

# ▲ Preparing Health Science Students for Interdisciplinary Professional Practice

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In 2002, a number of lecturers from different clinical schools within the Faculty of Health Sciences at La Trobe University embarked on the development of a new interdisciplinary professional practice subject to be undertaken by all final-year undergraduate health science students. The subject was designed to better prepare students for their first professional appointment by introducing them to the concepts of interdisciplinary teamwork, the health care context, and the challenges and constraints that organizational contexts present. This report details the background of the project, the consultation and development that took place in the design of the subject, and implementation of the subject. The uniqueness of the project is explained by the number of disciplines involved, the online delivery, and the focus on a set of generic graduate attributes for health science students. It is hoped that students who have undertaken this subject will have a better understanding of the roles of other health professionals and the context in which they will be working by grappling with many real-life professional issues that they will face when they graduate and enter the workforce. *J Allied Health* 2007; 36:141–149.

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LIKE MOST WESTERN COUNTRIES, the Australian health care system has been dominated by medicine and hospitals and characterized by services that are highly fragmented, overspecialized, and preoccupied with acute medicine. Changes to the health and welfare sector, technological development, and an aging and more complex, chronically ill population has changed how services are delivered. Contemporary approaches to best practice in health care have broadened our definition of what is meant by the term “health,” embracing the World Health Organization’s definition of health as “. . . a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.”<sup>1</sup> Political and sociological

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changes have seen a shift away from institutional modes of care to community care for many service users, such as those with disabilities, the aged, and mental health and youth populations. The structure, funding, and priorities confronting the health care system have also changed, with administrators struggling to balance the power and promise of medical and technological advances within resourcing constraints.<sup>2</sup>

The delivery of continuity of health care within the context of this environment requires the collaboration of health professionals with different expertise. This has been recognized in the considerable health care literature, which recognizes the benefits of a team approach, such as reduced hospitalization time and costs, better accessibility for patients, and improved coordination of care.<sup>3</sup> In particular, interdisciplinary practice encourages greater coordination in the identification of health-related goals, with each discipline responsible for a particular aspect of the goal,<sup>4</sup> and may involve cotreatment or intervention activities.<sup>5</sup>

The model of interdisciplinary health care delivery is believed to provide quality of care through better coordination and continuity of care and improved case finding, consultation, and referral because of understanding and knowledge of intervention options.<sup>6</sup> There is also evidence of better outcomes for the clinician and the organization, including increased knowledge of self and professional accountability, ongoing learning through exposure to new ideas and approaches, and staff satisfaction through retention and lower burnout.<sup>6,7</sup> These teams are also viewed by consumers as providing respectful care, promoting self management, and having a structured approach to treatment.<sup>8</sup>

## Context of the Project

There has been a long history of poor communication and competition between different health professionals and between hospitals and other parts of the health care system.<sup>8</sup> One obstacle has been the professionals’ limited awareness and understanding of the scope of practice of other health care professionals and of the significance of collaboration and cooperation between diverse disciplines to enhance the quality of health care.<sup>9,10</sup> Research also suggests that health care professionals lack training in interprofessional skills and tend to preserve traditional role concepts and boundary concerns.<sup>5,9</sup> With the acknowledgment that underlying causes of ill health in

our society are primarily economic and social, approaches to comprehensive health care also require the involvement of health professionals with sociological rather than medical training.<sup>11</sup>

All these trends and changes suggest that interdisciplinary practice should be an educational imperative for the various educational institutions.<sup>9</sup> In addressing the care needs of this changing health environment, educators are required to recognize the need to train allied health professionals to become able to adapt themselves to change, to participate in the management of change,<sup>2</sup> and to function effectively within interdisciplinary teams. However, although interdisciplinary teamwork may be standard practice in the workplace, allied health students may receive little or no formal training in working with other professionals.<sup>7,12</sup>

