Designing a Diverse, Future-oriented Vision for Undergraduate Psychology in Australia

Final Investigation Report

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(See acknowledgements for all universities involved)

Executive Summary

This investigation provided a collaborative framework for:
- the development and articulation of graduate attributes for psychology
- research and application of evidence-based teaching in psychology, and
- the creation of a diverse, future-oriented vision for undergraduate psychology education

The investigation brought together members of the prior AUTC/Carrick Disciplinary Investigation (Lipp et al., 2006), psychology educators identified by that project with relevant interest and expertise, the Australian Psychological Society (APS) executive, APS members with responsibilities in key curriculum development areas (such as the Program Development and Accreditation Committee (PDAC) of the APS), the Heads of Schools and Departments of Psychology Association (HODSPA), and many other stake-holders with an interest in the development of undergraduate psychology education. Members of this extended group met on a number of occasions, developed strategies for implementation of the investigation goals, lobbied relevant groups, and disseminated (and absorbed) information relevant to the investigation through scholarly activities. The Australian Psychology Educator's Network (APEN, established by Lipp et al.) was formally recognized by the APS through its incorporation as the Teaching Learning and Psychology Interest Group (TLAPIG, www.psychology.org.au/tlpig). This will provide a mechanism for continued and sustainable discussion regarding curriculum design, and the promotion of teaching and learning within the discipline.

Graduate Attributes for Psychology: A significant outcome from the investigation has been the Fellowship development of an agreed set of graduate attributes for psychology, which have now been incorporated into the Australian Psychology Accreditation Council's *Rules and Standards* (APAC, 2008). A resource to support academics wishing to embed graduate attributes in their programs has been initiated, and will be made available through the ALTC Exchange. Further extension of graduate attributes to post-graduate psychology education and training is being actively pursued by team members.

Evidence-Based teaching in Psychology: Team members promoted and disseminated information regarding evidence-based teaching through a wide variety of forums. The investigation sponsored a number of workshops and meetings in which internationally recognized scholars in psychology teaching and learning were able to present a case for evidence-based practices. Team members holding positions on relevant committees of the APS and other organisations have been able to disseminate information regarding the investigation and its goals. The APEN/TLAPIG website, and activities planned for future meetings of the APS Conference, will provide further opportunities for the sharing of best practices and problem solving around evidence-based teaching.

A diverse, future-oriented vision for undergraduate psychology education: A document outlining a possible vision for undergraduate teaching in Psychology, and strategies for its achievement, has been tabled for consideration with the peak professional bodies involved in the investigation partnership, the APS and HODSPA. Some of the challenges for psychology education in Australia are great, and questions raised by the investigation have initiated lively debate in the community of psychology educators. The response from educators to the vision will determine whether the activities necessary to establish needed changes in our educational practices are likely to be sustained beyond the terms of the investigation. However the infrastructure established through the investigation (APEN/TLAPIG) and the ALTC Exchange

will provide a suitable environment for achievement of the main priorities outlined in the vision statement.

Definitions and Abbreviations

AOU: Academic Organisational Unit

ALTC: Australian Learning and Teaching Council Ltd

APAC: Australian Psychology Accreditation Council Limited

APA: American Psychological Association

APEN/TLAPIG: Australian Psychology Educator's Network/ Teaching Learning and Psychology Interest Group of APS

APS: The Australian Psychological Society Limited

AUTC: Australian Universities Teaching Committee

Carrick: Carrick Institute for Learning and Teaching in Higher Education Ltd (renamed ALTC in May 2008)

Course: Separate and identifiable components of undergraduate and postgraduate courses, usually with their own assessment components and with a member of the Academic staff responsible for coordination, as defined in Schedule 1 of the Higher Education Support Act 2003.

CPRB Council of Psychologists Registration Boards of Australasia

DBI: Carrick Institute Discipline-Based Initiative Scheme

GAs: Graduate Attributes

HODSPA: Heads of Departments and Schools of Psychology Association

ISSoTL: The International Society for the Scholarship of Teaching & Learning

PDAC: Program Development and Accreditation Committee of the Australian Psychological Society Limited.

PFA: The Psychology Foundation of Australia

Program: A program of study, formally approved by an Institution, the successful completion of which results in the award of a degree, diploma, advanced diploma or certificate as defined in Schedule 1 of the Higher Education Support Act 2003.

SARAG: Science, Academia, and Research Advisory Group

SLOs: Student Learning Outcomes

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1. The Initiative: Creating a Diverse, Future-oriented Vision for Undergraduate Psychology

1.1 Aim and Scope

Psychology is fundamentally both a science and a profession, and its subject matter – human behaviour – is challenging (Badcock et al., 2007). Most departments/schools of psychology are subject to a variety of demands, including knowledge creation, fundamental undergraduate training, graduate professional training in a range of specialisations, and the diverse areas of service teaching (Littlefield et al., 2007). The discipline of psychology is placed in diverse university faculties including Science, Arts, Social Sciences, and Medicine (Lipp et al., 2006). The current investigation provided an opportunity for the discipline to review its identity and to plan its contribution to the future of Australian society.

The investigation builds upon a recent scoping project, *Learning Outcomes and Curriculum Development in Psychology* (Lipp et al., 2006), and its primary aims were to:
   A) support a specific project on the delineation of graduate attributes for the undergraduate psychology program, and the building of resources to support graduate attribute development
   B) support research into university student learning and performance and the implementation and sharing of evidence-based practice in teaching;
   C) create a diverse, future-oriented vision for undergraduate psychology in Australia, with prioritised strategic plans to deliver that vision.

During the course of the investigation (December 2006 to May 2008), there was a fluidity to the prioritizing of objectives and the methods used, as the Investigation Team remained responsive to stakeholder input and changing environmental demands. *Appendix 1.1* lists each of the original specific objectives, along with its methods and outcomes.

1.2 Investigative Strategy

An action research methodology was employed, which involved iterative cycles of planning, action, observation, and reflection, for each of the objectives. Key action strategies included: creating forums for free and frank discussion amongst a range of stakeholders; inviting participation through different routes such as forums, surveys, and interviews; attempting to keep stakeholders up-to-date on developments throughout the investigation; collecting new data and information as the need arose. A chronological summary of the investigations activities is provided in the *ALTC Psychology Fellowship and Discipline Activity Summary (Appendix 1.2),* and further detail regarding the specific methodologies for each objective is given in *Appendix 1.1.* The project was managed by the Team Leader in consultation with the Team Members, with input from the Steering Committee. Members of the Team and Steering Committee represented the diversity of Australian Psychology Academic Organisational Units (AOUs).

1.3 Stakeholders

The **Heads of Schools and Departments of Psychology Association** (HODSPA) is the peak disciplinary body responsible for delivering undergraduate and postgraduate educational programs in psychology, and for fostering research in psychology. The former Chair, Professor Henry Jackson, was an original investigation applicant, and the current Chair, Professor Patrick Heaven, has participated since March 2007 as a member of the investigation Steering Committee.

Team members have made presentations at the May and September 2007, and May 2008, HODSPA meetings.

The **Australian Psychological Society** (APS) is Australia's largest professional association for psychologists. The association is governed by a Board of Directors and comprises nine specialised colleges. Membership of the APS requires the completion of at least six years of APAC approved study (typically a 4-year undergraduate sequence followed by two years study in a specialist masters degree program). The former APS Manager of Science, Academia, and Research, Mary Katsikitis, was an initial investigation applicant. The current Manager, Nicholas Voudouris, and the Chair of APS-PDAC, Iain Montgomery, are members of the Steering Committee. Lyn Littlefield, Executive Director of the APS, was also involved in specific events throughout the investigation.

The **Program Development and Accreditation Committee** (PDAC) of the APS is responsible for monitoring program development and accreditation, and provides direct advice and recommendations to the Board of Directors of APAC and the Board of Directors of APS regarding program development and accreditation. The Chair of PDAC, Dr. Iain Montgomery, has participated since July 2007 as a member of the Steering Committee.

The **Australian Program Accreditation Council Limited** (APAC) oversees the accreditation of all undergraduate and postgraduate programs in psychology. The business of APAC is conducted by a Board of four directors appointed by the APS and four directors appointed by the Council of Psychologists Registration Boards. A member of APAC, Dr. Iain Montgomery, has participated since July 2007 as a member of the Steering Committee.

The **Australian Psychology Educators Network** (APEN) was established as part of a prior AUTC/ALTC-funded scoping investigation (Lipp et al., 2006). APEN's primary objective is to foster communication and exchange amongst psychology educators in Australia. This exchange is facilitated through the Network's new website (www.psychology.org.au/tlpig) and various conferences, meetings, and workshops held under the APEN banner. APEN foundation member, Dr. Stephen Provost, has been a member of the Team throughout the investigation.

The **Psychology Foundation of Australia** (PFA) aims to foster public awareness of the discipline of psychology as a science. The Foundation represents Schools of Psychology in Australia with a research orientation and encourages the maintenance of quality education and research in psychological science. Vice President of PFA, Professor Peter Lovibond, is a member of the Steering Committee.

Psychology academics, students, employers and consumers. Psychology academics and students were involved in various investigation activities; we point to the future need to consult employers and consumers.

2. Psychology Education and Training in Australia

2.1 Overview

The current nature of the Australian undergraduate program is strongly influenced by the Australian Psychology Accreditation Council (APAC), which sets the standards for undergraduate and postgraduate professional psychology programs and the AOUs (departments

and schools of psychology) that offer those programs (Lipp et al., 2006). The standards are based on the scientist-practitioner model of postgraduate professional training, with the undergraduate psychology program seen as providing broad, foundational knowledge as well as strong skills in research methods, data analysis and report-writing. The postgraduate professional training programs (two-year masters programs; three- or four-year Doctor of Psychology programs) consist of a mix of research, course-work and placements in work settings, and specialize in the areas of Clinical, Organisational, Forensic, Counseling, Clinical Neuropsychology, Sports, Educational and Developmental, Health, and Community Psychology, which eventually can lead to membership of the relevant APS Colleges. APAC contracts the APS, through its Program Development and Accreditation Committee (PDAC), to undertake assessment of proposed and existing programs, and to make recommendations to APAC regarding accreditation of those programs and AOUs. In order to undertake professional postgraduate training in psychology, students must have a degree from an accredited four-year undergraduate program. This is usually in the form of an integrated four-year program (e.g., Bachelor of Psychology), or a 3-year program followed by a fourth year (usually honours).

2.2 Scoping Investigation

The recent AUTC/ALTC-funded scoping investigation, *Learning Outcomes and Curriculum Development in Psychology* (Lipp et al., 2006; www.psy.uq.edu.au/carrick; see *Appendix 1.3* for a review), was charged with providing a review of the models and methods of teaching, curriculum development and learning outcomes within psychology. In particular the objectives were to: a) identify the disciplinary basis for evaluation, b) provide an overview of the teaching of psychology in Australian universities, c) assess the differing programs' capacity to meet the interests and needs of students, employers, the profession, and the scientific discipline, d) identify innovative practice in the teaching of psychology, e) develop a platform for future scholarly discussion on the teaching of psychology, f) develop print- and web-based material for dissemination, g) establish an evaluation framework for the project, and h) complete a final report. This two-year investigation involved extensive data gathering, including consultations with stakeholders such as the APS, and interviews with representatives from Departments of Psychology across Australia, the latter of which were designed to provide information relating to formal mechanisms of curriculum design and review, teaching practices, and identification of innovation and barriers to best practice. Amongst the findings of the Investigation were that psychology university teaching representatives perceived that the main constraints on the curriculum are underfunding of programs (obviously a negative), and the need to meet accreditation requirements (mostly a positive: helps ensure minimum quality standards in the face of university economic and policy pressures). Also on the basis of consultation with such teaching representatives, the Investigation identified a number of issues about undergraduate training in psychology that require further consideration, some of which are:

1. The current APAC Standards do not *explicitly* address graduate attributes or their assessment.[1]
2. Methods of assessment then endorsed by the APAC Standards, and implemented by most universities in their programs, are not always consistent with best practice (and may disadvantage students not only in terms of sub-optimal learning experience, but also in terms of employer dissatisfaction).
3. There is a lack of resources for innovative and evidence-based curriculum development (and often for the maintenance of current good practice, such as laboratory experience).

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[1] See Bowden et al. http://www.clt.uts.edu.au/ATN.grad.cap.project.index.html: "Graduate attributes are the qualities, skills and understandings a university community agrees its students should develop during their time with the institution"

4. Current innovations in curriculum development and teaching strategies that have led to improved student learning outcomes, are not being adequately disseminated.
5. There has been little consideration of the pros and cons of internationalization, in terms of (a) cultural competence training, (b) international student exchange programs in psychology, and (c) reviewing psychology education and training in Australia in light of national and international curriculum developments (e.g., the Bologna Agreement).
6. Particularly in light of recent APAC Standards, there needs to be more material to support learning and teaching on indigenous issues in undergraduate programs[2]; moreover, there is a need to promote indigenous participation in psychology training.
7. There should be more focus on and support of three- and four-year "terminal" psychology undergraduates (i.e., those who do not go on to become professional psychologists), particularly in regard to their graduate destinations and preparation for those destinations (e.g., with regard to alternative avenues of education to complement accredited programs, and relevant graduate attribute development).
8. There is inadequate material on the epistemological approach to education and training in psychology, this orientation should be provided from first year.
9. Regarding the teaching of psychology in other disciplines, there is a need for more collaborative approaches to curriculum development between Schools of Psychology and the other disciplines, in order to facilitate the development of innovative curricula and the achievement of discipline-relevant positive learning outcomes whilst maintaining the integrity of the psychological perspective.
10. Psychology AOUs should utilise Course Experience Questionnaire (CEQ) data to further improve their curricula and learning outcomes.
11. There is a need for a systematic and extensive employer survey, particularly in relation to graduate attributes.
12. There is a need to consider better ways to promote best practice and the scholarly discussion of teaching issues, including support of the network organisation, and the development of a regular series of workshops and conferences.

The specification of many of the objectives of the current investigation was a direct result of these identified issues (see *Appendix 1.1*); in particular, the investigation focuses on Issues 1, 5(c), and 12, endorses current action on Issue 6, and recommends further action on all Issues, but especially Issues 2, 5, 9, 11 and 12.

