



APS

Australian  
Psychological  
Society

# PSYCHOLOGY 2020

THE 2011-2012 PRESIDENTIAL INITIATIVE ON THE  
FUTURE OF PSYCHOLOGICAL SCIENCE IN AUSTRALIA



# FOREWORD

## PROFESSOR SIMON CROWE FAPS



The discipline and practice of psychological science has never faced greater challenges than in the current environment. Funding for psychology education and training is inadequate, the psychology workforce is in shortage, psychology does not perform well in the publication of research on international comparisons, and the psychological literacy of the community continues to be poorly developed. Clearly we cannot address these challenges by pulling the blanket up over our heads and hoping that they will go away! The approach we must take is to develop a plan of attack and to coordinate this through all of the bodies which are committed to the importance of the science of the discipline of psychology.

To do this, as my Presidential Initiative I called together a Taskforce of eminent and respected psychologists in the country to consider the challenges and opportunities for psychology going forward to the year 2020. Through in-depth analysis, the aim of the Initiative has been to understand the context and key challenges facing psychology, and to develop recommendations for action in order to influence the future of psychological science and to ensure sustainability of our discipline.

It is my hope that armed with this information, and with the support of the APS, psychology will be better able to maximise the opportunities for change and improvement as they are presented. There is strong student interest in psychology, policy makers and workforce planners are looking to build a strong mental health workforce, and the Australian community's demand for psychology has never been stronger. The future of our discipline will continue to be shaped by these forces but with a well developed action plan for how we must progress and modernise, psychology will be better prepared for whatever the next decade throws at us.

The future is another country and we will quickly discover as we draw nearer that they do things differently there! Without a wallet full of currency, a sensible map and guide book to the sights and delights, as well as at least some elements of the *lingua franca* of this undiscovered land, we will quickly find ourselves lost and exploited, a victim rather than the architect of our own adventure. This Presidential Initiative aims to provide some of these elements to allow our journey to 2020 to be the manifest success we all know that it can be.

A handwritten signature in black ink, consisting of a stylized 'S' and 'C' followed by a flourish.

**Professor Simon Crowe FAPS**  
**APS President 2010-2012**

## ACKNOWLEDGEMENT

This report presents the combined hard work and deliberations of all of the members of the 2011-2012 Presidential Initiative Taskforce, who I would like to thank for their expertise, insight and time dedicated to the project. I would also particularly like to thank Anna Stitzel who, with the assistance of other APS National Office staff, significantly facilitated the Presidential Initiative.

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# OVERVIEW

## THE 2011-12 PRESIDENTIAL INITIATIVE ON THE FUTURE OF PSYCHOLOGICAL SCIENCE IN AUSTRALIA

### BACKGROUND AND AIMS

During their term of office, each President of the Australian Psychological Society has the opportunity to conduct a Presidential Initiative. In 2011, Professor Simon Crowe established a Taskforce to identify, understand and address the opportunities arising from the changing environment of the discipline and practice of psychology, and to create a vision and a road map for the future of psychological science going forward to the year 2020.

Psychology is now operating in a context of much change and reform associated with alterations to government policy, regulatory frameworks, higher education, health reforms and workforce demands. Challenges facing psychology include:

- Inadequate levels of funding for undergraduate and postgraduate professional psychology programs
- An increase in the demand and supply for clinical psychology services, affecting the diversity of psychology training and practice
- Psychology workforce shortages, which puts stress on the capacity to provide services to meet the needs of the Australian community
- Poor performance in publication of research, despite a solid research infrastructure
- Meeting the needs in the general community for accurate psychological knowledge.

In order to meet these challenges and ensure sustainability toward 2020, psychology must understand and adapt to the continuing changes both in the external environment, and within the profession itself. The 2011-2012 Presidential Initiative therefore aimed to identify:

- Opportunities for the development of the discipline of psychology based on the needs of academics, students and the public
- Strategies and tactics to most effectively address these opportunities
- Opportunities to develop and enhance sustainable partnerships between the key stakeholders to implement new directions for the discipline of psychology and the development of a common public policy agenda
- A ten-year vision for the future of the discipline of psychology.



## THE 2011-2012 PRESIDENTIAL INITIATIVE TASKFORCE

Members of the 2011-2012 Presidential Initiative Taskforce were:

Professor Simon Crowe FAPS (Chair)

Professor Sally Andrews MAPS, University of Sydney

Winthrop Professor David Badcock FAPS, University of Western Australia

Associate Professor Jacqueline Cranney MAPS, University of New South Wales

Professor John Dunn, University of Adelaide

Emeritus Professor Gina Geffen FAPS, University of Queensland

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Dr Iain Montgomery FAPS, University of Tasmania

Professor Ottmar Lipp FAPS, University of Queensland

Professor Lyn Littlefield OAM FAPS, APS Executive Director

Professor Peter Lovibond FAPS, University of New South Wales

Associate Professor Louise Roufeil FAPS, James Cook University

Associate Professor Graham Tyson FAPS, Charles Sturt University

The Taskforce convened four working parties under the leadership of the various members of the Taskforce to focus on the following factors critical to the future of psychological science: securing funding for psychology education and training; sustaining the academic and practitioner workforce; ensuring publication of world class research; and promoting psychological literacy within the community.

The working parties met throughout 2011-12 to analyse and form recommendations for future action to meet the challenges associated with the changing environment of psychology.

## THE OUTCOME

The results of the work of the Taskforce are presented in the following chapters. A preliminary focus of the Taskforce was to carefully consider the various reforms and developments affecting the training and practice of psychology. Members from across the Taskforce contributed to discussion of the key areas of change affecting psychology: reforms impacting on education and training; health service delivery trends and health workforce reforms; and the impact of technological advances on psychology training and practice. These factors are explored in Chapter 1 of this report.

With an understanding of the reforms and trends affecting psychology training and practice, the Taskforce then set out to conduct an in-depth analysis of the challenges and opportunities for psychology. This work is reflected in Chapters 2 to 5 of this report, which each provide an orientation and a set of desired outcomes followed by thorough exploration of key considerations in order to form recommendations for future action. The chapters in turn consider how to: secure funding for psychology education and training; sustain the academic and practitioner workforce; ensure publication of world class research; and promote psychological literacy within the community.

The recommendations that were developed for each area have been synthesised into a set of key recommendations resulting from the 2011-12 Presidential Initiative, and are presented on the following page. The results of the Initiative provide the information and direction to foster the agility required to adapt to the changing environment, and to ensure the sustainability of psychology to 2020 and beyond.



# KEY RECOMMENDATIONS OF THE 2011-2012 PRESIDENTIAL INITIATIVE

Following in-depth analysis of the challenges and opportunities for psychology, the Taskforce formed a series of recommendations for action across the four broad areas of the Initiative. These have been summarised into eight key recommendations to provide a guide for the future of psychological science toward 2020. The recommendations are to:

- Advocate for the higher education funding model to recognise psychology as an area of workforce shortage by providing additional funding assistance to both undergraduate and postgraduate psychology education.
- Reform psychology education to achieve appropriately funded and sustainable training pathways that allow the dual outcomes of an increase in both the professional and the academic workforce in psychology.
- Ensure the psychology workforce can meet the needs of the community now and in the future through:
  - increased recruitment and retention;
  - enhanced professional training; and
  - support for the practice of psychology across specialty areas and places of work.
- Increase the influence of psychology at the national policy table by disseminating psychology research across the broader community, encouraging engagement between researchers and policy makers, and fostering translational research and policy skill development in psychology education and training.
- Support a rigorous and broad undergraduate curriculum that prepares students to conduct research, and develop postgraduate training that includes active engagement with state-of-the-art research methods and techniques.
- Work toward a national consensus regarding the ways in which students can acquire:
  - scientific literacy, strong knowledge and practical skills;
  - a minimum capacity to apply psychology principles to self, groups and society; and
  - an appreciation of how the knowledge, skills and attitudes across several foundational sub-fields of the discipline and profession of psychology are integrated.
- Develop a national approach to leverage existing committees, communities of practice, and educational bodies and resources to increase the orientation toward 'scientist-educators' and develop the capacity of psychology spokespeople.
- Maintain and enhance relationships with workforce planners and policy makers to ensure that they are informed about the critical and irreplaceable role that psychologists play in supporting the health and wellbeing of the Australian community.



**“Whilst a demand driven  
funding model allows  
higher education providers  
greater flexibility...such  
reforms bring with them  
a number of serious  
challenges”**

**11**

# **CHAPTER ONE**

**REFORMS AND TRENDS AFFECTING PSYCHOLOGY  
TRAINING AND PRACTICE**

# REFORMS AND TRENDS AFFECTING PSYCHOLOGY TRAINING AND PRACTICE

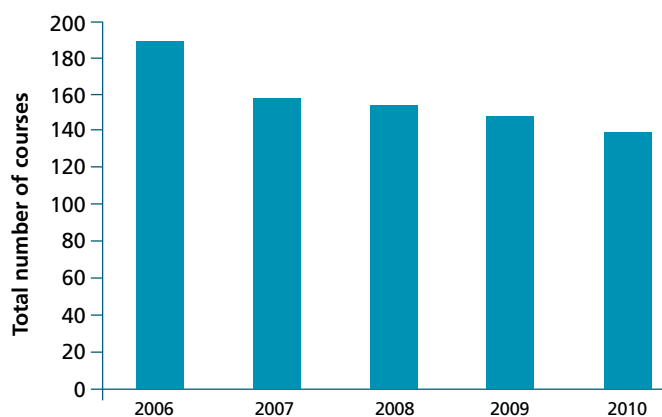
## EDUCATION AND TRAINING OF PSYCHOLOGISTS

### HIGHER EDUCATION REFORMS

January 2012 marked the beginning of perhaps the most important reform in the education sector seen in Australia for many years. Following the Review of Australian Higher Education, the Minister for Tertiary Education Senator Chris Evans committed to produce fundamental economic reform by ‘transition to a truly democratic level of opportunity for higher learning and universities’. Central to the government’s reform are targets for higher education attainment rates, as well as enrolment rates for those from disadvantaged backgrounds. The Government has set targets for 40% of 25-34-year-olds to hold a Bachelors degree by 2025, and for 20% of undergraduate students enrolled in universities to be from the lowest socioeconomic quartile of the population by 2020. As a result of these changes, an estimated 195,000 students will commence university studies by 2013, producing 217,000 additional graduates by 2025. Making the transition to a more broadly diversified economy focussed on a range of activities with a strong emphasis upon knowledge based developments is indeed a laudable aim. Such change will, however, have varied impacts on psychology education and training.

Whilst a demand driven funding model allows higher education providers greater flexibility in responding to student demand and increasing the diversity of its student body, such reforms bring with them a number of serious challenges. In a highly contested marketplace, it is vital that institutions achieve financial flexibility and responsiveness to ensure sustainable program provision, high quality courses, and a positive student experience. What this may well mean on the nation’s campuses, however, is that low cost, high demand courses will increase their enrolments while high cost, low demand courses will proportionately decrease their enrolments. Inevitably, university administrators will need to make difficult financial decisions with regard to the financial viability of lower enrolment courses, which are unlikely to be favourable. As demonstrated by the data in Figure 1, the number of professional postgraduate courses has already decreased over the period of 2006-2010. As a result, there is a sizeable excess of eligible candidates for the diminishing number of postgraduate training places for the Masters and Doctoral applied psychology training programs. The APS has previously reported that in 2007, 2338 applications were made for the 895 training places provided at the universities in Australia (Voudouris & Mrowinski, 2010). This is a ratio of 2.6 candidates applying for each place; see Table 1 below. The financial inequities for the universities in providing these places, each at an average loss of \$8500 per student per year (Voudouris & Mrowinski, 2010), continues to be an

insurmountable barrier to higher rates of participation, at a time when qualified candidates are in workforce shortage. This problem was exacerbated in the 2012 selection round as some institutions had the Commonwealth Supported Places for postgraduate training capped to the 2011 number of places.



**Figure 1.** Number of operational accredited postgraduate professional psychology courses, all accredited institutions, 1 January 2006 -1 January 2010 (from Voudouris and Mrowinski, 2010)

**Table 1.** Applications and admissions to professional postgraduate psychology programs (Adapted from Voudouris and Mrowinski, 2010)

Specialty	Applications†	Admissions	Ratio
Clinical	1,782	546	3.26:1
Organisational	184	149	1.23:1
Clinical Neuropsychology	89	42	2.12:1
Counselling	79	28	2.82:1
Educational and Developmental	73	46	1.59:1
Forensic	54	49	1.10:1
Health	35	16	2.18:1
Community	25	13	1.92:1
Sport	17	6	2.83:1
<b>TOTAL</b>	<b>2,338</b>	<b>895</b>	<b>2.61:1</b>

†Applications data were adjusted to account for the fact that most candidates make multiple applications. Following advice from course selection staff at five institutions, an assumption was made that the average number of applications per applicant was two and hence the number of applications recorded was divided in half for the purpose of this analysis.

A large majority of students completing an undergraduate sequence in psychology never pursue registration or a career in psychology. Table 2 indicates that whilst the number of places in some courses may be increasing, there remains a severe discrepancy between the number of places at undergraduate versus postgraduate levels. Postgraduate course completions

(i.e., Masters or Doctorate by coursework) are a better indicator of numbers moving into the workforce, with only 7.8% of the total undergraduate psychology intake completing postgraduate study in 2008, 8.7% in 2009 and 8.4% in 2010) (Department of Industry, Innovation, Science, Research and Tertiary Education, 2011).

## TRAINING REQUIREMENTS FOR PSYCHOLOGISTS IN AUSTRALIA

### PROFESSIONAL REGISTRATION AS A PSYCHOLOGIST

The practice of psychology is a nationally regulated profession in Australia, and in order to practise, a psychologist must hold registration with the Psychology Board of Australia (PsyBA). Psychology education and training programs offered by Australian universities are covered by an accreditation system administered by the Australian Psychology Accreditation Council (APAC). All tertiary psychology courses (except research degrees) are assessed to ensure they provide suitable preparation for students wishing to gain professional registration as a psychologist and/or membership of the APS. All APAC-accredited programs must also be approved by the PsyBA.

Six years of training is the minimum requirement for registration as a psychologist in Australia, involving an accredited four-year undergraduate sequence in psychology followed by a further two years of supervised training. The three-year accredited major in psychology should be followed by an accredited fourth year of study, either an Honours year as an integral part of a BA (Hons), BSc (Hons), or BPsych/BBSc (Hons) degree, or its equivalent. On completion of the four-year undergraduate degree, the two years of supervised training required for registration may be achieved through one of the following pathways:

- Two years of accredited supervised internship training in the workplace (the '4+2' model); or
- One year of postgraduate university training followed by one-year of accredited supervised internship training in the workplace (the '5+1' model), which is a relatively new pathway; or
- A postgraduate accredited Masters or Doctorate degree of at least two years full-time duration.

The number of new psychologists entering the workforce through training in the internship pathway and the postgraduate pathway is roughly equivalent. Estimates developed in 2008 suggested that 2,045 new psychologists enter the workforce each year; 1,063 places from the Masters/Doctoral training route, and 882 (48%) from the 4+2 route (Mathews, Stokes, & Grenyer, 2010).

The PsyBA recognises the following nine endorsed areas of psychological practice: clinical neuropsychology, clinical psychology, community psychology, counselling psychology, educational and developmental psychology, forensic psychology, health psychology, organisational psychology, and sport and exercise psychology. Endorsement requires an appropriate two-year Masters degree in the designated area followed by two years of supervised practice in the specialty area in the workplace.

### MEMBERSHIP OF THE AUSTRALIAN PSYCHOLOGICAL SOCIETY

Applicants for full membership of the APS are required to have completed six full years of accredited university training, involving four undergraduate years including an Honours year, or equivalent, plus an additional two year professional Masters or research degree. This requirement is in line with the equivalent standards of psychological societies in the UK, USA and Canada.

The current education reforms are directed at increasing the size of the undergraduate cohort, and the recent report from the Higher Education Base Funding Review (Lomax-Smith, 2011) clearly signals that the government does not see the issue of funding in the postgraduate professional training area as a priority. The report instead suggests that postgraduate professional training might be most appropriately developed by further emphasis on full fee based approaches. This trend is likely to have further negative implications for postgraduate psychology training opportunities. In some universities the inequitable funding will lead to an effective decrease in the number of students being trained via a professional postgraduate training pathway. With the increased scrutiny of the alternative 4+2 route pathway (i.e., a four year accredited undergraduate sequence in psychology followed by two years of supervised experience with a qualified psychologist), a net decrease in trainees may well occur in 2012 and beyond.

**Table 2.** Number of Commonwealth supported psychology places

	Commonwealth supported places	2008	2009	2010
<b>Undergraduate</b>	Bachelors psychology courses	10655	11962	13686
<b>Postgraduate</b>	Masters by coursework	497	639	741
	Domestic full fee paying Masters by coursework	160	178	145
	Doctorate by coursework	110	149	185
	Domestic full fee paying Doctorate by coursework	67	75	77
<b>TOTAL POSTGRADUATE</b>		<b>834</b>	<b>1041</b>	<b>1148</b>

Source: Department of Industry, Innovation, Science, Research and Tertiary Education (2011) *Students: Selected Higher Education Statistics, Full Year 2008-2010.*

## TRENDS ASSOCIATED WITH THE DEMAND FOR GLOBAL MOBILITY

There are two significant international issues associated with equity of standards for professional psychology and training that have implications for Australia.