Academic institutions are “notorious for breeding and rewarding rigid curricular separations” between disciplines, which presents considerable barriers to the development of interprofessional teaching to students.<sup>11</sup> Erickson et al. suggested that, developmentally, allied health students have not yet acquired the role differentiation and prejudices bred of separate training by teachers who promote knowledge that is uniquely special to their field.<sup>11</sup> Therefore, abandoning turf and boundary issues is essential for the effective working of an interdisciplinary team, and this same approach is required by educators to teach these skills to their students. Paul and Peterson identified additional barriers to curriculum review, including class scheduling and increased demands on academic staff time, and concluded that “adopting interprofessional education and practice requires change at the professional, personal and institutional practice levels.”<sup>5</sup>

A traditional teacher-directed, discipline-specific curriculum is not always suitable to develop the new practice realities.<sup>13</sup> Proponents of shared learning believe that interprofessional education enhances understanding of roles and responsibilities of other health professionals, develops skills in teamwork, and improves communication and interpersonal skills of participants.<sup>14</sup> Tavakol and Reicherter reported on a study of new graduates from various health care professional disciplines, who responded that their previous participation in interdisciplinary courses had positively influenced their professional practice.<sup>12</sup> The clinical benefits included improved interdisciplinary referrals, empathy for other disciplines, and using a holistic approach to patient management.

## Stimulus for Curriculum Change

Teaching interdisciplinary practice has received much attention in the literature over the past 5 yrs.<sup>15,16</sup> Howell et al. provided several examples of allied health education that can be found in the literature.<sup>7</sup> They ranged from students from different disciplines attending the same class with little interaction to developed courses and practical experiences with active interaction between students from

different courses. Some programs provided a range of seminars, lectures, and laboratory experiences, and others have developed joint fieldwork programs to place students from different disciplines together in the community.<sup>7</sup> In addressing this situation, educators should be training allied health professionals to function effectively within these interdisciplinary teams, even if a traditional teacher-directed curriculum is not suitable to develop the new practice realities.<sup>13</sup> Proponents of shared learning believe that interprofessional education enhances understanding of roles and responsibilities of other health professionals, develops skills in teamwork, and improves communication and interpersonal skills of participants.<sup>14</sup>

The Faculty of Health Sciences at La Trobe University, Victoria, is the second largest provider of allied health education in Australia, delivering 11 different undergraduate professional health courses across one metropolitan and three rural locations (Table 1). Each course contained a third- or fourth-year subject around professional practice issues, resulting in significant content duplication. Each school had developed course content independently, resulting in very little contact between students in different professional disciplines and little contact between teaching staff from different disciplines.

The impetus for the development of an interdisciplinary subject for allied health students within the Faculty of Health was threefold.

1. The changing context of the health care industry had resulted in criticism from health care employers and some professional associations that allied health students graduate with insufficient understanding of the work of other professional groups.<sup>16</sup>
2. Academic staff were aware of the changing definition of health, the changes in the delivery of health and welfare services, and the need to ensure that graduates were equipped to work in a changing health and human service field.
3. The faculty had developed a set of key graduate attributes that formed the basis of all subjects taught in the various schools that focused on the generic competencies for adaptation and management of a changed health environment.<sup>2</sup> The full set of attributes is shown in the Appendix. Several specific criteria identified in this document became the basis of the objectives of this new subject and are outlined below:

- ability to communicate with clients and other professionals
- ability to work independently or as part of a team and to practice in an interdisciplinary environment with appreciation of the roles of professionals in related fields
- ability to develop a sense of inquiry and commitment to lifelong learning
- ability to be involved in ethical and socially responsible decision making

TABLE 1. Number and Type of Undergraduate Programs by Enrollment Year

Undergraduate Bachelor's Degree Courses	No. of Campuses	Commencement of Student Enrollments in Interdisciplinary Professional Practice					
		2004		2005		2006	
		Semester 1	Semester 2	Semester 1	Semester 2	Semester 1	Semester 2
Health sciences*	2	✓	✓	✓	✓	✓	✓
Health information management	1	✓	✓	✓	✓	✓	✓
Nursing	3				✓	✓	✓
Nursing and midwifery	3				✓	✓	✓
Occupational therapy	1	✓	✓	✓	✓	✓	✓
Orthoptics and ophthalmic science	1	✓	✓	✓	✓	✓	✓
Physiotherapy	1	✓	✓	✓	✓	✓	✓
Podiatry	1			✓	✓	✓	✓
Prosthetics and orthotics	1				✓	✓	✓
Social work	3	✓	✓	✓	✓	✓	✓
Speech pathology	1	✓	✓	✓	✓	✓	✓
Total student enrollment per semester		388	110	615	300	729	

\*Students pursuing a bachelor of health sciences degree take this subject as an optional elective; it is compulsory for all other courses.