2.3 Developments in psychology education and training: 2006-2008

This investigation was undertaken in the context of significant change impacting on education and training in psychology:
(a) increased emphasis on quality learning and teaching in Australian universities (e.g., www.auqa.edu.au);
(b) increased emphasis on research productivity associated with the Research Quality Framework (RQF) and Excellence in Research Australia (e.g., www.arc.gov.au/media/releases/media_26Feb08.htm), and thus necessitating highly efficient approaches to teaching;
(c) increased emphasis on graduate attributes and competencies, and aligned assessment and teaching strategies (e.g.,

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[2] But see the recent Uni.SA project, http://www.unisanet.unisa.edu.au/learn/unaipon-psyia/?PATH=/Resources/tcc/Integrating+Australian+Indigenous+content+and+pedagogies+into+psychology+education/&default=Welcome.htm

http://learningandteaching.unsw.edu.au/content/LT/course_prog_support/graduate_attribu tes.cfm?ss=2);

(d) perceived workforce shortages with respect to the delivery of psychological services, leading to demands on universities to increase numbers of graduates and decrease the length of training (e.g., www.nhwt.gov.au/training.asp);

(e) moves to nationalize registration of psychologists, and to have the same national body oversee program accreditation (e.g., www.nhwt.gov.au/natreg.asp);

(f) pressures to internationalise university programs in general, including our programs, so that, for example, our postgraduate professional psychologists would more easily be able to practice in Europe and in North America (Littlefield et al., 2007);

(g) the advent of Medicare rebates for psychological services, which (i) increased student demand for places in postgraduate clinical psychology training; (ii) led to the closing of other professional psychology programs through lack of demand, and (iii) led to shortages in clinical placement opportunities (i.e., practical experiences during the program), thus threatening the viability of existing programs (e.g., Littlefield et al., 2007);

(h) increased emphasis on interdisciplinary education and interprofessional training (particularly within the health professions; e.g., www.nhwt.gov.au/training.asp);

(i) increased demands from the APS Colleges in terms of the nature of the curriculum in postgraduate professional programs;

(j) the morally responsible demand for evidence-based learning and teaching strategies (e.g., Zinkiewicz et al., 2003);

(k) increased competition in the education market place (e.g., http://www.productivityplaces.deewr.gov.au/NR/rdonlyres/204593CC-36F3-4AA4-A6DB-322E3B413473/21712/RESPONSE57.pdf);

(l) changing student expectations (e.g., consumerism; litigiousness; e-learning) and increasing student diversity (e.g., Burton & Dowling, 2005);

(m) the residual effects of a prolonged period of decreased funding for University educational activities (e.g., www.nteu.org.au/news/1998/1998/1216), particularly impacting on staffing levels, physical laboratory facilities, and other teaching resources;

(n) changes in cluster funding impacting directly on School/Departmental budgets, with the usual solution being that undergraduate courses cross-subsidise postgraduate professional training (e.g., Littlefield et al., 2007).

Historically, the discipline and profession of psychology in Australia has a strong interest in maintaining high quality education and professional training, and in maintaining disciplinary integrity. In constantly reviewing the accreditation standards, for example, APAC and its subsidiary APS committee, PDAC, attempt to objectively respond in a considered way to requests that reflect some of the pressures listed above, without sacrificing quality and the core scientist-practitioner based philosophy underlying the standards. The primary principle underlying the discipline of psychology (that distinguishes it from other disciplines) is that it uses the *methods of science* to create knowledge about a very tricky subject, *human behaviour*. Consequently, the underlying principle of professional psychology (that distinguishes it from many other professions) is that professional practice is based on the knowledge base of psychology and particularly the evidence regarding effective applications. The latter is a large part of the scientist-practitioner model and so drives the training approach. Although there is much debate about other aspects of the scientist-practitioner model (Lipp et al., 2006; O'Gorman, 2001; Provost et al., 2008), these were not the focus of the current investigation.

A further consideration for the discipline and profession is the misconception among the public, governments and university executives that "professional psychology equals clinical psychology"- to the detriment of an appreciation of other professional psychologies, including

health, educational, organizational, sports, neuropsychology, forensic, and community. Thus any pressure to reduce general knowledge and skill training or to engage in interprofessional health training diminish not only research training and knowledge creation, but also these other psychology professions.

3. Investigation Activities and Outcomes

As indicated in Section 1.1, this investigation had three broad aims, and a number of objectives. As stakeholder engagement progressed and the higher education and political environment changed, these aims and objectives took some unexpected directions, as is explained in the description of activities and outcomes below. It should be understood, however, that many activities such as stakeholder meetings were designed to achieve progress toward multiple objectives simultaneously. A summary of the activities, resources and outcomes of this investigation (in tandem with J. Cranney's Associate Fellowship project) is presented in *Appendix 1.2*. That summary is also available on the *Australian Psychology Educators Network (APEN)* in the ALTC Exchange (exclusive to members of the Psychology Discipline) and on the TLAPIG website (http://www.groups.psychology.org.au/tlpig/).

(A) **Graduate Attributes of the Australian Undergraduate Psychology Program**
This investigation supported the concurrent ALTC Associate Fellowship (J. Cranney) project on *Sustainable and Evidence-Based Learning and Teaching Approaches to the Undergraduate Psychology Curriculum*. One major objective was to delineate graduate attributes of the undergraduate psychology program (See *Appendix 1.1*, Objective 4). This investigation sought sector-wide input through the existing Australian Psychology Educators Network (APEN) established by the earlier scoping project, and through other key stakeholders in the design, delivery and consumption of education and training in psychology (i.e., PDAC, HODSPA, UNSW Learning and Teaching Advisory Group in Psychology). Input from a learning and teaching specialist with different discipline training (C. Turnbull), and from the psychology student research assistants (K. Varcin, L. Mellish, D. Matovic, S. Zhang) provided invaluable insights throughout this process of graduate attribute delineation.

Part of the rationale for delineating Graduate Attributes is that student learning outcomes should be an integral part of the vision for the future of psychology, and indeed, this has occurred. Three activities were undertaken:
   a) a review of a number of key international and national documents were undertaken, including the current APAC Standards, the Scoping Investigation, the APA Guidelines for the Undergraduate Psychology Major (2006), Project EuroPsyT (2001), the School of Psychology UNSW Graduate Attributes (Cranney et al., 2005); moreover, the discussions and responses of stakeholder input at various forums was also taken into account;
   b) iterative development of the GAs from an initial drafting in June 2007 to its current version in March 2008, with stakeholder input ranging from an APEN workshop at the International Society for the Scholarship of Teaching and Learning (ISSoTL) conference to PDAC input at its 2008 January meeting; and
   c) gradual integration of some of the key GAs and student learning outcomes (SLOs) into the APAC standards.
This latter activity is highly significant, as it means that every Department/School of Psychology will need to demonstrate in applications for accreditation how their programs address these GAs and SLOs. Although this is only a start in the integration, development, assessment and evaluation of GAs/SLOs in the Australian undergraduate program, it is a significant start.

Moreover, further work on the GAs/SLOs, particularly in terms of assessment, is one of the suggested courses of action outlined in the *Implementation Plan* of the *Vision Statement*. Examples of curriculum structure resources will soon be created by a number of Universities who are "early adopters" of the GAs, and these will be fed into ALTC Exchange *Australian Educators Network (APEN)* site. Some of the outcomes of the integration of the GAs into the curriculum structures are that (a) 3-year graduates will be more aware of the skills they have acquired during their psychology education, and (b) there should be better alignment of learning outcomes and assessment.

Outcomes:
- The document *Graduate Attributes of the Australian Undergraduate Psychology Program* (see *Appendix 3.A1*)
- Integration of the graduate attributes and many of the student learning outcomes into the APAC standards (http://www.apac.psychology.org.au/Content.aspx?ID= 1083)
- The initiation of a ALTC Exchange *Psychology Graduate Attribute Resource* to support development of the graduate attributes
- Submission of grant applications to specify core postgraduate psychology competencies, and to develop assessment strategies for these competencies as well as for the undergraduate graduate attributes
- Submission of grant applications to locate or create quality resources for the ALTC Exchange *Psychology Graduate Attribute Resource*

Future needs:
- The specification of postgraduate psychology competencies
- Curriculum templates or examples for the integration of graduate attributes and competencies
- Examples of aligned assessment of, and effective teaching strategies for, the SLOs associated with the GAs and postgraduate competencies
- The location and creation of quality resources for the ALTC Exchange *Psychology Graduate Attribute Resource*

(B) **Support research into university student learning and performance, and the implementation and sharing of evidence-based practice in teaching (see also Objective 7 in** *Appendix 1.1)*

APEN, established by the Scoping Investigation, includes in its objectives the promotion of research into university student learning and performance, and the implementation and sharing of evidence based practice in teaching. Moreover, APEN played a large part in the initiation of this investigation, and it was thus appropriate that one strategy to achieve this particular aim of the investigation was to ensure the continued activity of APEN. Thus, many of the investigations activities were pursued under the banner of APEN (e.g., workshops, symposia, newsletters; see *Appendix 1.2* for a summary), and one goal of the associated ALTC Fellowship was to further ensure the sustainability of the Network by (a) ensuring that it became an APS Interest Group (i.e., the TLAPIG), and (b) shifting many of its resources to that website. The outcomes of the previous Scoping Investigation and the current investigation will also be disseminated internationally during 2008 through APEN member attendance at the UK Psychology Network's Psychology Learning and Teaching (PLAT) conference, Bath (J.Cranney, L.Cohen, D.French), the International Conference on the Teaching of Psychology, St Petersburg (P.Wilson, D.French), and the National Institute for the Teaching of Psychology (NITOP) conference, Florida (S.Provost). In addition, J.Cranney is also attending the APA National Conference on Undergraduate Education in Psychology, Washington. It should be noted that these occasions

also result in new knowledge, which will continue to influence the *Vision Statement* and the *Implementation Plan*, which include strategies to improve the quality of learning and teaching, including the promotion of research in this area.

Outcomes:
- APEN symposia, posters, workshops, forums and satellite meetings were organised for the Experimental Psychology Conference in 2007 and 2008, the ISSoTL Conference in 2007, and the APS Conference in 2007 and 2008
- Inclusion of APEN members in key APS committees (e.g., PDAC – J. Cranney; Science, Academia & Research Advisory Group – S. Provost & O. Lipp; the APS National Psychology Education & Training Reference Group – J. Cranney)

Future Needs:
- The dissemination, uptake, and further development of the outcomes of the Scoping Investigation, the current investigation, and other such projects, will continue as long as APEN is actively supported by its members, HODSPA, and the APS
- The creation of a Centre or Institute for psychological research into university student learning and performance
- The creation of strategies to adequately reward excellence in the teaching of psychology

(C) Creation of a diverse, future-oriented vision for undergraduate psychology in Australia, with prioritised strategic plans to deliver that vision

As a result of (a) discussions and interviews with stakeholders, particularly members of HODSPA and PDAC, and (b) the changing social and political climate, a number of specific activities were undertaken in the lead-up to creating a *Vision Statement* for Psychology.

C1: Initiation of a review of models of education and training

This objective emerged partly from the previous Scoping Investigation, and partly because internationalisation is a current priority of universities and the Federal Government (Bishop, 2006). Six activities were undertaken to achieve this objective:
a) consideration of Littlefield et al.'s (2007) recent review of international trends in education and training;
b) J.Cranney's attendance at the NITOP conference in Florida in Jan 2007, where she made contact with leaders in the field including Bill Buskist (2007-2008 NITOP President), Tom Pusateri (Executive Director of Division 2, APA), and Caprice Lantz (UK Psychology Network);
c) organisation of symposia and workshops at the ISSoTL Conference in July 2007, where we had input from Tom Pusateri (APA) Annie Trapp (Director, Psychology Network, UK), and Richard Hawkins (JCU at Singapore);
d) our own selective review of psychology programs in a number of countries, including China;
e) our own selective review of a number of cognate professional training programs in Australia;
f) distillation of information from interviews with members of HODSPA and other leaders in education and training in psychology, and
g) iterative discussions with stakeholders and within the Team about models of education and training.

As a result of these activities, we developed a number of criteria (based on the various purposes of education and training in psychology, and with consideration of real financial and institutional

constraints) by which to judge different models of education and training. Overall, the Team came to the conclusion that the current national model of education and training in psychology is of high quality in terms of timely and efficient coverage of necessary curricula and training essential skills. For example, a simple analysis of the length of the programs tells us that we are approximately equivalent to the Bologna model of 3+2+1 (UG + PG + internship) for clinical psychology training, but far briefer than the U.S.A. 4+5+1 model. Similarly, comparisons with other Australian training programs in areas such as undergraduate nursing and accounting indicates that although these programs may be briefer, the career options in these fields are much narrower than the opportunities afforded with the scientist-practitioner-based 4+2 model for professional postgraduate training. Indeed, one of the core strengths of psychology education and training is that there is a strong and internationally uniform approach to education and training, that is, the scientist-practitioner model. Very few other disciplines or professions possess this unifying approach, which is rated highly by both objective outsiders and by HODSPA members (average rating of importance of the model to education and training = 8.69, SD = 0.53 with ratings ranging from 8 to 9.5; on a scale of 0 = *not at all important*, to 10 = *absolutely essential*). Some suggestions for a better application of the model to the current program structure were also made, and incorporated into the *Vision Statement* and *Implementation Plan*. These discussions are ongoing, particularly within the context of the APS National Psychology Education and Training Reference Group. That is, the criteria and comparative data produced by this investigation have been critical in an ongoing national debate regarding education and training in psychology.

Outcomes
- Publication in preparation, on the rationale underlying education and training in Australian psychology
- Information and input to the APS *National Psychology Education & Training Reference Group*
- Suggested strategies for improving the existing model of education and training (*Implementation Plan*)

Future Needs
- Peak disciplinary bodies undertake a regular review of education and training models
- Specific projects to improve implementation of the scientist-practitioner model

C2: Survey of Honours Students and Graduates

During discussions with stakeholders about models of education and training, it became clear that we needed more information about the experience and value of the Honours year that is a required part of undergraduate training. Inspired by the ALTC Physics Discipline Study[3], we belatedly decided to undertake surveys of (a) UNSW graduates who did and did not complete a fourth year in psychology (N = 62), but who had taken a core third year research methods course some years earlier, indicating that they were at least majoring in psychology, and (b) honours students across the country who were in the process of finishing their studies (October; N = 86) (*see Appendix 3.C2* for copies of the surveys). Although the number of respondents is not large, this pilot data did deliver some interesting findings.

(a) The UNSW honours graduates (n = 40) reported that their honours year was more important to their undergraduate education in psychology (M = 4.60) than to their current employment (M = 3.63), $t(37)$ = 4.25, p < 0.001, although it should be noted that both ratings were high (1 = *not*

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[3] http://www.altc.edu.au/carrick/go/home/grants/pid/536

important/valuable to 5 = *extremely important/valuable*). Of the honours graduates, 45% reported that research skills was the single most important thing learnt in their undergraduate psychology degree. The responses of the non-honours graduates (*n* = 20) were much more varied (see Table 1). It should be noted that non-honours graduates would not be eligible to apply for postgraduate professional psychology training programs.

Table 1.

(a) Percentage of non-honours vs. honours <u>graduates</u> who gave ratings of the <u>single</u> most important thing learnt in their undergraduate psychology degree. Please note that some respondents gave more than one response.

