

Graduate Attributes of the Four-Year Australian Undergraduate Psychology Program

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Introduction.....	2
1. Knowledge and Understanding of Psychology.....	2
2. Research Methods in Psychology.....	2
3. Critical Thinking Skills in Psychology.....	3
4. Values in Psychology.....	3
5. Communication Skills.....	4
6. Learning and the Application of Psychology.....	4
Appendix I: Notes.....	5
Appendix II: Consultation Process.....	7
Appendix III: Contributions to the Document.....	9
Appendix IV: Bibliography - Graduate Attributes, Student Learning Outcomes, and Psychology....	10

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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 APAC: 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.

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- *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.

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- *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 overseeing 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:

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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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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.