PLAT 23(2) 2024: Centering Psychological Literacy in Undergraduate Psychology Education Internationally

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We have no known conflicts of interest to disclose.

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Education Internationally

Psychological literacy is increasingly a model for undergraduate psychology education. Cranney and colleagues (2022a, p.3) define *psychological literacy* as the "intentional values-driven application of psychology to achieve personal, professional, and community goals." Psychology education, particularly with an emphasis on psychological literacy and the empowerment of students to collaboratively apply psychological science to solve societal issues, might be seen as the new 'liberal arts and sciences' program (McGovern et al., 2010) that future-proofs not only psychology graduate jobs, but our local, national, and global societies. Indeed, the pandemic has highlighted both the importance of connectedness and the existence of social inequities.

In 2016, a global collaboration resulted in the successful outcome of international consensus regarding graduate professional psychology competencies (International Association of Applied Psychology, 2016). There is currently a similar process regarding foundational psychology competences at the undergraduate level, the *International Collaboration on Undergraduate Psychology Outcomes* (ICUPO), a project in which all of the guest editors are involved (see osf.io/6y38x; 2024a). Readers of this special issue may be interested in Nolan and colleagues' (/2024b) recent definition of psychological literacy as "the intentional application of psychology knowledge, skills and values to achieve personal, work and community (local to global) goals; the integration and application of foundational psychology competences within an UG program should lead to psychologically literate graduates" (p. 19).

Psychological literacy has also been conceptualised as a pedagogical philosophy (Cranney & Morris, 2021; Nolan & Cranney, 2023), particularly in the undergraduate domain. An undergraduate educator who takes this teaching approach: (a) considers that psychological

literacy should be the primary outcome of undergraduate psychology education; (b) takes an evidence-based teaching approach; and (c) models psychological literacy in the classroom (Cranney et al., 2022b; Morris et al., 2021). The authors of the articles in this special issue clearly meet at least the first two criteria, and in some cases all three. Hulme and Winstone (2017, p.272) elaborate:

> ". . .we believe that a psychologically literate teacher is one who is well equipped to deliver innovative teaching that is creative and moves the discipline forwards, and can practice within the bounds of their competence within a given educational context. This may, of course, require professional development and scholarship on the part of the educator, to stretch the bounds of their competence, and this too, draws upon the psychological literacy skills of the teacher. Thus, psychological literacy might effectively act as a safety net to reassure the teacher during times of uncertainty. . . Perhaps the best strategy. . . to foster innovation, is to prioritize the development of psychological literacy and its delivery within our academic community".

The Current Issue

This special issue aims to showcase diverse ways in which psychological literacy is conceptualised and delivered internationally within undergraduate psychology education. It includes two reviews, three articles, and seven reports. Here we provide an overview of each (presented in alphabetical order in each section), and highlight the relevance of each paper to the development of psychological literacy in undergraduate contexts.

Reviews

The first review, contributed by **Cary and colleagues (USA)**, focuses on developing psychological literacy in the professional or work domain. The authors note that, especially in nations such as the USA where graduates of undergraduate psychology programs do not automatically qualify to register as psychological practitioners, students can struggle to

articulate the skills they bring to employment, or even to identify possible employment options. This can lead to student dissatisfaction with their psychology degrees, and can leave faculty at a loss to know how to support them, because they are not well equipped to offer careers advice. Cary and colleagues have proposed addressing this through a focus on 'psychological workforce literacy' as a central element that runs through the undergraduate psychology curriculum. The authors suggest some mechanisms for embedding this throughout the undergraduate programme, including offering some reflections on a pilot in their own context. Overall, this paper provides a useful resource for those educators interested in considering integrating the development of psychological workforce literacy into their undergraduate curriculum.

