

Review of the Aims, Outcomes and Accreditation Standards for Australian Undergraduate Psychology Education

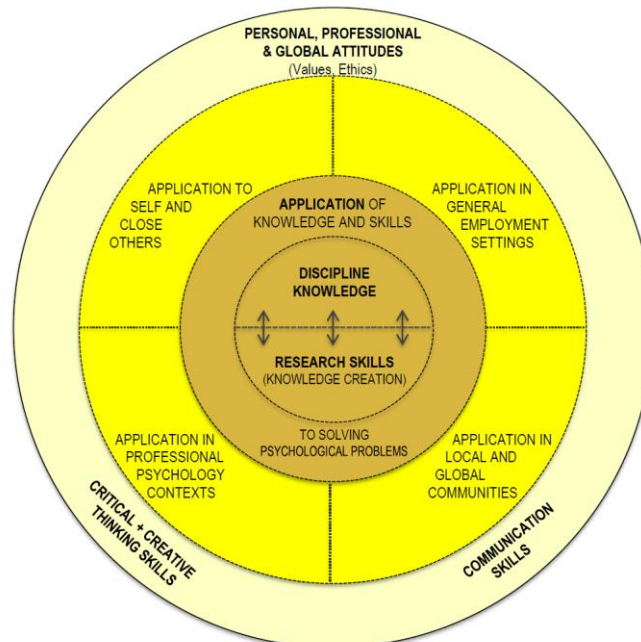
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“Psychological literacy means being aware of the psychological knowledge one possesses and what one still needs to acquire, being able to apply this knowledge appropriately and adaptively to all areas of life and acknowledging that one is and should be continually learning and integrating this into one’s current aggregation of knowledge. Psychological literacy also involves thinking beyond oneself through global awareness and future-thinking” (Eva Bowman-Wall, 2012 UNSW PSYC3011 student).

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List of Acronyms Used

AERA = American Education Research Association
APA = American Psychological Association
APAC = Australian Psychology Accreditation Council
APEN = Australian Psychology Educators Network
AHPD = Association of Heads of Psychology Departments (UK)
AOU = Academic Organisational Unit
APS = Australian Psychological Society
AWC = APAC working Committee
BPS = British Psychological Society
CBT = Cognitive Behavioural Therapy
GC = Global Citizenship
HE = Higher Education
HODSPA = Heads of Departments and Schools of Psychology Association
L&T = Learning and Teaching
LTA = Learning, Teaching and Assessment
NPETRG = National psychology Education and Training Reference Group
PDAC = Program Development Advisory Committee of APS (now made redundant by AWC)
PFA = Psychology Foundation of Australia
PG = postgraduate
PIFoPS = APS Presidential Initiative on the Future of Psychological Science (2011-2012)
PsyBA = Psychology Board of Australia
PL = Psychological Literacy
QA&I = Quality Assurance and Improvement
SARAG = Science, Academia and Research Advisory Group of APS
TEQSA = Tertiary Education Quality and Standards Agency
TLaPIG = Teaching, Learning and Psychology Interest Group of APS
UG = undergraduate
VET = Vocational Education and Training
WIL = Work-integrated learning

Executive Summary and Recommendations

During the past seven years, there have been several national initiatives that have scoped and reviewed undergraduate (UG) psychology education in Australia (see Appendix G). Drivers of these initiatives included the need to delineate and justify the outcomes of UG education, the realisation that an increasing number of UG students do not go on to become professional psychologists, the perceived increased health workforce needs of Australia, and a consideration of the future needs of society from a global perspective. There have been similar reviews in the USA (Halpern, 2010) and in UK (Trapp et al., 2011), where employability and global citizenship have become key foci.

Psychological literacy has been defined as the capacity to adaptively apply psychological principles to meet personal, professional and societal needs (Cranney & Dunn, 2011). Within the domain of UG psychology education, psychological literacy has been operationalized as the graduate attributes (GAs) of the degree program, which in Australia includes discipline knowledge (GA1), research skills (GA2), critical thinking skills (GA3), values (GA4), communication (GA5), and application (self-management, life-long learning; GA6). From a student perspective, psychological literacy can be conceptualised as scientific literacy, employability, and global citizenship. Using the concept of psychological literacy, and keeping in mind recent national regulatory developments such as the 2011 Australian Qualifications Framework (AQF) and the TEQSA standards, in this discussion paper we present an ideal model of UG psychology education. Acknowledging the economical and structural constraints faced by most higher education (HE) providers, we then present a more realistic model in the form of a proposed minimum/threshold accredited 3-year sequence. This sequence offers the traditional emphasis on knowledge, research and critical thinking, with the additional requirements of ensuring high emphasis on application, and a capstone experience. An *aspirational* 3-year UG sequence will additionally offer opportunities to (a) further develop professionally relevant psychology training to meet the clear need for professionals at this level, what we call “Applied Behavioural Practitioners”, and (b) further develop the capacity of graduates to be global leaders, in particular, psychologically literate global citizens. A number of recommendations are made:

Recommendation 1: The peak discipline and professional bodies in Australian Psychology - APS, HODSPA, APAC, PsyBA, PFA - should continue to lobby for **increased funding** of both UG and PG psychology programs.

Recommendation 2: A **review of the GAs** and associated standards should be undertaken (a) in light of the Recommendations that follow, (b) to reduce redundancy, and (c) to consider “assessability”.

Recommendation 3: In the domain of quality assurance, criteria and standards, although minimum/threshold levels of performance attainment need to be identified, reference to **aspirational** levels of performance attainment should also be made when appropriate (see Appendices A, B, C and D).

Recommendation 4: Psychology Schools and Departments (Academic Organisational Units [AOUs]) should demonstrate the quality of **educational outcomes** for their graduates, through regular systematic evaluation of assessment samples (by external assessors). Positive commentary by employers regarding the quality of graduates would constitute demonstration of an aspirational level of outcome achievement.

Recommendation 5: The amount of psychology content in a 3-year degree program should be increased; specifically, the core accredited 3-year psychology sequence **volume of learning** APAC standard should be increased to a total of “150%” as a minimum (where each year is worth 100%), to allow for additional strategic educational components (the aspirational volume of learning across a 3-year sequence should be “200%” or more).

Recommendation 6: The core accredited 3-year sequence should focus on foundational knowledge (GA1), research training (GA2), and critical thinking (GA3) to high minimum levels. *In addition*, the **application** of such knowledge to a high minimum level is required. To include this additional emphasis in a “150%” psychology model, innovative teaching strategies and staff development are required. This particular focus for the sequence constitutes psychological literacy in a narrow sense (i.e., scientific literacy).

Recommendation 7: A **capstone experience** at a minimum is required in the third year of the sequence; the aspirational level would be a full unit including work-integrated learning.

Recommendation 8: To provide an alternative professional psychology route for 3-year graduates, a sequence of “**Applied Behavioural Practitioner**” units should be developed by APS in collaboration with HODSPA and APAC, and offered in partnership with interested universities, perhaps as a minor, certificate or diploma. Whether this will become an accredited sequence will need to be further explored by those organisations.

Recommendation 9: A new APAC accreditation standard is created that requires the AOU to specify how it is meeting the **career-development** needs of all students, including those who are unlikely to progress to professional psychology postgraduate training. This is in line with the Australian Qualifications Framework requirements for Level 7 (Bachelor level).

Recommendation 10: To increase the capacity of psychology graduates to become **globally literate leaders** in solving local and global behaviourally based problems, additional units should be offered (e.g., on cultural awareness and competence; moral literacy; decision-making and interventions regarding global issues such as climate change; behaviourally based leadership; community-based volunteering experiences). These could be additional to or included within the focus of the capstone experience.

Recommendation 11: That peak disciplinary bodies encourage and support (a) sharing of expertise and resources (e.g., through support of the APS Psychology Education resources website), (b) explicit program-based staff development to facilitate changes in program outcomes for students, and (c) consensual/partnered policy and strategy development (e.g., through annual education summits for both UG and PG programs; through structural support within their organisations; through support of education committees and communities).

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“... ‘Psychology Literacy’ means to me acquiring the Graduate Attributes such as Knowledge and Understanding of Psychology, Research Methods, Critical thinking skills, Values, Communication skills in Psychology in addition to applying these psychological principles to all domains of life. It is not merely the acquisition of these graduate attributes as suggested by McGovern et al. (2010) but applying the knowledge and utilising our strengths and skills at a local and global level. The importance is in the process of APPLYING the psychological principles acquired, the actions of an individual which portray the psychological knowledge they have attained from their Psychology Degree. The portfolio helped students reflect on their self concept and identify their strengths and skills which are useful in the application of psychological literacy. Successfully applying ‘ Psychological Literacy’ could indeed be reflected by the Global Citizen...”(Elena Mavromoustakos, 2012 UNSW PSYC3011 student)

Document Purpose

This Green Paper has been written with the following aims/purposes in mind:

- To stimulate further discussion amongst peak disciplinary stakeholders regarding the aims, outcomes and accreditation standards for undergraduate (UG) psychology education;
- To record a submission (see Appendix A) that will be made separately to the APAC Standards Review;
- To provide a stimulus for discussion at the School/Departmental level regarding the aims and outcomes of their UG psychology program given local, national and international factors;
- To inform future-oriented projects that may focus on psychology UG education.

Some of the ideas in this paper were presented at the April 2012 UG Psychology Education Summit at UNSW, and have been discussed at formal APS-PDAC (April & May) and informal APS-TLaPIG meetings (May). Some of the feedback from these stakeholders is included in this document. We encourage and welcome comments by August 1, 2012, so that the paper can then be revised (contact: j.cranney@unsw.edu.au).

