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## Highlights

# Pathways for Australian psychology graduates



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## Understanding employability, career paths and career decision-making

*Research into careers enabled by undergraduate psychology education is important for potential students, current students, graduates, universities and employers. This type of research – focusing on employability, careers and career pathways – should support the recent changes introduced by the Australian Government to funding for universities. These changes specifically focus on increasing the job-readiness of university graduates as reflected in the Australian government job-ready graduate package launched in June 2020, which included government reforms to the Higher Education sector and funding initiatives (Australian Government, 2020). The priorities within this scheme are to increase innovative approaches to work-integrated learning, STEM-skills graduates (psychology is a STEM discipline) and improve outcomes for employment, and supporting universities with developing collaborations with industry (Australian Government, 2020).*

Graduate skills and capabilities in the provision of psychological services are critical, particularly where workforce shortages have been identified, and where it has been identified that the skills obtained at university may not completely match the skills required in employment settings (Casner-Lotto & Barrington, 2006; Gardner & Liu, 1997).

## **A look at the numbers**

The number of undergraduate students enrolled in an undergraduate psychology major vastly exceeds the number of students able to enrol in postgraduate psychology training programs. The Australian Psychology Accreditation Council (APAC) have publicly listed 317 undergraduate courses accredited compared to 131 postgraduate accredited degree programs (APAC, 2021). In Australia, the 2019 Graduate Outcomes Survey (GOS) indicated that 9424 students graduated with a psychology undergraduate degree (which is 3.1% of the total of 299,343 graduates). Psychology was one of the study areas with the lowest rate of full-time employment in 2019 (63.4%) but also had a high proportion of undergraduates continuing into full-time study in 2019 (35%). Given that the current minimum requirements for provisional psychology registrations are a fourth year, it seems that these students were mainly enrolled in the Honours-equivalent year to then potentially undertake a postgraduate psychology degree or commence a supervised practice registration pathway.

The last time data were provided on progression to postgraduate studies was presented by Crowe et al. (2012) who indicated that around 8.4% of three-year UG psychology students eventually progressed to postgraduate studies in 2010. At the recent AusPLAT Conference (September, 2021), [Renata Meuter, former Chair of the Heads of Psychology Departments and Schools in Australia](#) (HODSPA Inc) reported the

percentage for 2019 UG psychology graduates progressing to Honours programs was much higher (approx 62%), and the conversion rate from Honours to PG psychology professional training is likely to be 50%.

Nevertheless, that still leaves a large percentage of UG psychology major graduates choosing alternative career pathways to a professional psychology degree. At this point in time, there is no national dataset on how many UG psychology major graduates go on to further study in different discipline areas such as education, business, health or HR, utilising their psychological science competencies within these alternative professions.

## **What can you do with a psychology degree?**

A recent change to the psychologist registration pathway in Australia will also limit the number of graduates who are able to begin their training as a psychologist immediately after the Honours-equivalent year, with the 4+2 internship program to be retired from 30 June 2022 (Psychology Board of Australia, n.d.). The only option after this date to progress towards registration will be completion of either a fifth or combined fifth and sixth year of postgraduate study in psychology.

There is a widespread perception that an undergraduate psychology major offers a limited set of career options, with the key focus being on becoming a practising psychologist, which can only occur when a student completes further postgraduate training. Given that a significant proportion of students do not continue with further study in psychology following the first three years of study, questions arise as to what transferable skills are learnt during these first three years, and which skills can be used in alternative industries (APAC, 2020).

Australian research suggests that psychology graduates spend more than two years in hospitality before formally entering the psychology profession (Carroll, 2013; Graduate Careers Australia, 2016). This would not be regarded as a suitable outcome of their UG studies in the current political climate. Given the importance of producing graduates who are job-ready and the emphasis on psychological literacy within psychology programs, three-year psychology graduates are uniquely placed in the job market. Unfortunately, educators, graduates and potential employers often do not appreciate the value that a science-focused undergraduate psychology education (with a high level of psychological literacy) can offer.

For students (both potential and current) the question is often phrased as “What can you do with an undergraduate psychology major (or degree)?” Landrum (2018) responded that this question can be complicated to unpack but doing so can be

incredibly helpful. As a result, we feel this article will assist undergraduate students in particular by unpacking this question within the current Australian context.