Skill/Knowledge	Non- Honours (*n = 22*)	Honours (*n = 40*)
Research Skills	18%	45%
Critical Thinking	27%	35%
Writing Skills	18%	10%
Statistics	18%	10%
Value and Importance of Scientific Method	5%	10%
An Understanding of Human Behaviour	18%	0%

(b) Honours <u>students</u> (*N* = 86 across 12 Australian universities) rated their experience of the year as enjoyable though stressful. The majority of respondents strongly agreed that their research skills improved significantly during the year, that they enjoyed the process of undertaking an independent research project and that they would like to be involved in future research in psychology. The majority of respondents would also have liked to have more practical training in professional psychology during the course of the year. Few respondents felt that the honours year was a waste of time or that the competitiveness of the honours year was counterproductive. Respondents' perceptions of the extent to which the experience of completing a four-year undergraduate degree contributed to their knowledge, skills and development in specific areas were collated. This data is shown in Figure 1 (where "always" was ranked 7 and "never" was ranked 1). As can be seen in Figure 1, respondents reported that their four-year undergraduate education contributed to the development of their "knowledge and understanding of psychology" (Graduate Attribute 1) to a greater extent than their "learning and application" (Graduate Attribute 6), $t(84) = 5.64$, $p<.001$. Similarly, respondents reported significantly greater development of "research methods skills" (Graduate Attribute 2) than "learning and application" (Graduate Attribute 6) in their undergraduate education, $t(84) = 7.46$, $p<.001$.

It should also be noted that the mean rating given by HODSPA members regarding the importance of honours in psychology education and training was 8.75 (*SD* = 1.16; on a scale of 0 = *not at all important*, to 10 = *absolutely essential*).
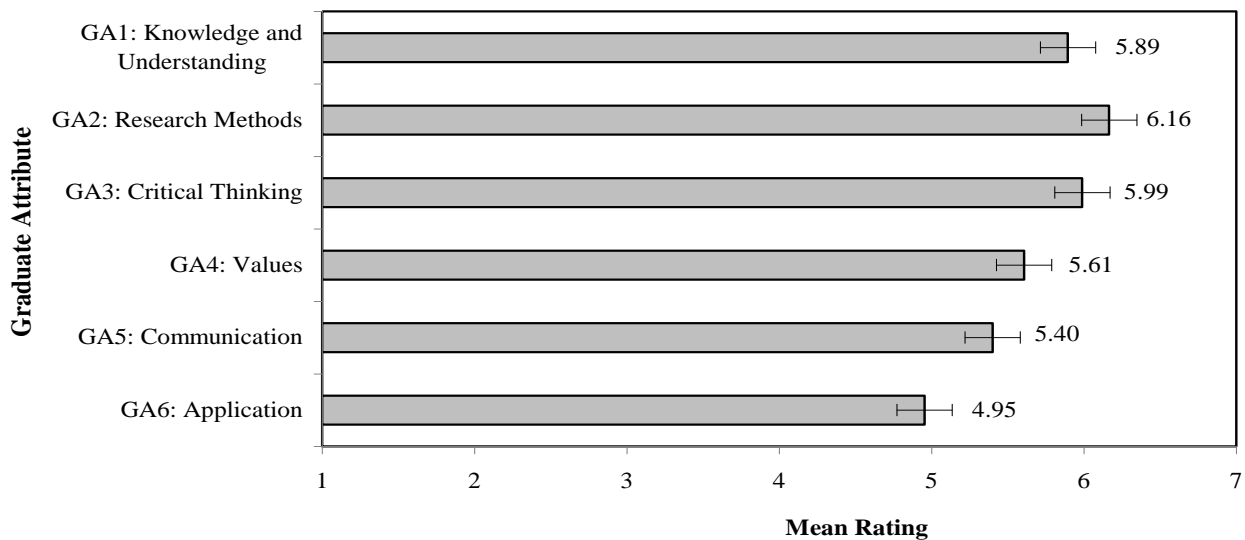
Figure 1. (b) Mean ratings for the extent to which a four-year undergraduate degree was seen by honours students to contribute to the development of graduate attributes.

Outcomes

- The survey and interview data give a strong endorsement by current honours students, relatively recent graduates, and HODSPA members, of the value of the honours year
- The survey data provide some initial positive rating data regarding the development of the graduate attributes, and the value of research methods and critical thinking

Future Needs

- HODSPA members organise a wider honours survey in 2008
- Psychology academic units develop systems to track graduates so that they can gain a more accurate picture of graduate destinations, the impact of honours, and rated graduate attribute attainment
- The peak discipline bodies support an extensive survey of employers of psychology graduates to determine perceived graduate strengths and gaps

C3: High-school teacher survey

Another issue that arose during stakeholder discussions was the place of high-school psychology. Psychology is available as a subject choice in all states and territories except New South Wales and Queensland in Years 11 and/or 12. Should we have more or less psychology in high-schools, nationally? Issues often raised included:

(a) training of high-school psychology teachers;
(b) support for high-school psychology teachers;
(c) general quality of the courses;
(d) strategies for engaging first year psychology students who have completed high-school psychology.

A survey of high-school teachers of psychology was sent via email to schools in Victoria, Tasmania and South Australia, with a total of 52 responses (44 from Victoria). The survey

consisted of ten questions with a scale response (1 = *strongly disagree* to 5 = *strongly agree*) and eight open-ended questions. In response to the question, "In general, how do you think your students perceive psychology, relative to their main focus of study?", the majority of responses were categorised as "interesting", "enjoyable", and "useful/relevant". Similarly, in response to the question, "What do you think are the important learning outcomes for students in the psychology component you are teaching?", the majority of responses were categorised as "understanding self" or "scientific knowledge". In terms of qualifications, 30 mentioned "Graduate Diploma in Education" (other degree types were also mentioned), and 15 mentioned a qualification that included the word "psychology" or "behavioural science". When asked the question, "Where do (or could) you go for advice or information about the teaching of psychology?", 28 mentioned "other teachers", and few mentioned specific discipline sources (e.g., APS, psychology conferences). Only two teachers were members of APS, and the median years of teaching psychology was eight. Of the seven rating questions, the following three received a mean rating of '4' or above:

- An APS interest group in the teaching of psychology that does not require membership of the APS has just been established. I would be interested in joining this Interest Group.
- If there was a regular (annual) conference or workshop related to the teaching of psychology I would like to attend.
- I would find it useful if there was an Australian resource centre bringing together information relating to the teaching of psychology.

The second-lowest rating (2.6) was to the question, **"**I feel a strong sense of belongingness to the discipline of psychology." A strong conclusion that can be drawn from these findings is that teachers would appreciate more support in terms of structured discipline contact and resources.

HODSPA members expressed varying views about high-school psychology, ranging from a willingness to develop special streams for first-year psychology students who have taken high-school psychology, to the assertion that it would be better to cease teaching psychology in high-schools because of the problems it creates at the university level.

Outcomes:
- Confirmation of the assumption that high-school teachers have a wide variety of backgrounds in terms of training in psychology, and that they would appreciate more support from the discipline
- There are widely varying views amongst discipline leaders regarding the value of high-school psychology

Future needs:
APS form a National Committee to gather more data (e.g., from students) and develop strategies for a national approach to high-school psychology.

4. Vision Statement

As a result of the various investigation activities, including interviews with HODSPA members, in April 2008 we produced a *Vision Statement* and an accompanying *Implementation Plan*, the former of which is reproduced below. These documents are currently being considered by a small Vision Working Party consisting of APS, HODSPA, and Council of Psychologists Registration Boards of Australasia (CPRB). The *Vision Statement* will be launched at an APEN event at the APS Annual Conference in September 2008.

Leading Australia Toward Better Health and Wellbeing

Australian Psychology Beyond 2015

Our 2015 Vision:
Psychology in Australia, as both a discipline and a profession, is recognized as the best source of scientific knowledge, education, training and practice for understanding and changing human thinking, feeling and behaviour.

In achieving this vision, we value:
1. A scientist-practitioner model of education and training
2. Quality standards for education, training and professional practice
3. Evidence-based practice in education, training and continued professional development
4. Quality basic and applied psychological research
5. The relevance of psychology in other disciplines and professions
6. Equity, opportunity and diversity in psychology
7. The moral and ethical motivation, and increasing potential, for psychology to contribute to human self-understanding and improved quality of life
8. The enhancement of social and health outcomes for Australians through the development of psychology as a discipline and as a profession.

Rationale:
Psychology is the best provider of scientific knowledge, education, training and practice for understanding and changing human behaviour. The issue is that this is not currently recognized by the Australian public and governments. To bring this vision to fruition, we need a range of strategies, and in particular strategic leadership by psychologists, at multiple levels and in various contexts. If we are successful in achieving this vision then all Australians will benefit.

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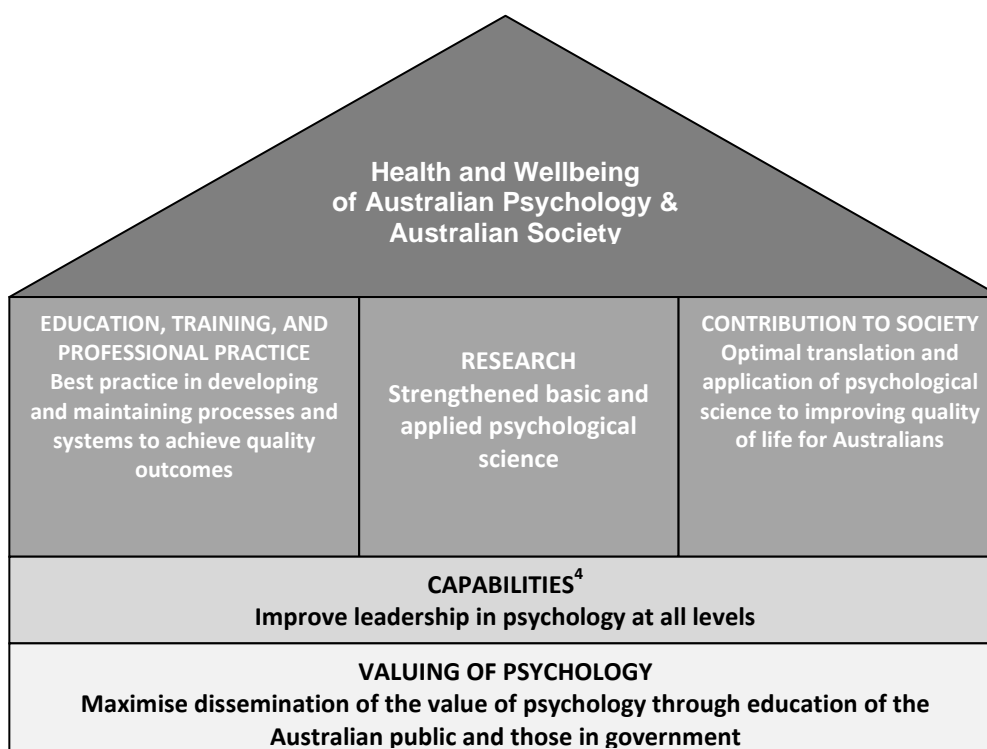
[4] This icon was adapted from the UNSW (2007) "B2B Blueprint to Beyond 2010", www.unsw.edu.au/about/pad/B2B_UNSW_Strategic_Intent.pdf

Psychology globally is championing the cause for psychology's contribution to society. The realisation of this contribution however, is hampered by a lack of appreciation of psychology by the general public and by those in government. Given its geographical, historical and cultural situation, Australian psychology is in a unique position to play a leadership role in forging new directions for the discipline and profession of psychology, and its contribution to human health and wellbeing. The existing peak bodies in Australian psychology have the potential to provide the strategic and inclusive leadership that is required to achieve this vision. These peak discipline bodies include: Heads of Schools and Departments of Psychology Association (HODSPA), Australian Psychological Society (APS), the Program Development and Accreditation Committee (PDAC) of APS, Australian Psychology Accreditation Council (APAC), Council of Psychologists Registration Boards of Australasia (CPRB), Australian Psychology Educators Network (APEN; also the APS Teaching, Learning and Psychology Interest Group), The Psychology Foundation of Australia (PFA). Psychologists in Australia constitute a registered profession. The title of "psychologist" is protected by legislation and requires the person to achieve a certain standard of education in an accredited course and also to adhere to certain standards of competency and ethics.

Finally, it should be noted that the current document is a work in progress that will change with continued input from the peak discipline bodies and associated stakeholders (i.e., psychologists, psychology students, consumers of psychological services, and employers of psychologists). Strategies that are important to address before the end of 2008, are marked with an asterisk*.

EDUCATION, TRAINING AND PROFESSIONAL PRACTICE
Objective: Best practice in developing and maintaining processes and systems to achieve quality outcomes for graduates and professionals and for the protection
of the public
Strategies:
1. *Reviewing models of education and training by the peak discipline bodies and statutory authorities, including psychology academic units (i.e., university departments and schools)
2. *Reviewing program accreditation processes and standards by the peak discipline bodies and statutory bodies, including psychology academic units
3. *Reviewing professional registration systems and standards by the peak discipline bodies and statutory authorities
4. *Improving resources for education and training in psychology
5. *Supporting innovation and creativity in developing best practice
6. Supporting communities of practice within education, training and work-places
7. Supporting the continued professional development of practicing psychologists
8. Reviewing workplace integrated learning processes in the psychology curriculum

RESEARCH
Objective: Strengthened basic and applied psychological research in Australia
Strategies:
1. *Being consistently categorised as a behavioural science by universities and by key research funding organisations
2. Psychology academic units (i.e., departments and schools) supporting the development of active research programs for all academic staff members, including quality research training for all students
3. Providing appropriate research environment, resources, facilities and equipment

4. Developing and expanding industry and research linkages both in Australia and internationally

CONTRIBUTION TO SOCIETY
Objective: Optimal translation and application of psychological science to improving quality of life for all Australians
Strategies:
1. Peak discipline bodies engaging with university research/academic personnel to identify opportunities for the translation of psychological research findings into relevant applications
2. *Peak discipline bodies engaging with government and community organisations to identify opportunities for the productive application of psychological science to solving and preventing behavioural problems at the individual, organizational and community/societal levels.
3. Peak discipline bodies facilitating dissemination of the outcomes of such applications
4. Psychology academic units seeking opportunities to contribute to understanding of, and change in, university organisational behaviour
5. *Peak disciplinary bodies developing strategies to assist undergraduate students to learn about the application of psychological knowledge to self and others
6. seeking opportunities to contribute to undergraduate student self-knowledge and development
7. *Psychology academic units seeking opportunities to work with other disciplines and professions in the understanding of human behaviour

CAPABILITIES
Objective: Improved leadership in psychology at all levels
Strategies:
1. *Strengthening leadership training in university programs to enable psychologists to take leadership roles in their workplaces and communities, including professional contexts such as the setting of registration standards
2. Supporting inclusive leadership processes in communities of practice and within organizational units
3. Peak discipline bodies supporting leadership development programs for their members, ensuring development in areas of need

VALUING OF PSYCHOLOGY
Objective: Maximum dissemination of the value of psychology through education of the Australian public and those in government
Strategies:
1. *Peak discipline bodies collaboratively creating processes to influence and inform Federal and State governments with one voice
2. Peak discipline bodies collaboratively creating educational media for the Australian Public
3. *Psychology academic units enhancing the opportunities for students from a variety of different programs to learn about psychology through (a) allowing access to first year courses and majors as is currently the case, and (b) promoting interdisciplinary educational, and inter-professional training programs
4. *Psychology academic units enhancing the quality of the educational experience for students who major in psychology but do not go on to become professional psychologists

5. Peak discipline bodies collaborating with State and Federal Education Departments to facilitate a standard quality high-school educational experience in the discipline of psychology

6. *Psychology academic units and peak discipline bodies ensuring constructive and selective (a) engagement with other disciplines and professions, including interdisciplinary education and research, and inter-professional training, particularly beyond health, (b) membership on key public interest and government committees, and (c) representation to government bodies

5. Implementation Plan

Accompanying the *Vision Statement* was a "living" *Implementation Plan*, giving examples of suggested actions to accompany the strategies. These actions are now in the hands of HODSPA, APS, APEN and CPRB; however, APEN will continue to pursue those central to education and training.