### THE EUROPEAN BOLOGNA PROCESS

There is a movement within the European Union (EU) to create an overall convergence in the structures of higher education systems, aimed at overcoming the major obstacles for people wanting to work or train in another part of the EU. The so-called Bologna Declaration was signed in 1999 by signatories in 29 European countries to create a European higher education area by the year 2010 in which degrees from within and across the EU would be readily comparable. There are now 40 European countries, including the United Kingdom, that have committed to the Bologna process.

The Bologna agreement stimulated the European Federation of Psychologists' Associations (EFPA) to create a set of standards for education and training in psychology that could assist in evaluating the professional training of psychologists across different countries in the EU. This movement has led to the concept of a European Certificate in Psychology (EuroPsy), which has been formalised and has led to relatively easy transportability of psychology qualifications within Europe. Currently 39 countries represented by EFPA are eligible to participate in the EuroPsy. The strong forces from across the globe interested in standardising the professional training of psychologists should be heeded by the profession in Australia.

### THE FREE TRADE AGREEMENT WITH THE UNITED STATES

The second significant international pressure for equity of standards of psychology training is associated with the Australia-United States Free Trade Agreement (AUSFTA). AUSFTA came into force in January 2005 and represents a landmark agreement that ensures that Australian businesses can compete on equal terms with US companies. At the core of AUSFTA is the easing of restrictions to trade, with an agreement to use international standards to the maximum extent possible. This includes standards of qualifications in relation to professional services. AUSFTA applies to all sectors of the Australian market place, which includes the provision of professional psychology services. This adds to the international pressure for Australia to achieve global education and training standards for the practice of psychology.

## THE PRACTICE ENVIRONMENT FOR PSYCHOLOGISTS

### DEMANDS ON AUSTRALIA'S HEALTH SYSTEM AND WORKFORCE

Australians, in general, report good health and as a nation our health compares well with other countries (Australian Institute of Health and Welfare [AIHW], 2012). However, there are some groups in Australia including Aboriginal and Torres Strait Islander people, the socially and economically disadvantaged, and those living in more remote geographical regions, who experience poor health on a number of measures (AIHW, 2012). Australia's growing and ageing population and lifestyle have also resulted in the nation facing a rising burden of chronic disease (AIHW, 2012), with greater numbers of people requiring long-term care than ever before. Health services and the health workforce, however, in many ways remain oriented toward acute episodic care rather than prevention of lifestyle-related illness or the delivery of ongoing care for a range of chronic illnesses. In 2003, the major morbidity and mortality disease burden groupings in Australia were cancer and cardiovascular disease, followed in third place by mental disorders, neurological and sensory disorders (Begg et al., 2007). The last grouping accounted for 13% of the total burden of disease in Australia with most mental illness burden attributable to anxiety, depression, alcohol abuse, and personality disorders.

Clearly, there is increasing need for preventative measures in Australia's health care system. Given that psychology training is underpinned by a biopsychosocial model, psychologists are well placed to function in the wellness-oriented health care system of the future.

### TRENDS IN HEALTH CARE DELIVERY

The high burden of chronic illness and ageing of the population along with workforce shortage issues highlight the importance of having an effective, accessible and efficient primary health care system. There is now consistent evidence that health systems with strong primary health care are more efficient, have lower rates of hospitalisation, fewer health inequalities and better health outcomes (Browne, Gafni, Weir, & Majumda, 1998; Forrest & Whelan, 2000; Starfield, 2012). The Australian primary health care system, however, is complex, fragmented and often struggles to provide coordinated systematic care for people with multiple chronic diseases, particularly those transitioning between health services and sectors (Department of Health and Ageing [DoHA], 2009a). It remains challenging to cater for the particular health needs and cultural requirements of groups such as people from culturally

and linguistically diverse backgrounds, people living in rural and remote regions and disadvantaged and marginalised populations. Furthermore, there is currently no systematic approach to preventive health care in the Australian primary health care setting.

In terms of mental health, whilst the minority of people experiencing mental illness seek professional help, much of the burden of care for people experiencing mental illness is carried by general practitioners (DoHA, 2009b). Two seminal reports highlighted deficits in key aspects of mental health care service delivery in all States and Territories of Australia (*Not for Service* Report, Mental Health Council of Australia, 2005; *From Crisis to Community* Report, Senate Select Committee on Mental Health, 2006). The reports indicated that people with mental illness struggle on a daily basis to access appropriate health care or be treated with respect when they do enter the health care system.

Whilst Australia is spending more and more on health care, with the total cost of spending on health rising faster than economic growth (AIHW, 2011), the health needs of the community are still not being met. These health needs will continue to increase with an ageing population. At the same time, the health workforce is also ageing and health workforce participation rates are falling. This scenario presents a major challenge to health workforce policy makers and has necessitated significant reform.

Due to the issues associated with workforce and access issues for rural and remote populations, it seems likely that scopes of practice of health professionals may well expand over the 10 year horizon. One particular area of focus may well be on the possible extension of a limited prescribing right to appropriately trained psychological practitioners in pursuit of redressing the problems surrounding access to appropriately qualified psychiatric practitioners (see Crowe, Sept 2012 for a discussion of these issues).

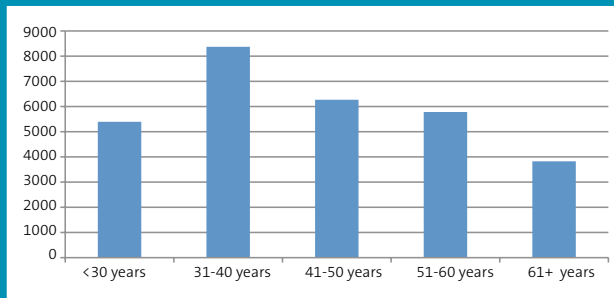
The more consistent development of shared care arrangements will also hopefully further develop over the decade with a sensible shift towards client focussed care teams as opposed to individual practice focussed silos. Clearly the best interests of the client are the highest priority. Shared care of the treating team, general medical practitioner, specialist medical practitioner, psychologist, practice nurse and the host of other allied health support working together to achieve the best outcome for the client will appropriately re-align healthcare to the best result for the individual rather than the best result for the various health care specialists.

## THE PSYCHOLOGY WORKFORCE IN AUSTRALIA

Statistics from the Psychology Board of Australia (2012) indicate that as at June 2012 there were 24,565 fully registered psychologists distributed across the States and Territories of Australia. Females make up 77 per cent of these fully registered psychologists. Psychologists who have skills in particular subspecialties of psychology are recognised on the national register through area of practice endorsement, and as at June 2012 there were 7,946, representing 32 per cent of fully registered psychologists.

The majority of psychologists practice in major suburban areas (78.5%) followed by regional (14.1%) and rural and remote areas (7.4%).<sup>2</sup>

### Age of registered psychologists <sup>1</sup>

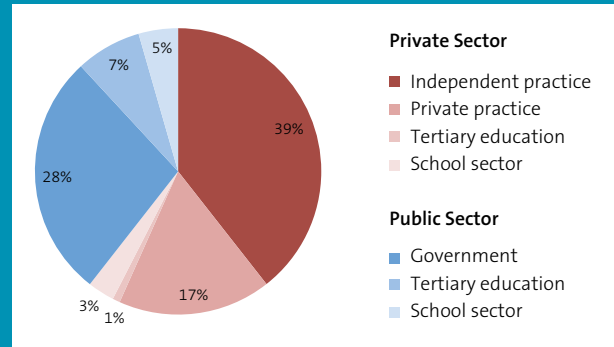


1 Source: Psychology Board of Australia

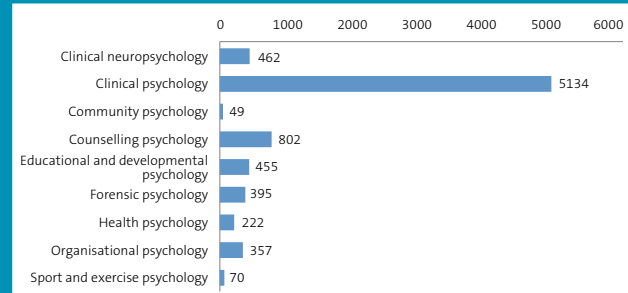
2 Source: Mathews, R. (2011). Profile of the regional, rural and remote psychology workforce. *InPsych*, 33(5), 12-13.

3 Source: Australian Psychological Society

### Psychologists - work setting <sup>3</sup>



### Areas of endorsement <sup>1</sup>



## HEALTH SERVICE AND WORKFORCE REFORM

In response to the challenges confronting the health system and to develop a more efficient, effective and equitable health service, the Australia Government and the Council of Australian Governments (COAG) responded with extensive strategies for reform. The *National Health and Hospitals Reform Commission* released its report in 2009 and set three goals for reform:

1. Tackling major access and equity issues including improving health outcomes for Aboriginal and Torres Strait Islander people, improving care for people with serious mental illness, and supporting people living in rural and remote regions
2. Redesigning the health system so that it is better positioned to respond to emerging challenges including strengthening the primary health care system and embedding prevention and early intervention in all aspects of the health system

3. Creating an agile and self-improving health system for long-term sustainability.

Reforms have included significant investment in the primary health care sector, mirroring trends seen in the primary care sector of many industrialised countries including New Zealand, the United Kingdom and Canada (see DoHA, 2009b). *Australia's First National Primary Health Care Strategy* (DoHA, 2010) set forth four key priority areas for primary health care delivery:

1. Improved access and equity
2. Better management of chronic diseases
3. Increased focus on prevention
4. Improved quality, safety and accountability of services.

It is well accepted that achieving these reforms will require substantial development of the health workforce.

## HEALTH WORKFORCE AUSTRALIA

Health Workforce Australia (HWA) was established in 2010 by COAG to enable a national, coordinated approach to health workforce planning and reform in order to provide a skilled, flexible and innovative workforce to meet the needs of the Australian community now and into the future. HWA's role is to develop policy and deliver programs across four main areas.

1. Health workforce information, analysis and planning
2. Clinical training reform
3. Innovation and reform of the health workforce
4. Recruitment and retention of international health professionals

Together with the National Registration and Accreditation Scheme, HWA's mandate provides Australian governments with far-reaching policy levers to shape the health workforce to meet the needs of Australia's growing and ageing population in more cost-effective ways, given the rapidly increasing health expenditure.

In 2011, HWA delivered their *National Health Workforce Innovation and Reform Strategic Framework for Action 2011-2015*. The Framework has significant implications for all health professionals including psychologists as it indicates that sustainability of the health sector requires 're-balancing' of many aspects of the current system, including reconfiguring the health workforce and reviewing education and training programs. HWA foresees a move towards outcome and competency based curricula for clinical training, enhanced opportunities for inter-professional education and practice, expansion of health professional assistant roles, expanded scopes of practice for health professionals, and a greater emphasis on generalist roles.

HWA is also working with the Australian Health Practitioner Registration Agency (AHPRA) and AIHW to create a comprehensive data source for health workforce planning. The resource will bring together information from various work settings, student pathways, immigration and geographic deployment to provide a comprehensive and nationally comparable health workforce data source. Such a resource has not been previously available and will allow detailed health workforce analysis and planning, and will provide justification for the wide-ranging reforms.

## NATIONAL MENTAL HEALTH WORKFORCE PLAN

As part of the reforms, specific attention has been placed on the mental health workforce. The *National Mental Health Workforce Plan* (MHWAC, 2011) identifies the need to retain the existing workforce but also increase the workforce with sufficient numbers, skills mix and distribution to meet projected population growth and need. The plan proposed development of national core competencies for mental health and for services for comorbid mental health and drug and alcohol problems, and to improve the distribution of the workforce to enable better access for people in rural and remote areas. The Plan also promotes the inclusion of the principles of recovery-oriented mental health practice in curricula and professional development.

### GOVERNMENT FUNDED ACCESS TO MENTAL HEALTH SERVICES BY PSYCHOLOGISTS

Reforms to service delivery in the primary mental health care sector have been substantial. Over the last decade, increasing government funding to provide psychological services has been introduced through a number of initiatives including:

- *Enhanced Primary Care/Chronic Disease Management program* (commenced 1999) for general practitioners to manage the health care of patients with chronic and complex medical conditions, including patients who require multidisciplinary, team-based care including at least two other health or care providers.
- *Better Outcomes in Mental Health Care program* (commenced 2001) that seeks to improve community access to quality primary mental health care and incorporates the Access to Allied Psychological Services that enables general practitioners to refer patients to appropriately qualified allied health professionals who deliver focused psychological strategies.
- *Better Access Initiative* (commenced 2006) which encourages general practitioners to work more closely and collaboratively with psychiatrists, psychologists, and appropriately trained social workers and occupational therapists to provide integrated mental health care.

The Better Access initiative provides effective, cost efficient and accessible psychological services for Australians with common mental disorders, and research shows it is reaching large numbers of people who had not accessed mental health care in the past.



## IMPACT OF TECHNOLOGY ADVANCES ON PSYCHOLOGY TRAINING AND PRACTICE

Whilst largely speculative in nature, in order to best prepare for the future environment, it is important to consider the impact of likely technological advances on the education and training, as well as the discipline and practice of psychology in the future.

### GENERAL TRENDS

It seems likely that technological advancement will continue exponentially in the approach to 2020 and beyond. Consistent with experience to date, it seems most likely that computing devices will become smaller, more powerful, and more intuitive, and will reduce in number as yet more functions are assumed by portable computing devices. The trend towards social media is likely to grow, with interactive technologies associated with voice, video, text and data becoming far more common place. Consequently, it will be possible to communicate quickly and reliably to individuals or groups anywhere. Software solutions seem likely to further expand along the lines of voice recognition with further reductions in the requirement for traditional input devices such as keyboard and mouse. Touch screen technology will expand and proliferate and it seems likely there will be increasing application of this technology more broadly - for example, in the car, on the fridge and in the workplace.

The sheer volume of traffic will increase exponentially and the delivery of the promised National Broadband Network will improve functionality. New technologies are likely to be focused on greater interactivity, and there is a strong likelihood that information technology will become more commonly layered onto the real world. Along with virtual reality becoming more commonplace, it is likely to be more extensively explored in clinical, rehabilitation and educational settings, whereby it becomes more possible to virtually dissect the brain, interact with holographic clients, and to retrain physical and psychological functions in simulated environments.

The discipline of psychology will have a central role in supporting all of these developments, which are ultimately based on human behaviour and interaction.

### IMPACT ON THE EDUCATION SECTOR

Perhaps the area which will sustain the greatest impact as a result of technological advance over the coming decade will be the education and training sector. Already, Australia has a large online provider of psychological education, *Open Universities Australia* (OUA). OUA is *open access* and as a result, the undergraduate courses offered have no first year entry

requirements, and there are no quotas for most courses. Enrolments exceed over 40,000 students with 130 courses and 1100 units of study across all programs. Most students are based in Australia, however the courses are available to the rest of the world. OUA is owned and operated by seven Australian universities (Curtin, Griffith, Macquarie, Monash, RMIT, Swinburne and the University of South Australia). Undergraduate units in psychology as well as an APAC-accredited undergraduate sequence are already being offered. Three universities (Swinburne, Macquarie and Curtin) offer units in psychology.

Flexible and online modes of delivery are likely to increase as students who are time poor avail themselves of the increased accessibility of this option. Challenges presented by provision of online-based education will need to be overcome, such as development of required learning outcomes of undergraduate psychology (which include oral communication skills and team work). There are currently no postgraduate offerings of note and although this may change, it seems unlikely that any professional postgraduate psychology program could be sustainable in the online mode alone. Technology may, however, aid postgraduate professional psychology training by, for example, allowing remote supervision of trainees during practica and internships.

With the benefits associated with the increased flexibility of mixed-mode learning, there is likely to be greater development of flexible and online offerings in the higher education sector. Education will expand beyond the physical campus as students progressively focus on the means of accessing and using information to solve their problems rather than focusing as directly on facts and theories. Learning will become progressively more personalised and experiential, including a greater emphasis on student choice in relation to mode of learning. The interaction of the student with the computer interface will also become more refined as the data gathering function of the interface will be employed as: a diagnostic tool; a method for marking the role; and a mechanism to develop a comprehensive picture of the learning mode and approach of students. Resources will also become more flexible, with development of interactive multimedia text books and open content utilising material sourced from across the globe. Degrees could potentially evolve to be composites of offerings from numerous different providers combined into the one program of study. Flexibility, diversity and richness of international professional development opportunities will also become more affordable and commonplace. Education and training will become increasing interdisciplinary, less institution focused, and become more a part of a lifelong journey, requiring institutions to be more adaptive and flexible.

## IMPACT ON SERVICE DELIVERY

Service delivery, as exemplified here in the clinical practice domain, will also continue to see great change over the decade with the further development of telepsychology. This increasingly efficacious mode of therapeutic intervention will make further inroads into traditional therapeutic service delivery. High quality, evidence based evaluations of these modalities will be required but the trend seems unassailable. It is foreseeable that in only a few years, student research projects may evaluate the relative benefits of holographic virtual therapists versus actual or online only approaches, developing evidence-based approaches to possible treatment modalities of the future.