Background to the Review of the Aims of UG Psychology Education in Australia

During the past seven years, there have been four national projects focussing on UG psychology education in Australia (see Appendix G). During the past four years, there have been significant reviews of UG psychology in Europe, the USA and the UK (see Appendix G). Moreover, the APS NPETRG has been reviewing models of education and training since 2008, and the 2011-2012 APS Presidential Initiative (PIFoPS) has UG education as one of its foci. There are several drivers to these reviews:

- Increasing popularity of UG psychology programs
- Relatively static number of Year 4/honours places
- Static nature of PG professional psychology training places (declining number and diversity; Vourdouris & Mrowinski, 2010)
- Consequent large numbers of UG graduates who either do not make it to Year 4, and thus need to take another career direction, or who need to take the 4+2 route to registration as a psychologist, if they can find PsyBA approved supervision
- Increasing emphasis in the HE sector on accountability, as well as quality assurance and improvement (QA&I)
- The Bologna and EuroPsy Tunings developments in the European Union
- Changing nature of professional registration and accreditation in Australia
- Decreasing funding of PG and UG psychology education by Government; relatively decreased resourcing of UG education by tertiary education providers
- Increasing pressure from Government and students regarding employability

- Increasing need for psychological literacy in society generally, particularly the aspects of scientific literacy and global citizenship.

There are several **STAKEHOLDERS** for UG psychology education, including students, graduates, Schools/Departments of Psychology, the profession of psychology, the Health Minister, employers, and those educators and others who from those take a global perspective on the future. We attempt to represent their perspectives below. Comments to various arguments and/or additional information are framed either as Notes or follow the flag of “However”.

Key considerations from the perspective of **students/graduates**:

- **Most** students undertake a psychology major in the expectation that this will lead them to a career in psychology (Cranney et al., in prep).
- Some students also expect that a psychology major will be useful in their personal life (Cranney et al., in prep).

However:

- Less than 50% of students progress from 3rd to 4th year in psychology (Cranney et al., in prep).
- Less than 50% of students progress from 4th year to a Masters/Doctorate course in professional psychology (Cranney et al., in prep). A substantial proportion attempt to take the 4+2 route to registration, which is becoming significantly more difficult to complete (e.g., PsyBA restrictions on supervision).
- What happens to the rest of the students? In particular, what careers are available to them? We still have little data on this issue, other than that they are employed in a range of settings, primarily human services (Cranney et al., 2008; Cranney et al., in prep).
- Should students at least acquire (a) greater self-knowledge, (b) the capacity to successfully apply psychological principles in their everyday lives, and (c) employability skills?
- Should funds be re-distributed to increase the quality of UG educational outcomes? Currently PG training is subsidised by UG education. UG psychology students, particularly the vast majority who do not go on to professional psychology training, are “short-changed” relative to PG professional psychology students.

Key considerations from the perspective of **Schools/Departments of Psychology**:

- UG psychology education needs to be *economical*. In particular, UG enrolments (i.e., students) fund both our intense honours programs and our expensive and underfunded PG programs.
- UG education should minimally cover the basic discipline foundational knowledge (GA1) and research training (GA2), to prepare the most academically capable students for research and/or professional psychology training.
- Who is protecting the discipline? Our Honours/Year 4 training may be instrumental in helping Australian psychological science be higher than average in *research productivity* (National Academy of Sciences, 1996).
- **Accreditation** processes are expensive and some question the utility of the process and the perceived lack of flexibility [Note: the UK has an accreditation system which

is changing (Trapp et al., 2011); the USA has no psychology-specific national accreditation system, but wishes it did (Dunn et al., 2010)].

- There is a preference for no change to the psychology major, *and* there is disagreement about whether the Honours year should remain as a prerequisite to further professional psychology training.

However:

- Many, after careful consideration of all existing models, consider that our current UG/Masters training model is best for our context, and just needs some minor (but still significant) changes (e.g., Cranney et al., 2008). Currently, there are varying opinions as to what is the appropriate international benchmark for professional psychology training. Although some argue that the USA model is best, Australia cannot afford such prolonged and delayed training for professional psychologists. The English UG education model is almost 100% psychology, and is only three years, with a smaller honours thesis in Year 3. Bologna is favoured by many because of its potential for mobility; again, almost all the UG program is psychology, but there is no thesis. In stakeholder consultation over the past year, there has been varying opinions as to whether the proportion of psychology in the UG degree should be increased, with the April 2012 Summit (almost all, University educators) voting against this suggestion, partly given perceived structural constraints. Could such constraints be overcome? Perhaps only if UG psychology produced work-ready professionals.
- We complain of being misunderstood by the general public, yet we have a wasted “ambassadorial” resource in the 50%+ psych majors who do not become professional psychologists, and the estimated 16% of university students who take first year psychology (Cranney et al., 2008). Why are they not psychologically literate local leaders, spreading the “good word” of psychological science and practice?
- We have not acknowledged that in many ways, UG education in psychology has been “reduced” over the past 30 years. For example, the extent of practical training in any one unit/course has decreased (e.g., from 2 to 1 hour per week, or for a reduced number of weeks per semester). Moreover, there has been a significant decline in professionally oriented practical skill training (e.g., hands-on assessment training with tests such as the WAIS; interpersonal skill training; placements). This has occurred over the past 30 years, and is the result of (a) the proposed shift of such practical training to PG professional programs; (b) the reduction in funding to HE engendered by the Dawkins and Vanstone reforms, which has meant that most UG programs have been stripped of any substantial practical components, including “bench” science; (c) miscommunications during accreditation processes; and (d) the present-day (economically convenient) School/Department mantra that only disciplinary knowledge and research skills are UG core.

Key considerations from the perspective of the **Profession of Psychology** (PsyBA; practitioners):

- UG education should provide the foundational discipline knowledge (and research training) to support further PG professional training.
- The quality of Australian UG education should be high by international standards, partly to maintain the reputation of the profession in Australia.

- There are varying opinions about whether professional psychology training should be shortened (e.g., more like the UG medical model), or lengthened (e.g., more like the North American model); however, there is general agreement that PG professional training should have a focus on developing competence in evidence-based best practice models, for which the UG education provides an excellent foundation.
- There is some resistance to the notion of a lower-level psychology assistant/associate, because of fear that employers may prefer such a cheaper labour force (i.e., fully registered psychologists may lose positions).

Key considerations from the perspective of the **Health Minister** et al.:

- Why can't professional psychologists be trained in 3 or 4 or 5 years (like nurses, physios, medicos)?
- There is a great need for (mental) health workers, so the "other" psych grads should be trained as psychology assistants or generic health workers.

However:

- Health Workforce Australia is likely to focus on supporting VET sector mental health training only.
- In the UK, there has been a movement to train almost anyone (i.e., perhaps no qualifications needed) to deliver CBT.
- In Australia, nurses, social workers and occupational therapists are currently being trained to deliver CBT.

Key considerations from the perspective of **employers** of UG psychology major graduates:

- Graduates should have effective oral and written communication skills, interpersonal and teamwork skills, critical thinking skills, knowledge of human behaviour, and statistical analysis and research skills.
- Graduates should have some pre-professional skills (e.g., assessment skills, counselling skills, interviewing skills; Cranney et al., in prep).

Key considerations from the perspective of educators and others concerned with the **global future**:

- UG psychology graduates should have the capability to apply psychological principles to meet personal, professional, societal and global needs (i.e., psychological literacy).
- UG psychology could be the best liberal arts and sciences education available, which means that graduates could be highly trained to help solve local, national and global problems, which are mostly caused by human behaviour.
- In particular, we need graduates who have good global literacy (of which cultural literacy is a core feature), and who possess "high-end" psychological literacy, which constitutes the "psychologically literate global citizen" (including the capacity to empathise to see perspectives other than their own world view). It is critical that today's university graduates are equipped with the attributes that will allow them to collaboratively and creatively deal with existing and emerging local and global issues.

Proposed Solutions:

- Increased places and **funding** for PG training in psychology, so that there is the potential for (a) a greater percentage of students being able to undertake PG professional psychology training, or (b) less funds being syphoned away from UG education, with the possibility of higher quality educational outcomes.
- A greater **valuing** of a better educated UG psychology graduate, which includes an emphasis on psychological literacy as the primary outcome of UG education. **All** graduates need psychological literacy, regardless of their career destination. This may require a greater minimal “volume of learning” in psychology than the current APAC Standard of “125%” across 3 years (each year being 100%), as well as more innovative learning, teaching and assessment (LTA) approaches.
- **Alternative** professional psychology **career** pathways (e.g., “applied behavioural practitioner” or some kind of flexible UG professional training).

Recommendation 1: The peak discipline and professional bodies in Australian Psychology - APS, HODSPA, APAC, PsyBA, PFA - should continue to lobby for **increased funding** of both UG and PG psychology programs.

Psychological literacy has been operationalized as:

- the graduate attributes of the UG program (McGovern et al., 2010; in Australia: **knowledge, research, critical thinking, values, communication, application**);
- the capacity to adaptively apply psychological principles to meet personal, professional, and societal needs (Cranney & Dunn, 2011);
- scientific literacy, employability, and global citizenship as desired outcomes of the psychology major (Cranney et al., in press).

“Psychological literacy to me is the understanding of oneself, others in their immediate circles and the greater community. We understand who we are in the world of psychology through figuring out our place and the role we want to take. We apply this to other around us through understanding the needs of others, and apply this to the global perspective of the role of psychology in the world. Through undertaking this course, I now have a greater understanding that psychology is a central discipline and delves into realms I did not previously consider, such as language, theology and biology.” (Candice Michael, 2012 UNSW PSYC3011 Student).

Ideal and Realistic Models of UG Education

Given the background, an ideal UG psychology program is proposed, but significant barriers to achieving the ideal are also noted. Thus, suggestions for *realistic changes* to our current model will follow.