Set out below is a listing to the "future needs" identified in Section 3 (these correspond to many of the courses of action suggested in the *Implementation Plan*).

Future needs

- The specification of postgraduate psychology competencies
- Curriculum templates or examples for the integration of graduate attributes and competencies
- Examples of aligned assessment of and effective teaching strategies for the student learning outcomes associated with the graduate attributes and postgraduate competencies
- The location and creation of quality resources for the ALTC Exchange Psychology *Australian Psychology Educators Network (APEN)* site
- The dissemination, uptake, and further development of the outcomes of the Scoping Investigation, the current investigation, and other such projects
- The creation of a Centre or Institute for psychological research into university student learning and performance
- The creation of strategies to adequately reward excellence in the teaching of psychology
- Peak disciplinary bodies undertake a regular review of education and training models
- Specific projects to improve implementation of the scientist-practitioner model
- HODSPA members organise a wider honours survey in 2008
- Psychology academic units develop systems to track graduates so that they can gain a more accurate picture of graduate destinations, the impact of honours, and rated graduate attribute attainment
- The peak discipline bodies support an extensive survey of employers of psychology graduates to determine perceived graduate strengths and gaps
- APS form a National Committee to gather more data (e.g., from students) and develop strategies for a national approach to high-school psychology.

6. Dissemination Strategy

Dissemination has been achieved during the progress of the investigation through: (a) special inter- and intra-institutional workshops, (b) symposia, workshops, forums and satellites at national conferences, and (c) a number of APEN email newsletters distributed to all academic psychologists through the HODSPA mailing list, and posted on the APEN/TLAPIG website.

Dissemination of outcomes and processes will be achieved beyond May 1, 2008 through: (a) this Final Report, which will be sent to all members of HODSPA and other national and international psychologists, and made available on key websites, (b) presentations at national (e.g., APS Conference 2008) and international (e.g., PLAT Conference 2008) conferences, (c) investigation materials available though the ALTC Exchange *Australian Psychology Educators Network (APEN)* site and the Team Leader website, TLAPIG website, including further publications, (d) membership on and leadership by team members on key national learning and teaching committees, and most importantly (e) maintenance of the APEN community through its APS website and through its active promotion of learning and teaching activities (e.g., cross-institutional grant applications, symposia and satellite activities at national conferences).

7. Linkages

International linkages were established or strengthened during this investigation with the APA Division 2 (as evidenced by Tom Pusateri's ISSoTL participation, J. Cranney's invitation to take part in the 2008 APA National Conference on Undergraduate Education in Psychology, and S. Provost's participation in the 2009 NITOP conference), and with the UK Psychology Network (as evidenced by Annie Trapp's ISSoTL participation, and J. Cranney's participation in the PLAT 2008 conference). Greater engagement with China and India is required in the near future.

National linkages were strengthened by the participation of Team members in key APS learning and teaching committees (see section 3.B). Through this investigation's activities (usually under the banner of APEN), collaborations have been formed that are supporting further grant applications to improve learning and teaching in psychology. In addition, the Team has connected with concurrent ALTC psychology projects such as the University of South Australia's "Disseminating strategies for incorporating Australian indigenous content into psychology undergraduate programs throughout Australia", and Macquarie University's "Development and evaluation of resources to enhance skills in higher degree research supervision in an intercultural context".

Through ALTC Conferences and other formal gatherings, the Team made contact with other ALTC Discipline Studies such as that in physics, and this led to some mutual sharing of methodologies and research instruments. Within universities, Team members have become involved in university- or faculty-wide projects on subjects such as GAs, and the scholarship of learning and teaching. In summary, both through discipline and university avenues and through structured ALTC events, there is no doubt that fruitful linkages have been made that not only enhanced this investigation's outcomes but should continue to support innovation in quality learning and teaching in the future.

8. Evaluation and Investigation Processes

8.1 Evaluation

Although originally planned, no formal or independent evaluation of the investigation has been undertaken. The action research methodology used, in conjunction with extensive and iterative stakeholder involvement, meant that the investigation was constantly adjusting its activities to meet the needs of the discipline and profession. There have been a number of significant outcomes to date, such as the inclusion of GAs into the APAC standards, and structures to review psychology education and training have now been put into place by the peak discipline bodies. The extent to which the *Vision Statement* and *Implementation Plan* is sustainably embraced by the peak discipline bodies will become apparent over the next year.

8.2 Processes, lessons learned and generalisability

This investigation was a direct result of the Scoping Investigation funded by AUTC and ALTC, and was specifically designed to address some of the suggestions made in that final report (Lipp et al., 2006).   A concurrent development was the awarding of the ALTC Associate Fellowship to J.Cranney, where the primary objectives were the development of GAs for the undergraduate program, and the promotion of research into university student learning and performance. As these objectives appeared central to advancing the discipline of psychology and in particular, improving learning and teaching within the discipline, the investigation was structured to support these objectives. The first half of the one-year investigation, then, focused primarily on these objectives. It was not until the second half of the project that focus turned more directly to seriously reviewing the nature of education and training in psychology, and although our initial brief was confined to undergraduate education, we found that we could not entirely ignore postgraduate professional training. Along the way, it became apparent that we needed to collect more data to provide factual information to test various assumptions. These were time-consuming but very worthwhile exercises and some of these are summarised in the *ALTC Psychology Fellowship and Discipline Study Activity Summary* (see *Appendix 1.1*). It is clear that further data gathering is required, and this is suggested in the *Implementation Plan*. However, enough substantive data was gathered to form the basis of publications (see ALTC Exchange *Australian Psychology Educators Network (APEN)* for updates). Along the way also, multiple opportunities for stakeholder involvement were created and strongly encouraged, and were largely successful due to the commitment of APS and HODSPA. These diverse experiences and sources of knowledge finally formed the basis of the *Vision Statement* and the *Implementation Plan*. Because these were constructed late in the investigation, there was limited stakeholder input prior to May 1, 2008, although suggested revisions by the Investigation Vision Working Party have now been integrated into this document. However, as indicated above, this fact emphasizes the evolving nature of these documents, and APEN will ensure that stakeholders continue to have input, and that the documents stay "alive" until superseded by more effective platforms for action.

Some factors may have limited progress and outcomes with this investigation: (a) although there was good collaboration with the two peak discipline bodies, APA and HODSPA, the investigation could have been more strongly driven by them (although the fact that it was not, may have afforded more objectivity), and (b) the lack of an appropriately qualified project officer for the full duration of the investigation meant that the Team Leader spent more time on the initiative than intended (although this may also have had the benefit of a more consistent and cohesive approach).

In summary then, this investigation had multiple objectives that required somewhat different methodologies, resources, and timelines, which in many ways was quite challenging to the Team and the Steering Committee. Nevertheless, enough progress was made on objectives to finally deliver a number of outcomes, including the *Vision Statement* and *Implementation Plan*. In terms of generalisability to other ALTC Initiatives and Projects, the key to the investigation's successful outcomes would appear to be to have a "quorum" of motivated and capable Team Members and support staff, as well as a capacity to modify directions and strategies in the rapidly changing environment of psychology education and training.

9. Conclusions

On the basis of the analyses undertaken in this investigation, we argue strongly that the model for education and training in psychology in Australia would appear to be the best internationally, or at the very least, the best fit to the Australian context. One strength is its internationally based scientist-practitioner approach, providing a philosophy that most other disciplines and professions lack in their approach to education and training. Nevertheless, continued review of the model in the light of global sustainability considerations is essential. We also argue that the discipline of psychology has been slow to apply psychological knowledge to facilitate university student learning and performance; that is, there has not been discipline-wide support for evidence-based practice in teaching. A start to this process has been made with this investigation: support of the delineation of graduate attributes for the undergraduate program, and of the creation and sharing of evidence based practice in the teaching of psychology. Finally, we need strategic leadership in psychology at all levels to achieve the great potential that the discipline and profession has in contributing to the wellbeing and future of all Australians.

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[This paper is an intelligent discussion of how universities (cf the VET sector) are responding to the original ACCI & BCA (2002) paper "Employability skills for the Future" (Department of Education, Science and Training, Canberra.). To quote: "The recognition of 'scholarly enquiry' or 'scholarly attitude to knowledge' differentiates most higher education policies on graduate attributes from the skills groupings contained in the Employability Skills Framework. The policies developed by universities also recognise an end use of the framework that goes beyond employment. Most contain attributes related to 'ethical practices' and 'social responsibility'" (pg. 6). In terms of how those eight employability skills are represented within the six graduate attributes outlined in this document: self-management, planning and organising, learning skills and initiative and enterprise skills, are explicit in Graduate Attribute 6; teamwork and communicating in Graduate Attribute 5; using technology in Graduate Attribute 2; and problem solving in Graduate Attribute 3.]

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11. Appendices

1.1 Initial Objectives, Approach, and Outcomes

The general approach in this investigation was to give initial priority to Objectives 1, 2, 4 and 7 (see below), as these either were already underway as part of the preparation for the investigation (e.g., 7), were necessary precursors to other objectives (e.g., 4 before 5), or would take some time to build toward (e.g., 3). Within the first few months of the investigation, as the primary focus shifted from support of the Fellowship Project objectives to the broader Discipline Study Investigation objectives, the core Team and Steering Committee were established. Members were drawn into the workshops and investigation meetings as seemed appropriate to the purpose and information and documents were also distributed through email to different members for comment as appropriate. Summaries of some of these face-to-face meetings, which were essential to the progress of these meetings, are provided in the *ALTC Psychology Fellowship and Discipline Study Activity Summary* (*Appendix 1.2*). The methodologies varied according to the Objective and the stage of development toward the Objective, but often involved literature review and web-based searches (e.g., Objective 2), primary survey administration and data analysis (e.g., Objective 3), interviews (e.g., Objectives 2 and 3), and workshops whereby some consensus was reached (e.g., Objective 4).

For each objective, we briefly summarise what we achieved (outcomes), how we achieved it (approach and methodology), and what still needs to be done.

Objective 1: *Review of the previous AUTC/ALTC Psychology investigation and how it informs the creation of a diverse, future-oriented vision for psychology in Australia.*
This review was the first objective, as it would inform the progress of the investigation and the developing vision for psychology. The review was drafted early in the investigation, and strongly influenced some of the strategies used (e.g., specific questions in the HODSPA interviews; aspects of the pilot survey of UNSW graduates; focus on converting APEN to an APS interest group). A final review is presented in *Appendix 1.3*.

Objective 2: *Review of developments in the USA, Europe, and China regarding internationalisation of education in psychology and the design of internationalised curricula.*
This recommendation emerges partly from the previous Scoping Investigation. Moreover, internationalisation is a current priority of universities and the Federal Government. Four activities were undertaken to achieve this objective: (a) consideration of Littlefield et al.'s (2007) recent review of international trends in education and training; (b) J. Cranney's attendance at the NITOP conference in Florida in Jan 2007, where she made contact with leaders in the field including Bill Buskist (2007-2008 President), Tom Pusateri (Executive Director of Division 2, APA), and Caprice Lantz (UK Psychology Network); (c) organisation of symposia and workshops at the ISSoTL Conference in July 2007, where we had input from Tom Pusateri (APA) Annie Trapp (Director, Psychology Network, UK), and Richard Hawkins (JCU at Singapore); and (d) our own selective review of psychology programs in a number of countries,

including China. As a result of these activities, we concluded that our model of education and training in psychology is the best internationally in terms of timely and efficient coverage of necessary curricula and training essential skills. For example, a simple analysis of the length of the programs tells us that we are approximately equivalent to the Bologna model of 3+2+1 (UG + PG + internship) for clinical psychology training, but far briefer than the U.S.A. 4+5+1 model. Similarly, comparisons with other Australian training programs in areas such as undergraduate nursing and accounting indicates that although these programs may be briefer, the career options in these fields are much narrower than the opportunities afforded with the scientist-practitioner-based 4+2 (UG + PG) model for professional postgraduate training. Indeed, one of the core strengths of psychology education and training is that there is a strong and internationally uniform approach to education and training, that is, the scientist-practitioner model. Very few other disciplines or professions possess this unifying approach, which is rated highly by both objective outsiders and by HODSPA members (average rating of importance of the model to education and training = 8.69, *SD* = 0.53 with ratings ranging from 8 to 9.5; on a scale of 0 = *not at all important*, to 10 = *absolutely essential*). Some suggestions for a better application of the model to the current program structure were also made, and incorporated into the *Vision Statement* and *Implementation Plan*.

Given that the Littlefield et al. (2007) review had been published early during the tenure of the investigation, it was not necessary to publish another review. Instead, we focused on writing papers on aspects of models of education and training in psychology (see ALTC Exchange *Australian Psychology Educators Network (APEN)*, including resources associated with some of the activities above, such as conference abstracts).

