ABSTRACT

Introduction: This paper outlines a collaborative, cross-national educational initiative, commenced in 2001, in which an Australian university provided clinical and research education assistance to a Filipino University. The aim was to establish the first Filipino Master of Science in Physical Therapy program that would train physiotherapists in their home country using best available content and teaching expertise.

Process: Principles of quality transnational education underpinned the program design and contractual agreements. Australian educational input was tailored to local constraints to ensure efficient and effective delivery of high quality, relevant material. Approximately 60% of the inaugural program was delivered by Australian educators in one-week intensive courses on-shore in the Philippines, using local facilities and case-scenarios. Follow-up support and evaluation were provided by video, email, written workbooks and assignments once these educators returned to Australia. Filipino graduates, who were competent with course content, taught the remaining subjects. In line with an aim of empowering Filipino graduates to assume responsibility for teaching all aspects of the program by 2006, the Australian educators are now teaching less than 25% of the course content to subsequent student cohorts. After 2006, they will provide mentorship only to the program.

Results: In 2003, 12 students in the first cohort graduated with Master of Science in Physical Therapy from the University of Santo Tomas (UST). Twenty-four students subsequently enrolled in the second cohort (commenced 2003) and 21 students into the
third cohort (commenced 2004). Six of the inaugural graduate cohort are currently acting as tutors for the Australian educators and will assume full teaching roles in 2006. Comparison of feedback from student evaluations at UST indicates significant improvements in teaching quality for the graduates from the inaugural program. Research activity and publications have also increased as a result of completion of the program.

**Discussion:** Such a cross-institutional, cross-national program has not been described previously for physiotherapy, and no other similar health program (for nursing) evaluated the educational processes in the manner used in this program. The program met its aims and has produced sustainable educational outcomes and outputs.

**Conclusion:** Future scholarly activities between the two institutions include extension of postgraduate training to other health disciplines, cross-institutional PhD student enrolments and collaborative research.

**KEYWORDS** Quality, international, transnational education, Filipino graduate physiotherapy program.

**Introduction**

Undergraduate physiotherapists are trained in approximately 150 Filipino colleges and universities. On graduation they are required to pass the standard national licensing exam of the Filipino Professional Regulation Commission (National Physiotherapy Board Examinations) to practice the profession. Over past decades, there has been consistent anecdotal evidence that many newly licensed physiotherapists have left the Philippines to work in lucrative overseas markets, never to return. This number has never been quantified.

Prior to 2001, there were no Filipino graduate physiotherapy programs. The only option for Filipino physiotherapists to undertake graduate studies in their discipline was to enrol in an overseas university program. The expense of studying abroad and the burden this placed on family and colleagues at home deterred many from taking this path. The lack of experienced Filipino-based physiotherapists with higher degrees was thus keenly felt, particularly in universities, where the result has been pressure for young Filipinos with limited undergraduate experience to assume senior teaching, research and administrative roles. As an example from the report of the Office of the Academic Affairs of UST in 2001, the College of Rehabilitation Sciences had five faculty members in the Department of Physical Therapy with postgraduate degrees (none in physiotherapy) and 12 staff with a Bachelor of Science degree in Physical Therapy. Lobbying undertaken by the top national physiotherapy body (the Filipino Physical Therapy Association) of the Philippines Government from 1999 onwards has stated that wages, conditions and referral rights for Filipino physiotherapists would not be reconsidered until there was a greater number of Filipino physiotherapists with discipline-specific higher degrees. Legislators equated holding higher degrees in physiotherapy with producing better quality services and health outcomes. To address this
requirement, an affordable, local (Philippines-based) internationally-recognized, graduate physiotherapy education program was needed, which would accommodate a sizeable cohort of Filipino physiotherapists, who could study and work concurrently while remaining in the country.