In the psychological assessment domain, test providers are becoming more technologically aware, as traditional paper and pencil measures progressively give way to more finely crafted instrumentation which capitalises on the accuracy, improved timing and computational might of computer-administered testing. These techniques will in the not-too-distant future be coupled with interactive brain focused measurements and result in more neuroscientifically-integrated models of measuring real time brain behaviour relationships. An early example of this is the Q-interactive platform currently in development (from Pearson Assessment) which is already in the beta testing version of the iPad administered form of the Wechsler Adult Intelligence Scale-IV, the California Verbal Learning Test as well as the Delis Kaplan Executive Function System. Similarly, an iPad administered Mini Mental State Examination (MMSE) is already commercially available. The increased accuracy and reliability of electronically facilitated administration represents an early gain associated with the more traditional approach to timing, and item response quality, and enables item by item access to the relevant administration scripts and scoring criteria in real time, improving administration accuracy.

The first phases of the electronic health record commenced implementation on 1 July 2012, with every Australian able to choose to register for an electronic health record. The eHealth record (or Personally controlled electronic health record [PCEHR]) is a secure, electronic record that brings key elements of a person's health information together and is only accessible to the individual and their authorised healthcare providers. Any client of a psychological practice may now choose to enrol for an eHealth record and may ask if the psychologist can access it or contribute to it. This trend towards greater information gathering, integration and transfer seems only likely to grow, and issues of what to include in the record, and how privacy will be monitored will be an important challenge for the next decade.

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“Higher education  
funding models must be  
reviewed and shaped to  
best support current and  
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psychology education  
and training”

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## CHAPTER TWO

### ADDRESSING FUNDING CHALLENGES FOR PSYCHOLOGY EDUCATION AND TRAINING

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# ADDRESSING FUNDING CHALLENGES FOR PSYCHOLOGY EDUCATION AND TRAINING

## ORIENTING STATEMENT

The psychology discipline is currently facing a serious situation concerning the funding of undergraduate and postgraduate professional education and training.

In Australia, the discipline of psychology is taught in a four-year undergraduate degree followed by professional training before registration to practise. During the first three years, the science of psychology gradually builds from foundational subjects to more complex understanding within the various core topics of cognitive, social, biological, abnormal, and developmental psychology. Like degrees in other science disciplines, it involves laboratory and experimental processes, both of which require significant investment in infrastructure and ongoing resourcing from education providers. The research-based 4th year program is conducive to creating new generations of researchers and academics, to further pursue the evidence base upon which psychological treatments are based. A major component of the 4th year is a thesis based on an independent research project conducted under the supervision of an experienced research psychologist, which draws heavily on education providers' human resource capacity. The thesis provides a critical capstone experience that cements the students' understanding of theory, research design and critical analysis which is essential preparation for an evidence-based professional or research career.

Professional training occurs after the initial four years. Postgraduate coursework programs focus on training in professional practice skills in assessment and intervention, once again building on the theory and knowledge base of the four-year degree course. Professional training requires small classes and close supervision similar to that provided in medicine and other health professions, which are expensive to run and draw heavily on human resources. The flow of students in these programs is further constrained by the heavy load of supervision in the workplace required for successful completion by these candidates, which is commonly provided on a pro-bono basis by psychology practitioners/service providers in the community. This represents an extremely limited and limiting resource requiring significant input both from the practitioners as well as the universities to foster, monitor, and maintain this essential component of these training programs.

The postgraduate psychology education model is similar to the graduate medicine approach adopted in many universities. This model is the most effective and efficient model for producing both a high quality professional psychological workforce and a psychologically literate and healthy community. The thorough grounding in psychological science provided by the four-year undergraduate degree supports the maintenance of evidence based professional practice, while simultaneously training new generations of researchers and academics to further pursue the evidence base upon which psychological treatments are based. This approach also develops 'psychological literacy' (Cranney et al., 2011) in the broader community of students who study psychology either to become professional or scientific psychologists, or to complement their degree in another discipline. Critically, it ensures that the most resource-intensive aspects of professional training are directed to the individuals best academically prepared for the professional practice of psychology. Furthermore, this first four years of training in psychology also provide a sound foundation for a higher degree (PhD) in research; critical for the academic workforce. Like the postgraduate professional programs, higher degree research training is expensive.

As described, the nature of undergraduate versus postgraduate psychology training is significantly different. As such, the funding requirements of the two levels of training also differ. The proposed new base funding model clusters will not provide adequate funding for psychology at either level. Both behavioural science and professional psychology must be moved to more appropriate funding clusters to meet the science-based demands of undergraduate training and the professional demands of postgraduate training.

Mental health training is a priority area of the Australian Government's health policies and initiatives (<http://www.aihw.gov.au/health-priority-areas/>) and although not all psychologists work in the mental health sector, psychology is the largest single discipline in Australia's mental health workforce. Indeed, there is an unprecedented community demand for psychological services, contributing to a growing workforce shortage as identified in the skills shortage list and the skills occupation list produced by Skills Australia (Department of Education, Employment and Workplace Relations [DEEWR], 2011). With psychology workforce shortages and increasing consideration of alternative professions, psychology must be aware and involved in workforce planning, and ensure the number and the competencies of psychology graduates meet workforce needs, both now and into the future.

Despite the ongoing and growing demand for psychologists, funding for undergraduate and postgraduate professional psychology programs is substantially lower than equivalent disciplines and professions. Due to this inadequate level of funding, postgraduate professional coursework Masters and Doctoral degrees, which are considered by psychology discipline bodies as well as national registration and accreditation regulators to be entry-level programs for the psychology profession (AHPRA, 2010), have been in decline since 2004, when the Federal Government altered the cluster funding arrangements for these degrees (Voudouris & Littlefield, 2011).

The APS recently conducted a study to examine trends in the number and type of accredited courses offered over the past five years, changes in the number of training places available, and demand for places in accredited psychology courses, to establish a data set which would support monitoring of trends in the future. Results showed that MPsych degrees have declined over the three year period 2007-2010, DPsych degrees are declining after a peak in 2008, and combined MPsych/PhD programs appear to be holding steady (Voudouris & Mrowinski, 2010). In order to meet workforce demand, the funding short-fall for psychology courses must be reduced. Funding of psychology education and training at both undergraduate and postgraduate levels must be increased to reflect the actual cost of the training and to meet growing demand. Significant changes occurring in the university funding landscape provide the psychology community with an opportunity to inform and influence policy makers and planners to ensure financial viability of psychology education and training toward 2020.

In October 2010, as part of the Government's response to the Bradley Review of Higher Education, the Minister for Tertiary Education, Skills, Jobs and Workplace Relations announced a root-and-branch review of funding in higher education (the *Higher Education Base Funding Review*). The Review has coincided with the rolling out of the largest and most wide-ranging set of reforms to the higher education sector since the 1980s. One of the key aspects of the Government's reform agenda is the plan for a large increase in the higher education participation rate, with the Government originally setting a target of at least 40 per cent of Australian 25 - 34-year-olds attaining a Bachelors degree by 2020 (currently this rate sits at



around 34%). Other major developments include the removal of enrolment caps from 2012, allowing universities to enrol as many students as necessary to meet demand. This will significantly affect the structure of the university sector over the next five years and beyond (Lohan, 2010) and has the potential to impact greatly on the future of psychology education and training. There has also been changes to the research funding landscape, including changes to the Australian Postgraduate Awards scholarships rules, expanding options for international students, and the introduction of the Australian research assessment exercise, Excellence in Research for Australia (ERA), and the Tertiary Education Quality and Standards Agency (TEQSA). In November 2011, the Department of Innovation, Industry, Science and Research and the Department of Education, Employment and Workplace relations released two significant consultation papers regarding research training funding and the allocation and funding of Commonwealth supported postgraduate places respectively.

Higher education funding models must be reviewed and shaped to best support current and future requirements of psychology education and training.

## **DESIRED OUTCOMES**

- A. Funding for undergraduate psychology training commensurate with other areas of laboratory-based sciences.
- B. Funding for postgraduate professional psychology programs sufficient to support work integrated learning.
- C. Growth in places in postgraduate professional psychology programs to meet workforce shortages.

## **A: FUNDING FOR UNDERGRADUATE PSYCHOLOGY TRAINING COMMENSURATE WITH OTHER AREAS OF LABORATORY-BASED SCIENCES**

Demand for undergraduate psychology places across the higher education sector in Australia has been strong for some years and there seems little evidence that this demand will abate in the near future. Psychology is one of the most popular course choices for higher education students and there is strong anecdotal evidence that the numbers of students studying psychology at the undergraduate level in Australia have been growing in a sustained fashion. Despite this continued demand, funding for undergraduate psychology is outdated and critically insufficient.

The psychology discipline is a science-based discipline and has always been taught as such. This is clearly reflected in the Standards set down by the Australian Psychology Accreditation Council (APAC). APAC requires laboratory training components to support strong foundations in psychology as a science in all accredited undergraduate programs which prepare graduates for education and training at the postgraduate level. Indeed, the international trend is that psychology students require greater access to costly facilities and equipment to gain appropriate training in the discipline compared to the way the discipline was taught 20 years ago (APAC, 2010). The advances in technology, and the human resources required to run research and laboratory classes, mean that the funding requirements for psychology now much more closely resemble those of other science disciplines and biomedical education. Current levels of funding for undergraduate psychology training are insufficient to sustain provision of training with the scientific rigour required.

Another factor impacting on costs has been the consolidation of the psychology discipline as a “hub science” (Boyack, Klavans, & Börner, 2005). This has emphasised the strong multidisciplinary nature of psychology and led to a much larger role in the burgeoning fields of science than psychology had 20 years ago. The increasingly multidisciplinary nature of psychology is reflected in the greater breadth of inputs required and outputs to be achieved (in the form of graduate attributes and competencies) to gain accreditation of both undergraduate and postgraduate courses (APAC, 2010).

Looking toward 2020, the above described factors will continue to make the delivery of quality undergraduate psychology education increasingly difficult. Adding further pressure to the system, Government-imposed caps on the numbers of undergraduate places in each discipline cluster have now been lifted, making higher education providers free to decide what courses they will offer and to decide how many students they wish to admit. Under this demand driven model, providers will

be more likely to withdraw places in courses for which there is a substantial shortfall between Commonwealth funding and real costs. In this context it is all the more critical to ensure that provision of undergraduate psychology training is financially viable, supporting providers to sustainably offer courses to meet demand.

### **Recommendations (A)**

The psychology community, including the APS and education providers must:

- Advocate for funding for undergraduate psychology to be increased to a level commensurate with other areas of laboratory-based sciences in order to ensure students can be trained in current methods, technologies and areas which have the most research promise, and which are routinely provided in other countries.
- Create opportunities for stakeholders to communicate with government regarding the need for increased funding for undergraduate psychology. Specifically, under the proposed cluster funding arrangements, behavioural science (effectively undergraduate psychology) must be reallocated from the current proposed position in Funding Cluster 1 (law, business, economics, education, humanities, behavioural science) to the funding level of Cluster 4 (science, engineering and surveying) to appropriately recognise the true costs incurred in offering undergraduate psychology education.
- Build the capacity of universities to access funds for undergraduate psychology training, including through innovative and flexible funding models.

## **B: FUNDING FOR POSTGRADUATE PROFESSIONAL PSYCHOLOGY PROGRAMS SUFFICIENT TO SUPPORT WORK INTEGRATED LEARNING**

A recent analysis of national accredited higher education programs by the APS has shown that postgraduate professional training programs in psychology are under-funded and under significant pressure (Voudouris & Mrowinski, 2010).

Training requirements for the psychology profession need to meet the high competency standards required of work-ready graduates by the new national registration authorities. These requirements are costly for professions such as psychology which operate under health legislation in which regulators recognise that extensive training is needed to build a tacit knowledge base which supports safe, ethical and skilled practitioners who are worthy of registration. Accreditation standards for psychology specify minimum student:staff ratios, as well as specifying the minimum numbers of supervision hours and practica required, resulting in high costs.

Postgraduate professional psychology programs are highly structured, comprising multiple elements including coursework, practical supervised training with multiple client groups and evidence-based research addressing applied problems. Mastery of professional competencies (such as interviewing, history taking, psychometric assessment, problem formulation, ethical practice, and planning, implementing and evaluating the effects of psychological interventions) requires a large quantum of internal skills training followed by work-integrated learning. The internal skills training ensures that students have the requisite skills and competencies to be able to directly contribute to professional practice in subsequent external workplace-based practica. Work-integrated learning mainly in the form of external placement is a strong feature of accredited postgraduate professional coursework programs and is expensive, especially in the psychology profession where the training of psychologists requires complex and intensive accredited fieldwork training regimes, mostly conducted in small groups, or one-on-one, needing close supervision by highly qualified supervisors. External placements are costly, demanding extensive human resources for the associated organisation, guidance and supervision. The internal skills training and external placements both contribute to the high physical and human infrastructure costs associated with postgraduate courses aimed at producing work-ready professionals.

A comprehensive survey of the costs of postgraduate training undertaken by the APS and involving Departments and Schools of Psychology in all States of Australia showed that the average shortfall in funding per student EFTSL per year is \$8,426, with some institutions reporting figures higher than \$15,000 (Voudouris & Mrowinski, 2010). No higher education provider which offered Commonwealth Supported Places covered the costs associated with the provision of postgraduate professional training. Compounding this situation is the problem that the proportion of the income which reached Schools and Departments for these postgraduate entry level courses ranged from 35 to 70 per cent with a median of 48 (Voudouris & Mrowinski, 2010). These data confirm the consistent stream of anecdotal reports from higher education providers over the past five years of a serious funding shortfall for accredited entry level postgraduate professional programs in psychology, and are echoed in the written comments derived from the most recent survey of costs. The consequent decline in the numbers of professional degrees being offered has reduced the number of student places in professional entry-level psychology courses, with severe adverse consequences for the psychology workforce.

### Recommendations (B)

The psychology community, including the APS and education providers, must:

- Advocate for changes to the funding arrangements for postgraduate professional psychology degrees to reflect the actual cost of these courses.
- Convey to government that the funding model to be adopted must specifically recognise and provide an additional funding loading where extensive placement practical or other work-integrated learning requirements are required by registration authorities in professional entry-level postgraduate courses like those in psychology.
- Convey to government that the funding model must recognise the full costs of education in the psychology discipline and profession given the extent to which it has changed over the past 20 years. Specifically, under the proposed cluster funding arrangements psychology must be reallocated from the current proposed position in Funding Cluster 3 (allied health, nursing, other health, clinical psychology, social work) to the funding level of Cluster 5 (dentistry, medicine, veterinary science, agriculture) to better recognise the true costs of offering this type of postgraduate professional education.
- Convey to government that, should the funding model abandon cluster arrangements, the central

guiding principle in calculating base funding should be transparency of the contributing factors, and base funding should primarily be based on the cost of delivering a course in a specified discipline. This should include elements for research, laboratory based learning, work integrated learning and/or placement requirements, and required student-staff ratios in certain courses (professional training in particular), all of which will vary greatly across disciplines. If additional factors are to be recognised, such as regional/remote location, lower income background and targeting of priority areas for rapid workforce growth, then these should be explicitly nominated and loading amounts allocated for each purpose. Such an approach would allow these loadings to be adjusted when circumstances change without having to revisit the whole funding model. Such explicit nomination would also ensure that the loading factors are transparent, can be evaluated for efficacy and will reduce the risk they will be lost in any compounded funding quantum.

- Ensure that psychology is included as a part of the implementation of the government's research workforce strategy, which includes consideration of the 2009 Building Australia's Research capacity report recommendation of additional stipends for students in areas of national importance and skills shortage.

Neither the current funding model nor the proposed new funding clusters adequately reflect the real costs of psychology postgraduate training. The inadequacy of funding is clear in the comparison of the base funding for psychiatry, psychology, and allied health and nursing. Psychiatry is defined in the Australian Standard Classification of Education as “the medical specialisation concerned with diagnosing, preventing and treating disorders of the mind” with example subjects including psychiatric state assessment, psychiatric syndromes and phenomena and child psychiatry. This definition and example subjects are equally applicable to clinical psychology. In the proposed revision of higher education base funding, clinical psychology would be funded at a level below allied health and nursing. For psychology to offer training similar to that of psychiatry and yet receive funding below the level of allied health and nursing is indeed a very stark illustration of the extent of inadequacy in the proposed funding model.

### **C: GROWTH IN PLACES IN POSTGRADUATE PROFESSIONAL PSYCHOLOGY PROGRAMS TO MEET WORKFORCE SHORTAGES**

The psychology workforce is in shortage, amid strong demand for psychological services. In the mental health sector, where psychologists are the largest single discipline in the mental health workforce, only 45% of people with a mental illness access services. Despite the demand for psychologists, chronic underfunding of postgraduate professional psychology programs is leading to an increasing gap between demand and supply in these professional postgraduate psychology programs. Increases in the number of places in postgraduate professional psychology programs are critically required to sustain and grow the psychology workforce.