In the second review, **Ruiz and others (USA)** promote service learning as a high-impact, evidence-based practice that has the potential to transform psychology teaching and curricula and foster campus-community partnerships. They argue that service learning is tied to academic, civic, and personal aspects of students' lives at a "glocal" level – that is, global-local. The authors explicitly tie their work to the United Nations' Sustainable Development Goals (SDGs) and urge faculty to build community engagement into courses/units across the curriculum. They highlight climate change as a major "glocal" challenge for which many aspects are addressed by psychological science, and outline how service learning and ensuing reflection about such experiences can "foster climate-related knowledge, skills, and attitudes/values." Beyond reviewing the literature, the authors point to several sets of learning outcomes (from the American Psychological Association, the British Psychological Society, and the ICUPO that we mentioned previously; see Table 2), and provide specific, evidence-based examples of climate-related service-learning activities across the curriculum (see Table 3), as well as specific assessment suggestions (see Table 4), making this a particularly notable contribution to the literature on service-learning as related to psychological literacy.

Articles

An article by **Cross and colleagues (USA)** explores the use of practice examples and peer collaboration to improve data literacy, a key aspect of foundational research and communication skills. The authors note that psychology undergraduates are expected to learn how to interpret statistical data and its graphical representation to a level that fits their chosen career in psychology. Such data fluency skills are helpful for psychology graduates, all of whom will encounter media, reports of research, and other instances which present statistics and graphics that are relevant to their lives. Cross and colleagues report a valuable approach to improving statistical learning at the undergraduate level, inspired by the idea of scaffolding. The authors conducted two experiments where they improved online modules to teach 2x2 factorial designs, focusing on the understanding and interpretation of main effects and interactions. Their study showed that investing in tools, techniques, and group interaction to teach statistics is always worthwhile, offering detailed examples and fruitful insights on enhancing future endeavours in providing a better university education.

Next, **Horn and colleagues (Germany)** investigated the impact of a counselling practice intervention with secondary-school pupils regarding study skills, delivered by pre-service teacher students (in their first two years of training) as an assessable activity in a popular elective seminar unit. The rationale for this teaching strategy was to provide the students with an opportunity to apply psychological knowledge in a real-world setting (i.e., theory-to-practice translation), and to critically reflect on these experiences – that is, to develop those specific psychological literacy skills. The authors acknowledge the potential future impact of psychologically literate teachers supporting pupil academic success. The researchers also reported the benefits (and some limitations) in terms of the impact of this specific teaching strategy on the student teachers' psychological literacy. If this teaching strategy were adapted for advanced psychology undergraduate units, it would contribute to the

development of capacities to apply psychology in work and community contexts, and to science communication, collaboration, problem-solving, and importantly, professional reflexivity and boundary skills. Overall, this paper provides a very useful resource for psychology teacher-educators, and a high-quality example for all educators interested in the scholarship of teaching and learning.

Pearson and colleagues (Australia) posited that developing and exploring human relationships with the natural world is an important aspect of teaching psychological literacy. The authors designed and delivered a novel university-wide elective course/unit, 'Connecting and Working with Nature,' in which first-year students from multiple disciplines learned about theories of nature connection and were able to reflect on and implement interventions. The course/unit included opportunities to engage with nature, while teaching a range of theories and perspectives, including First Nations perspectives, about the benefits of nature for health and wellbeing. Assessments required students to plan an activity that introduced nature-connectedness in a professional context, while taking into account ethical and cultural considerations. The course's impact on students' psychological literacy was evaluated via surveys, Padlet responses, assessed coursework, and focus groups. Students reported spending more time in nature, providing new insights into benefits for their physical, cognitive, and social/emotional wellbeing (psychological literacy in the personal domain). Planning an activity for their future professional lives also enabled students to develop psychological literacy in the professional domain. Finally, in the community domain, students reported that the course/unit enabled them to support friends, family and wider community members to engage with nature and take increased responsibility for preserving and protecting natural habitat. This case study addressed a wide range of psychological knowledge, skills, values and attitudes. The authors recommend teaching nature connectedness as a way to develop

students' psychological literacy across a range of disciplines and even in the early stages of their undergraduate studies.