A. Proposed components of an “ideal” UG program:

1. The **volume** of learning (proportion of three years that is psychology) should be a minimum of 200%. **Action:** *Change APAC Standards.* **However:** the April 2012 Summit voted against this. **Action:** *The discipline and profession need to decide*

whether to accept this decision, or not. If “yes”, other options need to be considered to “value-add” for UG students. If “no”, then HODSPA, APS and APAC need to reach a consensus.

2. The **traditional “core”** elements of discipline knowledge (GA1) and research training (GA2), and *associated* critical thinking (part of GA3) and ethics (part of GA4) should be retained. This was emphasised by the April 2012 Summit delegates. Action: APAC review procedures to ensure continued emphasis on these aspects.
3. A strong **“applied”** emphasis for the above (e.g., the capacity to apply psychological principles to self, groups and society, part of GA6) should be a core aspect of the psychology major. The April 2012 Summit strongly endorsed this change. This applied focus is psychological literacy in a narrow sense, but also the essence of *scientific* literacy (= “the knowledge and understanding of scientific concepts and processes required for personal decision making, participation in civic and cultural affairs, and economic productivity”;
<http://www.literacynet.org/science/scientificliteracy.html>). Action: (a) *Examples of good LTA strategies are required, as well as professional development for educators.* (b) *APAC review Standards and Procedures to ensure emphasis on these aspects.*
4. A **capstone** experience, preferably but not necessarily a whole unit, is required in the third year of the major, to underscore the above, and to help students (and educators) realise the value of UG psychology education. Innovative LTAs such as a GA log/portfolio and work-integrated learning (WIL) can help students develop a “capstone” appreciation of how the knowledge, skills and attitudes are integrated across several foundational sub-fields of the discipline and profession of psychology. The April 2012 Summit voted strongly for a capstone requirement, and also supported WIL, although resourcing issues were raised. Action: (a) *Examples of good LTA strategies are required (see the APS PE Resource website <http://www.groups.psychology.org.au/GroupContent.aspx?ID=4588>), as well as professional development for educators.* (b) *APAC Standards are changed to include this requirement as a Standard.*

“The most valuable thing that I learned through my experience of the course, was that every piece of material that I was taught, from the very beginning of my degree was, and still is valuable, in perfecting my literacy as a future University graduate. Each skill I have been taught from my time studying can be applied to procuring a future job prospect” (Corey Botansky, 2012 UNSW PSYC3011 Student).

5. Compulsory professionally oriented unit(s) that prepare students for the role of **Applied Behavioural Practitioner**. Units may include: (a) basic aspects of evidence-based assessment and evaluation (e.g., interviewing; test and questionnaire construction; evaluation methodology; applied behavioural analysis; administering but not interpreting tests—similar to how “examiners” in the Australian Army are being trained), **interventions** (e.g., fundamental operations of CBT—similar to how nurses, social workers and occupational therapists in Australian are currently being trained—and other evidence-based interventions such as Mindfulness Based Stress Reduction and Acceptance Commitment Therapy), as well as (b) **professionalism**

(e.g., further ethics training), (c) **generic mental health worker** capabilities, a kind of “VETplus” (which seeks to match and exceed current VET community mental health offerings), and (d) **specialist** offerings such as those relevant to **indigenous mental health** and **rural health**. This core component of the accredited psychology major will allow students to develop a career as an Applied Behavioural Practitioner, who will work in an interdisciplinary team, perhaps under the supervision of a registered psychologist. *However*, not every university will be willing/able to offer this as a compulsory or even elective component in their programs. Action: *APS, HODSPA and APAC create a working party to develop the content and determine the logistics of the offerings and any accreditation/registration consequences of these units/programs (e.g., minor or Diploma?)*.

B. Realistic Model of UG Education (Framed as Recommendations)

Given the barriers to creating an ideal psychology education program in Australia, we *recommend* the following changes, which include recognising three “components” (a, b, c) of UG psychology education (corresponding somewhat to the UG education psychological literacy components of scientific literacy, employability, and global citizenship; Cranney et al., in press). Figure 1 provides a visual representation of this model. But first, recommendations reflecting the changing nature of accreditation and standards are required (see Appendix B):

Recommendation 2: A review of the **GAs** and associated standards should be undertaken (a) in light of the Recommendations that follow, (b) to reduce redundancy, and (c) to consider “assessability”.

Recommendation 3: In the domain of quality assurance, criteria and standards, although minimum/threshold levels of performance attainment need to be identified, reference to **aspirational** levels of performance attainment should also be made when appropriate (see Appendices A, B, C and D).

Recommendation 4: Psychology Schools and Departments (Academic Organisational Units [AOUs]) should demonstrate the quality of **educational outcomes** for their graduates, through regular systematic evaluation of assessment samples (by external assessors). Positive commentary by employers regarding the quality of graduates would constitute demonstration of an aspirational level of outcome achievement.

a. Minimum core accredited 3-year UG sequence

Recommendation 5: The amount of psychology content in a 3-year degree program should be increased; specifically, the core accredited 3-year psychology sequence **volume of learning** APAC standard should be increased to a total of “150%” as a minimum (where each year is worth 100%), to allow for additional strategic educational components (the aspirational volume of learning across a 3-year sequence should be “200%” or more).

Recommendation 6: The core accredited 3-year sequence should focus on foundational knowledge (GA1), research training (GA2), and critical thinking (GA3) to high minimum levels. *In addition*, the **application** of such knowledge to a high minimum level is required. To include this additional emphasis in a “150%” psychology model, innovative teaching strategies and staff development are required. This particular focus for the sequence constitutes psychological literacy in a narrow sense (i.e., scientific literacy).

As Carlyon (2012) noted, this capacity to apply psychological principles in employment-related settings is what is tested, to a certain extent, in Australian Public Service entry examinations.

Recommendation 7: A **capstone experience** at a minimum is required in the third year of the sequence; the aspirational level would be a full unit including work-integrated learning (WIL).

“This capstone course helped me integrate and reflect on my learning throughout my psychology program by helping me discover the purpose of my psychological major in university. I was surprised to discover that the course aims of each psychology course were much broader and well rounded than I had perceived them to be. Before taking this course, I believed that main purpose of my psychology major was to acquire an adequate knowledge and understanding psychology. The benefit of this course is that it revealed that the purpose of university is not just to acquire head knowledge, but to train me in the attributes of a successful psychologist such as good communication, research, and critical thinking skills. Therefore this course has re-defined why I am attending university.” (Amy Pratten, 2012 UNSW PSYC3011 student)

b. Additional units focussed on further professional training at UG level

Recommendation 8: To provide an alternative professional psychology route for 3-year graduates, a sequence of “**Applied Behavioural Practitioner**” units should be developed by APS in collaboration with HODSPA and APAC, and offered in partnership with interested universities, perhaps as a minor, certificate or diploma. Whether this will become an accredited sequence will need to be further explored by those organisations.

Recommendation 9: A new APAC accreditation standard is created that requires the AOU to specify how it is meeting the **career-development** needs of all students, including those who are unlikely to progress to professional psychology postgraduate training. This is in line with the Australian Qualifications Framework requirements for Level 7 (Bachelor level).

“The course as a whole, and in particular the Graduate Attributes task, really helped me to integrate and reflect on the knowledge and skills I have developed throughout the course of my degree. The metaknowledge I have gained will be very useful when I apply for jobs in the future... To me, “psychological literacy” means being aware of the knowledge and skills I have gained in my psychology degree, as well as how I can apply it to enhance wellbeing for myself and the wider community in real world situations” (Chi Tran, 2012 UNSW PSYC3011 student).