The change to funding of Commonwealth supported postgraduate coursework places in psychology which occurred in 2004 resulted in a funding reduction of some 59 per cent, with the Government only partially redressing the cut in 2008. The consequence has been declining numbers of postgraduate professional psychology courses and a loss of postgraduate professional training places across Australia, in particular over the past five years (Voudouris & Mrowinski, 2010). There has been a net decrease of 49 postgraduate professional psychology degree programs across Australia during the five year period to January 2010 despite very large and growing unmet demand for places, despite the fact that postgraduate professional programs are considered entry level degrees for the psychology profession, and despite the fact that the psychology profession is considered by Government to be an area of workforce shortage (DEEWR, 2011). This is discussed further in Chapter 1 and is consistent with reports from universities that considerable numbers of suitable candidates

are turned away annually due to inadequate funding, lack of suitable fieldwork placements and a shortage of appropriately qualified supervisors (Voudouris & Mrowinski, 2010). Clearly the current level of funding for Commonwealth Supported Places in postgraduate professional courses is highly inadequate.

The gap between supply and demand for places in postgraduate professional psychology programs is going to be further exacerbated by the mooted phasing out of the 4+2 training pathway. There are currently two six-year pathways by which psychology graduates can meet their professional training requirements for full registration to practise. Pathway 1 is wholly university-based and incorporates coursework, applied research and supervised practice, whereas pathway 2 permits the final two years to be supervised practice in the workplace without any university involvement. The second pathway relies on individual supervisors for training and may lack appropriate mechanisms for ensuring minimum training standards are maintained, which has raised concerns regarding quality assurance and not meeting significant international benchmarks (e.g., in the UK and USA). The Psychology Board of Australia has considerably tightened the requirements for psychology registration, and has signalled its intention to phase out the second pathway.

The government's adoption of any changes in training models will require that there not be a negative effect on workforce, and with predicted workforce demand, the total number of trainees cannot afford to decrease. Were the 4+2 pathway to be phased out, with approximately half of the psychology workforce currently training under pathway 2 (Littlefield, Giese, & Geffen, 2009), students progressing to registration would have to do so via a Masters program or the new 5+1 pathway, requiring a doubling of places in postgraduate professional coursework degrees over the next six years. This growth in postgraduate numbers would simply maintain the current (inadequate) supply of psychologists for the workforce. To meet workforce demand looking to 2020, the number of postgraduate places will need to grow even further.

Should postgraduate professional courses in psychology continue to be grossly underfunded under a demand-driven funding model in future, the decline in places and courses themselves will accelerate with very serious implications for the supply of psychologists to the Australian community. The decline in places for postgraduate professional psychology degrees when demand for such graduates has surged, and growth in places is required to meet workforce shortages, urgently needs to be addressed.

Introduction of full fee paying places for postgraduate professional programs is not a viable solution for psychology.

The cost of a full fee place would be prohibitively high for a large proportion of students, and especially for those from disadvantaged groups, such as Indigenous students and students from rural, regional and remote communities.

The DEEWR (2011) has recently released a consultation paper regarding the allocation and funding of Commonwealth Supported Postgraduate Places, asking for comment on potential models for the allocation and funding of non-research commonwealth supported postgraduate places under the new deregulated funding system.

The options identified in the paper are:

**Option 1**

Allocating additional postgraduate places for specific courses or types of courses

**Option 2**

Allocating additional places to ensure universities have a guaranteed level of postgraduate places

**Option 3**

Allowing universities to negotiate their allocation of postgraduate places within an overarching funding envelope for the university

**Option 4**

Demand driven funding of all Commonwealth support postgraduate student places

**Recommendations (C)**

- The higher education funding model must recognise and prioritise psychology as an area of workforce shortage by providing additional funding assistance, in the same way that priority areas such as nursing and teaching have been supported in the past. This funding assistance must include both an increase in the number of postgraduate professional psychology places and an increase in the quantum of funding provided per place.
- There needs to be greater levels of transparency and accountability for the funds that universities receive from the Commonwealth. This is especially so for dedicated funding for workforce priority areas as there is anecdotal evidence that some targeted funding for development of the workforce in areas of skills shortage is being ‘creamed off’ at the institutional or faculty level to subsidise courses and programs that are incurring losses.
- Increased accountability and transparency needs to be encouraged through the use of a formula that allows the funding to follow the student. Another benefit of the ‘dollars following students’ methodology of funding is the ability to readily identify the crucial elements required in a student’s higher education pathway, such as clinical education, which are not adequately funded for the allied health professions when compared to the medical and nursing professions.
- Workforce planners and policy makers must be informed about the critical and irreplaceable role that psychologists across the spectrum (i.e., both the health and the non health-related specialties) play in supporting the health and wellbeing of the Australian community.

- The psychology community needs to highlight, for example, that:
  - Psychological interventions have been shown to be cost effective for patients and the health care system, the impacts of which include better outcomes from surgery and rehabilitation, decreased hospital admissions and slowed progression of chronic illness.
  - In contrast to counsellors, health coaches and other chronic disease health care workers, psychologists are exceptionally well trained in the psychology of physical health and illness management, and also belong to a Government-legislated registered profession which includes identification of endorsed areas of psychological practice.
  - Psychologists are aware of the medical, personal, social, work-related and financial burdens of the life-long treatment requirements of chronic diseases.
  - Psychologists have training and expertise in psychological diagnosis, mental state examinations, psychopathology and psychotherapy for people with mental health problems.
  - Psychologists provide direct services in acute care, community services and private practice, and work collaboratively with other professional groups in health behaviour change and development of health policy programs.
  - Psychologists’ variety of skills and advanced knowledge of psychological principles enable them to adapt treatments and programs to different contexts, making them a critically valuable part of the health workforce; contributing significantly to the health and wellbeing of Australians.

It is important to assist the government and other planners to understand how urgent it is to address the funding shortfall in postgraduate professional psychology programs if the observed decline is to be arrested. However it is crucial that the quality, depth and breadth of training of psychologists is not sacrificed in order to meet cost and workforce imperatives. The obligation to the public to ensure that psychologists are skilled practitioners who can deliver the full range of high quality and safe psychological services to the community must be fulfilled.

## CONCLUSION

The APS has had a longstanding program of advocacy in place aimed at improving funding for the psychology discipline in higher education. Whilst there has been some progress in recent years, with the growth and demand toward 2020, there are many improvements still required.

The current funding model does not adequately reflect the real costs of educating and training a psychologist, with a consequent large (and probably growing) shortfall between the number of qualified applicants for postgraduate professionals training and available places in postgraduate professional psychology programs. This will have adverse consequences for a future psychology workforce shortage.

Under the demand-driven funding model which is central to the Government's higher education reforms, higher education providers are more likely to withdraw places in courses for which there is a substantial shortfall between Commonwealth funding and real costs. The resulting decline in undergraduate and postgraduate psychology places and courses themselves would have very serious implications for the supply of psychologists to the Australian community.

Given the continued growth in demand for postgraduate professional psychology training places and particularly in the context of the Government's reforms to higher education, the APS must continue to rigorously advocate for appropriate funding for psychology courses in order to ensure financial viability of a well trained, high quality and adaptable psychology workforce that can contribute to the health and wellbeing of the Australian community.

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**“The psychology workforce in Australia is in shortage, putting stress on the capacity to provide services to meet the needs of the Australian community”**

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## CHAPTER THREE

### SUSTAINING THE ACADEMIC AND PRACTITIONER WORKFORCE

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# SUSTAINING THE ACADEMIC AND PRACTITIONER WORKFORCE

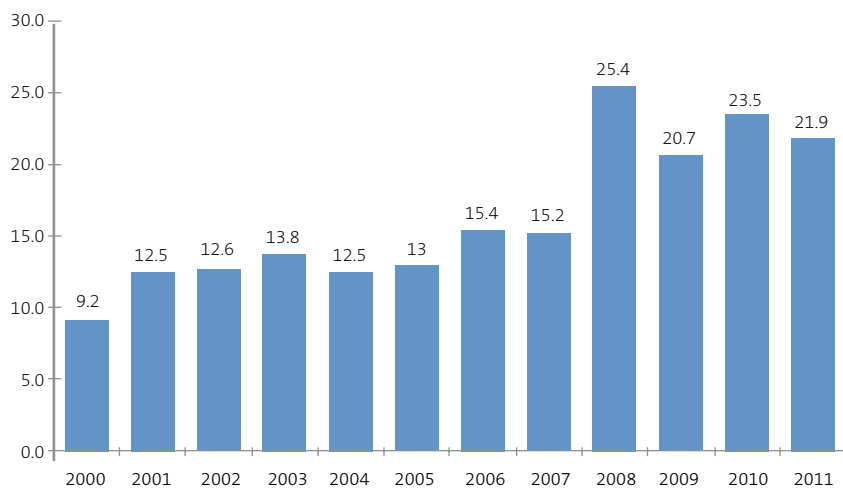
## ORIENTING STATEMENT

In a special edition of the *Australian Psychologist* on the Australian psychology workforce, Professor Brin Grenyer stated the following:

*The psychology workforce fulfils a critical role in Australia, providing cost-effective evidence-based treatments and services to improve the health and productivity of the Australian community. There are multiple nodes of interest in developing and protecting this resource, including workforce branches of health departments, university managers ensuring provision of psychology places in undergraduate and postgraduate courses, commonwealth departments that resource psychology services through programs such as Medicare and community services, public private partnership programs, and the non-government and business sectors that provide training and facilitate the development and growth of psychological services within their industries. Despite these important separate nodes of interest, there has traditionally been very little overall coordination of the drivers of supply, or the analysis of demand of the psychology workforce in Australia (Grenyer, 2010, p. 152).*

The psychology workforce in Australia is in shortage, putting stress on the capacity to provide services to meet the needs of the Australian community. Psychology has been listed on the Department of Education, Employment and Workplace Relations Skills Shortages list since April 2011, and the job title of clinical psychologist has been in national skills shortage since 2007. Many employers find it difficult to recruit suitably qualified and registered psychologists, with a low proportion of vacancies being filled, and unemployment being low (DEEWR, 2011a).

Historical levels of employment for the psychology profession have been increasing, as shown in Figure 2.



Source: ABS Labour Force Survey, DEEWR trend data to November 2011, Accessed at <http://joboutlook.gov.au>

**Figure 2.** Employment level (000's)

Employment data over the past two, five and ten years for psychology, compared with all occupations, indicates that the trends for growth in the psychology profession are strong. Long-term employment growth (10 years) was 152.3%, medium-term growth (5 years) was 42.5% and short-term growth (2 years) at 5.8% (DEEWR, 2011b). Further, the growth in the demand for psychologists continues to be fuelled by employment growth (new jobs).

There is a chronic shortage of postgraduate psychology training places and the psychology workforce is an ageing one (AIHW, 2006). The trends in data shown in Table 3 indicate that at least over the period of comprehensive record keeping by the PsyBA, growth in the number of psychologists in the general category, the provisional category and the total number of registrants has been largely static over the period November 2010 until June 2012. While endorsed specialists have increased, this seems most likely to be attributable to more psychologists with general registration successfully applying for endorsement rather than a growth in actual number of practitioners in itself. The other growth area is in the number of psychologists who have become non-practising. Clearly these numbers have been gathered over the period of transition to the new arrangements however if they do indeed indicate that growth in the psychology workforce has slowed or stabilised this would be alarming. With all these factors combined, the psychology workforce shortage is likely to continue, with the health and mental health needs of an ageing population only adding to the pressure on the system.

*Table 3. A snapshot of psychology registrations in Australia*

	NOV 2010	MAY 2011	AUG 2011	NOV 2011	FEB 2012	MAR 2012	JUNE 2012
<b>General Registration</b>	24445	24287	24052	24242	23877	24150	24565
<b>Endorsed</b>	5844	6875	7154	7355	7550	7687	7946
<b>Provisional</b>	4309	4327	4256	4155	3793	4137	4043
<b>Non-practising</b>	124	330	574	657	961	990	1036
<b>TOTAL REGISTRANTS</b>	<b>28881</b>	<b>28945</b>	<b>28883</b>	<b>29055</b>	<b>28632</b>	<b>29278</b>	<b>29645</b>

*Source: The Psychology Board of Australia, Accessed at <http://www.psychologyboard.gov.au/>*

In order to redress the shortage and ensure sustainability of the academic and practitioner psychology workforce toward 2020, the changes occurring both in the external environment, and within the profession itself, must be understood and addressed.

## DESIRED OUTCOMES

- A. Valid and consistent data is available regarding academic and practitioner workforce to permit planning.
- B. Psychologists have opportunities to upskill to best meet workforce needs.
- C. The diversity of the psychology workforce is sustainable going towards 2020.
- D. Utility of the academic workforce is maximised and there is improved efficiency of training.

## A: VALID AND CONSISTENT DATA IS AVAILABLE REGARDING ACADEMIC AND PRACTITIONER WORKFORCE TO PERMIT PLANNING

With the advent of the National Registration and Accreditation Scheme, the quality of data regarding the number of psychologists in the country, their areas of endorsement as well as many other aspects of the nature of the psychology workforce have become much improved.

Whilst the nature of the psychology workforce, as reflected in the PsyBA data collections, has become clearer, the academic requirements of the discipline remain obscure. No reliable data exist about the number of academic staff required for the 39 psychology departments in the country, the requirement for the growth and demand at the various levels of academic appointment (A-E), as well as the areas of specialty or research focus of the individuals involved.

The split in the psychology practitioner workforce between general versus endorsed psychologists continues to present a challenge. It is not possible to be able to sensibly predict how many endorsed psychologists might be required, what the necessary growth in these areas of endorsement should be, or which areas of endorsement require increase, decrease or might be subject to the effects of substitution. This issue arises partly because there continues to be considerable overlap between what general psychologists and endorsed psychologists actually do in practice (as well as the considerable degree of overlap between each of the endorsed areas of practice). Nevertheless, Medicare rebating for clinical psychology has created burgeoning demand for the specialty. This has resulted in a considerable shift in preference for trainees towards the clinical psychology speciality with a proportionate drift away from the other eight endorsed areas of practice. For example in the PsyBA data for June, 2012 of the 7,964 endorsed psychologists, 64.6% (i.e., 5134 psychologists) were endorsed in the area of clinical psychology. The next largest category, counselling psychology featured the more humble 10% (i.e., 802 psychologists). If these data are coupled with the overall trend towards reduction in Masters and Doctoral training programs (Voudouris & Mrowinski, 2010) it would appear that clinical psychology may be becoming the de facto training route for a majority of endorsed specialists. This is a very disconcerting trend and it is clear that sensible approaches to maintaining the diversity of the endorsed specialities must be fostered over the next decade.

Ascertaining the flow of candidates from professional psychology training programs in the various areas of practice endorsement would be valuable data for workforce planning.

The minimal data set would include:

- The number of training programs in each area of endorsement
- The number of candidates that are in training
- The number of places in each training specialty

One of the major inputs missing from this discussion is a view from employers of psychologists about service provision and predicted needs. A supply-side approach to training has occurred to date; that is, candidates are trained by the universities and at some level these candidates are absorbed by the employers without any direct nexus between how many are trained, what their specialty is, and the demand for various specialties.

Workforce data reported in this document is drawn from various sources including the Department of Education, Employment and Workplace Relations, the Department of Health and Ageing as well as from the resources of the PsyBA and the projects and data collections developed by the APS. Cross tabulation and verification of the data arising from each of these sources is a necessary validity exercise.

It is welcome news that HWA has the consideration of the psychology workforce as one of its priorities for its future work plan with proposed inclusion of econometric modelling in the survey. Any factors that would not enter into the focus of the HWA modelling will need to be examined by the profession itself. Thus the HWA's focus on the *health* workforce means that any realistic data regarding workforce for academic psychology and for those areas of psychology which are less health focussed will not come within their remit. These data are crucial and must be sought in tandem with the activities of HWA.

### Recommendations (A)

- A systematic review and integration of all of the available sources of data regarding the psychology workforce is required.
- In tandem with the modelling provided and developed by HWA it will be important for the profession to provide policy makers and planners with advice on the additional parameters necessary to allow a complete picture of development of the entire psychology workforce including the academic and the non-health focussed workforce.

## **B: PSYCHOLOGISTS HAVE OPPORTUNITIES TO UPSKILL TO BEST MEET WORKFORCE NEEDS**

Like all health professionals in Australia, psychologists are confronting a health landscape with chronic illness, and especially mental health disorders, placing a major burden on the health care system. Current service delivery models are struggling to meet these challenges not only in terms of the structure of service models but also in providing an adequate workforce to deliver appropriate care. At the same time, governments are seeking to implement reforms that will improve the alignment of health needs with health services in a cost-efficient manner.

### **SERVICE DELIVERY OPPORTUNITIES**

Psychologists have already been very responsive to the changing health environment particularly in terms of the delivery of psychological services through primary care. A number of studies have shown that both psychologists and their clients have responded positively to the Better Access and Better Outcomes initiatives in terms of both treatment outcomes and enhanced access (Giese, Lindner, & Forsyth, 2008; Mathews & Forsyth, 2009; Pirkis, Harris, Hall, & Ftanou, 2011). Given that the assessment and the delivery of evidence-based psychological interventions lie well within the expertise of psychologists, there are likely to be on-going opportunities for the profession. While some of the skills possessed by psychologists overlap with those of other health professionals, it is evident that there are areas of specialised practice where the psychology profession is unique. This has been evidenced already by the Australian Government flagging (through Medicare rebates) key areas of assessment and treatment where psychologists with specialised skills can contribute including diagnosis and treatment of children with autism, and pregnancy related counselling for women.