Discussions between academics from the University of South Australia (UniSA) (Australia) and the University of Santo Tomas (UST) (Philippines), held at an international physiotherapy meeting in 2000, highlighted the lack of opportunity for Filipino physiotherapists to undertake a higher degree in physiotherapy. This paper reports on the subsequent establishment of a unique international educational collaboration, which resulted in the first Filipino postgraduate physiotherapy program at the University of Santo Tomas. The first cohort graduated in 2003.

The Partner Universities
The University of Santo Tomas (UST) (Manila, Philippines) is one of two Filipino universities whose graduates consistently perform well in the National Physiotherapy Board Examinations. UST is one of the oldest universities in Asia, established in 1611 by the Dominican fathers for the education of priests and seminarians in the Philippines. The medical program was introduced in 1871 and the physiotherapy program in 1974 (Academic Calendar of Office of the Academic Affairs of UST, 2003).

The University of South Australia (UniSA) has trained undergraduate physiotherapists since the 1960s and has an established postgraduate coursework and research program since the mid-1970s (Academic Calendar, University of South Australia, 2003). It currently offers a 12-month on-campus clinical coursework program, as well as Research Masters and PhD degrees in physiotherapy. There have been approximately 150 graduates with higher degrees in physiotherapy in the past 5 years from University of South Australia.

Process of Program Development
Aims
The key project aim was to establish a Filipino-based post-graduate program for Filipino physiotherapists, based on internationally recognized content, knowledge and teaching skills. This program would improve the quality of Filipino physiotherapy education and research, increase the profile of physiotherapy in the Philippines and encourage Filipino graduates to remain working in the Philippines. An additional aim of the program was to provide the framework (Rauhverges, 2001; Stark & Fortune, 2003) for Filipino educators to assume complete responsibility for program delivery by 2006. At the time of program inception, educators from UniSA were contracted to provide expertise in areas that were currently lacking at UST and to assist
Filipino educators to develop the requisite skills to deliver the program in the longer term.

*Literature Review to Inform the Program Development:* The literature published over the last 25 years was systematically reviewed to identify research reports relevant to the establishment of a cross-national, cross-institutional program for graduate physiotherapists. Search terms of cross-national, international, transnational and post-graduate were used in the Medline and Cinahl databases from 1980 onwards. These terms were also applied to google.com, the internet search engine. Twenty-four research articles and 20 non-research articles were identified, of which 11 research articles and 15 non-research articles were relevant to the proposed program. The majority of the articles described specific learning activities and partnerships, although there were a few evaluation reports. Approximately 70% of the references described transnational programs in business, education and computing where students from one country were trained on- or off-shore by educators from another country and were awarded a degree from the institution of the educators (Jones, 1996; Henderson, 2002; Marion, 2002). Whilst this was not what was required in the proposed UST physiotherapy masters program, which had contracted expert assistance from UniSA where the degree was to be conferred by UST, the quality indicators for transnational programs were highly relevant for the UST program accreditation processes.

The nature and intent of the UST graduate program suggested that it was appropriately classified under a collaborative, cross-national learning model. Such models have been reported for nursing and could readily be adapted to physiotherapy (Forouzesh & Gunatilake, 1990; Nicholas *et al*., 1994; Sumners & Tronsgard, 1999; Hamada & Scott, 2000; Ogilvie *et al*., 2003). A reference to establishing cross-national health research was useful in identifying the components of capacity building and planning, including finance and budgeting, insurance and occupational health and safety issues for researchers working away from home (Musil *et al*., 2004).

The majority of international training programs reports used the internet as the primary medium for information exchange, problem-based learning activities and evaluation (Jones, 1996; UNESCO, 2000; Marion, 2002; Swisher & Mandich, 2002; Williams & Feldman, 2004; Duffy *et al*. 2005). The proposed UST graduate physiotherapy program, however, needed to address the explicit expectations of Filipino educators that the primary medium of information exchange for practical skills-based teaching would involve face-to-face contact with the Australian educators. This requirement concurred with the literature on using appropriate educational methods to achieve desired student outcomes (Sellbeim, 2003; Stark & Fortune, 2003).