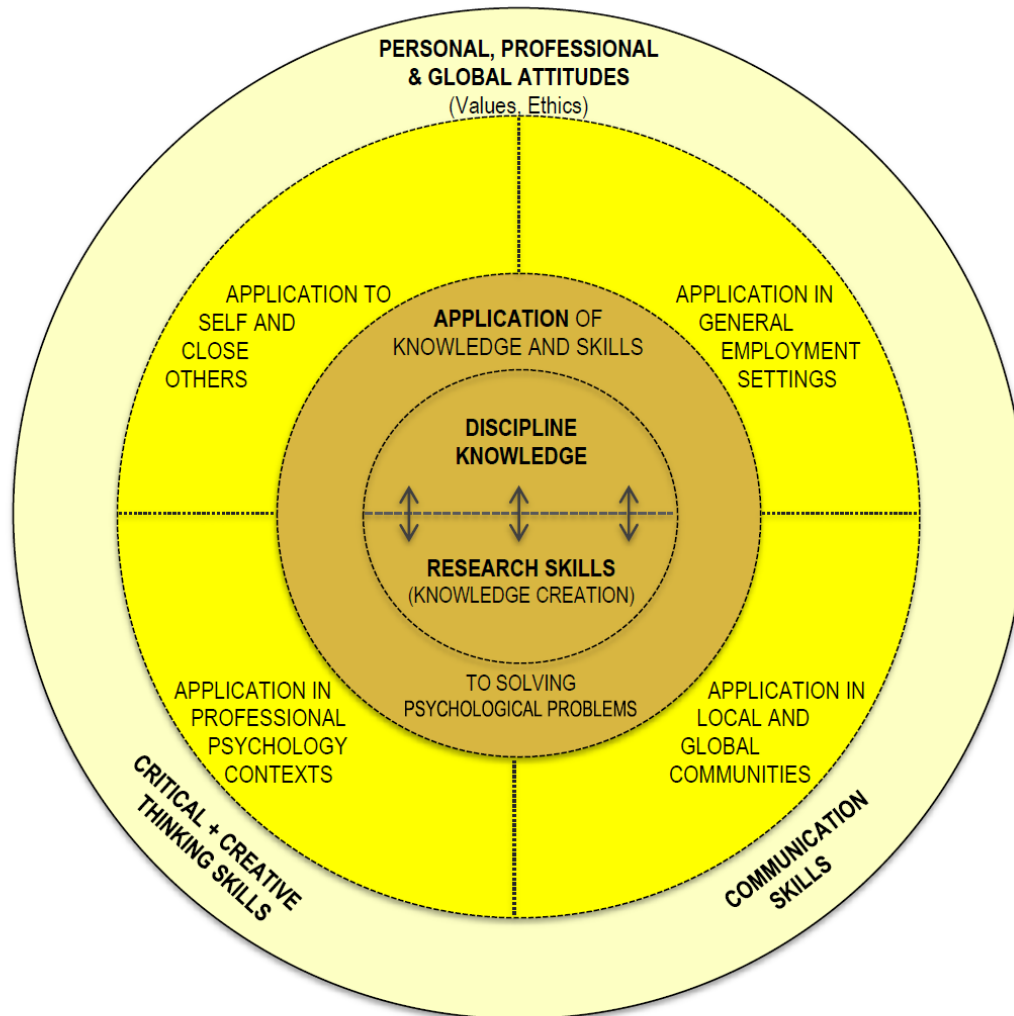


Figure 1. Psychological knowledge, skills and attitudes within the UG psychology major domain. The central two circles and the outer circle represent the proposed “realistic model” of UG education, that is, the minimum core of the psychology major. The top two partial quadrants are the highly recommended domains of application, with the bottom two being aspirational (e.g., “applied behavioural practitioner”, and “global citizen”, L-R respectively). Underlying all are critical and creative thinking and communication skills, and above all is the explicit acknowledgement that attitudes are key to our motivation to learn, research and practice (i.e., why we engage with the science and practice of psychology).

c. Additional units focussed on developing UG psychology graduates as globally literate leaders

Recommendation 10: To increase the capacity of psychology graduates to become **globally literate leaders** in solving local and global behaviourally based problems, additional units should be offered (e.g., on cultural awareness and competence; moral literacy; decision-making and interventions regarding global issues such as climate change; behaviourally based leadership; community-based volunteering experiences). These could be additional to or included within the focus of the capstone experience.

In **summary**, the minimum/threshold accredited 3-year sequence will offer the traditional emphasis on knowledge, research and critical thinking, with the additional requirements of ensuring high emphasis on application, and the capstone experience. An aspirational 3-year sequence will additionally offer opportunities (i.e., units, minor, concurrent or subsequent certificate or diploma) to (a) further develop professionally relevant psychology training to meet the clear need for professionals at this level, that is, Applied Behavioural Practitioners, and (b) further develop the capacity of graduates to be global leaders, in particular, psychologically literate global citizens. Finally:

Recommendation 11: That peak disciplinary bodies encourage and support (a) sharing of expertise and resources (e.g., through support of the APS Psychology Education resources website), (b) explicit program-based staff development to facilitate changes in program outcomes for students, and (c) consensual/partnered policy and strategy development (e.g., through annual education summits for both UG and PG programs; through structural support within their organisations; through support of education committees and communities).

“To me, Psychological literacy refers to the ability to view the world with a competent understanding of psychological concepts; not only in social aspects (eg, understanding the bystander effect), but in all aspects, including health, learning, physiological, developmental and many other psychological aspects” (Corey Botansky, 2012 UNSW PSYC3011 student)

Appendix A:

General Principles and Specific Recommendations for Changes to the APAC Standards and Procedures for Undergraduate Psychology Education

Date: 18/06/12

To: Dr. Nicholas Voudouris, Australian Psychology Accreditation Council (APAC) Chief Executive Officer

Submission by: Jacquelyn Cranney, Member, Australian Psychological Society Program Development Advisory Committee (APS-PDAC), and Associate Professor of Psychology, UNSW

Document Purpose:

This document sets out suggested general principles for accreditation of UG psychology programs, and also suggests specific changes to the Standards and procedures. Additional rationale is provided in Cranney and Botwood's (2012) Green Paper, *Review of the Aims, Outcomes and Accreditation Standards for Australian Undergraduate Psychology Education* (available from j.cranney@unsw.edu.au). This document constitutes a submission to the 2012 APAC Standards Review.

A. General Principles

Adapting APA's (2011) "Principles", we assert that the following principles for UG education in psychology, based on the concept of psychological literacy (Cranney et al., in press), are designed for creating:

- A world-class educational system that provides students with the workplace skills needed in this rapidly changing information age (i.e., employability);
- A solid academic background that prepares them for advanced study in a range of fields, as well as the capacity to be critical consumers (i.e., scientific literacy); and
- The knowledge, skills and attitudes that will enhance their personal, professional and global lives (i.e., global citizenship).

Principle 1: Accreditation of UG psychology programs is a worthwhile endeavour; moreover, the aims and procedures of accreditation need to be reviewed periodically, including (a) national consultation with key stakeholders such as students, graduates, employers, educators, peak disciplinary and professional bodies, and government (e.g., the Australian Qualifications Framework [AQF] and the Tertiary Education Quality and Standards Agency [TEQSA]), and (b) consideration of international benchmarking and the consequences for graduate mobility.

Principle 2: Within the opposing contexts of accountability and economic constraint, accreditation review procedures based on outcomes and outputs (e.g., evaluation of attainment of student learning outcomes) need to be balanced with accreditation review procedures based on inputs (e.g., minimal staffing and resource levels), to ensure quality education in psychological science.

Principle 3: Within the opposing contexts of accountability and economic constraint, minimal or threshold level attainment of outcomes need to be specified and exemplified; moreover, aspirational levels should be exemplified where feasible.

Principle 4: In partnership with each Academic Organisational Unit (AOUs), the accreditation process should focus on quality assurance and improvement (QA&I), delineating required vs. desired areas for improvement, and publically acknowledging areas of excellence.

Principle 5: In acknowledging that the majority of psychology major graduates do not become postgraduate-trained professional psychologists or psychological scientists, the accreditation processes should be designed to take into consideration the career-related needs of all graduates (see AQF Level 7 “Purpose” statement).

Principle 6: In acknowledging the promise of application of psychological theory, research and practice to solving a variety of human-created local and global problems, the process of accreditation needs to take into consideration how this capacity can be best realised for psychology major graduates.

Principle 7: The global needs of human beings should be taken into account in any educational endeavour; thus, the development of psychological literacy and global citizenship should be supported by the process of accreditation of psychology programs.

B. Suggested Changes to the Existing APAC Standards

Although some may argue that the current Standards should be thrown out and rewritten according to (a) the principles outlined above and (b) current research, theory and practice in education and QA&I, we take the middle course below by suggesting a new set of minimal standards for UG psychology education (3-year sequence only). It is strongly suggested that this be followed as soon as possible by a set of APAC “Guidelines” which includes examples of minimal and aspirational performance-level statements and/or examples.

Note that:

1. The revision of the Graduate Attributes is based on work undertaken by groups of delegates to the UG Psychology Education Summit at UNSW on 11/04/12. Note that they considered all the original 2008 SLOs, not just those included in the 2008 APAC Standards. Further minor changes were made on the basis of assessability and feasibility, such that:
2. Although the APAC Standards are “minimal”, occasionally aspirational achievement examples are indicated.

3. Red (or grey should you have printed this in black and white) indicates additions; please note that there have also been deletions (not indicated, to improve readability).

SECTION 3 UNDERGRADUATE 3-YEAR SEQUENCE COURSES

This section provides accreditation standards for undergraduate 3-year sequence courses in psychology.

APAC only recognises for accreditation, courses designed to provide an education in psychology. It does not recognise courses designed to provide education in another discipline or profession, even if these have a substantial psychological content.

Although the purpose of accreditation of undergraduate psychology programs traditionally has been to serve further training in the science and profession of psychology, it is recognised that psychology major graduates have diverse career outcomes, with the majority not undertaking further postgraduate training in psychology. As such, the primary minimal outcome of an accredited three-year sequence needs to be scientific literacy, which is just one component of psychological literacy. Psychological literacy has been defined as the capacity to adaptively apply psychological science to meet personal, professional and societal needs. This should be an outcome for all UG psychology graduates, regardless of their career destination. From a psychology major perspective, psychological literacy can be operationalized either in terms of the graduate attributes, or in terms of the three categories of outcomes: scientific literacy, employability, and global citizenship. Given current economic constraints, the basic 3-year sequence should at a minimum deliver scientific literacy, but every AOU should be able to demonstrate that they have given students structured and explicit opportunities to increase employability skills for a diverse range of career destinations. Note that this general purpose statement of the psychology major outcome is consistent with the Australian Qualifications Framework (AQF) Level 7 Purpose Statement: “The Bachelor Degree qualifies individuals who apply a broad and coherent body of knowledge in a range of contexts to undertake professional work and as a pathway to further training”.

The 3-year sequence may be taken as a stand-alone degree program, or as part of an integrated four-year sequence within a single AOU. The following sections (3.1 and 4.1 of the Standards) describe the Standards where this four year sequence is undertaken in two separate components.

3.1 **Three year programs**

These standards apply to all three-year **programs** in psychology which lead to a Bachelors degree or Graduate Diploma in Psychological Science (or similar), and to three-year sequences which are integrated into four-year Honours or Pass degree courses. It is important to note that three year sequences are expected to form adequate foundational preparation upon which later study at the advanced level is built (see Standards Section 4.1).

Length (Volume of Learning)

- 3.1.1 The length of the course should be three years of full-time study, or the equivalent (consistent with the AQF Level 7 Volume of Learning Statement).