There are also likely to be opportunities for psychologists, especially health psychologists, to become involved in supporting people living with chronic illness and reorienting the health service to be wellness-oriented with a system-wide emphasis on prevention and early intervention. For example, psychologists are well placed to be able to develop, deliver and evaluate prevention and early intervention programs and self-managed care packages for people with chronic illness. The high-level expertise of health psychologists, in particular, may position them as the best placed expert clinicians to provide a specialist consultancy role to support other health professionals to be able to embed prevention, early intervention, and self-managed care strategies into all aspects of the health service.

## **TRAINING PROGRAMS MUST ADAPT TO CHANGING NEEDS**

While there are clearly opportunities for psychologists as a result of the changing health landscape, the reforms will challenge all health professions and require a paradigm shift in the approach to workforce development so that it more appropriately reflects community needs. For the psychology profession, it will be important to reflect on the extent to which current training models and the capacity to deliver high quality continuing professional development enable us to meet these challenges.

One of the first challenges will be the demand on the profession for rapid expansion to meet the mental health needs of the community. As an allied health discipline, psychology may need to consider modifications to its training model so that it more closely aligns with that of other health professions that produce entry-level, work-ready graduates within a five year period.

It is clear that addressing inequities in the delivery of health services is a key priority for the reform agenda. One of the major areas of inequity is the limited access to quality primary health care for people living in rural and remote regions. While there is some access to psychological services in these areas, current training models and supervisory requirements make it difficult for psychology to adopt the “grow your own” approach to building a rural and remote workforce that appears to be showing promising results for other health professions (Henry, Edwards, & Crotty, 2009; Wilson, Couper, De Vries, Reid, Fish, & Marais, 2009). While Australia has a few undergraduate psychology training programs in rurally-based universities and some offer distance education with a residential component, the demand for these programs far and away outstrips the supply. Combining this issue with the increasing difficulty observed in completing the apprenticeship model (4+2) (APS, 2012), routes to registration that include clinical and/or health training are very limited for rural students. Moreover, even if students successfully undertake postgraduate training, the current regulations governing supervision towards endorsement fail to consider the barriers of geographical isolation confronting remotely-based workers. This has a flow-on effect in that it is hard to develop a pool of experienced postgraduate-trained supervisors in rural and remote regions, in turn, making it difficult to encourage upskilling in these regions. Thus, initiatives aimed at maintaining and enhancing psychologists’ competence need to be especially mindful of the challenges for attracting and supporting a qualified psychology workforce in rural and remote areas. Despite the access issues there is no sense in which it could ever be appropriate for rural and remote clients to be provided a level of service which was not identical to

that shared by metropolitan users. Clearly, the ten-year aim must be to provide an adequate level of training and service provision to Australians no matter where they live.

The profession will also need to consider how to meet the demands for a workforce that primarily requires a generalist skill base. Over the last two decades, Australian undergraduate psychology courses have sought to provide a broad training in all aspects of human behaviour after which students can undertake postgraduate training in an area of speciality. These training programs are popular with students because they provide them with both generic core capabilities and advanced specialty training. However, as discussed in the previous chapter, the cost of these programs does not permit enrolment of sufficient numbers of students to meet workforce needs. With the apparent decline in the apprenticeship (4+2) model, and the 5+1 model still being in its early implementation phase, there is a need for both specialist and generalist postgraduate training as a route to registration and practise. A generalist postgraduate training route will develop the profession as integral to the health workforce. Expert high level skills in speciality areas will be complemented by generalist skills across the spectrum of health promotion and early intervention, assessment and treatment of a range of health and illness-related disorders, especially chronic illness and mental health disorders, and recovery-oriented mental health practice. Discussions about how to identify and define this generalist skill base and subsequently create appropriate training programs are urgently needed. Such work will require collaboration between the health sector, university training providers, APAC and the APS. Such work is well underway under the auspices of the National Training and Education Review Group sponsored by the APS. However, there is a considerable time lag from the development of models to their implementation in university training programs to graduates who are fully registered psychologists.

The reform agenda clearly seeks not only to build a generalist workforce base, but also to ensure that health professionals can work together effectively to deliver team based care. Currently, many existing training programs for psychologists tend to isolate students from interaction with other health professionals. While some schools and departments of psychology have moved out of their traditional homes alongside humanities, or general science courses, few still appear to provide structured and systematic opportunities for multidisciplinary learning with a range of other health professionals. There also appears to be limited opportunities for psychology placements in primary health care settings (e.g., general practice) that could potentially enhance the skills of psychologists in collaborative care (Morrissey, Davidson, McAuliffe, McAllister, McConnell, & Reddy, 2011). Moreover,

most psychology undergraduate and postgraduate training programs appear to provide only limited exposure to systems theories and, more generally, to the health system in Australia. An urgent review is needed of the content of current training programs. In addition, investigation of the acquisition of skills in multidisciplinary collaboration needs to be targeted. Different interactions would be required for the range of professional outcomes required of psychology training programs.

As flagged by HWA, it is evident that all health professional training providers, including university-based psychology training programs, will need to work with health services to reconfigure training to address community need. For psychology, this will present a challenge. The reforms will force the profession to confront the varying needs of the discipline and the specific “health-focused” arm of the profession of psychology. Psychologists work in a multiplicity of sectors rather than solely in health. Moreover, it has long been recognised and venerated that studying psychology is more than training for a specific workforce role. It will be difficult to achieve progress and change training models until these issues are confronted. It will be essential for university psychology departments and the profession to confront the implications for the profession, as a whole, of any changes to current training programs.

It is also important to recognise that one of the barriers confronting university departments with regard to expansion of postgraduate psychology programs is the issue of cost. In order to resolve the problem of lack of training places, either university courses need to be reformed to make them more affordable, or there needs to be reform regarding who can provide the training.

### **NEED FOR ONGOING PROFESSIONAL DEVELOPMENT AND UPSKILLING**

The Medicare Benefits Schedule (MBS) supported items available to consumers to access services from psychologists currently require specific on-going professional development by the psychologists in order to maintain provider status. With increased focus on efficiency, effectiveness and accountability of services it is likely that this approach to quality control will continue to be a key requirement of all health professionals. Mandatory professional development is now firmly entrenched for psychologists and the need for quality, targeted professional development within the key areas of practice will continue.

It is also likely that some members of the current psychology workforce may need to improve their skills and retrain in order to be able to operate within the new health landscape. This is shown already by the increased demand for clinical psychology

training presumably to enable the existing workforce to step up to the endorsed clinical psychologist status required for the higher MBS rebate (Voudouris & Mrowinski, 2010). There will be a need for the current workforce to become skilled in areas targeted specifically by the reforms including recovery-oriented mental health practice, collaborative care and cross agency interventions, cultural competence, and working in partnership with clients, carers and families. There may also be a need for broader retraining in areas such as reducing risk factors associated with chronic conditions and self-management for chronic disease.

Currently, professional development for psychologists is provided by a raft of providers with no mechanism in place to ensure quality. There are also inequities in access to quality professional development, particularly active professional development, for psychologists living in rural and remote areas (Roufeil & Lipsker, 2007). The National Mental Health Workforce Plan seeks to build on current initiatives such as the Mental Health Professional Online Development (MHPOD) to deliver accessible professional development. As a profession, psychology needs to be involved in the development of such initiatives as well as seeking opportunities to deliver targeted, high quality, accessible training specifically for psychologists that enables them to meet the requirements of the health system as well as psychological service delivery in non-health areas including the workplace and education institutions, as well as the broad reach of psychological service delivery which goes beyond health-service delivery.

In terms of provision of accredited retraining programs for psychologists, there are currently few organisations providing such courses. There are at least two options that could be followed to address this gap. Firstly, existing universities could be encouraged to enter this market, possibly through a consortium of providers sharing resources and delivering programs through e-learning. Secondly, a new accredited training body could be established to provide accredited training in specialised areas.

#### **Recommendations (B)**

- Ensure the skill base of psychologists meets the needs of the community now and in the future
- Establish an organisation dedicated to on-going professional training

## **C: THE DIVERSITY OF THE PSYCHOLOGY WORKFORCE IS SUSTAINABLE GOING TOWARDS 2020**

Whilst the psychology profession is now steadying itself after the enormous change brought by the National Registration and Accreditation Scheme in 2010, the environment in which psychologists practice is continuing to change, with effects on the demand and supply of psychological services. To ensure sustainability of the psychology workforce to 2020, the agility required to adapt to this changing environment must be fostered. Perhaps the most significant instrument of change on the horizon is HWA. Together with the National Registration and Accreditation scheme, HWA's mandate provides Australian governments with far-reaching policy levers to shape the health workforce to meet the needs of Australia's growing and ageing population in more cost-effective ways, given the rapidly increasing expenditure on health. The HWA has a significant mandate for health workforce reform, and it is clear there will be major implications for the psychology workforce. It is imperative that the psychology profession is across the detail of the proposed HWA changes to enable rigorous advocacy for appropriate arrangements for psychologists in the reform processes.

The recently released Strategic Framework for Action 2011–2015 outlines HWA's national call for action in workforce reform across the health and education sectors. It notes that addressing health workforce needs does not only equate to producing more workers; it identifies that the sustainability of the health sector requires "re-balancing" of many aspects of the current system, involving reconfiguring the health workforce and the education and training programs that prepare that workforce. At a national level this will involve the redesign of roles and service delivery across the health professions to ensure that all professions work to full capacity through expanded scopes of practice and a greater emphasis on generalist roles, with the HWA stating that 'supporting professionals to practice in generalist roles, to be freed up to maximise their time spent providing care and to utilise all of their skills and training will be crucial' (HWA, 2011). It is not viable to expect that professionals within every possible area of health specialisation will be available to work in all areas, especially rural and remote areas, and so a range of solutions to the workforce shortage must be explored. The promotion and support of increased scopes of practice across the various health professions may see psychologists with expanded opportunities, such as prescribing rights following suitable training, but it also poses significant threats as other health professions gain expanded scope to possibly deliver psychological services. Furthermore, any moves towards a more generic workforce may have serious implications for the

future diversity of the provision of psychological care, to the detriment of community health and wellbeing. Psychologists have unique skills over and above those of generic health workers. The creation of generic positions in health services over the past 10 to 15 years has disenfranchised many professionals who feel they are becoming deskilled in roles that do not specifically utilise their professional skills. Rather, positions designed specifically for psychologists both increase the capacity of mental health and health services and also support workforce participation, enabling trained therapists to provide the psychological interventions which the evidence base has shown to be effective, for the benefit of the community. Thus, to ensure sustained diversity of psychology, advocacy for the value of the practice of psychology over a range of specialty areas must be continued.

The push from HWA to increase the capacity of the available workforce of health professional through training of various health professional assistants may have a major impact on the psychology workforce. The concept is that these assistants would work under supervision and take on some of the more simple aspects of the health professionals' work, freeing the professional to focus on more complex tasks. Whilst psychology assistants may have the potential to increase the capacity and the capability of the mental health workforce, the concept of psychology assistants requires more extensive consideration.

Changes in the external milieu of psychology are also effecting fundamental transformations in the very nature of the discipline and profession. In November 2006, new MBS mental health items were introduced. These include rebates for psychological assessment and therapy services provided by clinical psychologists, and focussed psychological strategies by registered psychologists. Uptake of the items has been very high, and in the period November 2006-June, 2012, clinical psychologists delivered 5,294,284 fifty-minute plus services (item 80010) and registered psychologists 8,645,035 fifty-minute plus services (item 80110). The successful uptake of the Better Access initiative, coupled with the separate items for clinical psychologists attracting a higher rebate, has led to the development of disproportionate number of clinical psychology courses in Australian universities as shown in Table 4.

This change in market conditions has essentially been delivered at the cost of diversity in the psychology curriculum at postgraduate level, which has implications for the future diversity of the provision of psychological care, in both health and non-health domains, and hence also for services available to the Australian public. Once lost this diverse skill base will be very difficult (and expensive) to regain.

*Table 4. Number of programs per psychology area of endorsement*

Area of psychology	Number of programs
Clinical neuropsychology	7
Clinical psychology	37
Community psychology	1
Counselling psychology	5
Educational and developmental psychology	6
Forensic psychology	7
Health psychology	5
Organisational psychology	8
Sport and exercise psychology	2

*Source: Australian Psychology Accreditation Council, 2012*

At the practice level, many psychologists have made the Better Access initiative a substantial part of their practice (Stokes, Mathews, Grenyer, & Stokes, 2010). The immense, and growing, uptake of Medicare-funded psychological services under the Better Access initiative has demonstrated the flexibility of the psychology workforce, and the success of the funding model in providing accessible psychological care and supporting increased collaborative practice in primary care mental health service delivery. Whilst the MBS rebates enhance security of work and income for psychologists in the private sector, there may be a significant impact on the ratio of public to private sector employment, and hours worked in each sector. Not only do the rebates increase overall demand for psychologists, thereby putting pressure on supply, they may cause a shift in the ratio of public to private sector employment, with a greater proportion of psychologists opting for private sector work (Mental Health Workforce Advisory Committee, 2008). Whilst a survey conducted in 2010 showed there was an approximately 50:50 split in psychology in the public and private sectors (Grenyer, 2010), an APS survey of psychologists working in the public/NGO sector indicated that 22 per cent of respondents were likely to reduce their public sector work in the near future to move to private practice, albeit mainly part-time. Five per cent said they were actively planning to resign to pursue private practice, and another 17 per cent were actively planning to reduce their hours to facilitate increased time for private practice (Forsyth, 2009). Further monitoring and analysis of information on the composition of the psychology labour force (i.e., private provision versus employed status) is warranted to assess these developments. The impact of changing funding models requires careful consideration going

forward, to ensure increased access to private sector services are balanced with the capacity and sustainability of the public sector psychology workforce.

Any change to scope of practice will also have significant repercussions for the training and practice of psychology. The inclusion of prescription rights within the scope and practice of psychology is being considered and could have benefits to patients and clients through the integration of psycho-pharmacological treatments with psychological interventions for which psychologists are well-known. Whilst such changes would provide limited prescribing rights to only appropriately trained specialist psychologists, to ensure high quality, evidence-based treatment, significant planning and investment would be necessary. Substantial postgraduate training and supervision as a foundation for prescribing rights would be required. A clear delineation of which types of medication would be appropriate for prescription by a psychologist would also need to be developed. Further consideration of these impacts is required to ensure the potential benefits to consumers are balanced with the capacity and sustainability of the psychology workforce.

To support sustainability of the diversity of the profession and discipline of psychology toward 2020, the opportunities and challenges that these changes present must be addressed. It is critical that psychology plays a role in strengthening health policies and programs, and addresses the critical workforce demands through involvement in advisory groups, taskforces, working groups, boards and other decision making structures. The broad strategic directions of HWA's reforms for the Australian health workforce outlined above have major implications for the psychology profession. In particular, moves towards generalist models of training and expanded scopes of practice could well see other segments of the health workforce providing a substitute psychology workforce to deliver psychological services in the context of psychologist shortages. Input into the health workforce reform work of HWA, therefore, will be critical to ensuring policies and planning that support sustainability of the psychology workforce. HWA has recently produced the first edition of Health Workforce 2025, which used simulation modelling to project the number of doctors, nurses and midwives required under various planning scenarios. Whilst the workforce modelling to date has focussed on the medical and nursing professions, the next phase will take into account new data sources and expand the scope to include psychology. The APS is already immersed in significant advocacy to try to achieve the most appropriate outcomes for psychologists and the clients and communities they serve. It is essential that psychology remains centrally involved in consultations and planning activities with HWA to help ensure the psychology profession has input regarding appropriate

data sources, the psychology training pipeline, future workforce requirements, and the role of psychologists within a sustainable health workforce into the future.

Provision of mental health services in the school environment is another area in which the sustainability of the psychology workforce is threatened by a substitute workforce. The government funded National School Chaplains Program (NSCP) allows unregistered and inadequately trained school chaplains to potentially work outside their accepted professional boundary as spiritual and religious guidance officers. Specifically, chaplains can be employed in schools to provide mental health counselling to students, which can be either instead of, or in replacement of, school psychologists. The presence of chaplains in the school offering advice and support to students that is often inappropriate carries risks to both students and schools that may ultimately result in costs both financial and human. Children, teachers and parents have the right to receive a quality, appropriately accredited and quality controlled, highly professional service in relation to emotional support, relationship issues, behavioural adjustment and mental health from appropriately trained and accountable practitioners.