- ability to work with diverse communities
- ability to develop professional competency in their chosen vocation.<sup>17</sup>

The overall design of this new interdisciplinary subject was to integrate diverse disciplines into a common curriculum that prepared students to practice in a manner that values the contribution of other disciplines and their unique perspective on a problem or situation. Students were either in their third or final year of study, so they were sufficiently socialized in their disciplinary roles to enable them to learn about how to work collaboratively. This subject was designed to expose students to the concepts of teamwork through shared learning across professional boundaries and will equip them to enter the workforce with an enhanced sense of professional and possible leadership skills.

### Curriculum Development Process

The faculty recognized the need to offer a subject that would shift the focus from the traditional discipline-specific model of education to an interdisciplinary-focused model. It was agreed that a final-year subject be introduced for all professional health science disciplines; in addition, bachelor of health science students could take the subject as an elective. However, previous attempts to introduce interdisciplinary teaching had limited success because of the structural limitations of timetabling, differences in course structure, including clinical placement times, and professional boundary issues. An earlier initiative to develop some joint clinical placements for two courses had been successful from a learning perspective but was too difficult to introduce on a wider scale because of the curriculum and timetabling differences across courses and the variation in

organizational structures in health agencies where students undertake this experience.

An online mode, using WebCT, was identified as the solution to these difficulties, providing the advantages of time and geographic flexibility. In fact, the technological infrastructure became an invaluable tool for a range of reasons, including

- presentation of learning materials
- links to references including the library catalog, Web sites, and readings
- synchronous and asynchronous communication between students, tutors, librarians and information technology support staff; this communication can be between a nominated group or can be private communication between two people and may include discussion and sharing of documents
- submission and return of assessment
- monitoring of student activity and grading.

To implement this new subject, the Interdisciplinary Professional Practice Working Party was established by the administration of the Faculty of Health Sciences, which ensured the “neutrality” of the program. It was composed of a representative from each of the 11 disciplines and a member from the Academic Development Unit to provide expert advice on the design of curriculum and assessment and to evaluate the subject delivery. Representatives from COMET, the online development unit of the university, were closely involved with the Working Party to advise on appropriate methods of online presentation and the use of WebCT technology. The cost of subject development has been significant, as reported elsewhere.<sup>18</sup>

The Working Party used the selected student attributes as the underlying conceptual framework, and various sub-

TABLE 2. Example of Scenario and Task

Irene is a sole parent who has three children aged 2, 5, and 9 yrs, and they are renting a house in a small town in rural Victoria, about 40 minutes from the main town, which is 3 hours from Melbourne (there is no public transportation from Irene’s house to the main town, and Irene does not own a car). The small town has a small grocery store but no medical facilities and only a few families living there. The main town has a community health center, which has a part-time general practitioner (twice a week), a physiotherapist who visits 1 day per week, and a social worker who visits once a fortnight. There is also a general practitioner in private practice in the main town, but Irene prefers the general practitioner at the community health center.

Two months ago, Irene was diagnosed with a slow-growing brain tumor that will require radiotherapy. The cancer has also affected her short-term memory and some other cognitive deficits and has resulted in poor balance. Irene was admitted to an acute hospital 2 days ago with a fractured arm after falling at home while trying to put her baby to bed. She had an operation for an open reduction and internal fixation to her arm, and she will be in a sling for 10 days.

Irene has been separated from her husband for 2 yrs; he has moved interstate and has no contact with her and is not paying any child support. Irene has been resistant to receiving any help from health and welfare services, and it is believed that her brain tumor has been affecting her judgment and decision-making ability. The local school has indicated concern about the welfare of her two older children because they are frequently away from school and the older boy was recently reported to the principal for bullying. The 5-yr-old has a mild intellectual disability but is attending a mainstream school where his older brother is enrolled.