Objective 3*: Development and implementation of a strategy for the creation of a diverse, future-oriented vision for psychology in Australia, and prioritised strategic plans to deliver that vision.*

Nine activities were undertaken to achieve this objective: (a) we drew upon the conclusions and suggestions of the former AUTC/ALTC project, including those regarding CEQ data; (b) from the beginning of the project, key representatives of the two peak disciplinary bodies in psychology, the APS (Mary Katsikitis and Nicholas Voudouris, successive Managers of Science, Academia, and Research) and HODSPA (Henry Jackson and Patrick Heaven, successive Chairs) participated in the management of and influenced the direction of this investigation, and others such as Iain Montgomery (Chair, APS-PDAC) and Lyn Littlefield (CEO, APS) were drawn in for specific events; (c) a number of key meetings were held to obtain stakeholder involvement in discussing the future of psychology, including the March 2007 Discipline Study Investigation Meeting, a Forum at the 2007 APS Conference, the 2007 and 2008 May HODSPA Meetings, and a special meeting with APS-PDAC members in December 2007; (d) we learnt much from discussion with international colleagues at the NITOP, ISSoTL, and APS conferences, (e) we conducted interviews of the majority of the members of HODSPA, (f) we conducted a selective review of some allied health and other professional training programs in Australia, (g) we conducted a limited survey of 2007 honours students, (h) we conducted a limited survey of UNSW graduates (those who had, and had not, completed honours), and (i) we conducted a survey of high-school teachers in psychology. J. Cranney also became a member of APS-PDAC in April 2007, and this involvement resulted in invaluable learning about the history, current reality, and potential future issues regarding education and training in Australian psychology. In addition, as a result of the activities mentioned above, J. Cranney was also an invited member of a specially convened APS National Psychology Education and Training Reference Group, whose work is ongoing. Thus, a *Vision Statement* was created, with key objectives and associated prioritised strategies. We have also developed a more detailed list of suggested courses of action for many of the strategies (*Implementation Plan*), and these have been delivered, along with the *Vision Statement*, to the peak disciplinary bodies. Although this *Vision Statement* was developed

late in the investigation, we feel that it is well informed by the major stakeholders, including students, and so is a sound basis for further discussion. That is, it is a living document that will be maintained by key stakeholders such as APEN, and we will encourage the peak discipline bodies to adopt whatever components they feel relevant to their own missions. In addition, collaborative grant application writing to address some of the suggested courses of action has been and will continue to be an outcome of this Objective.

Objective 4: *Support of the Fellowship Project whose #1 goal is the explicit delineation of a set of suggested goals and student learning outcomes (SLOs) for the Australian undergraduate psychology program, as well as the development of a curriculum structure resource.*
Part of the rationale for this objective is that SLOs should be an integral part of the vision for the future of psychology, and indeed, this has occurred. Three activities were undertaken to achieve this objective: (a) a review of a number of international and national sources were undertaken, including the current APAC Standards, the AUTC/ALTC Project, the APA Guidelines for the Undergraduate Psychology Major (2006), Project EuroPsyT (2001), the School of Psychology UNSW Graduate Attributes (Cranney et al., 2005), and stakeholder input at various forums; (b) iterative development of the GA from an initial drafting in June 2007 to its current version, with stakeholder input ranging from an APEN workshop at ISSoTL to PDAC input at its 2008 January meeting; and (c) gradual integration of some of the key GAs and SLOs into the APAC standards. This latter activity is extremely significant, as it means that every Department/School of Psychology will need to demonstrate in applications for accreditation how their programs address these GAs and SLOs. Although this is only a start in the integration, development, assessment and evaluation of GAs/SLOs in the Australian undergraduate program, it is a significant start. Moreover, further work on the GAs/SLOs, particularly in terms of assessment, is one of the suggested courses of action outlined in the *Implementation Plan* of the *Vision Statement*. Examples of curriculum structure resources will soon be created by a number of Universities who are "early adopters" of the GAs, and these will be fed into ALTC Exchange *Australian Psychology Educators Network (APEN)* site. Some of the outcomes of the integration of the GAs into the curriculum structures are that (a) 3-year graduates will be more aware of the skills they have acquired during their psychology education, and (b) there should be better alignment of learning outcomes and assessment. These are concerns that were raised in the AUTC/ALTC Psychology Project (Lipp et al., 2006).

Objective 5: *Support of the Fellowship Project whose #2 goal is to establish a process for the selection and sharing of evidence-based learning, teaching and assessment materials that are explicitly associated with the suggested student learning outcomes, and to create a distribution portal for these materials.*
This goal of the Fellowship project could not fully proceed until (a) the GAs had received broad acceptance by the peak discipline bodies, and (b) the ALTC Exchange was ready to use. In the meantime, we commissioned Learning&Teaching@UNSW to create a basic web structure that we hope to transfer to the ALTC Exchange before the end of the Fellowship project, and we will begin to populate the site with resources. We intend to take advantage of any resource review systems that the ALTC Exchange implements. We have also transferred the original APEN website materials to the APS TLAPIG website, which we created as part of the Fellowship. This platform will advertise psychology-relevant developments on the ALTC Exchange. In addition, we have applied for further funding to build on these resources. It is intended that the learning and teaching resources will include web-based learning modules, portfolio development tools, experiential learning strategies for cultural competence training, and assessment strategies that are aligned with curriculum objectives but take into account the APAC standards regarding assessments as well as the economic realities of current university teaching. A key criterion in the selection of this material will be sustainability. With the advent of the systems akin to the RQF,

there is an increased need to share existing resources and knowledge regarding learning and teaching. The dissemination of these resources should assist both individual lecturers and departmental undergraduate education committees to deliver high-quality educational experiences in an increasingly resource-depleted environment.

Objective 6*: Address specific SLO and curriculum issues raised by the AUTC/ALTC Project, such as the development of particular resources or plans to address specific issues.*
The AUTC/ALTC Project identified a number of gaps, besides the lack of explicit GAs, in the undergraduate curriculum. One was the lack of material on cross-cultural training and on indigenous issues. Fortunately, a simultaneously ALTC funded project, "Disseminating strategies for incorporating Australian indigenous content into psychology undergraduate programs throughout Australia", has adequately addressed this issue (see http://www.unisanet.unisa.edu.au/learn/ unaipon-psyia/?PATH=/Resources/tcc/Integrating+Australian+Indigenous+content+and +pedagogies+into+psychology+education/&default=Welcome.htm), and continues to disseminate the outcomes of their project through conferences such as that attended by J. Cranney and L. Mellish in July 07 (Psychology and Indigenous Australians: Effective Teaching and Practice). Another identified gap was the lack of resources concerning education about the scientist-practitioner model. Some resources have been identified and will be placed in the ALTC Exchange. Other aspects of the scientist-practitioner model are the subject of courses of action in the *Implementation Plan*. A third identified issue was a perceived conflict between service teaching needs and the discipline perspective; and again this is the subject of courses of action in the *Implementation Plan*. It should be noted, however, that both the resources that will be available on the ALTC Exchange, and the community of practice that is mediated by the APEN APS Interest Group, should go some way toward supporting quality service teaching.

Objective 7*: Improved quality of learning and teaching in psychology, and potentially in all disciplines at the university level.*
Communication of DBI activities and outcomes has been, and will continue to be, achieved partly through ongoing APEN activities. This Network is the product of the recent AUTC/ALTC Psychology Project, and its online presence is now hosted by APS as the Teaching, Learning and Psychology Interest Group. Under the banner of APEN, symposia, posters, workshops, forums and satellite meetings were organised for the Experimental Psychology Conference in 2007 and 2008, the ISSoTL Conference in 2007, and the APS Conference in 2007 and 2008 (see ALTC Exchange *Fellowship and Discipline Study Activity Summary* for a full report of activities and associated resources). The dissemination, uptake, and further development of the outcomes of the immediate past AUTC/ALTC Psychology Project, the current investigation, and other such projects, will continue as long as APEN is actively supported by its members and by APS. Relatedly, a key aspect of APEN's agenda is to support and disseminate evidence-based practice in facilitating university student learning and performance. The impact of APEN is strengthened by inclusion of members in key APS committees (e.g., PDAC –J. Cranney; SARAG –S. Provost & O. Lipp; the APS National Psychology Education & Training Reference Group – J. Cranney). Project outcomes will also be disseminated during 2008 through attendance at the Psychology Network's PLAT conference (J. Cranney, L. Cohen, and D. French), the International Conference on the Teaching of Psychology (P. Wilson and D. French), and the NITOP Conference 2009 (S. Provost). In addition, J. Cranney is also attending the APA National Conference on Undergraduate Education in Psychology in June 2008. It should be noted that these occasions also result in new knowledge, which will continue to influence the *Vision Statement* and the *Implementation Plan*, which included strategies to improve the quality of learning and teaching, including the promotion of research in this area.

1.2

ALTC Psychology Fellowship and Discipline Study Activity Summary

Building upon the AUTC/ALTC work on the undergraduate psychology curriculum accomplished by Ottmar Lipp, Steve Provost and others (from UQ, USC, and U.Tas), Henry Jackson (former Chair of HODSPA), Mary Katsikitis (former APS Manager of Science, Academia and Research), and Jacquelyn Cranney (ALTC Associate Fellow), were granted funding for an investigation "Designing a future-oriented vision for undergraduate psychology in Australia" under the Discipline-based Initiative Scheme (DBI);. The primary objective of the initiative involved developing and implementing a strategy for the creation of a diverse, future-oriented vision for psychology in Australia, with prioritised strategic plans to deliver that vision. Jacquelyn Cranney also received funding for the ALTC Associate Fellowship "Sustainable and evidence-based learning and teaching approaches to the undergraduate psychology curriculum". This Fellowship is driving a nationally focused project seeking to (a) address issues raised by a prior scoping project in psychology, and (b) facilitate national uptake of sustainable and evidence-based learning and teaching approaches to the undergraduate curriculum. The objectives of the project involved (a) building curriculum templates that are compatible with the Australian Psychology Accreditation Council Standards and that reflect educationally sound principles; (b) establishing a process for the selection and sharing of learning and teaching materials that are explicitly associated with the templates; and (c) facilitating the creation and adoption of evidence-based learning and teaching strategies in psychology, to improve student learning outcomes.

Substantial progress was made on the projects, through various activities involving extensive stakeholder consultation as outlined below.\

DATE	TITLE	ACTIVITY	LOCATION	RESOURCES
Feb 07 – May 08	National and International Comparisons of Models of Education	Analyses	UNSW	Summaries
1 March 07	APEN: The Research-Teaching Nexus	Workshop	UNSW	Summary Program
2 March 07	DBI: The Future of Psychology Training in Australia (Steering Committee Meeting)	Workshop	UNSW	Summary Program
13-15 April 07	EPC: Effective university student learning papers	Conference	Canberra	EPC Abstracts
4 May 07	HODSPA Meeting	Panel	University of Sydney	Summary
July 07 – May 08	Head of Schools Interviews	Interviews	Aus. Universities	Summary
3 July 07	ISSoTL: The Psychology of University Student Learning and Performance I & II	Symposium	UNSW	Summary Presentations
4 July 07	ISSoTL: International perspectives on undergraduate psychology: Student learning outcomes and assessment, accreditation, and future directions I & II	Symposium	UNSW	Summary Presentations
4 July 07	APEN: Issues in the Teaching of Psychology: From Research to Future Training	Satellite to ISSoTL	UNSW	Summary Program Presentations
5 July 07	Mini-DBI and Steering Committee Meeting	Meeting	UNSW	Minutes

12-13 July 07	Psychology and Indigenous Australians: Effective Teaching and Practice	Conference	University of South Aus.	Summary
16 July 07	Consultation with N. Voudouris & L. Littlefield of APS	Meeting	APS	Summary
28 August 07	ULTAG meeting: Graduate Attributes	Meeting	UNSW	Summary
Sept - Nov 07	Graduate Outcomes Survey	Survey	UNSW	Summary
25-29 Sept 07	APS SoTL Symposium	SoTL Symposium	Brisbane	Summary Presentations
27 Sept 07	Steering Committee Meeting	Meeting	Brisbane	Summary
28 Sept 07	HODSPA Meeting – Presentation of GA Document	Meeting	Brisbane	Summary
25-29 Sept 07	APS Conference Forum	Forum	Brisbane	Summary Presentations
5 October 07	Mini-DBI Meeting	Meeting	UNSW	Minutes
18 October	APEN: The Research-Teaching Nexus	Workshop	UWS	Summary
October 07	Service Teaching: Australian High-Schools Survey	Survey	Schools in Vic, Tas, SA	Summary
October 07	Honours Survey	Survey	Aus. Universities	Summary
6 December 07	DBI Meeting (Steering Committee Meeting)	Meeting	APS Melbourne	Summary
26 January 08	Mini-DBI Meeting	Meeting	UNSW	Summary
25 February 08	APAC Meeting	Meeting	APS Melbourne	Graduate Attributes Doc.
6 March 08	APS National Psychology Education and Training Reference Group	Meeting	APS Melbourne	Summary
20-21 March 08	Mini-DBI Meeting	Meeting	UNSW	Summary
25-26 March 08	DBI Meeting	Meeting	UNSW	Summary
27 March 08	APEN EPC Satellite Meeting	Meeting	Perth	Summary
30 April 08	Vision Statement	Report	UNSW	Document
30 April 08	Implementation Plan	Report	UNSW	Document

1 May 08	Final Report	Report	UNSW	Document
23 May 08	APS National Psychology Education and Training Reference Group	Meeting	APS Melbourne	Summary
27 May 08	DBI Vision Statement Meeting 1	Meeting	APS Melbourne	Summary
13 June	DBI Vision Statement Meeting 2	Meeting	APS Melbourne	Summary
22-27 June 08	APA National Conference on Undergraduate Education in Psychology: Blueprint for the Discipline's Future	Conference/Workshop	Uni. Of Puget Sound, Washington, USA	Preview
1-3 July 08	PLAT Conference	Conference	Bath, UK	Preview
7 August 08	DBI Vision Working Party Meeting	Meeting	APS Melbourne	Summary
11 August 08	APS National Psychology Education and Training Reference Group	Meeting	APS Melbourne	Preview
Sept 08	APS Symposia	Symposia	Hobart	Preview
Sept 08	APS APEN Teaching Learning and Psychology	Satellite and AGM	Hobart	Preview
Jan 09	National Institute for the Teaching of Psychology	Conference	St Petersburg, Florida, USA	Preview
Jan 09	UK Psychology Network Meeting	Meeting	York, UK	Preview

1.3

Project Evaluation

Learning Outcomes and Curriculum Development in Psychology

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(finalised June, 2008)

Summary

The scope of this project was "to provide a review of models and methods of teaching, curriculum development and learning outcomes within psychology" (p.1). The project was undertaken during the period 2004-2006, and was driven by a team of academics from the University of Queensland, the University of Tasmania, and Southern Cross University. The final report, available at http://www.altc.edu.au/carrick/webdav/users/siteadmin/public/ grants_2005project_learningoutcomes_psychology_finalreport.pdf, was finalised in November 2006. In order to meet the objectives of the project, a variety of methods were employed, including structured interviews, surveys, internet searches of departmental websites, analysis of archival data, and discussion and information gathering at Network Meetings. The report contains a great deal of useful information and raises a number of issues which need to be addressed by the discipline in the near future. In summary, the project met most of its original objectives to a high standard, and is likely to have a lasting impact on the discipline of psychology in Australia.

Introduction

The scope of this project was "to provide a review of models and methods of teaching, curriculum development and learning outcomes within psychology" (p.1). This project review is primarily based on the Final Report, which consists of seven chapters:
1. Scope, Aims, Methodologies and Executive Summary
2. The History and Framework for Teaching of Psychology
3. Curriculum Development in Psychology Programs
4. Teaching of Psychology in Other Disciplines
5. Graduate Outcomes in Psychology
6. Current Issues and Challenges, Leadership and Best Practice
7. Project Outcomes, Dissemination and Proposals to Ensure Continued Impact
This project review will be based on an assessment of whether the project met its original objectives as outlined in Chapter 1, and will make reference to Chapter sections as appropriate.