Psychologists are one of the most qualified professional groups to provide early intervention services to students who are experiencing poor psychological health or who are coping with difficult personal or family issues. School psychologists also work collaboratively with school staff, families and external health and welfare services, have undertaken extensive training, and have a high level of regulation. Most psychologists and other health professionals in the school environment are not only registered under the National Registration and Accreditation Scheme but also answerable to a professional code of ethics. The investment of scarce government funded resources which are desperately needed to meet the social, wellbeing and mental health needs of students and their families must be redirected to support provision of interventions that are evidence-based best practice, high-quality and delivered by appropriately trained professionals. To ensure safer and appropriate management of issues in the school environment, the funding provided to the NSCP would be better spent on expanding the current professional services developed by people with mental health expertise. In addition, there needs to be clearly defined roles and boundaries provided for chaplains, and education of chaplains to enable them to appropriately refer-on when presented with issues that are outside their area of expertise. Continued advocacy for the funding of school psychologists is critical for the sustainability of psychologists in the school environment and provision of safe, evidence based, and value and agenda-free services by the most appropriately qualified profession.



Alongside advocacy at the national planning and policy level, psychologists across all workplace sectors, speciality areas within psychology, geographical areas, and training backgrounds will require advocacy and support. In order to support sustainability of the psychology workforce toward 2020, the psychology profession must: seek to recruit and provide high quality training to psychology students; advocate for working conditions which support retention of an efficient and effective workforce; and provide continuing education opportunities to ensure delivery of evidence-based psychological care to the Australian community.

### Recommendations (C)

- Further explore and test the possibility of a workforce of psychology associates
- Support and strengthen generalist skills in the psychology workforce
- Support sustainability of the discipline across specialty areas
- Support and enhance the academic workforce
- Support psychology practice in both the public and the private sector
- Support psychology practice in rural and remote areas
- Ensure health workforce reforms are developed and implemented to support sustainability of the psychology workforce
- Improve recruitment and retention of psychologists

### D: UTILITY OF THE ACADEMIC WORKFORCE IS MAXIMISED AND THERE IS IMPROVED EFFICIENCY OF TRAINING

Maximising the utility of the academic workforce and improving efficiency of training needs to be considered in the context of the nature of the academic workforce available to provide training in both the discipline and profession of psychology.

Overall, a key issue for the Australian academic workforce is its age structure and how and by whom this workforce will be replaced once academics who began their university careers in the 1960s and 1970s have begun to retire (Hugo, 2005). Hugo and Morriss (2010) note that universities will need to

replace approximately half of the academic workforce by 2025. Moreover, additional staff will have to be attracted to account for the anticipated increase in student enrolment following the introduction of Higher Education Support Amendment (Demand Driven Funding System and Other Measures) Bill 2011 based on review of the system by Bradley (2008). As discussed above, funding issues within the university sector have exacerbated these academe-wide issues.

There are several additional challenges to the academic workforce in psychology.

1. The majority of students enrolling in psychology degrees are increasingly interested in pathways to professional rather than research qualifications. Some of these students enrol in combined professional Masters/PhD programs, and a relatively smaller number in PhD programs. Thus, the potential academic labour force for psychology is limited in number. Overall, the number of PhD students has declined (Professions Australia, 2008). Anecdotal data suggest that many PhD-only students focus on the non-professional aspects of the discipline of psychology and do not obtain additional professional qualifications. This has further implications for the supply of future academics. Graduates with PhDs in the non-professional areas of the discipline may not be able to contribute to postgraduate professional training given current accreditation standards requiring professional training be provided by those with relevant qualifications, registration and endorsements.
2. With the introduction of government funded reimbursement for psychology services (Medicare) in 2006, rates of pay are considerably lower for academia as compared to professional practice. It is increasingly difficult to attract and retain professionally trained psychologists (with and without research qualifications) to academic positions.
3. Under the Excellence of Research (ERA) schemes, Australian universities are increasingly focussing on hiring academic staff based on their research strengths.
4. Psychologists with professional doctorates and combined MPsych/PhD degrees often find it difficult to meet both university and registration requirements (including achieving sufficient supervised practice for endorsement—the latter being important for staff providing supervision in professional postgraduate programs).
5. Efficiency in training may be affected by accreditation standards, which are now administered with reference to psychology as a health profession.

The utility of the academic workforce can be maximised and the efficiency of training improved by incorporating innovative technology based approaches into learning and teaching. Review of current accreditation standards should consider the extent to which standards facilitate or discourage efficient training approaches resulting in both professional and academic graduates. Many universities increasingly rely on casual staff as a less expensive academic workforce. Data are needed to demonstrate equivalence of learning outcomes for casual compared with continuing academic staff. Given current university staffing profiles and capacity limitation, finding ways to attract and support PhD students is critical to develop the future academic workforce. Current approaches to international PhD supervision could be explored as a means of attracting top students to PhD programs and encouraging internationalisation.

#### **Recommendations (D)**

- Increase collaboration across departments and schools of psychology and relevant work settings to ensure that the academic workforce has relevant knowledge and skills, taking into consideration innovative approaches to learning and teaching.
- APAC and the PsyBA must recognise the need for training in both the profession and the discipline of psychology. The goal is to achieve training pathways that allow the dual outcomes of an increase of both the professional and the academic workforce in psychology.

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“Looking toward 2020  
we must maintain the  
outstanding level of  
top research and lift  
the majority to  
world standard”

# CHAPTER FOUR

## ENSURING PUBLICATION OF WORLD CLASS PSYCHOLOGY RESEARCH

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# ENSURING PUBLICATION OF WORLD CLASS PSYCHOLOGY RESEARCH

## ORIENTING STATEMENT

2011 was an important landmark for research in Australia. The ERA provided for the first time a quantitative assessment of the quality of research outputs against international benchmarks. Prior to this, assessments were more varied and perhaps allowed for more positive self-evaluations. This chapter is intended as a brief review of the current state of play in psychological research within Australia, an evaluation of current strengths, challenges and potential future directions.

There is no doubt that the core belief in psychology as an evidence-based discipline leading to evidence-based professional outcomes is entrenched in psychology training programs and is an asset in training high quality graduates as well as driving high quality and useful research. Psychology students are trained in the systematic, scientific evaluation of behaviour (defined in its broadest sense) from their earliest classes, a central theme that continues through to the end of post-graduation education. The profession also has in place the mechanisms to extend that evidence-based training through ongoing professional development requirements. This focus on the scientific basis of the discipline in addition to its application sets psychology apart from most areas of allied health and provides us with a workforce capable of advancing both the discipline and professional practice. One question that should be addressed is whether psychology makes the most of this asset or, to put it more positively, how psychology can capitalise more effectively on that training model in the future. Psychology has a solid infrastructure for an energetic research base and yet, as the evaluation of the ERA outcomes below show, on average does not appear to be extracting full value from that base. Looking toward 2020 we must maintain the outstanding level of top research and lift the majority to world standard.

Psychology itself is at an exciting position in its history. There is tremendous student interest, a growing public acceptance of the role of psychology and professional psychologists, and an explosion in the knowledge base driven by both new technology and a more nuanced understanding of brain function. With these changes come inevitable pressures on curricula to incorporate new areas of knowledge whilst retaining the strengths already existing. A further question addressed below pertains to the adequacy of the skill set being provided to students for the research requirements of the future.

## DESIRED OUTCOMES

- A. Recognition of psychology's status as a hub science that, like the other sciences, requires funding to support a science based training.
- B. Promotion of initiatives such as national and international collaborations to support above world standard research across a wider range of Australian institutions and to lift the median standard of research to world standard as a minimum.
- C. Undergraduate and postgraduate training that continues to be at the cutting edge of psychological research, that maintains substantial breadth so that it prepares students for all possible career outcomes, and can respond to new developments in research methodology.
- D. A higher profile for psychology in public debate, policy development, and research funding across the rich diversity of the discipline and profession.

## CURRENT STATE OF THE DISCIPLINE: PSYCHOLOGY AS A HUB SCIENCE (AND ITS CONSEQUENCES)

Psychology's great strength is the breadth of its applicability. Any area of activity with human involvement can benefit from a greater understanding of human behaviour and it is becoming increasingly apparent that many artificial systems are also improved when designed in reference to the principles underpinning human behaviour.

This breadth of applicability leads to the role of psychology as one of the hub sciences (Cacciopo, 2007; Boyack, Klavans, & Borner, 2005). Psychology provides theoretical and methodological tools to a broad range of other disciplines and will continue to do so in the foreseeable future. This feature brings its own challenges. Sub-disciplines of psychology will develop into new fields with a relatively independent existence (e.g., Cognitive Science, Behavioural Economics, Cognitive Neuropsychiatry, Cognitive Neuroscience) and there will be others as sub-areas grow into new fields of knowledge with a specialist role. These present the challenge of maintaining coherence in the core discipline and a cost-effective development of the field of research. It also presents the challenge to psychology of maintaining a modern face when new and interesting sub-disciplines will inevitably assert their own attractiveness and utility. Many of these challenges represent exciting developments and are a sign of a healthy, relevant discipline but they also pose the risk that psychology itself can become less visible (e.g., Cognitive Neuropsychiatry is essentially a renaming of Cognitive Neuropsychology). In many places, internationally, Schools of Psychology are being renamed as Schools of Psychological Science (as though there was a need to emphasise the scientific base), or Psychological and Brain Science (as though the operation of the brain was not always a central concern of psychology), or Cognitive Science and/or Cognitive Neuroscience which omit 'psychology' altogether from fields of enquiry that are its central concern. Indeed the National Committee for Psychology has been disbanded and replaced with a National Committee for Mind and Brain, suggesting a more minor role for psychology and a return to a dualism that most modern researchers reject. The challenge for psychology is to build and maintain a role at the policy table that is readily justified by its knowledge base when its visibility is at risk of being diminished by such developments.

### Recommendation 1

- Increase the presence of 'psychology' at the national policy table through:
  - Encouraging researchers to engage with policy makers on a regular basis
  - Including policy makers in research project activities
  - Fostering knowledge and skills in translational research and policy development in postgraduate training programs
  - Providing opportunities for professional development in translational research and policy development.

In all cases the ability to contribute effectively depends on a) producing highly qualified students with the knowledge required to make those contributions and b) the discipline producing high quality research to address currently pressing issues. This issue will be discussed following a consideration of the discipline's current state as indicated in ERA 2010 and the Chief Scientist's report on the Health of Australian Science.

## PSYCHOLOGY AND ERA PERFORMANCE

The purpose of the 2010 ERA exercise was to provide a snapshot of the quality of the research undertaken by higher education institutions in Australia. As outlined in the foreword of the final report (Australian Research Council, 2010), the exercise was intended to provide assurance for the public as to the value of government investment in the research sector and to guide the allocation of funding of indirect research costs. There can be little doubt that the outcome of this and future exercises will have ramifications for the allocation of research funds to universities – and by extrapolation within universities.

The overall research quality within an institution was quantified within fields of research (FoR: 1701 for Psychology, 1702 for Cognitive Science and 17 for the combination of the two) on a 5 point scale with the anchors "well above world standard" to "well below world standard". Thus, assessment was not matched to organisational units like Schools of Psychology, but was based on all nominated research outputs allocated to a FoR and generated across a range of organisational units. This mismatch between FoR code and schools obfuscates funding and performance assessments in many areas and was noted as an issue in the 1996 report of the National Committee of Psychology of the Australian Academy of Science. The recent revision of the FoR codes has exacerbated this difficulty and thus the ERA assessment is not well-targeted to reflect the performance of Schools of Psychology, which in some cases provided fewer than 50% of



the assessed outcomes within an institution. However, in most universities units of psychology will typically be the largest contributor to FoR 1701 and be associated with the outcomes received. It should be noted that a difficulty in assessing interdisciplinary research such as is frequently conducted in psychology was recognised as a problem of ERA 2010. ERA 2012 offers an increased flexibility to claim psychological content even if published in non-psychology outlets.

Benchmarks for the assessment of above (scores 4 and 5), at (3), or below (2 and 1) world standard were provided from a number of sources. For journal papers, the bulk of the research outputs in psychology, these benchmarks permitted the assessment of the publication profile within a FoR at a particular institution in terms of ranked journals and citations in reference to all papers published in the journals allocated to the FoR code. Other indicators, like grant or commercialisation income or esteem measures, were assessed within the Australian context. For psychology, 28 institutions were assessed with an average rating of 2.6 (Table 5).

The ERA 2010 outcome for psychology should be considered with a number of caveats. The benchmark 'world standard' does actually reflect a rather select portion of the world, namely those who publish in journals covered by Scopus. One might argue that this selectivity bias overestimates the quality of the world standard by ignoring large sets of

research outputs. Thus, performing at world standard defined as such is a considerable achievement. However, having the research quality of 57% of the assessed institutions classified as below or well below the world standard is problematic. More so as the assessment of research quality in psychology is incomplete. Of 41 eligible Australian institutions only 28 made submissions in psychology, although a good number of the remaining 13 institutions also offer accredited programs and higher degree research training in psychology and presumably produce research in that FoR code. These outputs may have been too few to result in a submission (<50 indexed journal publications in the six year audit period from 2003 to 2008) or some may have been counted towards a different FoR code.

The ERA outcome for psychology compares unfavourably with the assessments of research quality in other FoR codes, in particular in the sciences where average ranks below 3 were the exception. It should be noted that research outputs from psychology like those from the sciences and unlike those from social sciences or humanities were assessed based on metrics (ranked journals and citations) and that peer review was not used. This, by comparison, poorer outcome can render psychology's position in the competition for funds difficult as it is likely that government and university administrations will back what they perceive to be winners when it comes to distributing research funds. An early indication of such a strategy is a current consultation paper on 'Defining Quality

Table 5. Summary statistics for Psychology, Cognitive Science, and other disciplines on the level of 4-digit FoRs

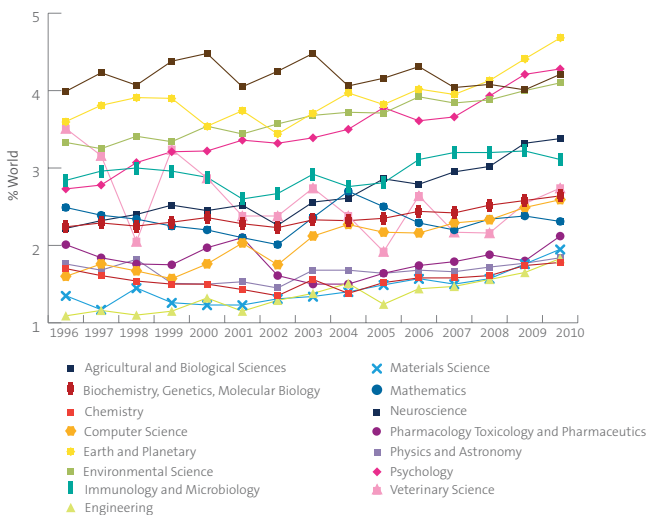
Discipline	UoEs	FTEs	Outputs	Income \$	Average Rank	Rankings				
						5	4	3	2	1
Zoology	19	264	3119	40,738,545	3.5	5	4	6	4	0
Clinical Sciences	30	1683	1105	757,668,507	3.2	4	7	11	6	2
Human Movement	19	349	2892	32,500,432	3.7	5	5	7	2	0
Neurosciences	17	543	4056	287,646,446	3.4	3	3	9	1	1
Nursing	23	774	3098	50,878,800	3.4	3	6	11	3	0
Public health	27	1893	10648	686,549,160	2.3	1	4	7	6	9
Applied Economics	33	679	5224	110,891,233	2.1	2	2	7	7	15
Business & Management	39	1160	9537	50,226,012	2.2	3	4	6	11	15
Marketing	29	390	2525	20,522,102	2.2	2	2	4	13	8
Sociology	34	466	3537	51,843,433	2.4	1	4	9	13	7
Psychology	28	1043	8186	130,671,312	2.6	3	4	5	11	5
Cognitive Science	11	171	1981	22,164,299	3.1	1	3	4	2	1

(Number of units of evaluation, Number of full time equivalent staff, Number of outputs [papers, books, chapters and conference papers], research income, average ranking, and Number of UoEs per rank).

for Research Training in Australia' (Department of Innovation, Industry, Science and Research, 2011) suggesting that ERA outcomes will be part of the funding formula for the Research Training Scheme.

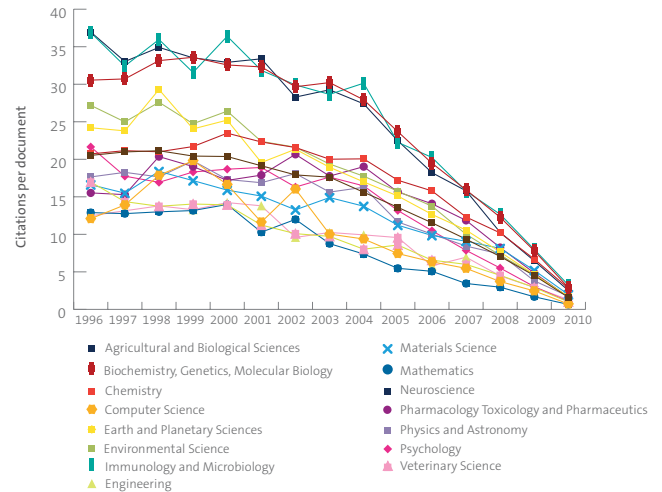
There are, however, aspects of the discipline's research performance which are reassuring. Additional performance data were provided in the recent Chief Scientist's report on the Health of Australian Science (Office of the Chief Scientist, 2012). These data show psychology to have increased its outputs as a proportion of the global total from 3.4% in 2001 to 4.3% in 2010 and this is high compared to nearly all other sciences (see Figure 3).