Program Structure

- 3.1.2 Across the three years, half (50%) of the units should be psychology [*aspirational: 200% plus*].
- 3.1.3 Normally, there would be a minimum of 25% in the first year, and 50% in each of the second and third years, with a minimum additional 25% gained in one of those years. In AOUs where structural limitations preclude 50% in the second year, then students must be able to average a minimum of 50% psychology across their second and third years (e.g., 33% in second year, followed by 67% in third year). In these cases, the acceptable minimum at second year is 33%.
- 3.1.4 The third year of the course must include a minimum of 50% psychology and there should be the option for students to enrol in more psychology units.
- 3.1.5 The course must be structured to ensure that the **psychology graduate attributes** (see Standard 3.1.7) are covered by all students, while also offering the opportunity through elective components for students to study some areas in greater depth. It is recognised that the elective components in any AOU are likely to reflect the particular areas of strength and expertise of the AOU.

Program Content

- 3.1.6 The emphasis of the **basic 3-year sequence** must be on providing an education in the core discipline **and research methods** of psychology and not in one or more **highly specialist professional areas** (e.g., **clinical or organisational psychology**).
- 3.1.7 **The development of graduate attributes across the program should be explicitly sequenced; that is, upper-level UG units should explicitly build upon first-year unit content where possible.**
- 3.1.8 The accredited three-year sequence must provide students with a solid foundation in psychological literacy, that is, the psychology graduate attributes and associated learning outcomes (based on the *Graduate Attributes of the Four-Year Undergraduate Psychology Program [2012 Revision]*, available from the APAC website). This set of Graduate Attributes is consistent with the AQF Level 7 Knowledge, Skills and Application Statements. It should be noted that the Program content is not limited to these Graduate Attributes.

Graduate Attribute 1: Discipline knowledge and its application

Demonstrate a broad and coherent body of knowledge of psychology, with depth in the underlying principles and concepts, and the capacity to apply this knowledge as the basis for life-long learning.

- 1.1 Demonstrate an understanding of the history and philosophy of **science and psychology**

1.2 Demonstrate understanding of the major concepts, theoretical perspectives, **research methods**, empirical findings, and historical trends in the core topics of psychology:

- biological bases of behaviour
- cognition, information processing and language
- individual differences in capacity and behaviour; testing and assessment; and personality
- intercultural diversity
- indigenous issues in psychology
- learning
- lifespan developmental psychology
- motivation and emotion
- perception
- psychological disorders
- psychological well-being
- social psychology

1.3 **Demonstrate the capacity to apply disciplinary knowledge to explaining, predicting, and controlling human behaviour.**

Graduate Attribute 2: Research methods in psychology

Understand, apply and evaluate basic research methods in psychology.

2.1 **Demonstrate the capacity to** design and conduct basic studies to address psychological questions across a wide variety of domains:

- frame research questions
- undertake literature searches
- critically analyse theoretical and empirical studies
- formulate testable hypotheses
- operationalise variables
- choose an appropriate methodology
- appropriately design questionnaires/surveys as needed
- make valid and reliable measurements
- appropriately analyse data and interpret results
- derive theoretical and practical implications
- acknowledge limitations
- suggest future research
- communicate this research in professional formats

2.2 **Describe the key principles for designing, implementing and evaluating programs of behaviour change**

Graduate Attribute 3: Critical and creative thinking skills in psychology

Demonstrate the motivation and capacity to utilise logic, evidence, and psychological science to evaluate claims about, and solve problems regarding, human behaviour.

- 3.1 Recognise the major formal and informal fallacies of human reasoning.
- 3.2 Use logic and evidence to critically evaluate and to develop arguments.
- 3.3 Critically evaluate theoretical and methodological approaches in psychology.
- 3.4 Demonstrate a rigorous and objective attitude in thinking and learning about human behaviour [*aspirational: demonstrate this attitude in creative and pragmatic problem-solving*].

Graduate Attribute 4: Values and ethics in psychology

Demonstrate appropriate professional values.

- 4.1 Demonstrate sensitivity to diversity in individuals [*aspirational: apply that sensitivity in practice, and reflect on the sociocultural, historical, geographical and international contexts that influence beliefs, values and behaviour: i.e., develop cultural awareness and competence*].
- 4.2 Recognise how prejudicial attitudes and behaviours that exist in oneself and in others may lead to discrimination and inequity [*aspirational: demonstrate the capacity to adopt alternative perspectives; promote the value of non-discrimination and equity*].
- 4.3 Recognise ethical and moral influences that impact on individuals in a globalized society [*aspirational: act upon these to help resolve moral conflicts*].
- 4.4 Demonstrate knowledge, understanding and application of relevant professional codes including (a) the Australian Psychological Society *Code of Ethics* and the complementary *Ethical Guidelines*, (b) relevant values identified within the Australian *National Practice Standards for the Mental Health Workforce*, and (c) relevant values identified in those institutional codes regarding student behaviour (e.g., intellectual integrity) [*aspirational: demonstrate knowledge and application of values relevant to global citizenship*].

Graduate Attribute 5: Communication and interpersonal skills in psychology

Demonstrate professional communication skills.

- 5.1 Write effectively in a variety of formats and for a variety of purposes (i.e., standard research reports and research proposals; observing ethics of written communication)[*aspirational: informing and arguing through electronic means*].

5.2 Listen and speak effectively (i.e., effective oral presentation; basic two-way interviewing skills) [*aspirational: listen accurately and actively; identify impact of behaviour on others; provide constructive feedback; use flexible techniques to communicate sensitively with diverse ethnic and cultural partners*]

5.3 Across the above domains: demonstrate interpersonal skills for communicating between individuals; collaboratively work in groups to complete projects [*aspirational: manage conflicts appropriately and ethically; demonstrate effective leadership behaviours*].

Graduate Attribute 6: Learning and the application of psychology

Understand and apply psychological principles to personal, social, organisational and global issues.

6.1 Understand the links between basic psychological theories and their application (e.g., capacity to explain psychological phenomena using the concepts, language, findings and major theories of the discipline).

6.2 Select psychological principles that can be applied meaningfully in personal and professional contexts (with reference to ethics, privacy, human rights) and evaluate how well this is done (i.e., outcome evaluation).

6.3 Demonstrate a responsibility and capacity for independent learning to sustain personal and professional development in the changing world of the science and practice of psychology.

- 3.1.9 The AOU must clearly demonstrate that the course provides substantial coverage (and assessment) of the Graduate Attributes. Some Attributes (such as *Values and Ethics in Psychology*) may be naturally integrated within other topics, but must be clearly in evidence in the curriculum.
- 3.1.10 During the third year the AOU must provide a capstone experience; this can be part of a unit, for example, a particular assessed component [*aspirational: a whole unit, preferably with a work-integrated component*]. Capstone experiences should provide the student with explicit opportunities to integrate knowledge, skills and attitudes across different knowledge topics and graduate attributes.
- 3.1.11 The AOU must provide evidence that students are given opportunities to develop general (not just specific to professional psychology or psychological science) employability skills (see AQF Level 7 Purpose Statement).
- 3.1.12 The content of the lectures, tutorials and laboratories in the course must be supported by relevant and up-to-date evidence-based scientific reference material. This material should include peer-reviewed empirical articles in the best international scientific journals, preferably at all year levels and certainly at all levels beyond first year.
- 3.1.13 At all three year levels, students must have formal practical work as part of their coursework in psychology, with much, though by no means all, of this practical work taking place in laboratory sessions.

Program Assessment

- 3.1.14 Where feasible, the AOU should implement explicit criterion-based assessment, with accompanying performance achievement statements (e.g., using detailed marking rubrics). Wherever feasible, students should be informed of these “standards” for assessment prior to submission of their work, and markers should be appropriately trained. Moreover, “best practice” examples can be helpful to both students and markers.
- 3.1.15 The assessment of components of **most units** should **include written** submissions by students such as essays or laboratory reports, and formal examinations. An AOU must not rely solely on multiple choice assessments in a course. **For all assessments**, the basis upon which they are graded should be clear (**i.e., criterion-based assessment**). See also Standard 2.1.9.
- 3.1.16 Assessment must ensure that the breadth and depth of the **graduate attributes** are assessed in accordance with the unit learning outcomes. **Examples of Fail, Pass and High Distinction grades for key (e.g., final) assessments of Graduate Attributes should be made available for inspection by the APAC Team. [Aspirational: Provision of employer evaluation of graduate “value”]**
- 3.1.17 Students should receive detailed and timely feedback on their assessments.
- 3.1.18 Appropriate procedures must be in place (e.g., Boards of Examiners) to ensure that **academic** standards are maintained and that all assessment and awarding of final marks or grades is treated with the utmost care and attention. Regular external independent moderation should be undertaken at intervals to benchmark the assessment practices of the AOU against other APAC-accredited AOU's. The APAC Secretariat can assist with advice about how to set up a benchmarking exercise.
- 3.1.19 Appropriate procedures which meet modern governance standards must be in place to deal with student appeals.
- 3.1.20 Appropriate procedures must be in place to deal with cases of plagiarism or other instances of unethical conduct.

Awarding of credit or advanced standing

- 3.1.21 Students transferring from one AOU to another in Australia while completing a three year course or entering an accredited course following the completion of a degree or other course can only be given credit for studies in psychology previously completed if the AOU at which they completed these studies is APAC-accredited and the completed units for which advanced standing is to be granted are part of an APAC-accredited sequence. The onus is on the AOU to which the student is transferring to ensure that this is the case. AOU's should be prepared to justify such decisions should APAC conduct an audit of the AOU's transfer credit practices.
- 3.1.22 Studies undertaken at non-Australian Institutions must be carefully evaluated by the AOU to determine their strict equivalence to the studies for which credit is to be granted, and the AOU must be prepared to defend its decisions regarding the granting of credit should APAC conduct an audit of the AOU's transfer credit practices.

3.1.23 It is the responsibility of the AOU to which a student is transferring to make sure that all **graduate attributes** are covered by the point of completion of the degree. Because there is some flexibility in the structure of courses, and AOU's may vary in the way in which core subjects are covered, it is not sufficient to assume that completion of a particular year at one Institution (for example second year), will necessarily provide adequate preparation for what would usually be the next year's work in the sequence at the receiving Institution (in this example, third year). It may be necessary to prescribe an individually tailored course to ensure that such students cover all core subjects. This prescription must enable students to complete the equivalent of an accredited course. Please note that APAC does not accredit individual students' courses of study.