Objectives

1. Identify the disciplinary basis for evaluation

Ratcliff (1997, p.15) stated that:

> Discipline-based curricula are a social construction developed by academics. Over time, knowledge has been organised into key terms, concepts, models, and modes of inquiry. Academics add to and test these knowledge constructs using their disciplinary associations as means of verbal and written communication. Curricular change is conditioned by the role of the disciplines in conserving and transmitting their organisation and representation of what is worth knowing, why, and how (p.15).

Chapters 1 and 2 state that an in-depth literature review was undertaken to identify the discipline base and the prevailing models of teaching. In the report, however, the discipline base strictly is not identified. This may have been, as implied in the quote above, because "discipline" is a social construction, and implicit in our organisations and representations. Alternatively, one could argue that we should avoid essentialism, and take an operational approach in regard to defining the discipline. As such, it could be argued that this project report operationally defines the discipline in a number of ways, for example, by its overview of units offered by psychology departments (Chapter 2), by its analysis of the first year psychology textbooks (presented in a Poster at the 2004 UniServe Science Conference), and by the disciplinary base implicit in the APAC standards (partly described in Chapter 2).

It should be noted, however, that the distinctiveness of psychology as a discipline is sometimes seen to be challenged, especially in Chapter 4 where it is clear that other disciplines/professions apply knowledge derived from psychological science to the specific contexts of their professions, potentially without the full understanding of the basis of this knowledge. Integral to this lack of explicit identification of the disciplinary base may be the focus on content—that is, disciplinary knowledge—in undergraduate programs and the accreditation processes, without explicit delineation of skills and attitudes that we may implicitly expect our undergraduates to acquire during their program of study. In summary, this lack of identification of the discipline base may be due to our implicit notions of what the discipline base is, but may also highlight our need to explicitly identify what makes our undergraduate training in psychology distinctive, particularly in terms of student learning outcomes, and in relation to other disciplines/professions.

The report does identify the prevailing model of teaching as the scientist-practitioner model, and provides a useful review of literature that both supports and challenges this approach. Some of the issues include the relative balance across undergraduate and postgraduate programs, a critique of logical positivism, and possible alternatives. One issue that appears to muddy this debate is a confusion in the literature between the general approach to the training of professional psychologists, which emphasizes an appreciation of the scientific method as the genesis of psychological knowledge, and actual teaching methods, which traditionally have been similar to that of the other sciences, but have not necessarily "moved" with the current student-centred learning and teaching methods in science.

From a social constructivist framework, then, the report does meet this first objective; nevertheless, it is clear that much more work needs to be done in terms of "operationalising" psychology as a discipline, and as a profession.

2. Provide an overview of the teaching of psychology in Australian universities

This objective appropriately involved a significant proportion of the project's resources, as a large amount of data (website analysis, interviews, questionnaires, workshops) needed to be gathered, analysed, and interpreted. Table 1.1 summarises the universities offering programs, and this makes clear the diversity of Faculties in which Schools are situated, which exemplifies the problem psychology has in being identified as a science. A brief overview of the undergraduate psychology program structure and APAC requirements, and an overview of the units offered, is given in Chapter 2. Chapter 3, with a mix of figures and individual comment, very clearly presents the results of the Departmental survey regarding the factors considered important in influencing curriculum content, delivery, innovation and change. A useful summary of the modes of delivery on-campus is given (e.g., percentage of lectures vs. labs), and some issues regarding off-campus delivery are also raised. The uptake of new technologies is also discussed, as are the usual assessment methods.

Chapter 4 provides a comprehensive summary of some of the issues raised during the project's multi-method investigation of the teaching of psychology in other disciplines. Identified concerns appear to be primarily as a result of the mismatch of disciplinary perspectives and needs, including "inappropriate" content, and a sense of isolation felt by those psychology academics situated in other disciplines. These are very important issues that Australian psychology will need to directly address as the external push toward interdisciplinary and interprofessional training continues.

In summary, there is no doubt that the project met this objective, to a very high standard.

3. Assess the differing programs' capacity to meet the interests and needs of students, employers, the profession, and the scientific discipline

Objective 2, which constitutes the primary work and contribution of this project, presents a disciplinary perspective, with little reference to the profession, which is understandable given that the focus is on the undergraduate program (professional training in psychology is undertaken at the postgraduate level). The "needs of the students" is approached in this project by examining CEQ and GDS data. The CEQ data analysis and interpretation in this project is extensive, comprehensive, and useful. For example, comparisons across similar large programs (e.g., history, nursing) are given, as are across-university (and year) comparisons. The message is clear—although ratings have gradually improved over the years, we in psychology must acknowledge our strengths—for example, in perceived generic skill training (likely those report-writing and critical thinking skills)—and our weaknesses, for example, in perceived teaching effectiveness ratings. As our research output has continued to remain strong in an international context, we have been somewhat successful in improving perceived teaching effectiveness, but we need to be "thinking smarter" about how to achieve genuine improvements.

The GDS data are clearly inadequate for psychology, and emphasises the need for a comprehensive survey of graduates (three-year majors, as well as four-year majors), as well as their employers. There appears to be almost no data of this kind in Australian psychology.

In summary, the CEQ analyses were useful in drawing our attention to our strengths and weaknesses, but the project was unable to undertake more detailed surveys of graduates, and in particular, of the employers, in terms of their perceptions of the current educational programs in psychology, and their needs.

4. Identify innovative practice in the teaching of psychology

Through the Departmental survey, the drivers for innovation and change were identified (Chapter 3). Examples of innovative practice were identified through the surveys and Network Meetings, and some are described in Chapter 6. The project identifies the clear needs for (a) institutional support and (b) acknowledgement and reward of innovative practice, given the cost to individual academics engaging in such innovation. Examples of innovative practice were also loaded onto the APEN website, although there was a problem of sustainability of this website, as identified in the next section.

In summary, this project objective has been met; nevertheless, the issue of sustainable dissemination of innovative practice remains.

5. Develop a platform for future scholarly discussion on the teaching of psychology

The project itself, particularly with its Network Meetings and conference presentations and workshops, provided a platform for scholarly discussion on the teaching of psychology. The scholarly articles that emerged from the project will serve as a stimulus for future discussion. A major achievement of the project, however, was the establishment of the Australian Psychology Educators Network (APEN), with an associated website. Unfortunately the website itself appears to be relatively inaccessible and inactive, and this requires some action, potentially contingent on further funding and/or discipline support. It is clear, however, that the Network Meetings established a group of colleagues who now know that they are all interested in the teaching of psychology, and this will continue to bear fruit in future collaborations. In summary, the project was relatively successful in achieving this objective.

6 & 7. Develop print- and web-based material for dissemination & Establish an evaluation framework for the project, and complete a final report

A hard copy of the final report was distributed to all Departments of Psychology, and more importantly, is readily accessible on the Project and ATLC websites. Although a "straw vote" taken at a March 2007 workshop indicated that few participants knew about the project, it is highly likely that this situation is changing. A number of conference presentations have been and continue to be made nationally and internationally, and the work is becoming widely known (e.g., the final report is likely to be cited in an upcoming edited book on the future on undergraduate psychology education in the U.S.A). A key ingredient to continued dissemination and development would appear to be the continued collaboration amongst Network members on teaching and curriculum projects, mostly under the banner of APEN, and at a minimum, APEN is likely to continue to contribute specialist symposia at the annual APS conference.

Unintended Outcomes

The identification of specific gaps and needs, particularly in Chapter 6, was a very useful contribution of this project. These needs include:

- Improved teaching of psychology in other disciplines
- The delineation of graduate attributes for the undergraduate psychology program
- Improved aligned assessment procedures
- Valid data regarding graduate evaluations of psychology programs, particularly by 3- and 4-year graduates
- Employer evaluation of graduates of psychology, particularly of 3- and 4-year graduates
- A re-evaluation of the curriculum from the perspectives of the scientist-practitioner model, and the needs of different stakeholders (students, employers, discipline, profession)
- Support of the identification, practice and dissemination of evidence-based teaching and learning
- Greater recognition of psychology as a science, and as an evidence-based profession
- Strategies for greater internationalization
- Strategies for the integration of material on cross-cultural and indigenous psychology
- Strategies for more effective use of technologies in learning and teaching.

These issues overlap substantially with those identified by recent national and international discussions of undergraduate education generally (e.g., Association of American Colleges and Universities, 2007).

Postscript

The reviewer's own teaching practice, which led to contributions to Network Meetings and discussions with other members, led to applications to the ATLC Institute for a Discipline-based Initiative investigation, "Designing a Diverse, Future-oriented Vision for Undergraduate Psychology in Australia", and an Associate Fellowship, "Sustainable and evidence-based learning and teaching approaches to the undergraduate psychology curriculum". The current and continuing outcomes of these projects address some (e.g., delineation of graduate attributes for the undergraduate psychology program) but not all (e.g., employer survey) of the issues outlined above. Moreover, continuing collaborations amongst APEN members have resulted in further applications for funding to advance the outcomes of teaching of psychology in a variety of ways.

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3.A1

Graduate Attributes of the Four-Year
Australian Undergraduate Psychology Program

August 12, 2008

Disclaimer: The views expressed in this report do not necessarily reflect the views of The Carrick Institute for Learning and Teaching in Higher Education Ltd, now renamed as the Australian Learning and Teaching Council.

Introduction

The *Graduate Attributes of the Australian Undergraduate Psychology Program* is a comprehensive list of the capacities or attributes that undergraduate students of psychology can develop during their four years at university. The attributes comprise the knowledge, skills and values that are consistent with the science and application of psychology. Each of the six attributes is accompanied by a list of suggested student learning outcomes. The learning outcomes provide students with focal points to demonstrate their attainment of the graduate attributes, and provide academics with focal points for measuring student performance. The graduate attributes and related learning outcomes are not intended as a set of rules or directives, but rather as recommendations based on research and consultation with a wide range of stakeholders (see Appendices). Different levels of development of these graduate attributes and learning outcomes would be expected across the four years of the program. Appendix I provides more detailed suggestions for how to use this document, as well as the rationale for considering graduate attributes and learning outcomes. Student learning outcomes that are currently considered to be central to the three year course are indicated with a single asterisk, while those central to the fourth year course are indicated with a double asterisk.

Graduate Attribute 1: Knowledge and Understanding of Psychology

Demonstrate understanding of the major concepts, theoretical perspectives, empirical findings, and historical trends in the core topics of psychology, as outlined by the National Accreditation Body (currently the Australian Psychology Accreditation Council).

Suggested learning outcomes:

- *Display basic knowledge and understanding of the following core[††] topics:
  - abnormal psychology
  - biological bases of behaviour
  - cognition, information processing and language
  - health and well-being
  - individual differences in capacity and behaviour, testing and assessment, personality
  - learning
  - lifespan developmental psychology
  - motivation and emotion
  - perception
  - social psychology
  - history and philosophy of psychology
  - intercultural diversity and indigenous psychology

- **demonstrate knowledge of the theoretical and empirical bases underpinning the construction, implementation, and interpretation of some of the most widely used cognitive and personality assessments
- **demonstrate knowledge of the theoretical and empirical bases underpinning evidence-based approaches to psychological intervention
- Delineate psychology as a scientific discipline and describe its major objectives.
- Explain the major themes (e.g., interaction of genetics and environment) and perspectives (e.g., behavioural, evolutionary, sociocultural) of psychology.
- Explain psychological phenomena using the concepts, language, and major theories of the discipline.

Graduate Attribute 2: Research Methods in Psychology

Understand, apply and evaluate basic research methods in psychology, including research design, data analysis and interpretation, and the appropriate use of technologies.

Suggested learning outcomes:

- *Describe the basic characteristics of the science of psychology.
- *Describe, apply and evaluate the different research methods used by psychologists.

[††] "Core" is used in the sense that these topics must be covered by programs, and not necessarily because they are substantive subject areas in psychology.

- *Demonstrate practical skills in laboratory-based and other psychological research.
- Describe and evaluate questionnaire and test construction, implementation and interpretation.
- Describe the key principles for designing, implementing and evaluating programs of behaviour change.
- Locate, evaluate and use information appropriately in the research process.
- Undertake statistical analysis appropriately.
- Use basic web-search, word-processing, database, email, spreadsheet, and data analysis programs.
- *Design and conduct basic studies to address psychological questions: frame research questions; undertake literature searches; critically analyse theoretical and empirical studies; formulate testable hypotheses; operationalise variables; choose an appropriate methodology; make valid and reliable measurements; analyse data and interpret results; and write research reports.

Graduate Attribute 3: Critical Thinking Skills in Psychology
Respect and use critical and creative thinking, sceptical inquiry, and the scientific approach to solve problems related to behaviour and mental processes.

Suggested learning outcomes:

- *Apply knowledge of the scientific method in thinking about problems related to behaviour and mental processes.
- *Question claims that arise from myth, stereotype, pseudo-science or untested assumptions.
- Demonstrate an attitude of critical thinking that includes persistence, open-mindedness, and intellectual engagement.
- Demonstrate a capacity for higher-order analysis, including the capacity to identify recurrent patterns in human behaviour.
- Evaluate the quality of information, including differentiating empirical evidence from speculation.
- Identify and evaluate the source and context of behaviour.
- *Recognise and defend against the major fallacies of human thinking.
- Evaluate issues and behaviour using different theoretical and methodological approaches.
- Use reasoning and evidence to recognise, develop, defend, and criticise arguments and persuasive appeals.
- Demonstrate creative and pragmatic problem solving.

Graduate Attribute 4: Values in Psychology
Value empirical evidence; tolerate ambiguity during the search for greater understanding of behaviour and knowledge structures; act ethically and professionally; understand the complexity of sociocultural and international diversity; and reflect other values that are the underpinnings of psychology as a discipline.

Suggested learning outcomes:

- Recognise and respect social, cultural, linguistic, spiritual and gender diversity.
- **Explain how the science and practice of psychology is influenced by social, historical, professional, and cultural contexts.
- Identify and describe the sociocultural and international contexts that influence individual differences in beliefs, values, and behaviour.
- *Use information in an ethical manner (e.g., acknowledge and respect the work and intellectual property rights of others through appropriate citations in oral and written communication).
- Recognise how privilege, power, and oppression may affect prejudice, discrimination, and inequity.
- Explain how prejudicial attitudes and discriminatory behaviours might exist in oneself and in others.
- Recognise the limitations of one's psychological knowledge and skills, and value life-long learning.
- Display high standards of personal and professional integrity in relationships with others.
- Exhibit a scientific attitude in critically thinking about, and learning about, human behaviour, and in creative and pragmatic problem solving.