In your departmental group, complete the template to record your responses to the following:

- Identify the interventions that will be needed to support Irene and her children. Include a minimum of five health interventions and five welfare interventions. To help you, we have already offered an example of how to complete the template.
- Identify at least two agencies that will be able to provide these interventions.
- Identify the sources of funding for these agencies. Include each of the following options in your template: local government, state government, commonwealth, nongovernment (not for profit) such as charitable and voluntary agencies, and private (for-profit) sources such as TAC, WorkCover, private insurance, and client funded.
- Identify the health professionals from these agencies who could provide each service (e.g., social worker, physiotherapist).

groups of academics took responsibility for developing the content and determining the resources for the subject. Regular meetings were held to discuss the progress of the subgroups and make decisions about the final format of the subject. Hall and Weaver described the academic debate about the appropriate timing for interdisciplinary studies.<sup>16</sup> In developing this subject, the Working Group decided that the subject should be taken by all final-year students of the Faculty of Health Sciences to ensure that students had a good understanding of their own disciplines and of health and human service delivery contexts through the prior completion of clinical placements and theoretical coursework.

In addition to the acquisition of subject content, the underlying objectives of the subject included enabling students to develop an understanding of interdisciplinary practice, the skills of other health disciplines, and the skills to work as an interdisciplinary team.

TABLE 3. Subject Objectives

Describe the structure and influences of the health system
Demonstrate an interdisciplinary awareness
Describe the contribution of other professions to health and human service delivery
Engage in teamwork with students from other health and human service professions
Describe the rights and expectations of service consumers
Describe the key issues in ethical decision making

A problem-based interdisciplinary subject was seen as the best educational approach to promote the graduate attributes and to develop skills for working in interdisciplinary teams. Problem-based learning has a focus on concept formation, reflection on one’s own knowledge, reflection on sources of information, and self-directedness in determining what one needs to learn and how to go about acquiring knowledge.<sup>13</sup> Scenarios were developed, based on virtual clients and health service agencies, to form the focus of a problem-based learning approach through online discussion and as the basis of some of the assessment. Academic staff took on the role of learning facilitators rather than teachers. An example of a scenario and group task is shown in Table 2.

### Subject Description

The subject was structured into five modules to reflect the five objectives (Table 3) and taught over a 13-week period. Students were assigned into “departments” of six to seven members composed of a minimum of three different disciplines and worked as a team to respond to the tasks and assignments in each module. The modules are briefly described in the following text. Specific objectives were also developed for each module and are detailed in Table 4.

An orientation day was held a couple of weeks before the start of the semester to introduce the subject content and to give students a brief training segment on WebCT. Before accessing the subject material, students were