3.2 **"Applied Behavioural Practitioner" Standards**

***This is a suggested development for 2012:**

These programs need to be developed as a minor, certificate or diploma. Units should have specific UG accredited unit prerequisites (e.g., first year units plus second-level research methods and learning for a unit on applied behavioural analysis). Units may include: (a) basic aspects of **evidence-based assessment and evaluation** (e.g., interviewing; test and questionnaire construction; evaluation methodology; applied behavioural analysis; administering but not interpreting tests—similar to how "examiners" in the Australian Army are being trained), **interventions** (e.g., fundamental operations of CBT—similar to how nurses, social workers and occupational therapists in Australia are currently being trained—and other evidence-based interventions such as Mindfulness Based Stress Reduction and Acceptance Commitment Therapy), as well as (b) **professionalism** (e.g., further ethics training), (c) **generic mental health worker** capabilities, a kind of "VETplus" (which seeks to match and exceed current VET community mental health offerings), and (d) **specialist** offerings such as those relevant to **indigenous mental health** and **rural health**. These units should be developed by APS, HODSPA, and APAC. Whether the program would be accredited and a specific "registerable" role is created, would need to be worked out.

4.1 **Year 4**

***This is a suggested development for 2012:**

We need to consider the extent of low-level professional training in Year 4, given the 4+2, and competing 5+1 pathways. It may be possible to tap into the "Applied Behavioural Practitioner" units.

Pass-level: Should this cohort be given the opportunity to acquire professional skills at the Year 4 level (e.g., this could include training for "Applied Behavioural Practitioner")? Note that for this Year 4, those who pass the psychology major should be eligible, and a pass level only is required to graduate from this Year 4. This situation would make it possible for any student who passes to gain some level of psychologically relevant professional training (similar to the situation for nurses and social workers), and would reduce the problem with students feeling as though they have wasted their time and money with an undergraduate psychology degree.

C. Suggested Changes to the Existing APAC Procedures

- Off-line survey of the documentation of how the program develops and assesses the GAs and SLOs (a program portfolio?), with relevant student HD, P and F examples (this could include student psychological literacy portfolios or other capstone assessments); follow up with Skype meetings;
- AOU's emphasise the common "accreditable sequence" across their different programs, with a brief summary of any key differences, with a subsequent discount of accreditation costs;
- 2+ external experts online rate/calibrate student assessment pieces (nationally common? eg GA portfolios? Use Keith Willey's *SparkPlus* technology);
- To support an aspirational standards approach, as well as the "threshold" levels of achievement, where appropriate aspiration levels or examples should be specified.

Appendix B: Quality Principles (and Methods) for UG Psychology Education and Accreditation within an International Context

This section supports some of the previous recommendations.

What [internal] QA&I systems operate within Schools/Departments of Psychology?
What are the relevant QA&I systems external to the university? APAC, TEQSA (AQF).

In terms of the current APAC approach to UG education, there is a focus on:

- minimal rather than aspirational standards (*cf* medicine)
- the adequacy of the AOU (staffing, facilities, systems) to deliver the program (inputs)
- the UG programs themselves, where the standards relate to outputs (graduate attributes), inputs (e.g., % units) and other factors (e.g., nature of assessment).

The **USA** does not have compulsory national psychology accreditation of UG programs. Partly in response to this situation, the APA (2011) supported a set of “Principles for Quality Undergraduate Education in Psychology”:

1. Students are responsible for monitoring and enhancing their own learning
2. Faculty strive to become **scientist–educators** who are knowledgeable about and use the principles of the science of learning
3. Psychology departments and programs create a coherent curriculum
4. Academic administrators support and encourage quality practices in teaching and learning
5. Policymakers and the general public need to understand why **psychological literacy** is necessary for informed citizens and an effective workforce

Previously, Dunn et al. (2007) had produced a set of “Quality Benchmarks in Undergraduate Psychology Programs”, which included developmental rubrics in a number of domains:

- Curriculum (science foundation, curriculum structure and sequence, course variety, disciplinary perspective breath, curricular ethics, curricular cultural diversity, service learning)
- Assessment
- Student learning outcomes (writing skills, speaking skills, research skills, collaborative skills, information literacy and technology skills)
- Program resources domain
- Student development
- Faculty characteristics (teaching orientation, scholarship orientation, resource development, professional development, community orientation, accessibility to students, faculty ethics)
- Program climate
- Administrative support (see Appendix D for additional detail)

Subsequently, Dunn et al. (2010) “called for a core” for undergraduate education, which consisted of units in:

- scientific method
- diversity
- core domains (biological, learning and cognition, developmental, sociocultural)
- application
- integration (capstone experiences).

APA (2007) also specified a list of 10 graduate attributes and associated learning outcomes, which overlap with the Australian set. It should be noted that the first two USA documents mentioned above have an emphasis on the department (AOU) as well as the program/curriculum. For various reasons, we will confine our discussion to the latter.

The **UK** UG report (Trapp et al., 2011, click [here](#) to view) concluded that:

- Less than 20% of its graduates become professional psychologists or psychological scientists
- The QAA Benchmarks are adequate, however the actual implementation of aspects relevant to psychological literacy (and especially, employability) is not usually emphasised in UG programs
- Work-integrated learning is a highly desirable experience for UG students
- There should be more of a “partnership” relationship between their accreditation body and the departments.

The **EuroPsy Tunings** project (Lunt et al., 2011) on UG and graduate education argued that:

- Most of the UG program should consist of foundational (knowledge and research training) psychology units, with just a few units on cognate disciplines such as anthropology
- Specifically, this “first phase” content includes orientation (knowledge), explanatory theories (knowledge), technology theories (knowledge), explanatory theories (skills), technology theories (skills), methodology (knowledge), methodology (skills), professional skills (knowledge and skills), academic skills (skills), non-psychology knowledge (knowledge)
- There should be an emphasis on psychological content at three levels: **individual, group, and society/systems**
- UG graduates should gain **competency in interviewing, test and questionnaire construction, and group intervention**
- UG graduates should gain at least a moderate level of **competency** in the “basic competencies” of **self-management, information handling, communication, team-work, and academic competencies**

Lunt et al. (2011) argue that Phase 1 graduates should be able to:

- Apply multiple perspectives...
- Identify and evaluate general patterns in behaviour...
- Generate and explore hypotheses and research questions
- Carry out empirical studies...
- Apply basic knowledge...

- Employ evidence-based reasoning and examine practical, theoretical and ethical issues associated with the use of different methodologies...

And these generic capabilities:

- Communication
- Computer/IT
- Basic numeracy
- Interpersonal and teamwork
- Metacognitive and learning to learn

And they will have skills relevant to

- ... scientific literacy
- ... communication of psychology to varied audiences
- ... employability
- ...life-long learning

It should be noted that this document is primarily concerned with professional psychology training, not UG education, and so it *does not creatively consider the broader potential of UG education*.

Inputs vs outputs

Although there is increasing emphasis on outputs, the EuroPsy document presents an argument for a combination of both inputs and outputs, and accreditation of inputs is still an important factor in protecting the discipline of science, which we know is fundamental to evidence-based practice. In addition, wholly output/competence-based accreditation quality standards assessment is excessively expensive.

Methods of Accreditation

There are a number of drivers to a review of methods of accreditation of UG programs:

- The new health regulation laws means that almost the full cost of accreditation (which used to be subsidised by APS and the state registration boards) needs to be passed on to the client (AOU), who already argues that the cost is too high
- Increased national emphasis on QA&I in the professional training and HE sectors
- Argument for aspirational rather than minimal standard approaches to accreditation.

See [Appendix A](#) for suggestions for changes to methods of accreditation in Australia.

Appendix C: The Coal-face: Developing, Assessing and Benchmarking Learning Outcomes

Some critical points:

- In any curriculum renewal process, there is a need for a **whole-program approach** to determine required and desired GAs and SLOs (and the consequent LT&A strategies) in any AOU UG program
- There is an urgent need to share good LTA strategies
- Capstone experiences/courses are critical, and may become a tool for benchmarking across universities

- Psychological literacy/GA portfolios, either across the whole program, or within a capstone course, may likewise become a tool for benchmarking
- Innovation is needed!
- So-called “standards-based assessment” (or criteria-based assessment) will become increasingly required; again, we need to share our good practice (rubrics, criteria, standards, Assurance of Learning, examples of good practice).

APPENDIX D: Examples of Different Levels of Achievement and Assessment of SLOs

These examples were developed for the Undergraduate Psychology Education Summit in April, 2011, at UNSW. The detail of these examples may soon become outdated; however, they provide examples of how assessment and benchmarking of SLOs may be implemented.

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.

eg

*Demonstrate practical skills in laboratory-based and other psychological research.