## **Psychological literacy: the new wine?**

Many authors (e.g. Hulme & Cranney, 2020; Machin & Gasson, 2022b) outlined the importance of psychological literacy in the psychology training pathways. The purpose of an accredited undergraduate degree in Australia is to provide students with “...broad and coherent knowledge and skills in the scientific discipline of psychology”. (Australian Psychology Accreditation Council [APAC], 2019, p. 10). This means that students learn about different fields of psychology both from a theoretical and an empirical (evidence-based) perspective. Undergraduate students develop cultural responsiveness, critical thinking skills and an understanding of values and ethics (personal, research and professional). Alongside these, students develop communication and research skills that, when combined with discipline knowledge, place them in good stead for employment and/or postgraduate training in a variety of professions. This blend of knowledge and skills is known as ‘psychological literacy’. Arguably, psychological literacy provides psychology students with a clearer understanding of the outcome of their degree and how it will impact their employability skills.

The debate about work readiness of psychology graduates is ongoing and some authors argue that there is very little research to support any assertions (Schweinsberg, et al., 2021). Schweinsberg et al. also argue for a clearer understanding of the “discipline specific attributes of psychology graduates” (p. 7). Consequently, a better way of capturing these discipline-specific attributes is needed, and this too falls into the domain of psychological literacy.

A recently published systematic review (Newell et al., 2019) found most researchers who have attempted to measure psychological literacy refer to two definitions: McGovern et al. (2010) and Cranney et al. (2012). Broadly defined, psychological literacy can be thought of as “...the general capacity to adaptively and intentionally apply psychology to meet personal, professional and societal needs”. (Cranney et al., 2012, p. iii). Several attempts have been made to assess psychological literacy with the most promising being the Test of Psychological Literacy (ToPL: Roberts & Gasson, 2018). The initial version has undergone a preliminary validation and it is now proposed to further develop the test using an innovative scoring methodology. The Test of Psychological Literacy – Revised (ToPL-R; Machin & Gasson, 2022a) will use a scoring process based on the Situation Judgement Test methodology (Robinson et al., 2020). Like a multiple-choice question, respondents are given five possible answers to each scenario, each of which has been rated by subject matter experts as to how ‘correct’ it is.



This project offers a way to capture the level of students' psychological literacy across their undergraduate training as well as link the content of the undergraduate program to employability skills. While this project is still underway, [a recent presentation at the Australian Psychology Learning and Teaching Conference \(AusPLAT 2021\)](#) by Machin and Gasson confirmed the TOPL-R is linked to employability skills self-efficacy in three out of the four domains and we will now explain what this means.

## Capturing self-reflection

In addition to their psychological literacy, students need to have confidence in their ability to undertake a range of important job-relevant tasks. The [Employability Skills Self-Efficacy Scale \(ESSES: Ciarocco & Strohmetz, 2018\)](#) captures four skill domains: communication, analytical inquiry, collaborations and professional development. Each of these domains has between two and four subdomains. The [ESSES](#) allows students to assess their levels of employable skills self-efficacy throughout their undergraduate degrees and recent updates to the website also enable tracking of students' responses.

We argue that employability of psychology graduates is a combination of several factors, which include their academic achievements, their sense of identity (more about this later), their ability to apply their psychological knowledge (psychological literacy) and their confidence in their key employability skills. The concept of psychological literacy is not necessarily a 'new wine', but it may be the key to a 'new cocktail'.

## Plotting career paths

Our understanding of the career paths taken by psychology graduates is limited by a lack of evidence about the relevance of different pathways.

There are some key questions that need to be answered:

What are the career outcomes for Australian undergraduate psychology students?

How are psychology graduates using their psychological literacy in their workplaces?

What do employers understand about the skills offered by psychology graduates?

How well prepared are psychology graduates for new and emerging careers?

One example of a new career is the growing field of cyberpsychology. The opportunities for focusing on issues concerning cybersecurity are growing very quickly. [Associate Professor Jacqui Taylor recently presented a stimulating paper at the AusPLAT 2021](#)

Conference explaining why psychology graduates are uniquely placed to work in the cybersecurity industry due to two factors: their understanding of human behaviour, and the skills which are needed to address cybersecurity issues.