The need to observe and accommodate cultural differences and sensitivities in cross-national training programs was also highlighted by the literature review (Hammer, 1987; Yershova *et al*., 2000; Olson & Kroeger, 2001). To adequately
address the cross-national teaching and learning requirements of this program, the Australian educators needed to learn about Filipino student culture, as well as to become familiar with Filipino legislation governing physiotherapy referrals and practice, local health environments, procedures and patient diagnoses.

Course Outline
Negotiations between UST and UniSA on program structure, course content and delivery were based on core elements of the Code of Good Practice for Transnational Education (Jones, 1996; Henderson, 2002; Marion, 2002). The concept of the inaugural on-shore coursework graduate physiotherapy program was refined during 15 months of preliminary discussions between the universities. In 2001, based on an initial draft agreement between the communicating academics of the two universities, UniSA formally agreed to assist UST to establish a Filipino-based graduate physiotherapy program (a masters degree), using the best available expertise in teaching, research and clinical practice and which addressed the graduate qualities of both universities (see Table 1). A Memorandum of Understanding to formalize both the inter-university relationship and this specific international collaborative educational

<table>
<thead>
<tr>
<th>UniSA graduate qualities</th>
<th>UST graduate qualities</th>
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<tbody>
<tr>
<td>• Operate effectively with and upon a body of knowledge</td>
<td>• Promotion of a dialogue between faith and reason leading to integration of knowledge about man, nature and God</td>
</tr>
<tr>
<td>• Are prepared for lifelong learning</td>
<td>• Integral information of the human person and the protection and advancement of human dignity</td>
</tr>
<tr>
<td>• Can work autonomously and collaboratively</td>
<td>• Development of sound professional expertise in an atmosphere of academic freedom</td>
</tr>
<tr>
<td>• Are committed to ethical action and social responsibility</td>
<td>• Preservation, enrichment and propagation of Filipino cultural heritage rooted in a sense of history and tradition</td>
</tr>
<tr>
<td>• Communicate effectively</td>
<td>• Recognition of the vital role of the individual, not only as a citizen of his country working for national development, but also as a citizen of the world promoting universal good, and a denizen of planet Earth, preserving and saving her for all humankind</td>
</tr>
<tr>
<td>• Demonstrate an international perspective</td>
<td>• Cultivation of Christian values necessary for the formation of right social conscience</td>
</tr>
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Table 1. A comparison of the graduate qualities of University of South Australia (UniSA) and University of Santo Tomas (UST)
initiative was subsequently signed by the relevant research administrators of the two universities late in 2001.

The UST Graduate School assumed the program governance. The 11-course inaugural program officially commenced in 2002. UniSA staff delivered eight courses, and UST faculty delivered the remaining three courses. Five UniSA staff taught the UniSA courses: Health Research Methods, Evidence-Based Practice, Clinical Reasoning in Musculoskeletal Practice (spine and periphery), Neurology, Clinical Reasoning in Neurological Physiotherapy Practice, Occupational Health and Safety and Ergonomics. Local Filipino educators taught Exercise Physiology, Human Kinesiology and Educational Strategies in Physical Therapy.

**Teaching and Learning Approaches**
The UniSA courses were delivered in one-week short course formats, taught face-to-face on campus at UST. The courses incorporated theory lectures, practical sessions, tutorials, problem-based learning, with embedded evaluation and feedback.

**Quality and Authenticity**
The external quality and authenticity of UniSA courses were ensured by teaching UniSA accredited courses, engaging UniSA lecturers with demonstrated content and teaching expertise and applying UniSA accredited assessment practices within local contexts. UniSA agreed that its staff could be released for the requisite period to teach off-shore and to link its graduate qualities with those of UST to underpin the proposed masters program (see Table 1).