TABLE 4. Summary of Subject Evolution

Module	Content of Each Module	Content and Assessment, 2004	Changes to Subject, 2005	Changes to Subject, 2006
Orientation day		<p>Guest speaker and introduction to the subject.</p> <p>Opportunity for members of departments to meet face to face.</p> <p>Lecture about online learning.</p> <p>Handbook distributed.</p>	Expanded handbook to include more information.	Face-to-face "orientation day" refocused to a "conference day" with increased presentations and content on teamwork and the objectives of this subject.
Module: Professional development	<p>Apply practical information regarding search strategies for locating employment opportunities, investigating potential employers, developing a résumé, applying for various positions, and successful interview techniques for employment.</p> <p>Investigate the role of a union in supporting new graduates.</p> <p>Discuss the formal and informal opportunities for lifelong learning to promote professional development.</p> <p>Analyze the similarities and differences between the self-regulation requirements of various professional groups.</p> <p>Identify the mentoring opportunities available to your profession.</p>	<p>Five tasks, including completing a quiz on writing a résumé and cover letter, ranking six job applications and a rationale, and writing individual résumés.</p> <p>Pass/fail grade.</p>	<p>Students had reported technical difficulties and needing time to get to know the members of the department.</p> <p>The content of this module is quite descriptive and informative rather than analytical, so it was decided to move this from the last to the first module presented to help ease the student into the learning technology of WebCT and to "get to know" the members.</p> <p>Content of résumé assessment stayed the same.</p>	<p>Less content on individual reflection and more on asking students to share information about their specific health disciplines.</p> <p>Establishing a group learning contract was introduced as the initial group task that members had to work on together.</p> <p>Extra assignment to develop a 5-yr learning plan for the successful applicant.</p>
Module: Provision of care within the context of human service systems	<p>Understand policy directions that determine distribution of health and welfare funding at the various levels of government and nongovernment levels.</p> <p>Differentiate the various models of funding of health and welfare services.</p> <p>Identify the current provision of care and discuss how these have developed as a response to broader health and social policy imperatives and the constraints these present for allied health practice.</p> <p>Critique contemporary service provision and identify client populations that are not well served by existing services.</p>	<p>This module introduces a case study that contains a range of health and welfare issues. The department has to identify the needs of the individual/family and the agencies that can provide the services. They are then required to find the appropriate funding sources for the services that they have identified as being required to address the needs of the case.</p> <p>Pass/fail grade.</p>	<p>The content and case study approach remained, but students did not have to develop a discharge plan.</p> <p>Content added from Evidence/Accountability modules with an additional task introduced that required each department to develop a funding submission to meet an identified gap in available services.</p> <p>Assessment percent increased to reflect additional requirements.</p>	<p>Some assessment percent moved to final, individual student contribution to ensure that group assignments did not unduly penalize the capacity of individual students.</p> <p>Other content and assessment stayed the same.</p>

*continued on next page*

TABLE 4 (continued)

Module	Content of Each Module	Content and Assessment, 2004	Changes to Subject, 2005	Changes to Subject, 2006
Module: Organizational dynamics within health and human service organizations	Explore the way that the organizational environment impacts the work health behavior of employed professionals. Work together with students from various schools within the Health Sciences Faculty in examining a key contemporary theme in health service delivery (that of effective case management and care coordination) as it relates to both organizational variables and the capacity of individual health professionals to perform effectively in this aspect of servicedelivery.	Three tasks that include discussion of organizational culture, reacting to a chief executive officer's presentation, and identifying staff development opportunities. A template outlining responses to professional issues was the assignment submitted. Pass/fail grade.	No change	Additional group task: analysis and review of their group experiences, reflecting on their group learning contract.
Module: Professional accountability	Be challenged to discuss and reflect on common legal and ethical issues related to health care. Develop an awareness of ethical principles and behaviors in relation to your own and other's professional practice areas.	Two tasks asking members to review their code of ethics and a case study approach in which the department is required to determine the legislative and ethical issues that might arise from the case. Pass/fail grade.	No change	No change
Module: Evidence/quality	Work independently and as part of a team to critically reflect on how health care processes contribute to the optimization of patient care. Develop awareness of resources and frameworks to support the delivery of quality patient care.	Members respond to a letter of complaint and develop a written submission for funding of a new service. Pass/fail grade.	Content amalgamated with other modules (provision of care, professional development). Number of modules in the subject reduced from five to four.	
Final assessment	Group assignment on coordinated care. Each student submitted a description of how they had contributed to the final group task.	Individual instead of group assignment introduced. Overall result presented as pass/fail grade.	Specific marks allocated to each task within the modules instead of previous pass/fail. Marks allocated by tutors based on individual student involvement with group activities. Assignment includes discussion of interdisciplinary practice and their experiences. Final assignment worth 40% of total marks. Individual "makeup" tasks introduced for students unable to participate in group activities.	Same assignment as 2005 but more emphasis on an individual reflection on the group process and how the group contract was helpful in undertaking and completing the tasks. No marks for student participation to be introduced in 2007.

required to complete an initial quiz to test their familiarity with the basics of this tool. Because students had varied experience with computer technology, tutors were encouraged to log on every couple of days at the start of the semester to answer queries, and COMET staff were also available via WebCT or e-mail to assist with technical issues. Some tutors met face to face with some of their students or ran a mini-lecture to orient them to the new format of learning. Any announcements and updated information about the subject were posted in an announcement section of WebCT.