Even career plans that are very sensible and carefully constructed may encounter a wide range of barriers, disruptions and unexpected detours regardless of the discipline or profession on which they are focused. In fact, the Chaos Theory of Careers (Bright & Pryor, 2005; Pryor & Bright, 2014) claims this is how the world really is, so why should careers be any different? Hoare and Luke (2022) capture some of the important aspects of chaos theory, including complexity, non-linearity, chance and change, and apply them to career development.

## Career decision-making

Another important issue relates to how undergraduate students make career-related decisions. Strapp et al. (2021) analysed the responses of 32 psychology alumni who had graduated in the previous five years and who were asked the question, “Tell me about your experience ending your time as an undergraduate and figuring out your next steps to when you were graduating.”

While different subgroups emphasised different factors in their decision-making, there were also common factors that all subgroups identified as important; for example, participation in a variety of experiences during the undergraduate degree, particularly research projects and work-related experiences, was common across all subgroups. The influence of one’s family situation was also a common factor, as well as exploring various options that were available, in both work and graduate program areas.

Anyone who studies psychology receives training in both skills and knowledge that are important to employers. Thus, there are many career options available to a student who has trained in psychology. Indeed, the challenge that many students in psychology face is not “What can I do?” but rather “How do I choose what to do?”

As a guide to making better choices, we adapted the *Canadian Handbook for Careers in Psychological Science* (see Norris, 2019). The Australian adaption (Machin, Machin, Jeffries & Hoare, 2022) will support undergraduate psychology students developing a broader view of the ways that psychological science can be applied. “Throughout this book you will learn more about career search strategies, career opportunities related to psychology, and just some of the many ways that psychological science has been applied to opportunities and challenges facing our society” (p. viii). The outcome of this

process of discovery and reflection should be reflected in students linking the content and learning outcomes from courses to the employable skills that are sought after in the Australian workplace.

## **Psychological scientist identity: An old wine**

A recent challenge to the health of psychological science involves the 'replication crisis'. Many people have referred to this 'crisis' in psychology as a sign that the way we do psychological science is flawed and in a sad state. Shrout and Rodgers (2018) concluded that psychological scientists must "engage in methodologically sound, ethically driven research in which probabilistic decisions are made explicitly and respected by an open research process" (p. 504). They provide a very useful table (see their Table 1) that outlines a series of recommendations for research practices designed to speed knowledge construction in psychology and to reduce concerns about replication success in both exploratory (E) and confirmatory (C) studies. Their prognosis is that "The future of psychological science is bright" (p. 506) which also allows the psychology profession to prosper. A similar situation also applies to the other methodologies that are increasingly applied in psychological research.

The psychology discipline has gained a reputation as a scientific discipline with a strong emphasis on statistics (recall the old 'stats and rats' meme), and this emphasis on science and the scientific method is still its greatest strength (even though a critically reflexive stance by psychological researchers represents a more highly developed professional position). When students identify as psychological scientists, they can think flexibly. If they are confident of their identity, they start asking questions like:

As a psychological scientist, how could I help children with learning difficulties who struggle to keep up in the classroom?

As a psychological scientist, how could I design tools to assist people to cope with major disruptions in their lives such as natural disasters?

As a psychological scientist, how might I promote safer workplaces and assist workers in adapting to technological change?

As a psychological scientist, how can I assist people to enhance wellbeing/build a more socially just society/contribute to addressing climate change?

So, we must also encourage students to be interested in the way that science is changing, and how the psychological scientist identity may be changing as a result. The open science movement is making a huge difference to all aspects of the world of psychological science. In fact, it is providing a healthy approach to the way we go about doing science. This will provide exciting opportunities for psychology graduates as we

explore ever more areas of potential application of our psychological knowledge. The cybersecurity example mentioned earlier is only one potential area for psychology graduates.

## The future for Australian graduates

Cranney et al. (in press) propose an international collaboration that would seek to gain consensus on the core capabilities that undergraduate psychology graduates possess, including discipline-specific knowledge and skills which, along with generic capabilities (communication, values and ethics, and critical and creative thinking), is applied in personal, professional and community settings. These capabilities are underpinned by a better understanding of and focus on the development of psychological literacy.

The future for psychology graduates is better than may have been generally perceived if our students are encouraged to focus on their psychological literacy, identify and track their employability skills, strengthen their identity as psychological scientists, and then get out and 'psychologise the hell' out of whatever area they chose to work in.

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