Evaluation of the internal quality and authenticity of the teaching material was undertaken within UST via its usual course review and accreditation processes. Filipino educators (senior staff in the College of Rehabilitation Sciences, UST) acted as local change agents (Henderson, 2002) by championing the program throughout the university hierarchy and to the Philippines Physical Therapy Association.

**Admission to the Program**
Admission to the inaugural program in 2001 was offered only to UST staff (reflecting UST funding for the inaugural cohort). Entry into subsequent cohorts was available to any graduate Filipino physiotherapist, who could commit to the study expectations and guarantee to fund the requisite program costs.

**Evaluation of Student Learning Outcomes**
The educational outcomes for the first cohort of students were formally evaluated by each course lecturer against course aims by assessing (as indicated) new treatment techniques, clinical reasoning skills, project planning (in ergonomics and evidence-based practice) and research skills (e.g. designing
research proposals and searching library databases). Once the Australian educators returned home, follow-up assessment was undertaken using videos of student presentations and written assignments. Individual on-line support was also provided by the Australian academics to students whose questions could not be resolved locally. As all students in the inaugural program also taught in the UST undergraduate program, they were encouraged to teach their own students aspects of what they had learnt in their graduate studies to consolidate their learning outcomes. This was monitored by senior academic staff at UST, by classroom observation, formal evaluation of undergraduate lecture content and undergraduate student feedback.

Peer Evaluation of Program Content and Design
During each course taught by Australian educators, iterative feedback was obtained from local Filipino educators on the delivery, content and outcomes of the course, so that adjustments to content and teaching style could be made to maximize student learning opportunities. On completion of the inaugural program, email, telephone and face-to-face discussions were held between the Filipino and Australian educators to modify program content and delivery for subsequent cohorts.

Program Evaluation by Students
Formal feedback regarding curriculum content, assessment, motivation and workload was obtained from the initial cohort of graduates following program completion. Modifications were made to the curriculum, its structure and delivery for subsequent cohorts. A major change was the introduction of more pre-requisite subjects prior to entry into the program, to standardize the academic baseline of new students. Moreover, the neurology and orthopedic tracks were separated. Additional basic and elective subjects, as well as research and thesis components, were added to each track to ensure a broader content base. To accommodate these changes, the program of study is now 2 years, rather than the initial 18 months.

Educating the Local Educators
In line with the aim of facilitating Filipino educators to teach the program in its entirety by 2006, only four of the courses for the subsequent second and third cohorts are now being taught by UniSA lecturers (Health Research Methods, Evidence Based Practice, Clinical Reasoning in Orthopedic Physical Therapy and Clinical Reasoning in Neurological Physical Therapy). Graduates of the inaugural cohort, who also act as tutors for the UniSA educators during their courses, teach all other subjects.

Contractual Arrangements
The contract between the two universities specified all details of the quality, accreditation, governance and costs of the program (staff salary reimburse-
ment, travel, accommodation, insurance and costs of teaching programs). This contract was renegotiated for each new cohort of students, reflecting the diminishing input by UniSA staff in providing external teaching assistance for the program. All tuition fees are now funded by the graduate students themselves or by their employers.

**Progress to Date**

*Students*
The first cohort of twelve students successfully graduated in 2003 from UST—a proud day in Manila and Adelaide! So pleased was UST with this outcome, that this program was used as a benchmark for the Philippines Quality Award for the other colleges of the University. The second and third cohorts (24 and 21 students respectively) commenced the program in 2003 and 2004. These cohorts were comprised of physiotherapy educators from other Filipino universities, as well as clinicians working in hospitals and community services. These cohorts are expected to graduate in 2005 and 2006 respectively.

*Timing of Classes*
To accommodate the students’ own teaching and/or clinical loads, the classes are held out of normal teaching hours (for instance, late afternoon and evening classes, as well as classes on weekends).

*Accommodation*
Visiting academics are housed in self-contained rooms in UST residences on-campus. This satisfies insurance requirements, minimizes travel time, optimizes opportunities to interact with class members and continue with personal projects when not teaching. It also provides the visitors with an appreciation of UST academic and student life.