- *Evaluate psychologists' behaviour in psychological research and other professional contexts in relation to the Australian Psychological Society *Code of Ethics* and the complementary *Ethical Guidelines*, as well as the Australian *National Practice Standards for the Mental Health Workforce*.
- Promote evidence-based approaches to understanding and changing human behaviour.

Graduate Attribute 5: Communication Skills in Psychology
Communicate effectively in a variety of formats and in a variety of contexts.

Suggested learning outcomes:

- *Write a standard research report using American Psychological Association (APA) structure and formatting conventions.
- Write effectively in a variety of other formats (e.g., essays, research proposals, reports) and for a variety of purposes (e.g., informing, arguing).
- *Demonstrate effective oral communication skills in various formats (e.g., debate, group discussion, presentation) and for various purposes.
- Demonstrate basic interviewing skills.
- Demonstrate effective interpersonal communication skills including the abilities to: listen accurately and actively; use psychological concepts and theories to understand interactions with others; identify the impact or potential impact of one's behaviour on others; provide constructive feedback to others; adopt flexible techniques to communicate sensitively and effectively with diverse ethnic and cultural partners, including in the context of team-work.
- Collaborate effectively, demonstrating an ability to: work with groups to complete projects within reasonable timeframes; manage conflicts appropriately and ethically.

Graduate Attribute 6: Learning and the Application of Psychology
Understand and apply psychological principles to personal, social, and organisational issues.

Suggested learning outcomes:

- *Describe major areas of applied psychology (e.g., clinical, counselling, organisational, forensic, health).
- *Apply knowledge of legislative frameworks (including privacy, human rights).
- *Apply knowledge of consumer and carer participation in psychological care.
- *Apply knowledge of psychology, society and the workplace/influencing systems.
- Apply psychological concepts, theories, and research findings to solve problems in everyday life and in society.
- Reflect on one's experiences and learn from them in order to identify and articulate one's personal, sociocultural, and professional values; demonstrate insightful awareness of one's feelings, motives, and attitudes based on psychological principles.
- Apply psychological principles to promote personal development through self-regulation in setting and achieving career and personal goals; self-assess performance accurately; incorporate feedback for improved performance; purposefully evaluate the quality of one's thinking (metacognition).
- *Demonstrate a capacity for independent learning to sustain personal and professional development in the changing world of the science and practice of psychology.

Appendix I: Notes

Graduate Attributes and Student Learning Outcomes

A general consensus has been reached in relation to both the general nature of graduate attributes and a number of principles informing their place in higher education. The most commonly cited definition of graduate attributes in Australian higher education was produced by a DETYA-funded project led by John Bowden, Keith Trigwell and others in 2000:

> Graduate attributes are the qualities, skills and understandings a university community agrees its students should develop during their time with the institution and consequently shape the contribution they are able to make to their profession and society. …. They are qualities that also prepare graduates as agents of social good in an unknown future (Bowden et al, 2000).

The *Graduate Attributes of the Australian Undergraduate Psychology Program* is a comprehensive list of the capacities or attributes that undergraduate students of psychology can develop during their time at university. The attributes comprise the knowledge, skills and values that are consistent with the science and application of psychology. While the development of the *Graduate Attributes* reflect the Federal Government's and the higher education sector's emphasis on the development of generic skills, they are more relevant than lists of university-wide attributes because of their explicit focus on psychology. As such, they also assist in the discipline's assertion of its own identity in the face of pressures to impose university-wide graduate attributes.

Each of the six attributes is accompanied by a list of suggested student learning outcomes. Learning outcomes are reasonably specific statements describing what students should know, understand or be able to do as a result of learning (Biggs, 2003). The suggested learning outcomes included in this document provide students with focal points to demonstrate their attainment of graduate attributes, both during and upon completion of their programs. The learning outcomes also provide academics with focal points for measuring student performance, for example, in formative and summative assessment tasks. The graduate attributes and related learning outcomes are not intended as a set of rules or directives, but rather as recommendations based on research and consultation with a wide range of stakeholders.

Using this Document

Although this document is structured to delineate six distinct graduate attributes, this does not imply that they are mutually exclusive. Rather, in practice there should be overlap and integration of the graduate attributes, particularly in the way they are experienced by students. For example, issues in indigenous psychology (GA 1) could be presented in such a way that prompts students to reflect on their own prejudices (GA 4 and 6).

Each attribute can be addressed in School/Department curriculum designs and assessment plans; however, beyond accreditation standards, Schools/Departments may choose formally to *emphasise selected attributes and outcomes* depending on their perspectives, goals, traditions, or resources. An emphasis on certain content areas included as part of the graduate attributes should not be construed as dictating course requirements (e.g., the emphasis on the development of critical thinking skills does not imply that these activities must transpire in a formal course on critical thinking in psychology). Rather, this document is intended to empower and encourage Schools/Departments to determine contexts in which students can learn those relevant skills and perspectives. These contexts may, for example, include training that is offered by other University units such as the library, student learning centre, or careers unit.

The document is based on an assumption that the graduate attributes and learning outcomes are developmental in nature. The attributes and learning outcomes are framed from the perspective of the end point of the development that students experience during their programs (i.e., by the end of their fourth/Honours year).

Schools/Departments may determine performance levels against the learning outcomes that are appropriate to their students at any given stage of a program. This document can serve as a useful resource in these determinations. The learning outcomes are organised in a hierarchical manner, with lower order cognitive processes usually listed first (e.g., "describe"), followed by higher order processes (e.g., "evaluate") (Bloom et al., 1956; Krathwohl, 2002). The comprehensiveness of the attributes and learning outcomes listed in this document is not intended to imply that individual courses should, or even could, support the full development of all six attributes. Moreover, at lower year levels, it may be that students are capable of description but not evaluation within certain student learning outcomes.

The *Graduate Attributes* complement the *Rules for Accreditation & Accreditation Standards for Psychology Courses* (see Appendix II), and are meant to facilitate provision of a strong educational foundation both for postgraduate studies in psychology and for the application of psychological knowledge, skills and values in other settings. The six graduate attributes simultaneously reflect the principles of the scientist-practitioner model for training in psychology, and give added meaning to the model in the context of university learning and teaching. The graduate attributes also are aimed at supporting the education of students who will take vocational pathways other than professional psychology. As such, this document partly delineates the discipline of psychology at the undergraduate tertiary education level, representing the amalgamation of requirements for the basis of professional psychology training and for a liberal education in the discipline of psychology.

Rationale

The *Graduate Attributes* are underpinned by an assumption that the presence of clearly articulated learning outcomes in programs and courses enhances learning (e.g., Biggs, 1996, 2003). This principle assumption, and the efficacy of the *Graduate Attributes*, is based on a number of secondary suppositions. First, learning outcomes must be closely aligned with course and program content, the activities that students engage in (i.e., laboratory work, small classes, lectures), and the content and format of assessment tasks. Second, learning outcomes should occupy a relatively central position in courses and programs rather than be introduced initially then neglected thereafter. Third, students should be able to perceive an interdependent relationship between their pursuit of an individual learning outcome and the more long-term development of graduate attributes.

Despite this focus on clearly articulated, relatively discrete learning outcomes, the *Graduate Attributes* are also based on an understanding that learning in higher education is a complex phenomenon (Barnett, 2000, 2000a; Knight, 2001). It is for this reason that the *Graduate Attributes* and learning outcomes are not prescriptive, but rather they serve as a shared reference point for academics and students. In this context, it should be recognised that the list of learning outcomes is not exhaustive, and that the provision of learning outcomes does not preclude the attainment of unintended or additional outcomes from learning in psychology.

This document is also important in the ongoing process of defining psychology graduate attributes. For example, this document delineates the personal and professional characteristics that distinguish psychology graduates. This is particularly important given the divergence of views among academics in relation to the content and concept of graduate attributes. Research has demonstrated that academics hold widely varying views of disciplinary-based graduate attributes despite the existence of a consensus about their general definition (Bowden, 2000; Barrie, 2004, 2006). This situation presents a number of problems for students. In response to this situation, the *Graduate Attributes* can help facilitate a higher degree of coherence within and across programs, particularly from a student perspective. They may also help to give focus to a more open debate about learning and teaching in psychology.

Revision

It is intended that (a) the *Graduate Attributes* be reviewed and modified by a Committee consisting of relevant members of the Heads of Schools and Departments of Psychology Association, the Australian Psychological Society, and the National Accreditation Body (currently APAC), on at least a 5-yearly basis, (b) the *Graduate Attributes* be attached to or at least referred to in the National Psychology Accreditation Standards, and (c) the *Graduate Attributes* be available on the Australian Psychological Society Website.

Appendix II: Consultation Process

The process of developing the *Graduate Attributes* was based on two main consultative strategies. First, the content and structure of the *Graduate Attributes* were drafted after consulting a range of key documents and reports on psychology learning and teaching. There were three resources that were particularly influential: the Australian Psychology Accreditation Council's *Standards for Accreditation of Australian Psychology Programs* (January 2007), the final report of a project on *Learning Outcomes and Curriculum Development in Psychology* (2006), and the American Psychological Association's *Guidelines for the Undergraduate Psychology Major* (August 2006). Second, the conceptual development of the *Graduate Attributes* derived from consultation with a range of relevant stakeholders, including psychology students; heads of psychology schools, departments and programs; members of the Australian Psychology Educators Network; leaders in the Australian Psychological Society and APAC; and international leaders in psychology learning and teaching.

Key documents and reports
The *Graduate Attributes* utilise and draw upon:

Australian Psychology Accreditation Council (2007). *Standards for Accreditation of Australian Psychology Programs*. Melbourne: Australian Psychology Accreditation Council.

> The Standards are referred to or integrated into the *Graduate Attributes*. For example, the core topics (Standard 3.1.7) are explicitly stated in Attribute 1, the strong emphasis on research methods and report writing (Standard 3.1.6) is reflected in Graduate Attributes 2 and 5 respectively, the recent emphases on cross-cultural and indigenous psychology (Standard 3.1.7) is reflected in Graduate Attributes 1 and 4, and the emphasis on both the science and application of psychology (Standard 3.1.10) is integrated into Attributes 3 and 6 in particular.

Lipp, O., Terry, D., Chalmers, D., Bath, D., Hannan, G., Martin, F., Farrell, G., Wilson, P., & Provost, S. (2006). *Learning outcomes and curriculum development in Psychology*. Sydney: Carrick Institute for Learning and Teaching in Higher Education.

> This report highlighted a number of needs in undergraduate training, including (a) the creation of a list of graduate attributes, of which this document is the first attempt, (b) that Schools/Departments should cater more for 3-year and honours graduates who do not go on to postgraduate training in psychology, hence the emphasis on Graduate Attribute 6, whereby the capacity to apply psychological principles to everyday life, including one's career development, is highlighted, (c) the internationalisation of psychology, which is explicitly or implicitly referred to in Attributes 4, 5 and 6.

American Psychological Association. (2006). *APA guidelines for the undergraduate psychology major.* Washington, DC: Retrieved from www.apa.org/ed/resources.html

> The structure and content of the Australian *Graduate Attributes* is partly based on the 10 goals and suggested learning outcomes of the APA's *Guidelines for the undergraduate Psychology major*. While a number of the Australian graduate attributes and student learning outcomes are precise duplications of their American counterparts, others have been adapted to make them more appropriate for the Australian context. A decision was made to utilise the knowledge and expertise underpinning the American Guidelines, since these were based on five reports and an extensive research and consultation period from 2000 to 2006.

Lunt, I., Bartram, D., Döpping, J. Georgas, J., Jern, S., Job, R., Lecuyer, R., Newstead, S., Nieminen, P., Odland, S., Peiró, J.M., Poortinga, Y., Roe, R., Wilpert, B., & Herman, E. (2001). *EuroPsyT - a framework for education and training for psychologists in Europe. Report by Project EuroPsyT, funded by the Leonardo da Vinci programme*. Retrieved from www.europsych.org

This document strengthened the rationale for maintaining an international perspective in the *Graduate Attributes*.

Littlefield, L., Giese, J., & Katsikitis, M. (2007). "Professional psychology training under review". *InPsych, 29*(2). Retrieved from http://www.psychology.org.au/publications/inpsych/training/?ID=1538.

This document strengthened the rationale for maintaining an international perspective in the *Graduate Attributes*.

Hayes, N. (1997). The distinctive skills of a psychology graduate. *Monitor on Psychology, 28*, 33-35.

This document, written by an English academic, reproduced in the American trade journal, and utilised by UNSW academics for many years, influenced the shape of some of the learning outcomes, especially that of Graduate Attribute 3. It is a neat synopsis of what undergraduate students usually gain from their degrees, and has assisted many students in explaining to their family and friends what is involved in studying psychology.

Cranney, J., Morris, S., & Martire, K. (2005). *School of Psychology UNSW Graduate Attributes*. Unpublished School Document.

These graduate attributes were developed in consultation with academic staff members, and was a point of comparison during 2007 consultative workshops for developing this document.

Stakeholder consultation
Workshop, "The Future of Psychology Training in Australia", University of New South Wales, 2 March 2007.

This workshop included 21 participants from the University of New South Wales, the University of Melbourne, the University of Wollongong, the University of Queensland, the University of Tasmania, Southern Cross University, the Australian Psychological Society, and the Carrick Institute for Learning and Teaching in Higher Education.

Program Development and Accreditation Committee (PDAC), Australian Psychological Society.

Iain Montgomery, the Chair of the Committee, attended the July ISSoTL Workshop. Consultation with the whole Committee was initiated in September 2007, and continues. Please see "Revision" section in Appendix I.

Heads of Departments and Schools of Psychology Association (HODSPA)

HODPSA has been consulted extensively during the development of the *Graduate Attributes*, for example: (a) the Chair of HODSPA was an applicant on the Carrick Psychology Discipline-based Initiative (DBI), and remains a member of the DBI team; (b) a discussion panel at a HODSPA meeting on 4 May 2007, (c) interviews with members, on the future of psychology training in Australia, and (d) presentation of this document at the September 28 HODSPA Meeting, with invitation to provide further feedback. Consultation with this key group continues.

International Society for the Scholarship of Teaching and Learning, 2-5 July 2007

The *Graduate Attributes* were discussed in two sessions held as part of the Conference of the International Society for the Scholarship of Teaching and Learning, 'The Psychology of University Student Learning and Performance' and 'International perspectives on undergraduate psychology: student learning outcomes and assessment, accreditation, and future directions'. Feedback was received from numerous national and international leaders in psychology learning and teaching.

Australian Psychology Educators Network meeting, 4 July 2007.

A half-day session on "Issues in the Teaching of Psychology: From Research to Future Training" was held as a satellite workshop of the Conference of the International Society for the Scholarship of Teaching and Learning. The session was attended by 33 national and international leaders in psychology learning and teaching, and featured extensive discussion and reporting on 'What knowledge, skills and attitudes should have been acquired by our 3rd and 4th year graduates?'.