In addition the citation rates for those papers, a measure of global impact, is competitive, with an average of 10.2/paper over the audited period, suggesting that the increased output is not reliant on a reduction of quality. Thompson ISI essential science indicators yield an average citation rate for psychiatry/psychology papers of 10.7 in the more recent period 2002-2012 and if Australian papers of longer standing are examined then the rates exceed that number (see Figure 4). Perhaps just as important, the relative position amongst Australian sciences has not varied in the period covered by the Chief Scientist's report in spite of substantial growth in student numbers during that time.



Source: SCImago data, [www.scimagojr.com](http://www.scimagojr.com). Cited in Health of Australian Science, Office of the Chief Scientist, 2012

Figure 3. Australia's document outputs as proportion of world publications, by field, 1996 to 2010



Source: SCImago data, [www.scimagojr.com](http://www.scimagojr.com). Cited in Health of Australian Science, Office of the Chief Scientist, 2012

Figure 4. Australian citations per document by field, 1996 to 2010

Psychology is compared explicitly to other sciences because it is a hub science, although it is still the case that it is not funded equivalently to other sciences. This long standing discrepancy was noted previously in the 1996 report of the National Committee for Psychology. Psychology courses are based on training in the scientific method and include a heavily research-based Honours program with student numbers unmatched by other sciences, our research publications show experimental rigour within psychology journals and sit comfortably in interdisciplinary science journals, our postgraduate professional courses are moulded on the scientist practitioner model, and demonstrated efficacy is required of our therapeutic techniques to ensure ethical practice. Therefore psychology needs to be a strong science wherever it is offered. However, not all schools are based in science-oriented faculties and national funding levels for psychology are lower than for other sciences. The recent review of base funding does not recommend a change so future lobbying will be required to ensure a well-justified case is strongly made.

### Recommendation 2

- Efforts should be undertaken at every opportunity to lobby for a level of funding for psychology reflective of the need to run a science program.

## CHANGING LANDSCAPE OF RESEARCH

The last 10-15 years have seen a considerable change in the manner in which research is conducted in Australian universities. Whereas previously research output was driven largely by teaching and research academics based in schools or departments and employed on continuing appointments, research-only academics frequently based in dedicated research institutes or centres and employed on soft money and on temporary contracts now make an increasing contribution. The establishment of research institutes and centres has not been equal across fields of research with more in the biomedical and physical sciences than in the social sciences or humanities (Office of the Chief Scientist, 2012). This has led to the development of increased scale and focus for research in some fields, a trend that to date is only beginning to affect research in psychology.

Research in psychology (with a few very notable exceptions) is frequently conducted in small laboratory groups comprising a single teaching and research academic as the leader with a number of students, some research higher degree, but more frequently at the Masters or Honours levels. Group members in the post doctoral level are the exception, although increasing in number. These research groups often function without external grant funding as the need for expensive equipment is relatively low and the large student cohorts provide a considerable, readily accessible and cheap research workforce. These groups produce a substantial amount of research that finds its way into one of the about 1500 journals listed for psychology in ERA2012, as well as into conference proceedings and (edited) books. Thus, the research model works and some would argue is more cost efficient than are research institutes. Moreover, this research model is inextricably linked to the training model in psychology, which emphasises hands on research training and has been the foundation stone of a healthy discipline and well trained profession. On the other hand, the projects which are tackled are frequently limited in size as they need to be tailored to the requirements of the degrees pursued by the students. This can determine the nature of the research outputs as it is difficult to reconcile the expectations of individual Honours and Masters students with the requirements for making a contribution in one of the higher impact outlets. Thus, the balance between publication quantity and quality may still come down on the side of quantity in psychology. It should be noted that this has not precluded the execution of larger scale projects often central to effective industrial collaboration. Psychology maintains a proportion of funding from linkage grants in the middle of the range for the sciences and this funding is won with a range of external partners (Office of the Chief Scientist, 2012).

A second challenge to the traditional model of psychological research is posed by the increased role of neuroscientific methodology in psychological research. The decade of the brain has led to an emphasis of the neurobiological and genetic basis of psychological processes and behaviour. This research is expensive in that it requires considerable equipment and larger, multidisciplinary research teams.

These developments provide challenges for the traditional, cottage industry model of psychological research. On the other hand, the need for larger, more impactful research projects in combination with the drivers provided by ERA may prove beneficial for the development of psychological research. Extrapolating from the success of the biomedical sciences and following some very successful examples in psychology, it seems likely that there will be an increased emphasis on scale and focus within psychological research. The requirement to share in expensive equipment or techniques that require multidisciplinary teams provides an incentive that could lead to more collaboration and research driven by groups of researchers rather than individuals. These research groups can pursue more large scale funding, in the form of centres of excellence, large equipment or program grants. This is not to say that there is no place for work that follows the traditional research model in psychology. However, this may be limited to certain areas or individuals. Initiatives to facilitate such collaboration may be needed as the Chief Scientist's report suggests that international collaboration on psychology publications is declining in recent years whereas it is increasing in most other sciences (Office of the Chief Scientist, 2012).

### Recommendation 3

- Facilitate national and international collaborations in particular at institutions which currently lack those.

Regardless of the research framework chosen, the contingencies imposed by the ERA framework are likely to have profound consequences on psychological research and its outputs. Given that the assessment of the quality of psychology research is based on metrics, which were limited to citations in ERA 2012, it is likely that publication patterns will change. Conference publications and book chapters, which comprised 13% and 14% of the psychology research outputs in ERA 2010 respectively and are difficult to assess in the absence of peer review, will decrease in frequency relative to journal papers. Journal papers comprised 72% of the research outputs submitted in 2010 and are more amenable to an ERA style quality assessment. Publication is likely to take place in journals that are indexed by the major citation providers, Thompson ISI or Elsevier Scopus, and to comprise outputs that are more likely

to be impactful according to the criteria applied. They are more likely to reflect larger scale projects with several experiments or studies, or involve international collaborations.

This development will occur amidst a fertile background of research support and infrastructure. An informal survey of eleven leading researchers in Australian psychology who represent the breath of the discipline seems to suggest that funding agencies are not biased against psychological research and are willing to fund it. Similarly, with the notable exception of access to equipment that permits brain imaging, research infrastructure was regarded as adequate. It should be noted that the sample canvassed may not be representative of the average psychological researcher, however, the responses seem to suggest that there are no major structural impediments to the funding of psychological research in Australia. This impression is supported if an international perspective is taken with overall good success rates of grant applications in Australia in comparison to other parts of the world. One notable exception to this rather positive picture seems to be in the area of mental health research. This seems underfunded within the National Health and Medical Research Council (NHMRC) with a success rate of less than 15% which does not compare favorably across grant review panels. This is not a reflection of poor research quality as research outputs in psychology/psychiatry are ranked in the top 5 (for number) and top 6 (for citations) internationally (see Christensen et al., 2011 for a more detailed discussion).

#### **Recommendation 4**

- Embark on an initiative to facilitate applications for NHMRC funding in mental health and other relevant areas. Given the NHMRC's focus on application of research in clinical settings, encourage work on the efficacy and effectiveness of clinical techniques (NHMRC Tier 2) and on dissemination and implementation of research for system wide change (NHMRC Tier 3).

Nationally a pool of institutions that are internationally competitive are required to maintain the visibility of Australian psychology worldwide, and the ability to draw the best and brightest to Australia, to work, visit and collaborate. It is pleasing to see that some places obtained ERA ranks of 4 or 5 as even the best Australian institutions work with budgets that make this level of performance difficult. It would be desirable to elevate average performance to a level of at least 3 throughout the system since that is the national benchmark for performance in the sciences. This is only practical in schools that are sufficiently well staffed to allow the time

to conduct high-quality research. Many current schools have small staff numbers and quite large student numbers making this equation a challenge for maintaining or lifting research quality but the recent review of base funding in universities did not list psychology as being underfunded. This may seem erroneous to those running psychology programs but indicates that alternative should be considered in order to improve the overall quality of our performance. It is common in schools ranked lower than 3 to find some active researchers. If funding is differentiated on the basis of ERA performance then those researchers will find it increasingly difficult to remain competitive although the ERA drivers will make it increasingly important for university management to ensure they do so. One method which may facilitate their continued research and help to elevate the base level of performance across the system, within the discipline, would be to reinstate the APS visiting researcher scheme to facilitate collaborative research but with special emphasis on enhancing the possibilities for researchers in institutions ranked 3 or below to collaborate with researchers from institutions ranked 4 or 5 (see Recommendation 3).

#### **TRAINING OF GRADUATES FOR RESEARCH**

Psychology also faces several challenges in training its graduates to become the future academic and research workforce. The ability to carefully select a stellar group of students for postgraduate training that arises from the current course structure is a distinct advantage for the discipline. The undergraduate training received provides most of these students with the basic skill set required for advanced research training. However, as revealed by our informal survey, this base training needs to be complemented during postgraduate training in particular in the areas of higher level methodologies, programming, and use of neuroscientific techniques (these needs may differ across specific sub-disciplines). Together this raises a number of challenges to confront in training for research:

1. Challenges in research training are particularly pertinent in the training of the future generation of academics who provide postgraduate professional training (see Chapter 3) as these students are expected to combine the rigors of a research PhD with the coursework and practical components of professional training. This may demand a 4 + 2 + 3 training sequence, which poses considerable demands on the students involved. This training which will enable students to fulfil the selection criterion 'having a PhD' often posed in academic job advertisements but this path is often rejected in favour of a Professional Doctorate (4+3) which equips the student with the practical training and a title, but may prevent them from joining the academic workforce.

2. The discipline has an even mix of Science and Arts students in most institutions and the latter students are often lacking in mathematical and biological skills, although they commonly have an advantage in written communication skills. The positive side to this is that psychology provides a palatable access to scientific literacy for many of these students that broadens their outlook in a manner valued by recent curriculum changes seen in some institutions (e.g. The Universities of Melbourne and Western Australia). The accredited curriculum encourages psychology schools to work hard to ensure that all students practise the broad skill set underpinning the scientific base of the discipline. However success requires intensive practical experience and this would be more easily supported with an appropriate level of funding. Selecting students with those skills at entry would increase time for training in more advanced techniques and content but at the cost of a narrower contribution to scientific literacy in the undergraduate cohort.
3. Rigid prescription of curricula always risks producing inertia in curriculum evolution in particular in an environment where guideline development, program accreditation and registration processes are handled by separate entities with limited interchange and communication. The proposal by the PsyBA for a National Psychology Exam and current APAC accreditation requirements do rigidify the training model in an attempt to ensure an adequate minimum standard of training in the discipline and its professional applications. Frequently these minimum standards are formulated with a particular type of psychologist in mind – those who work in the mental health sector. Other areas of employment, notably organisational psychology and teaching and research receive less careful consideration. Moreover, minimum standards are often mistaken as required standards and prescriptive curricula can impact on the currency of training. The discipline will be more current and internationally competitive if schools are able to add or modify sub-topics as they arise in the discipline and are able to reflect modern practice to ensure students are well prepared for the research needs of the discipline which is the focus of this chapter of this document.

The dangers of a prescriptive curriculum are well illustrated in the teaching of methodology. The current curriculum has a heavy emphasis on statistics and research methods. This is appropriate given the acceptance that psychology should be an evidence-based discipline and profession. However, there is also a significant recent change in the manner in which statistics are thought to be best employed. This new approach is exemplified in an Australian contribution by Geoff Cumming in his book entitled 'Understanding The New Statistics' (Cumming, 2012). Curriculum specification needs to be sufficiently flexible to allow new approaches to gain rapid presence when, as in this example, they are

clearly demonstrated to be superior. Similarly there is also a need to ensure that the teaching of research methodology is not reduced to the teaching of a certain set of statistical methods. The current strong focus on group designs in research and research training meshes easily with analysis of variance procedures but needs to be complemented with methods where individuals tend to be studied in detail. Each individual tested then becomes a replication of the research analysis. Psychology does, in the end, aim to treat or modify the behaviour of individuals in most cases and with the influx of neuroscience approaches it seems odd that so little of the research in the discipline internationally explicitly tries to establish understanding at the level of the individual, although, of course the professional application of psychology is typically directed at the individual. The challenge is to maintain currency of curricula in addition to minimum standards. Recommendation 5 may provide one mechanism to help achieve this.

4. There is a wave of new research technology using brain imaging and tools such as transcranial magnetic stimulation (TMS) and transcranial Direct Current Stimulation (tDCS) to manipulate brain function which are increasingly applied to answer the questions posed by psychological research. Yet many students do not have access to these methods and technologies at any level of training. This provides a challenge for the training of the next generation of researchers in psychology and suggests the need to maintain diverse paths through the training programs so that a subset of individuals can develop these skills. This may require an increased collaboration of institutions in postgraduate training to share resources or the realisation that 'scale and focus' may mean a differential emphasis on particular areas of research across different institutions. Such a development seems to be already under way with few schools able to support world class research across the breadth of the discipline. It is certainly the case that Australian graduates will be uncompetitive internationally if they are unfamiliar with the modern tools of psychological research. Already in many sub-areas of psychology international advertisements for post-doctoral positions commonly indicate that familiarity with brain imaging is either desirable or required.

#### Recommendation 5

- Garner the strongest support for a rigorous and broad undergraduate curriculum that provides students with knowledge and a skill base which prepares them to conduct research in any of the discipline's sub areas. Develop postgraduate training aimed at students intending to pursue a career in teaching and/or research that includes active engagement with state of the art methods and techniques.

In summary, psychological research in Australia makes a substantial contribution to the international progress of knowledge in the discipline. Overall the quantity of publications is high by international standards, the average impact of papers is near the discipline average and the peaks in performance are outstanding in the international context. There is however a large spread of performance and the overall average ranking of quality as indicated by the ERA is lower than desirable for sciences in Australia. It is important for the training of our students that steps are taken to help lift this average. In part this is because the scientist-practitioner model of training which has served the discipline well requires a rigorous training as a scientist and that is best delivered in schools that embrace the role. This will also allow broad participation in the development of modern psychological theory. To that end there are a number of steps the APS could take to facilitate stronger overall performance.

#### **Recommendation 6**

- Psychological research needs to be disseminated within the broader community (e.g. via The Conversation <http://theconversation.edu.au>), identify where psychology can make a relevant input, and lobby for appropriate representation.

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“For the good of our discipline and profession, and our local and global communities, psychological scientists, educators and practitioners need to seize every opportunity to increase the psychological literacy of the general public”

## CHAPTER FIVE

### PROMOTING PSYCHOLOGICAL LITERACY WITHIN THE COMMUNITY

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# PROMOTING PSYCHOLOGICAL LITERACY WITHIN THE COMMUNITY

## ORIENTING STATEMENT

Psychological literacy is the capacity to intentionally use psychological knowledge and skills to achieve personal, professional and societal goals (Cranney & Dunn, 2011). It has also been argued from a number of perspectives (e.g., Cranney & Morris, 2011; McGovern et al., 2010; Sokol & Kuebli, 2011) that a high level of psychological literacy necessarily entails psychologically literate citizenship, which involves behaving in a way that reflects a consideration of the long-term needs of local and global communities. When George Miller (1969) implored psychological scientists and professional psychologists to “give psychology away”, he meant that the more psychologically literate the public is, the better off we all would be.

There are limits to the capacity and the opportunity for everyone to become psychologically literate, and it is the responsibility of psychology leaders and educators to ensure that:

- Young people in secondary schools and in universities have maximal opportunities to become psychologically literate
- Psychology leaders, educators, and graduates should be capable of “giving psychology away” to receptive members of the public, many of whom will have influence on their immediate and wider communities (including the discipline and profession of psychology).

Why is this important? First, from a self-interested perspective, psychology is often misunderstood by the public, by university and health decision-makers, and by politicians, leading for example, to inadequate levels of funding for training and for research (Badcock et al., 2007). Second, most problems in the world today (e.g., conflicts based on ingroup-outgroup thinking; life-style diseases) are psychologically based. As George Paxinos (1992) has argued, our limited neurocognitive capacity makes it difficult for us to (a) realise the sociocultural and political factors that lead to these problems, and (b) subsequently work together to create solutions.

Given the large number of secondary school students, first-year university students, and undergraduate major students who study psychology, psychology education requires review to ensure that these potential community leaders have maximal opportunities to acquire an understanding of the value of psychology as a science and profession. Relatedly, attention needs to be paid to the problem that Stanovich (2010) identified: psychological scientists and professional psychologists are not only slow reactors, but are minimal pro-actors, in meeting the need in the general community for accurate psychological knowledge. For the good of our discipline and profession, and our local and global communities, psychological scientists, educators and practitioners need to seize every opportunity to increase the psychological literacy of the general public.

The desired outcomes expressed below have a common need for greater appreciation of the value of psychological science by the general public. In particular, the psychology community, including both individuals and organisations, must actively promote:

- The value of study (secondary and tertiary) and practice in psychology to the public, policy makers and business leaders, emphasising particularly the *scientific and rigorous approach* it entails when applied across a broad range of everyday and global issues
- Increased awareness that the study of psychology (secondary and tertiary) provides knowledge, skills and values that are relevant throughout life to address health and wellbeing issues related to self, family and friends, workplaces and organisations, the local community, nations and the world.