Aspirational level (HD):

- Demonstrates a high level of practical skill in laboratory-based psychological research, eg skilled use of specialist equipment, excellent skills in accurate observation and reliable measurement.
- Demonstrates a high level of practical skill in non-laboratory based forms of psychological research, eg skilled use of in-field equipment, excellent skills in accurate observation and reliable measurement.
- Demonstrates a high level of skill in the storage, reduction, and appropriate analysis of quantitative data using standard statistical packages.
- Demonstrates a high level of skill in qualitative data acquisition and analysis

Threshold level (Pass):

- Demonstrates a basic (adequate) level of practical skill in laboratory-based psychological research, eg appropriate use of specialist apparatus, adequate skills in observation and reliable measurement.
- Demonstrates a basic level of practical skill in non-laboratory based forms of psychological research, eg adequate use of in-field equipment, adequate skills in observation and reliable measurement.
- Demonstrates a basic level of skill in the storage, reduction, and appropriate analysis of quantitative data using standard statistical packages.
- Demonstrates a basic level of skill in qualitative data acquisition and analysis

Below threshold level (Fail):

- Does not demonstrate even a basic (adequate) level of practical skill in laboratory-based psychological research, eg appropriate use of specialist equipment, unreliable observations and measurement.
- Does not demonstrate even a basic level of practical skill in non-laboratory based forms of psychological research, ie in adequate use of in-field equipment, poor/unreliable observation and measurement skills.
- Does not demonstrate even a basic level of skill in the storage, reduction, and appropriate analysis of quantitative data using standard statistical packages.
- Does not demonstrate even a basic level of skill in applying qualitative data acquisition and analysis

Examples of assessment:

- (a) Within-laboratory/field assessment of individual student's practical skills by the educator. L&T strategies would require scaffolded development of the skills, perhaps initially with small groups of students working together to acquire the skills that have been modelled in reality or virtually. **Standards/criterion-based assessment:** The criterion likely would be adequate performance of the skill component, with a pass/fail judgment. If there were a series of skill components which built upon each other, then there would be the opportunity for a range of performance above a basic level, in which case, the educator would ideally develop a rubric with clearly outlined the skill set, and the desired levels to achieve an adequate/basic or aspirational level of practical skill achievement.
- (a) Limited aspects, eg choice and implementation of data analysis skills, could be tested in examinations.

Suggested Forms of Accreditation Assessment

- (a) In the accreditation application, the AOU indicates which forms of assessment in which unit covers this LO. The AOU should back that up with evidence of (a) student examples of HD/Pass/Fail in the practical skills assessment test, the exam, or other assessment.
- (b) Alternatively, there is a set method of assessing this LO, which can then be subjected to independent assessment.

Graduate Attribute 6: Learning and the Application of Psychology

*Demonstrate a capacity for independent learning to sustain personal and professional development in the changing world of the science and practice of psychology.

Aspirational level (HD):

- Recognises the inevitable evolution of the science and practice of psychology.
- Recognises the need for life-long learning, both to meet the needs for personal growth, and to meet the need for continuous professional and career development.
- Demonstrates the capacity to proactively identify and successfully engage in opportunities to enhance personal growth and continuous professional development.

Threshold level (Pass):

- Demonstrates an appreciation that the science and practice of psychology develops over time.
- Demonstrates an appreciation that one needs to engage in further professional development activities.
- Demonstrates the capacity to participate successfully in opportunities to learn more about oneself, one's profession, or one's career.

Below threshold level (fail):

- Has a rigid orientation toward the state of knowledge in the science and practice of psychology; appears to believe that there is/should be no change.
- Does not demonstrate an appreciation that one needs to engage in further professional development activities; appears to believe that one's current capacities should be indefinitely adequate.
- Does not demonstrate the capacity to participate successfully in opportunities to learn more about oneself, one's profession, or one's career.

Suggested Examples of assessment:

- (a) Graduate attribute/psychological literacy portfolio. Statements of achievement and relevant evidence. Developmental L&T strategies: Give student opportunities in class to identify gaps in other learning outcomes; student documents engagement in formal or informal opportunities to close that gap; student provides types of specific evidence indicated as acceptable by the educator. **Standards/criterion-based assessment**: The educator would develop a wholistic rubric to assess this LO. The criterion is the LO, and the different levels/standards of achievement would include HD (Recognises the inevitable evolution of the science and practice of psychology; Recognises the need for life-long learning, both to meet the needs for personal growth, and to meet the need for continuous professional and career development; Demonstrates the capacity to proactively identify and successfully engage in opportunities to enhance personal growth and continuous professional development), and Pass (Demonstrates an appreciation that the science and practice of psychology develops over time; Demonstrates an appreciation that one needs to engage in further professional development activities; Demonstrates the capacity to participate successfully in opportunities to learn more about oneself, one's profession, or one's career).
- (b) Limited aspects, eg particular questions about the evolution of science and practice, could be tested in examinations.

Suggested Forms of Accreditation Assessment

- (a) In the accreditation application, the AOU indicates which forms of assessment in which unit covers this LO in application. The AOU backs that up with evidence of (a) student examples of HD/Pass/Fail in that part of a Portfolio, exam, or other assessment.
- (b) Alternatively, there is a set method of assessing this LO, which can then be subjected to independent online calibrated review.

APPENDIX E: Additional Information

Dunn et al. (2010) produced a set of “Quality Benchmarks in Undergraduate Psychology Programs”, which included developmental rubrics in a number of domains:

- Curriculum (science foundation, curriculum structure and sequence, course variety, disciplinary perspective breath, curricular ethics, curricular cultural diversity, service learning)
- Assessment (assessment planning, data gathering, program improvement, program promotion)
- Student learning outcomes (writing skills, speaking skills, research skills, collaborative skills, information literacy and technology skills)
- Program resources domain (physical facilities, administrative support, extramural funding, departmental website, technology, alumni connections)
- Student development (student advising, advising materials, student organisations, involvement in departmental decisions)
- Faculty characteristics (teaching orientation, scholarship orientation, resource development, professional development, community orientation, accessibility to students, faculty ethics)
- Program climate (program ethics, program leadership, relationship with university community, greater community involvement by program, collegiality, respect for individual and cultural differences)
- Administrative support (institutional administrative climate, mission, by-laws and procedures, evaluation system, teaching assignments, scholarship support, recognition system)

APPENDIX F: Glossary (in development)

Competence = “a learned ability to adequately perform a task, duty or role” (Roe, 2002, quoted in Lunt et al., 2011, p.51).

[To be expanded: various use of “standards”, threshold standards, standards-based assessment (and criteria), GAs, capabilities, competencies, learning outcomes (and learning objectives); also cultural awareness, cultural competency, ethical literacy]

The “literacies” as described by Joan Cooper and Stephen Marshall, 2012, in the context of the Diploma of Professional Practice, and extended:

Social literacy = understanding of and ability to work effectively with others as collaborators, competitors or leaders in many local contexts including educational/training, employment and other professional contexts.

Career literacy = understanding of own personal interests and strengths and the implications for career choices.

Professional literacy = understanding of and ability to work within profession specific expectations, standards and competency requirements.

Organisational literacy = understanding of and ability to work within a workplace's values, priorities, structures, and cultures.

Legal and ethical literacy = understanding of and ability to work within the legal and ethical frameworks within which workplaces and other relevant organisations operate.

Global literacy = understanding of and ability to live, study and work as part of a global community.

Cultural literacy = understanding of cultural differences and the ability to respect and value these differences in non-judgemental ways.

APPENDIX G: Bibliography and Key Readings

Key Readings:

- American Psychological Association. (2011). Principles for quality undergraduate education in psychology. <http://www.apa.org/education/undergrad/principles.aspx>
- Australian Psychology Accreditation Council (APAC) (2011). *APAC Standards*. Retrieved from <http://www.apac.psychology.org.au/Content.aspx?ID=1083>.
- Cranney, J. (2008). Sustainable and evidence-based learning and teaching approaches to the undergraduate psychology curriculum. Strawberry Hills, New South Wales, AU: Australian Learning and Teaching Council Ltd. Retrieved from <http://www.olt.gov.au/resource-sustainable-evidence-based-learning-psychology-unsw-2008>
- Cranney, J., Provost, S., Katsikitis, M., Martin, F., White, F., & Cohen, L. (2008). *Designing a diverse, future-oriented vision for undergraduate psychology in Australia*. Strawberry Hills, New South Wales, AU: Australian Learning and Teaching Council Ltd. Retrieved from <http://www.olt.gov.au/resource-future-psychology-unsw-2008>
- Dunn, D. S., Brewer, C. L., Cautin, R. L., Gurung, R. A., Keith, K. D., McGregor, L. N., ... Voight, M. J. (2010). The undergraduate psychology curriculum: Call for a core. In D. F. Halpern (Ed.), *Undergraduate education in psychology: A blueprint for the future of the discipline* (pp. 47-61). Washington, DC: American Psychological Association. doi:10.1037/12063-003
- Halpern, D. F. (Ed.). (2010). *Undergraduate education in psychology: A blueprint for the future of the discipline*. Washington, DC: American Psychological Association.
- Lipp, O., Terry, D., Chalmers, D., Bath, D., Hannan, G., Martin, F., ...Provost, S. (2007). *Learning outcomes and curriculum development in psychology*. Sydney, Australia: Carrick Institute for Learning and Teaching in Higher Education. Retrieved from <http://www.olt.gov.au/resource-learning-outcomes-psychology-uq-2006>
- 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>.
- Lunt, I., Job, R., Lecuyer, R., Peiro, J. M., & Gorbena, S. (2011). *Tuning educational structures in Europe: reference points for the design and delivery of degree programmes in psychology*. Bilbao, Spain: University of Deusto. Retrieved from http://www.google.com.au/url?sa=t&rct=j&q=&esrc=s&frm=1&source=web&cd=6&ved=0CFEQFjAF&url=http%3A%2F%2Feuropsy.psychologues-psychologie.net%2Findex.php%3Foption%3Dcom_docman%26task%3Ddoc_download%26gid%3D4%26Itemid%3D&ei=08KDT4fqPMKHiQfk3-3kBw&usg=AFQjCNFGAV_FWk85PyXS46FF7HI8I2gtWQ

Quality Assurance Agency. (2002). *Subject benchmark statement: Psychology*. Retrieved from <http://www.qaa.ac.uk/academicinfrastructure/benchmark/statements/Psychology07.asp> .