Australian Psychological Society and APAC

APS has been consulted extensively during the development of the *Graduate Attributes*, for example: (a) the Manager of Science, Academia and Education was an applicant on the Carrick Psychology DBI, and remains as a member of the DBI team; and (b) a meeting with the Manager and Executive Director was held on July 16, 2007. In addition, members of the APS Program Development and Accreditation Committee (PDAC), which reports to APAC, have been included on the DBI team which is overviewing this process. Consultation with these key groups continues, and has recently resulted in the integration of some of the student learning outcomes into the Standards (APAC, February 2008).

Australian Psychological Conference Annual Conference. (2007).
At this conference, a Forum on the Future of Psychology Education and Training in Australia was run. The creation of this document was mentioned, and an invitation to comment was made, and some attendees have taken up this invitation.

Carrick Discipline-based Initiative Team Meetings and Communications: February 2006 onwards.

Appendix III: Contributions to the Document

The creation of the *Graduate Attributes* was funded by the Carrick Associate Fellowship project, "Sustainable and evidence-based learning and teaching approaches to the undergraduate psychology curriculum", and the Carrick Institute for Learning and Teaching in Higher Education Discipline-based Initiative "Designing a future-oriented vision for undergraduate psychology in Australia", *and* was supported by the Australian Psychological Society and the University of New South Wales (Psychology; Learning & Teaching). Individuals who contributed include:

*Nigel Bond	NSW Representative	Psychology, Univ. of Western Sydney
*Graham Bradley	Qld representative	Psychology, Griffith University
Pia Broderick	Western Australia Representative	Psychology, Murdock University
*Lorelle Burton	Qld Representative	Psychology, Univ. of Southern Qld
*Lynne Cohen	W.A. Representative	Psychology, Edith Cowan University
Jacquelyn Cranney	Carrick Fellow & DBI Team Leader	Psychology, UNSW
*Joanne Earl	ULTAG Representative	Psychology, UNSW
Davina French	W.A. Representative	Psychology, Univ. of Western Australia
Greg Hannan	HODSPA & ATEN Representative	Psychology, University of Tasmania
Julie Hansen	Qld Representative	Psychology, Qld Univ.of Technology
Russell Hawkins	International Representative	Psychology, JCU, Singapore
Patrick Heaven	Chair, HODSPA	Psychology, University of Wollongong
Mir Rabiul Islam	NSW Representative	Psychology, Charles Sturt University
Henry Jackson	DBI Applicant	Psychology, University of Melbourne
*Mary Katsikitis	DBI Applicant	Psychology, U. of the Sunshine Coast
*Ottmar Lipp	APEN and QLD Representative	Psychology, University of Queensland
*Peter Lovibond	HODSPA & UNSW ULTAG Representative	Psychology, UNSW
Renae Low	Educational Psychology Representative	Education, UNSW
*Frances Martin	APEN and Tasmania Representative	Psychology, University of Tasmania
*Diana Matovic	Student Research Assistant & ULTAG member	Psychology, UNSW
*Leigh Mellish	Student Research Assistant & ULTAG member	Psychology, UNSW
Renata Meuter	Qld Representative	Psychology, Qld Univ.of Technology
Jo Milne-Home	Chair, APS College of Ed. & Develop. Psych.	Univ. of Western Sydney
Iain Montgomery	APAC Representative	Psychology, University of Tasmania
*Shirley Morrissey	PDAC Representative	Psychology, Griffith University
*Sue Morris	UNSW ULTAG Representative	Learning and Teaching, UNSW
*Lorna Peters	NSW Representative	Psychology, Macquarie University
*Steven Provost	APEN & NSW Representative	Psychology, Southern Cross University
Thomas Pusateri	Director, APA Div. 2	American Psychological Association
Rob Ranzijn	S.A. & Carrick Project Representative	Psychology, Univ. of South Australia
Michele Scoufis	Director, UNSW Learning & Teaching	Learning and Teaching, UNSW
*Branka Spehar	UNSW ULTAG Representative	Psychology, UNSW
*Peter Terry	HODSPA member	Psychology, U. Southern Qld
Annie Trapp	Director, UK Psychology Network	Psychology, Uni. Of York, UK
Craig Turnbull	Carrick Project Officer	Psychology, UNSW
*Kandice Varcin	Student Research Assistant & ULTAG member	Psychology, UNSW
*Nicholas Voudouris	APS Manager of Science, Academia and Research	Australian Psychological Society
*Fiona White	NSW Representative	Psychology, University of Sydney
*Mark Wiggins	HODSPA member	Psychology, Univ. of Western Sydney
Peter Wilson	APEN and NSW Representative	Australian Catholic University
*Lucy Zinkiewicz	VIC Representative	Deakin University

* Commented on recent drafts. Please direct correspondence to j.cranney@unsw.edu.au
APAC = Australian Psychology Accreditation Council
APEN = Australian Psychology Educators Network
DBI = Discipline-based Initiative (Carrick)
HODSPA = Heads of Schools and Departments of Psychology
PDAC = Program Development and Accreditation Committee, APS
ULTAG = UNSW [Psychology] Learning and Teaching Advisory Group.

Appendix IV: Bibliography - Graduate Attributes, Student Learning Outcomes, and Psychology

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National Mental Health Education and Training Advisory Group (2002). *National practice standards for the mental health workforce*. Canberra: Commonwealth Department of Health and Ageing.
    This document is now explicitly referred to in Graduate Attribute 4, and the implicit intent of that document is apparent in other parts of the *Graduate Attributes*. It should be noted, however, that these standards are more suitably applied to postgraduate training in Clinical and Health Psychology.

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    This paper is an intelligent discussion of how universities (cf the VET sector) are responding to the original ACCI & BCA (2002) paper "Employability skills for the Future" (Department of Education, Science and Training, Canberra.). To quote: "The recognition of 'scholarly enquiry' or 'scholarly attitude to knowledge' differentiates most higher education policies on graduate attributes from the skills groupings contained in the Employability Skills Framework. The policies developed by universities also recognise an end use of the framework that goes beyond employment. Most contain attributes related to 'ethical practices' and 'social responsibility'" (pg. 6). In terms of how those eight employability skills are represented within the six graduate attributes outlined in this document: self-management, planning and organising, learning skills and initiative and enterprise skills, are explicit in Graduate Attribute 6; teamwork and communicating in Graduate Attribute 5; using technology in Graduate Attribute 2; and problem solving in Graduate Attribute 3.

3.C2
Psychology Students and Graduates Survey: Graduate Attributes

1. About you and undergraduate study

A. ☐ Female   ☐ Male   Date of birth ☐☐/☐☐/☐☐☐☐

B. Undergraduate degree completed: _____

Name of institution: _____ Year of graduation: _____

2. Honours and postgraduate study

A. Are you enrolled in, or did you do Honours?   ☐ Yes   ☐ No   If yes, which year? _____

If no, why not (e.g. tired of studying, pursued a good employment opportunity, insufficient finances, insufficient marks)? _____

B. If you undertook Honours, how important/valuable do you think your Honours year was to your undergraduate <u>education</u> in psychology (please circle a number)?

1 Not important/valuable	2	3 Moderately important/valuable	4	5 Extremely important/valuable

C. If you undertook Honours, how important/valuable was your Honours year to your current <u>employment</u> (please circle a number)?

1 Not important/valuable	2	3 Moderately important/valuable	4	5 Extremely important/valuable

D. Are you enrolled in, or did you do a postgraduate degree?   ☐ No   ☐ Yes What and When? _____

If no, why not (e.g. no interest in becoming a professional psychologist or researcher, tired of studying, pursued a good employment opportunity, insufficient

finances, insufficient marks)? _____

3. Graduate attributes

A. What is the single most important thing you learnt in your undergraduate psychology degree?

_____

_____

B. What features of your undergraduate Psychology studies were of most help to your learning?

_____

_____

C. To what extent did your experience of completing an undergraduate psychology degree contribute to your knowledge, skills and development in the following areas?

	Always	Very much	Often	Sometimes	Occasionally	Very little	Never
1. Knowledge and Understanding of Psychology *Major concepts, theoretical perspectives, empirical findings, historical trends*	☐	☐	☐	☐	☐	☐	☐
2. Research Methods in Psychology *Including research design, data analysis, interpretation; computer technology and literature search skills*	☐	☐	☐	☐	☐	☐	☐
3. Critical Thinking Skills in Psychology *Critical and creative thinking, sceptical inquiry, scientific approach to solve problems*	☐	☐	☐	☐	☐	☐	☐
4. Values in Psychology *Value empirical evidence, act ethically and professionally, understand diversity, tolerate ambiguity*	☐	☐	☐	☐	☐	☐	☐
5. Communication Skills in Psychology *Communicate effectively in a variety of formats and contexts, written and oral forms; team work*	☐	☐	☐	☐	☐	☐	☐
6. Learning and the Application of Psychology *Understand and apply psychological principles to personal, social, and organisational issues*	☐	☐	☐	☐	☐	☐	☐

D. Please say if there were any another valuable attributes: _____

4. Employment

A. Please complete the table below for employment you have engaged in since ceasing study at the <u>undergraduate</u> level.

Employer (name)	Approximate dates of employment	Main activities	Knowledge/skills required for employment position

B. What aspects of your undergraduate Psychology education have helped you most in your career?

_____

C. Do we have permission to contact your employers regarding graduate attributes in their workplace? ☐ Yes   ☐ No
(Please note that you will not be identified during any discussion with the employers)
If yes, who would be the most appropriate person to contact? _____

D. What is your current gross (pre-tax) annual salary? $ _____

5. Research Methods 3A

A. Do we have your permission to collect information on your grade in *PSYC3001* Research Methods 3A? ☐ Yes   ☐ No
(Please note that these data will be used anonymously in examining relationships with Honours experience ratings)

6. Focus Group

B. Would you be willing to be contacted to participate in a focus group with people from your year about your undergraduate experience?   ☐ Yes   ☐ No

If yes, please provide your <u>name</u> and <u>contact details</u>: Name: _____ Contact (Phone/email/address): _____

2007 AUSTRALIAN PSYCHOLOGY HONOURS YEAR SURVEY

This survey is being undertaken as part of a program* to improve education and training is psychology.

Date:_____   Age:_____   Gender: M / F   University: _____   Program (eg B. Arts [Hons]): _____

OPTIONAL: Your name:_____   Student Number: _____   Expected Honours Grade: _____

YOUR HONOURS YEAR
Please rate the extent to which you agree with the following statements by circling the appropriate number:

1. The honours year was very stressful

Why?_____

1	2	3	4	5
Strongly Disagree	Mostly Disagree	Neither Agree or Disagree	Mostly Agree	Strongly Agree

2. The honours year was the most valuable of all my undergraduate years.

Why?_____

1	2	3	4	5
Strongly Disagree	Mostly Disagree	Neither Agree or Disagree	Mostly Agree	Strongly Agree

3. Overall, I enjoyed my honours year.

Why?_____

1	2	3	4	5
Strongly Disagree	Mostly Disagree	Neither Agree or Disagree	Mostly Agree	Strongly Agree

4. I feel that the honours year was a waste of time for training as a professional psychologist.

Why?_____

1	2	3	4	5
Strongly Disagree	Mostly Disagree	Neither Agree or Disagree	Mostly Agree	Strongly Agree

5. My writing skills improved significantly during the year.

Why/how?_____

1	2	3	4	5
Strongly Disagree	Mostly Disagree	Neither Agree or Disagree	Mostly Agree	Strongly Agree

6. My research skills improved significantly during the year.

Why/how?_____

1	2	3	4	5
Strongly Disagree	Mostly Disagree	Neither Agree or Disagree	Mostly Agree	Strongly Agree

7. My project management skills improved significantly during the year.

Why/how?_____

1	2	3	4	5
Strongly Disagree	Mostly Disagree	Neither Agree	Mostly Agree	Strongly Agree

8. I found the degree of competitiveness during the honours year counterproductive.

1	2	3	4	5
Strongly Disagree	**Mostly Disagree**	**Neither Agree or Disagree**	**Mostly Agree**	**Strongly Agree**

9. I enjoyed the process of undertaking an independent research project.

1	2	3	4	5
Strongly Disagree	**Mostly Disagree**	**Neither Agree or Disagree**	**Mostly Agree**	**Strongly Agree**

10. I feel well-prepared to undertake further training in professional psychology.

1	2	3	4	5
Strongly Disagree	**Mostly Disagree**	**Neither Agree or Disagree**	**Mostly Agree**	**Strongly Agree**

11. The "advanced topics" seminars/courses were challenging but worthwhile.

1	2	3	4	5
Strongly Disagree	**Mostly Disagree**	**Neither Agree or Disagree**	**Mostly Agree**	**Strongly Agree**

12. I wish there had been more practical skill training in professional psychology this year.

1	2	3	4	5
Strongly Disagree	**Mostly Disagree**	**Neither Agree or Disagree**	**Mostly Agree**	**Strongly Agree**

13. Sometime in the future, I would like to be involved in undertaking

further research in psychology (not necessarily the same as my honours project).

1	2	3	4	5
Strongly Disagree	**Mostly Disagree**	**Neither Agree or Disagree**	**Mostly Agree**	**Strongly Agree**

14. This year, our class was presented with adequate information regarding our choices for next year.

1	2	3	4	5
Strongly Disagree	**Mostly Disagree**	**Neither Agree or Disagree**	**Mostly Agree**	**Strongly Agree**

15. What was the best thing about the honours year?

_____

16. What was the worst thing about the honours year?

_____

17. How could the honours year be improved?

_____

18. Do you intend to undertake postgraduate study within the next two years? YES / NO   If yes, what? _____

If no, what kind of career path (eg type of employment) do you hope to develop over the next five years? _____

_____

B. GRADUATE ATTRIBUTES

To what extent did your experience of completing a 4-year undergraduate degree contribute to your knowledge, skills and development in the following areas?

	Always	Very much	Often	Sometimes	Occasionally	Very little	Never
1. Knowledge and Understanding of Psychology *Major concepts, theoretical perspectives, empirical findings, historical trends*	☐	☐	☐	☐	☐	☐	☐
2. Research Methods in Psychology *Including research design, data analysis, interpretation*	☐	☐	☐	☐	☐	☐	☐
3. Critical Thinking Skills in Psychology *Critical and creative thinking, sceptical inquiry, scientific approach to solve problems*	☐	☐	☐	☐	☐	☐	☐
4. Values in Psychology *Value empirical evidence, act ethically and professionally, understand diversity, tolerate ambiguity*	☐	☐	☐	☐	☐	☐	☐
5. Communication Skills *Communicate effectively in a variety of formats and contexts*	☐	☐	☐	☐	☐	☐	☐
6. Learning and the Application of Psychology *Understand and apply psychological principles to personal, social, and organisational issues*	☐	☐	☐	☐	☐	☐	☐

Please say if there was another valuable attribute. _____

Thank you!