Each module has several learning tasks; most are based on a case study approach in which students assessed and solved problems on a group basis, and one task per module was nominated for formal assessment. Students must receive a pass in all modules.

Subject developers prepared notes and model answers to guide tutors in their grading and feedback of assessment tasks. Criteria-based assessment grids, based on content areas to be covered and levels of knowledge and analysis required, were developed for each assessment task to facilitate consistency of feedback to students.

Apart from overcoming issues of a multicampus university with complex timetabling, the use of online delivery offered the advantage to students of accessibility 24 hours per day, enabling them to balance concurrent involvement in on-campus classes, off-campus clinics, and personal commitments to family and work.<sup>19</sup> Although there were target dates for completion of each module, there was some opportunity for self-pacing to take account of individual student capability and previous knowledge. Learning materials were available for review for the entire semester. Students also developed their information technology skills at a practical and cognitive level<sup>19</sup> and thus achieved consistency of basic skills in this area in line with the Faculty's Generic Skills.<sup>17</sup>

## Evaluation and Changes

The Working Party reviewed and evaluated the modules at several stages of their design. Two pilot trials of the subject were conducted by staff before the first delivery of the subject. Feedback from these trials was used to enhance the modules while also enabling staff to develop skills in WebCT.

Since its introduction in March 2004, this subject has been taught to five cohorts and the content and delivery of this subject have been evaluated and monitored through student evaluations and focus groups. Each module and the whole subject were evaluated by enrolled students through an online, formal, independent La Trobe University Student Evaluation of Teaching process conducted by the Academic Development Unit.

Tutors, including subject developers, met regularly throughout each semester to monitor the subject, discuss questions and problems, and preview the material for the following weeks. After each semester, the tutors were

involved in a half-day review and planning session for the following semester, including updates to the reference material. Conflict did arise in some groups around the allocation and performance of tasks and the unevenness of some students' contribution to group assessment tasks. Tutors have developed tools to monitor the online discussion and encourage participation. Since 2005, active engagement between group members has been linked to the assessment requirements.

Evaluation of the subject by the first cohort of students had a 40% response rate (155 students). Overall, the students thought the subject was relevant to their career and that they had developed skills needed by professionals in this field. They reported that group work activities were an effective way of gaining exposure to other ideas and different perspectives from other disciplines. Generally students indicated that they liked working in interdisciplinary groups and that having a good working group helped with learning. They thought that through the discussions, they gained a deeper knowledge of the health field and the nature of other disciplines. Students commented that they learned more that way than researching through journals and books. In comparison, Deretchin et al. found that medical students exposed to a new problem-based learning curriculum reported a lower rating of the importance of this active form of learning and a higher rating for traditional lecture style learning.<sup>13</sup> Students appreciated other perspectives and having examples of what may happen when working in a multidisciplinary team. Students also reported that their technical computer skills improved, with some students admitting that it was the first time that they had actually logged onto the university system.

However, there were a number of negatives expressed by students, including the frequency of assessment, which occurred every week, the volume of online reading, and some frustration with group dynamics, such as conflict of opinion and failure of some members to fully participate in tasks and discussion.

The tutors reported that the most positive aspect of this subject was its interdisciplinary nature and that it was the first time many of them had even met with many of the academics from other schools in the faculty. Regular meetings gave them a better understanding of shared issues and challenges with teaching student groups online. The tutors believed there was a lot of collegial support when assistance or information was required. Another unanticipated but positive outcome was the establishment of an interdisciplinary research agenda, where academics from different schools and members of the local health network have developed some potential projects.

As a result of the student evaluation and discussions with the tutors, the subject has undergone considerable change since its first year of delivery.