Trapp, A., Banister, P., Ellis, J., Latto, R., Miell, D., & Upton, D. (2011). *The future of undergraduate psychology in the United Kingdom*. York, UK: UK Higher Education Academy Psychology Network. Retrieved from http://www.pnarchive.org/docs/pdf/UG_PSYCHOLOGY_WEB.pdf

General Bibliography and References:

- American Psychological Association. (2007). *APA guidelines for the undergraduate psychology major*. Washington, DC: Author. Retrieved from www.apa.org/ed/resources.html.
- Australian Chamber of Commerce and Industry and the Business Council of Australia (2002). *Employability skills for the future*. Canberra, ACT Australia: Department of Employment Science and Training. Retrieved from <http://www.deewr.gov.au/Schooling/CareersandTransitions/EmployabilitySkills/Documents/EmpSkillsForTheFuture.pdf>.
- Barnett, R. (2000). *Realizing the university in an age of supercomplexity*. Buckingham, UK: Open University Press.
- Beins, B. (2007, Spring). Psychology, critical thinking, and scientific literacy. *Psychology Teacher Network*, 17, 3-4.
- Bernstein, D. (2011). A scientist-educator perspective on psychological literacy. In J. Cranney & D. S. Dunn (Eds.), *The psychologically literate citizen: foundations and global perspectives* (pp. 281-295). New York, NY: Oxford University Press.
- Boud, D. & Falchikov, N. (2006). Aligning assessment with long-term learning. *Assessment & Evaluation in Higher Education*, 31, 399-413. doi:10.1080/02602930600679050
- Boud, D. (2000). Sustainable assessment: Rethinking assessment for the learning society. *Studies in Continuing Education*, 22, 151-167. doi:10.1080/713695728
- Bradley, D., Noonan, P., Nugent, H., & Scales, B. (2008). *Review of Australian Higher Education: Final Report*. Retrieved from www.deewr.gov.au/he_review_finalreport
- Carlyon, T. (2012, April). Community service reform—role of psychological literacy. Paper presented at the April 2012 UG Psychology Education Summit, UNSW, Sydney.
- Charlton, S., & Lymburner, J. (2011). Fostering psychologically literate citizens: A Canadian perspective, In J. Cranney and D. S. Dunn (Eds.), *The psychologically literate citizen: Foundations and global perspectives* (pp. 234-248). New York: Oxford University Press. Cranney, J., Botwood, L., Mellish, L., & Baker, C. (in prep.). Student, Graduate and Employer perspectives on psychology undergraduate education in Australia: A pilot study.
- Cranney, J., & Dunn, D. (Eds.) (2011). *The psychologically literate citizen: foundations and global perspectives*. New York: Oxford University Press. ISBN- 13: 978-0-19-979494-2
- Cranney, J., & Dunn, D.S. (2011). Psychological literacy and the psychologically literate citizen: New frontiers for a global discipline. In J. Cranney and D. S. Dunn (Eds.), *The psychologically literate citizen: foundations and global perspectives* (pp.3-12). New York: Oxford University Press.
- Cranney, J., & Dunn, D.S. (2011). What the world needs now is psychological literacy. In J. Cranney and D. S. Dunn (Eds.), *The psychologically literate citizen: Foundations and global perspectives* (pp.322-336). New York: Oxford University Press.
- Cranney, J., & Morris, S. (2011). Adaptive cognition and psychological literacy. In J. Cranney and D. S. Dunn (Eds.), *The psychologically literate citizen: Foundations and global perspectives* (pp.251-268). New York: Oxford University Press.
- Cranney, J., Morris, S., Martin, F., Provost, S., Zinkiewicz, L., Reece, J., Milne-Home, J., Burton, L., White, F., Homewood, J., Earl, J., & McCarthy, S. (2011). Psychological Literacy and applied psychology in undergraduate education. In J. Cranney and D. S. Dunn (Eds.), *The psychologically literate citizen: Foundations and global perspectives* (pp. 146-164). New York: Oxford University Press.
- Cranney, J., Morris, S., Krochmalik, A., & Botwood, L. (in press) . Assessing Psychological Literacy. In D. S. Dunn, S.C. Baker, C.M. Mehrotra, R.E. Landrum, & M. A. McCarthy, (Eds.). *Assessing Teaching and Learning in Psychology: Current and Future Perspectives*.

- Cranney, J., Morris, S., Spehar, B., & Scoufis, M. (2008). Helping first year students think like psychologists: Supporting information literacy and team-work skill development. *Psychology Learning and Teaching*, 7, 28-36.
- Cranney, J., Turnbull, C., Provost, S.C., Martin, F., Katsikitis, M., White, F.A., ...Varcin, K.J. (2009). Graduate attributes of the four-year Australian undergraduate psychology program. *Australian Psychologist*, 44, 253-262. doi: 10.1080/00050060903037268
- Cranney, J., & Voudouris, N.J. (2012). Psychology education and training in Australia: Shaping the future. In S. McCarthy, K. L. Dickson, J. Cranney, V. Karandashev & A. Trapp (Eds.), *Teaching psychology around the world: Volume 3*. Pp. 2-14. Newcastle Upon Tyne, UK: Cambridge Scholars Press.
- Cranney, J., Kofod, M., Huon, G., Jensen, L., Levin, K., McAlpine, I., Scoufis, M., & Whitaker, N. (2005b). Portfolio tools: Learning and teaching strategies to facilitate development of graduate attributes. *Proceedings of the Blended Learning in Science Teaching and Learning Symposium, September 30, 2005, University of Sydney*. Sydney: Uniserve Science. Retrieved from http://sydney.edu.au/science/uniserve_science/pubs/procs/wshop10/2005Cranney.pdf
- Davidson, G. R., & Morrissey, S. A. (2011). Enhancing ethical literacy of psychologically literate citizens. In J. Cranney & D. S. Dunn (Eds.), *The psychologically literate citizen: foundations and global perspectives* (pp. 41-55). New York, NY: Oxford University Press.
- Dudgeon, P., Darlaston-Jones, D., & Clark, Y. (2011). In J. Cranney and D. S. Dunn (Eds.), *The psychologically literate citizen: Foundations and global perspectives* (pp. 72-90). New York: Oxford University Press.
- Dunn, D. S., Brewer, C. L., Cautin, R. L., Gurung, R. A., Keith, K. D., McGregor, L. N., ... Voight, M. J. (2010). The undergraduate psychology curriculum: Call for a core. In D. F. Halpern (Ed.), *Undergraduate education in psychology: A blueprint for the future of the discipline* (pp. 47-61). Washington, DC: American Psychological Association. doi:10.1037/12063-003
- Dunn, D. S., Cautin, R. L., & Gurung, R. A. (2011). Curriculum matters, structure, content and psychological literacy. In J. C. Cranney & D. S. Dunn (Eds.). *The psychologically literate citizen* (pp. 15-26). New York, NY: Oxford University Press, Inc.
- Kennedy, B., & Innis, M. (2005). The teaching of psychology in the contemporary university: Beyond the accreditation guidelines. *Australian Psychologist*, 40, 159-169. [This article gives an overview of developments within the Australian Higher Education Context regarding the growing emphasis on graduate attributes, and their relevance to psychology.]
- Krathwohl, D. R. (2002). A revision of Bloom's Taxonomy: An overview. *Theory into Practice*, 41, 212-260. Retrieved from http://www.unco.edu/cetl/sir/stating_outcome/documents/Krathwohl.pdf
- Lantz, C. (2011). *Psychology student employability guide: From university to career*. York, UK: UK Higher Education Psychology Network. Retrieved from http://www.pnarchive.org/docs/pdf/EMPLOYABILITY_GUIDE.pdf
- 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.
- McGovern, T. V., Corey, L., Cranney, J., Dixon, W. E., Jr., Holmes, J. D., Kuebli, J. E., ... Walker, S. (2010). Psychologically literate citizens. In D. F. Halpern (Ed.), *Undergraduate education in psychology: A blueprint for the future of the discipline* (pp. 9-28). Washington, DC: American Psychological Association. doi:10.1037/12063-001
- Marsella, A.J. (2007). Education and training for a global psychology: Foundations, issues, and actions. In M. J. Stevens & U. P. Gielen (Eds.), *Toward a global psychology: Research, intervention, and pedagogy* (pp. 333-361). Mahwah, NJ: Lawrence Erlbaum Associates.
- Mayo, J. A. (2010). *Constructing undergraduate psychology curricula: promoting authentic learning and assessment in the teaching of psychology*. Washington, DC: American Psychological Association. doi:10.1037/12081-000
- National Academy of Sciences. (1996). *National science education standards*. Washington DC: National Academy Press. Retrieved from <http://literacynet.org/science/scientificliteracy.html>
- National Centre for Public Policy and Higher Education (2006). *Measuring up: The national report card on higher education*. Retrieved from <http://measuringup.highereducation.org/>
- National Committee for Psychology, Australian Academy of Science. (1996). *Psychological Science in Australia*. Canberra: Australian Government Publishing Service.
- OECD. (2011). Testing student and university performance globally: OECD's AHELO. Retrieved from

- http://www.oecd.org/document/22/0,3746,en_2649_35961291_40624662_1_1_1_1,00.html
- O’Gorman, J.G. (2001). The Scientist-Practitioner model and its critics. *Australian Psychologist*, 36, 164-169.
- Pusateri, T., Halonen, J., Hill, B., & McCarthy, M. (2009). *The assessment cyberguide for learning goals and outcomes*. Washington, DC: American Psychological Association. Retrieved from <http://www.apa.org/ed/governance/bea/assessment-cyberguide-v2.pdf>
- Upton, D. & Trapp, A. L. (2010). *Teaching psychology in higher education*. Blackwell, UK: Wiley.
- Voudouris, N., & Mrowinski, V. (2010, April). Alarming drop in availability of postgraduate psychology training. *InPsych*, 32, 20-23.
- Waring, T. (2008). The regulation of psychology in Australia. In J.E. Hall and E.M. Altmaier, *Global promise: Quality assurance and accountability in professional psychology*. Pp. 164-185.