## DESIRED OUTCOMES

- A. A coherent, relevant and science-based pre-tertiary curriculum in psychology, so as to maximise the “spread” of scientific/psychological literacy in the general public, as well as to prepare students for further tertiary study in psychology.
- B. A coherent, relevant and science-based tertiary undergraduate curriculum in psychology, so as to maximise the acquisition of scientific literacy, employability, and global citizenship (i.e., psychological literacy) in those students, as well as to prepare them for further study in psychology.
- C. Psychologically literate educators (scientist-educators) at the pre-tertiary and tertiary levels, to maximise students acquisition of psychological literacy.
- D. Psychologically literate spokespeople for communicating psychological science and application to the general public.
- E. A general public who is more psychologically literate (i.e., psychologically literate citizens).



## **A: A COHERENT, RELEVANT AND SCIENCE-BASED PRE-TERTIARY CURRICULUM IN PSYCHOLOGY, SO AS TO MAXIMISE THE “SPREAD” OF SCIENTIFIC/ PSYCHOLOGICAL LITERACY IN THE GENERAL PUBLIC, AS WELL AS TO PREPARE STUDENTS FOR FURTHER TERTIARY STUDY IN PSYCHOLOGY**

Although from a university educator/researcher perspective it would be simpler if there was no secondary psychology, the horse has bolted and so the issue can no longer be ignored. There are also important societal reasons to have a quality psychology program in secondary schools. Given some benchmarking with UK and USA models (e.g., Trapp et al., 2011), one indicator of a coherent pre-tertiary psychology curriculum would be to achieve the outcome of inclusion of psychology in the national science curriculum. There are currently significant state differences in the nature of pre-university exposure to psychology, and in addition there are problems arising from the differential experience of first-year psychology university students (i.e., those who have taken secondary-school psychology are often dissatisfied with the repetition of material in first-year undergraduate psychology programs).

As part of national educational reform in Australia, the Australian Curriculum, Assessment and Reporting Authority (ACARA) is developing the senior secondary Australian Curriculum whereby curriculum content and assessment standards are being developed for 14 senior secondary subjects including the science courses of physics, chemistry, biology and earth and environmental science, but not psychology. Implementation timelines are subject to decisions made by the Australian education Ministers in December 2012 and local State and Territory needs. The curriculum development process used by ACARA (2012) involves four interrelated phases: curriculum shaping, curriculum writing, implementation and curriculum evaluation and review. Thus, work with ACARA and other stakeholder bodies is required to begin the process for developing a national curriculum in psychology and inclusion of psychology in the senior secondary school Australian Curriculum. Psychology's position as a science and the rationale for including it as a national science course in secondary schools has been outlined in two APS publications (APS, 2010a, 2010b; see also Skouteris et al., 2008).

Psychology can benefit from the lessons learned, and still being learned (regarding enablers and barriers), from the development of the first national senior secondary science courses. These lessons involve the need to:

- Identify the diverse stakeholders (e.g., ACARA, psychology educators at both secondary and undergraduate levels) and their views and characteristics
- Engage all stakeholders at all stages, including in preliminary collaborative work

- Consider the links between curriculum that comes before the upper school curriculum (i.e., K-10) and the curriculum that follows (i.e., tertiary study) the upper school curriculum
- Complete a mapping exercise of the knowledge, skills and values that are common to the courses offered in each State (to identify the overlap between the knowledge, skills and values taught in secondary psychology curriculums across the various jurisdictions)
- Achieve a good balance between the breadth and depth of the curriculum to avoid a 'crowded', shallow curriculum
- Be mindful that consensus is more readily reached for courses that already have a large area of overlap in the curriculum offered in each State
- Recognise people's wariness of political agendas and the need to perceive the benefits of change and to trust the agents of change
- Recognise that ACARA is more likely to look favourably on submissions that are based on consensus and collaboration between stakeholders and that reflect consumer demand.

There are particular issues that need to be addressed. Firstly, there is little information about who teaches secondary psychology, their pathway to becoming a teacher of psychology, their curriculum specialties other than psychology, their views on the nature of psychology and their experiences of teaching psychology (see Provost et al., 2012). Some information is available regarding the nature of students who study psychology, but this should be collated and extended.

Secondly, the psychological community should harness the psychological literacy of its members to address ingroup-outgroup and diversity issues among stakeholders to facilitate a 'national conversation' about the proposal for including psychology in the national curriculum.

Thirdly, there needs to be increased awareness of common themes that run through the school (K-12) and tertiary sectors that potentially provide greater continuity between school and university curriculum (e.g., core topics, cultural awareness and respect for diversity, sensitivity to indigenous cultures, sustainability and environmental awareness).

### **Recommendations (A)**

- APS, in partnership with other peak psychology bodies and ACARA, should complete the initial stakeholder engagement process, and then form a national committee to complete initial scoping, including the curriculum and theme mapping exercises, and then determine and enact the national strategies.
- A national approach needs to be created to support the training and continuous professional development of psychology educators in schools (see APA, 2011).

## **B: A COHERENT, RELEVANT AND SCIENCE-BASED TERTIARY UG CURRICULUM IN PSYCHOLOGY, SO AS TO MAXIMISE THE ACQUISITION OF SCIENTIFIC LITERACY, EMPLOYABILITY, AND GLOBAL CITIZENSHIP (I.E., PSYCHOLOGICAL LITERACY) OF THOSE STUDENTS, AS WELL AS TO PREPARE THEM FOR FURTHER STUDY IN PSYCHOLOGY**

It has been argued that there are several categories of graduates of undergraduate psychology education, the primary ones being: those who intend to become psychological scientists, those who intend to become professional practising psychologists, and those who are taking psychology out of interest and to complement their career development in other areas. This situation reflects the status of psychology as a “hub” discipline (Cacioppo, 2007), emphasising its critical importance, but the situation also creates some headaches for psychology educators, given these diverse needs to be met within a limited curriculum “space”. Relatedly, it must be acknowledged that in the Australian “Phase 1” (Years 1-3, Bachelor level), less than 50% of the UG accredited psychology major students go on to undertake further study in psychology. Moreover, less than 50% of Year 4 psychology students go on to undertake further professional or research training in psychology (i.e., MPsych, DPsych, PhD, Masters research). Most would like to, and it is likely that many of those would have the current minimum desired entry requirement of upper-level 2-A Honours (i.e., 75% or greater) equivalent. The issue preventing many from pursuing this path is the low number of places in professional psychology training programs (which itself is a result of poor government funding of universities for that education as well as inadequate supply of external professional training places). Others cannot afford the extra two years of training. Many of these students currently undertake the alternative “4+2” supervision route which is also becoming increasingly difficult. There is an urgent need to consider post-Year 4 options, however this chapter will focus on Years 1-4.

### **PHASE 1 PSYCHOLOGY EDUCATION: THE PSYCHOLOGY MAJOR (YEARS 1-3)**

Essentially, the perceived value of the accredited psychology major needs to be increased for all students, not just those who go on to professional psychology training. There should be a greater emphasis on the development of psychological literacy, that is, all six graduate attributes, but also students need to be given the opportunity to develop a “gestalt” of what they have acquired through their psychology major, most likely through a third-year capstone experience and tools such as a portfolio. A more pragmatic taxonomy of psychological literacy consists of three categories of attributes:

scientific literacy (the “foundational knowledge” that is applied adaptively), employability (adaptive application of psychological principles to employment issues; e.g., critical thinking, values, communication), and global citizenship (applying psychological principles to advancing the long-term wellbeing of local and global communities, hopefully providing the antidote to short-term and “in-group” thinking—essential for dealing with the world today and into the future). Some practice-based experiences first in the classroom (e.g., exercises in applying principles to self or to hypothetical local issues) and eventually to the real world (e.g., work or voluntary experience in local communities, in remote communities, or in other parts of the world) would be the most powerful way to develop these “liberal arts and sciences” attributes. Given that less than 50% of psychology major students study more psychology, psychology education must equip students with general employability skills, and make the most of the opportunity to develop potential community leaders who not only understand and appreciate what they have gained from their psychology education, but also apply those principles adaptively, and transmit those principles to others in their community (i.e., increasing the psychological literacy of the community). In shaping the undergraduate curriculum toward greater employability, it is acknowledged that (a) the kind of liberal arts and sciences education provided with the current psychology major is highly desirable for general graduate employment, including various roles in the public service - but employers need to be educated about this (Carlyon, 2012), and (b) there is otherwise a dearth of information about what employers are specifically looking for in a three or four year psychology graduate (Cranney et al., 2008, in prep; Lipp et al., 2007). A further consideration is that of benchmarking, with the preferred benchmark being Bologna and thus EuroPsy Tunings where for example, competency in assessment, interviewing, and test and questionnaire construction is specified (Lunt et al., 2011). Note that the EuroPsy (and English) UG programs are almost 100% psychology; this is in contrast to the “pseudo-Bologna” models that are currently being adopted by some Australian universities, that are in reality a move toward the USA model of higher education (whereby a psychology major program is often less than 33% psychology content).

There is a need to ensure high quality across all psychology undergraduate programs, for the multiple stakeholders in psychology undergraduate education. The revised APAC Standards (APAC, 2010) regarding this “scientific literacy” core (particularly relating to the Graduate Attributes [GAs] of the undergraduate psychology program; Cranney et al., 2009), as well as principles underlying accreditation processes) have recently been outlined in Cranney and Botwood (2012; see also APA, 2011).

The desired outcome of psychological literacy is inherent in GA 6, and is key to the notion of scientific literacy (particularly being able to apply science-based critical thinking to everyday human behaviour, especially to oneself and media reports; see Cranney et al., 2011). The critical thinking aspect inherent in scientific literacy should be particularly emphasised in the large first-year psychology unit. Applications to the workplace are particularly relevant to employability (and so should have additional focus in third year), and applications to communities and societies can be relevant to global citizenship. The additional capacity for self-reflexivity is particularly important to the development of cultural awareness, inclusive leadership, and continuous professional development.

At least in the final year of the undergraduate program, students should be given the opportunity to reflect on what they have acquired across the psychology major, and how the various subfields of knowledge, and the skills that they have learnt, interrelate, particularly in the application of psychological principles to solving human behaviour problems in professional and other real-world contexts.

One issue to consider is whether graduates from an undergraduate program should have acquired a particular set of evidence-based practical skills training relating to (a) bench-marking with Tuning-EuroPsy (Lunt et al., 2011), (b) a consideration of the best fit of psychology major outcomes with generally desired work-place skills, beyond those associated with general scientific literacy, and (c) the importance of leadership skills for advocating psychological literacy to the public. All such skills can and should be strongly linked to psychological theory and research.

It is now clear that 25% or less of psychology majors go on to study more psychology (also see earlier discussion the Chapter 1), and that Schools should be concerned as much about the non-continuing cohort as those who become postgraduate students (for the reasons stated in the introduction to this chapter). In addition, by emphasising the value of the undergraduate program, value is given to the discipline and its relevance to “the real world” (beyond clinical psychology) (Halpern, 2010). Students consulted during this exercise made the point that most units in psychology (not just that unit containing a capstone experience) should make links between core knowledge and application in employment or community settings.

There is an urgent need to consider the issue of how students who have completed high-school psychology transition into undergraduate psychology. In Victoria, for example, many first-year psychology students are dissatisfied with the repetition of material in the first-year units. There are a number of different options, including: offering two different kinds of first-year units (this happens in chemistry, for example); offering a different laboratory stream for those who have taken pre-tertiary psychology; offering advanced placement examinations with the possibility of credit, as in the USA; and individual universities deciding to give credit for high-school psychology.

#### **PHASE 2 PSYCHOLOGY EDUCATION: THE PRE-PROFESSIONAL YEAR 4**

Year 4 should explicitly build upon the scientist-practitioner model by having both research and pre-professional practice training components. The research training component is strongly integrated into current Year 4 Standards, and the discipline strongly endorses this situation. However, the strength of the pre-professional component is somewhat variable across different Australian universities. Content needs to build upon, and extend, the skills obtained in the first three years of the undergraduate program in relation to assessment, intervention and evaluation, for several reasons. The 4+2 pathway will likely survive for some time, and this compulsory offering will at least provide Year 4 graduates with more advanced training relevant to professional psychology practice (note that some universities already do this, as either core or optional material). There are generic skills across all postgraduate professional psychology training, and so by providing some of this training at fourth year, that component in postgraduate training should be able to be eliminated or diminished (with the potential consequence of reducing the length of Masters training or being able to cover more advanced material). Universities invest a high level of resource in this year, and so outcomes should be maximised for all stakeholders, particularly through rethinking aims and strategies, and through sharing innovative practice. Consideration needs to be given to competency-based assessment, and to benchmarking (e.g., against EuroPsy Tunings; Lunt et al., 2011).

### **Recommendations (B)**

National consensus should be reached regarding:

- The minimum core content (knowledge, skills and attitudes) for students to acquire scientific literacy, including research methods (GA 2), knowledge and its application (GA 1 & 6), critical thinking (GA 3), and aspects of values (GA 4) and communication (GA 5)
- The ways in which students can acquire a minimum capacity to apply psychological principles to self, groups and society
- The ways in which students can acquire a “capstone” appreciation of how the knowledge, skills and attitudes across several foundational sub-fields of the discipline and profession of psychology are integrated
- The ways in which students can acquire strong knowledge and practical skills in six key areas: behavioural assessment and development of a behavioural management program; test and questionnaire construction; interviewing; program evaluation; cultural competence; and leadership
- How all Schools/Departments of Psychology can provide psychology major students with opportunities to increase their employability as 3-year graduates
- How all Schools/Departments of Psychology can provide first-year psychology experiences to take into account the fact that some but not all students will have taken psychology in secondary school
- How all Schools/Departments of Psychology can provide Year 4 students with cost-effective opportunities both to (a) complete an original research investigation and (b) build upon and acquire foundational theoretical knowledge and especially practical skills in assessment, intervention and evaluation that would be relevant to a broad range of professional psychology settings.

### **C: PSYCHOLOGICALLY LITERATE EDUCATORS (SCIENTIST-EDUCATORS) AT THE PRE-TERTIARY AND TERTIARY LEVELS, TO MAXIMISE STUDENTS ACQUISITION OF PSYCHOLOGICAL LITERACY**

To increase the possibility of successful organisational change, key stakeholders need to acquire ownership of change strategies. In order to make progress toward the desired outcomes for 2020 commitment from pre-tertiary and tertiary educators is required. In particular, in order to create psychologically literate graduates, educators themselves need to be psychologically literate and “scientist-educators” (Bernstein, 2011; McGovern, 2011, 2012).

#### **Recommendation (C)**

- A national approach should be developed whereby existing committees, communities of practice, and other educational bodies and resources are leveraged to increase the orientation toward “scientist-educators”.

### **D: PSYCHOLOGICALLY LITERATE SPOKESPEOPLE FOR COMMUNICATING PSYCHOLOGICAL SCIENCE TO THE GENERAL PUBLIC**

The need for such spokespeople should be apparent in the continued misunderstanding of psychology by the general public, and when particular issues are raised in the media which cry out for psychological commentary. In the medium to long-term, the leadership capacity building in our psychology majors should start to fill this need, although specific attention should be paid to developing confidence in speaking out on relevant psychological issues. In addition there is also an urgent need that requires medium-term strategies.

#### **Recommendation (D)**

- A national approach should be developed whereby existing committees, communities of practice, and public interest and educational initiatives and resources are leveraged to increase the capacity for psychology spokespeople.

## E: A GENERAL PUBLIC WHO IS MORE PSYCHOLOGICALLY LITERATE (I.E., PSYCHOLOGICALLY LITERATE CITIZENS)

“How can it be to our detriment if everyone improves the quality of their folk psychology?” (Crowe, 2012)

Much can be achieved with more focus on (a) the explicit development of psychological literacy in the secondary and tertiary domains (Outcomes A-C), (b) increasing the capacity and willingness of our psychological scientists and professional psychologists to engage in public discourse in an ethical and altruistic manner (Outcome D), and (c) strategically increasing the engagement between psychological scientists and the public.

### Recommendations (E)

- The psychology community, including both individuals and organisations, must actively promote the value of the science and practice of psychology to the public, policy makers and business leaders, emphasising particularly (a) the scientific and rigorous approach it entails when applied across a broad range of everyday and global issues, and (b) the fact that psychology provides knowledge, skills and values that are relevant throughout life to address health and wellbeing issues related to self, family and friends, workplaces and organisations, the local community, nations and the world.
- There should be increased opportunities for undergraduate psychology students to contribute to increasing psychological literacy in the general public.
- In order to build the employability of graduates, and so increase the spread of psychological literacy in the general work force, there should be increased support for (a) local psychology student societies, (b) a national psychology student organisation, (c) local alumni associations, and (d) partnerships between academic departments, graduates and employers.
- A national roundtable of peak psychology bodies should determine the ten most pressing problems in Australian society that relate to human behaviour, and then lobby to make the resolution of these problems (a) foci of secondary and tertiary psychology education content, and (b) foci of psychological science funding.

In following these recommendations, the relevance of psychological science to the general public, including governments and university administrations, should naturally become apparent.

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