*Support for this Program*
Feedback from the inaugural cohort of students suggested that factors which assisted in successful completion of the masters degree were:

- a standard undergraduate preparation\(^1\) (coming from one institution) having uninterrupted face-to-face contact with visiting academics;
- working in peer groups to optimize learning outcomes after the Australian lecturers returned home;

\(^1\)The importance of having a standard content baseline for new cohorts has been the prime motivation for modifying the course with the introduction of pre-requisite subjects for the second and third cohorts.
• having a dedicated, pre-arranged university-supported opportunity to increase discipline-specific skills (rather than students having to arrange and fund overseas study);
• theory coupled with practical applications;
• subsequent opportunities for promotion.

Feedback from the Australian lecturers was that facilitators for delivering high quality teaching were:

• uninterrupted time for teaching in their specialty area;
• being valued as an expert educator;
• having the opportunity to evaluate teaching styles and course content in an international environment;
• teaching a targeted program to graduates who knew what they needed and were enthusiastic about learning.

Hurdles

The program was not without its hurdles, and these continue to provide opportunities for improving the quality of education to subsequent student cohorts. Main ongoing issues are:

• constrained local access to library databases and physiotherapy journals;
• the limited face-to-face contact time with the international teachers;
• the need to fit study around work for the period of the masters program;
• difficulties in arranging appropriate patients for clinical practice sessions, due to patient availability, lecture times and hospital policies.

All Australian educators reported experiencing a steep learning curve in order to address cultural sensitivities, local physiotherapy practices and health care environments whilst teaching the first student cohort. These experiences have equipped the Australian educators better for teaching subsequent cohorts in the Philippines and also for teaching physiotherapists from other countries who enrol in post-graduate studies at the University of South Australia. Hurdles included:

• obtaining an adequate understanding of current Filipino physiotherapy educational practices and tailoring teaching styles and delivery of information in a way that efficiently value-added to the students’ knowledge and skills;
• gaining an appreciation of Filipino culture and student behavior in class (for instance shyness, reticence to voice opinions and deference to lecturers’ opinions);
• changing course delivery styles and timing to suit local needs. All Australian educators reported refining their teaching styles to ensure delivery of key
information in an appropriate and timely manner within short-course format. Many of the Filipino students traveled 2–3 hours to and from campus daily, were also teaching their own classes or treating their own patients at earlier than usual times. Thus student fatigue was often a barrier to good immediate learning outcomes. As a result, theory lectures were commonly shortened and combined with practical experiences and self-directed learning to ensure that students retained key learning objectives. To consolidate key information from lectures and practical sessions, a variety of educational activities have been employed. On-the-spot tests (with chocolate as a reward for correct answers), observation of educators assessing and treating local patients, hearing about educators’ own research activities and working in small groups to learn specific clinical or research techniques were used;

- dealing with equipment and facilities that differed from those used in Australia (for instance, electrical equipment that is no longer used in Australia, using treatment plinths that are non-adjustable and/or not appropriate for the treatment techniques being taught, not having good access to library resources and the internet for literature searching, etc);
- using examples in teaching and setting relevant assignments using local terminology, referral practices, patient presentations and local environmental constraints;
- providing appropriate and timely follow-up to student queries after the short courses were completed (competing workloads).

**Travel Permission**

For the Australian academics, obtaining permission from the Australian Government to travel to teach is an ongoing issue. For instance during the inaugural program, teaching schedules needed to be rearranged twice as a result of an Australian Government travel ban and concerns with Sudden Acute Respiratory Syndrome (SARS).