Table 4 reflects the significant modifications that occurred to this subject over the past 3 yrs as a result of student and tutor feedback. Concerns about the number and

frequency of tasks and assessment resulted in the reduction in the number of modules from five to four and substantial reduction in student workload requirements of reading, online discussions, and tasks. To ensure that all students contributed to the major assessment task, tutors received individual as well as group submissions. This was subsequently further updated to encourage student participation; all assessments were graded with a mark instead of the previous pass/fail grade, and more emphasis was applied to the final assignment, which became an individual instead of a group task. Feedback about conflict and friction within some departments resulted in the subject introducing more theoretical content about group dynamics and problem-solving strategies at the orientation/conference day, requiring students to develop a group contract in the first module and asking them to reflect on its usefulness in their individual assignments at the end of the semester.

## Conclusions

Economic and technological changes demand a culturally sensitive and adaptable health care practitioner who is able to update his or her knowledge and skills through self-directed learning. This ambitious interdisciplinary subject has had a long gestation period, and its introduction has not been the end point but the continuation of another period of review and further modifications. By the third year of presentation, the Working Party identified that optimal learning and student satisfaction with this subject are contingent on positive group processes and introduced theoretical input on team building and conflict resolution strategies. Further refinement will include more industry involvement in reviewing the content and the creation of a “virtual health and welfare community” that students can use as the basis of their learning. The real test will be when the health field reports that graduates of La Trobe University reflect an informed interdisciplinary approach to their professional practice.

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APPENDIX

*La Trobe University Faculty Of Health Sciences Generic Key Characteristics of Health Sciences Graduates*

Characteristic	Criteria
Professional competencies relating to a specific discipline and, where appropriate, related disciplines—graduates are expected to have acquired a conceptual, theoretical, and practical knowledge of the discipline with the ability to apply knowledge and skills to a standard appropriate to the requirements of the relevant profession in a changing environment.	<ol style="list-style-type: none"> <li>1.1 Have acquired knowledge of the field of study at a level required for an entry-level practitioner</li> <li>1.2 Be able to integrate theory and practice</li> <li>1.3 Be able critically reflect on current theory and practice</li> <li>1.4 Be technically competent in the application of skills required for practice in the discipline</li> <li>1.5 Be aware of developments and research in the discipline and related fields</li> <li>1.6 Display competency in the use of information technology related to their disciplinary field</li> <li>1.7 Practice in accordance with professional values and ethics</li> <li>1.8 Be safe practitioners in relation to themselves, their clients, and the community</li> <li>1.9 Be aware of how their discipline relates to similar fields of study in local and international environments</li> </ol>
Communication skills—graduates are expected to be able to work effectively in a multidisciplinary team environment and to communicate with a range of people in a variety of settings.	<ol style="list-style-type: none"> <li>2.1 To communicate competently and sensitively with colleagues, clients, and the public</li> <li>2.2 To display appropriate oral, written, numerical, and information technology skills, with the ability to use a range of appropriate supporting media</li> <li>2.3 To work independently or as part of a team and to practice in a multidisciplinary environment with appreciation of the roles of professionals in related fields</li> <li>2.4 To negotiate effectively and present rational arguments appropriate to the given situation</li> <li>2.5 To adopt current and relevant technologies to identify, analyze, interpret, and present information</li> </ol>
Sense of inquiry and commitment to lifelong learning—graduates are expected to have acquired the capacity to learn independently and effectively, assess evidence about innovations in their profession, and display a commitment to continuous learning and intellectual curiosity throughout their lives.	<ol style="list-style-type: none"> <li>3.1 Have well-developed analytical, problem-solving, and evaluation skills</li> <li>3.2 Display intellectual curiosity, creativity, and critical thinking skills</li> <li>3.3 Be able to appraise new ideas, developments, and opportunities</li> <li>3.4 Recognize their own learning needs and take responsibility for developing effective learning strategies</li> </ol>
Ethical and socially responsible decision making—graduates are expected to have an understanding of ethical and social responsibilities.	<ol style="list-style-type: none"> <li>4.1 Maintain high ethical standards, be aware of social and ethical implications of professional and personal activities, and be able to deal with ethical dilemmas appropriately</li> <li>4.2 Be aware of social and environmental issues (within Australia and internationally) and their impact on health, health care, and the community</li> <li>4.3 Have acquired knowledge of relevant public policy and the systems in which they work</li> <li>4.4 Are able to practice appropriately in a socially diverse community</li> </ol>