**Sustained Educational Outcomes**

Based on observation by senior UST academics and the visiting Australian academics, the UST faculty members in the inaugural graduating cohort are more organized researchers, more skilled clinicians and better educators than their non-graduate peers. They no longer read textbooks as their primary source of reference. Rather they use international journals more frequently. They are also more research-oriented, since they are able to better understand the content of the journals they are reading. Moreover, feedback from undergraduate students being taught by these graduates has included fewer complaints about teaching style and content than in previous years. The undergraduate students reported appreciating the efforts of the faculty members who had completed the graduate program. They saw this as a tangible attempt to improve methods of teaching and consequently address the quality of the undergraduate course.
Graduating students each academic year completed an exit survey measuring a number of quality educational domains (listed below), is routinely undertaken by the UST Office of Planning and Development. A series of Likert scales are used to measure these domains, scored lowest to highest (1–4). There has been marked improvement in the scores obtained by the UST physiotherapy faculty (85% of whom completed the UST physiotherapy masters degree in 2003) when comparing the academic years 2001–2002 and 2002–2003. Significant improvements in the second year of survey have been found in terms of graduate quality domains of Competence and expertise (2.80 vs. 3.71), Ability to effect quality learning among students (2.70 vs. 3.76), Ability to provide rich academic opportunities for developing higher order thinking skills (2.75 vs. 3.50), Ability to serve as models in both standards of performance and behavior (2.25 vs. 3.35) and Employing innovative teaching approaches, methodologies and strategies (2.60 vs. 3.71). Moreover to date, five research papers have been published by graduates of the inaugural cohort, which represents a marked improvement in publication rates compared with previous years.

Conclusion

This paper outlines experiences in establishing a collaborative, postgraduate health education initiative, in which an Australian university assisted an Asian university to establish its own higher degree program in physiotherapy. While the program presented a range of learning opportunities at institutional, academic and student levels, it has also proved to be mutually rewarding in terms of educational outcomes, learning experiences and ongoing cross-institutional relationships. However, evaluation of the program outcomes for the second and third cohorts is required to provide more robust evidence of the teaching and learning outcomes in the longer term.

Measuring the quality of any international postgraduate teaching program requires an understanding of quality educational processes delivered within the context of local service delivery and cultural issues. The relationship now established between the physiotherapy schools of the Universities of Santo Tomas and South Australia has produced a teaching and learning quality benchmark for international delivery and evaluation of physiotherapy postgraduate programs. This reflects and addresses cultural differences between Australian and Filipino educational approaches and physiotherapy practices. Reasonable costs have been determined for content and delivery of international post-graduate allied health programs within an Asian context, and precedents have been established for teaching and learning strategies, as well as travel, accommodation and insurance for visiting academics.

Assisting UST to establish its own postgraduate physiotherapy program has proved to be a rewarding experience for UniSA academics. The Filipino
students’ enthusiasm, generosity and good humor, their commitment to learning and to their profession, and their capacity for hard work are constant reminders to the visiting Australians of the (often unrecognized) good fortune of most Australian academics and students. Many young Filipino physiotherapists see their life work as improving practices for therapists and patients in the Philippines. Thus Australian involvement in the initiative to academically assist Filipino physiotherapists has been immensely rewarding in personal, professional and academic areas. Now that the graduate physiotherapy program is underway, other inter-institutional scholarly opportunities have been identified, such as:

- inviting Australian and Filipino academics as guest speakers to health meetings in each others’ countries;
- adapting the UST Physiotherapy Masters program into one for Occupational Therapists;
- undertaking cross-institutional research;
- introducing undergraduate training for allied health disciplines, such as Podiatry (a discipline for which training is currently not available in the Philippines);
- developing cross-institutional PhD programs in allied health. These programs would be initially offered to graduates of UST Physiotherapy Masters program and would involve specific and planned time in Australia for project design, training and analysis. Data collection would be undertaken in the Philippines, so that projects relate to local public health issues.

The collaborative international educational experiences reported in this paper highlight how a responsive, effective postgraduate program can be developed using a quality framework of content, delivery and staff, to ensure mutual benefit, eventual autonomy in local program delivery and high quality teaching and learning outcomes.

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