Reports

This special issue also includes seven reports. First, **Einav and colleagues (UK)** present their applied scenario-based assessments for their second-year undergraduate psychology social and developmental psychology module/unit. The focus of the assessments is (at minimum) on the development of the psychological literacy skills of (a) knowledge application to 'real-life' issues, and (b) communication to diverse non-psychology audiences – all in 'simulation'; that is, these assessments do not require interaction with 'real-life' groups, which makes this a feasible form of assessment, but not without challenges for both educators and students. Students appreciated the value of these authentic assessments, and indicated that their application and communication skills had improved. This core module would contribute to the development of students' capacity to apply psychology knowledge, skills, values and attitudes to work-related and community contexts, and to their science communication and problem-solving skills. Overall this report provides a useful resource for those educators interested in moving beyond essays and lab reports toward more authentic assessments that would serve to increase students' awareness of the skills they have acquired in their undergraduate psychology education, and thus impact positively on employability.

In the UK, qualitative research methods are a core component of undergraduate psychology programs that must be taught to attain BPS accreditation (a requirement for students to progress into postgraduate professional psychology training). In their report, **Fernandes-Jesus and colleagues (UK)** describe an innovative course/unit developed for psychology and other undergraduate students across a small modern UK university. The focus of the course/unit is around social and ecological justice, and in this case, specifically related to '*Feeding the Campus*'. The current cost of living crisis in the UK is hitting students hard;

hence, food poverty and sustainability are particularly relevant, especially in a university whose mission is to widen participation in higher education. Second-year psychology undergraduates were taught the epistemological and methodological underpinnings of qualitative research design, conduct, and analysis. Students then conducted a small-scale project investigating a research question and writing a qualitative lab report on a food-related theme. The authors report that students: (a) valued the authentic nature of the assessment; (b) gained an increased appreciation of the societal relevance of psychology as a discipline; and (c) were encouraged to interact with students from other disciplines. Integrating such opportunities into the curriculum may enhance students' awareness of the value of psychology relative to other disciplines, and increase their research and collaborative skills. Opening up additional opportunities for students to disseminate their work to facilitate change on campus, as requested by students, would also facilitate further development of students' communication skills, and skills in intervention design and problem solving.

Next, **Harris and colleagues (UK)** describe two core and two elective undergraduate psychology units/modules that 'centre' psychological literacy in the subject content, pedagogical design, and assessments of these modules. Student evaluations of these components range from moderately to highly positive. The staff involved in module planning and organisation list key successes and challenges for each module (e.g., with regard to authentic assessments). Finally, the authors provide a list of challenges and recommendations for undertaking this kind of curricular innovation. The two compulsory modules are at first- and second-year levels, and would contribute to the development of research, science communication, collaboration and professional work-related skills. The elective third-year modules would provide opportunities for integration and application of psychological knowledge, skills, value and attitudes, thus contributing to students' development as psychologically literate graduates. Overall, this paper provides a useful resource for those

educators interested in integrating the development of psychological literacy into their undergraduate curriculum.

Machin and others (Australia) build upon their innovative work on the measurement of psychological literacy (Test of Psychological Literacy, ToPL), considering the challenge of generative AI to such measurement. Their original work focused on developing applied scenarios for subfields of psychology (in this paper, research methods), in the initial studies asking students to give free responses (manually assessed) to prompts relating to their psychological-science-based explanation of that scenario. In recent studies the authors decided to ask students to rate 5 options on "the degree to which these responses reflect their own understanding and application of psychological science." What is particularly innovative in this more recent approach is the assessment of student rankings against subject matter experts' (SMEs') rankings of those options. In this paper, Machin and colleagues treat ChatGPT 3.5 and 4 as students, analysing their free responses (Study 1) and comparing against SME ratings (Study 2). Essentially, these special students perform well, apparently displaying a high level of psychological literacy. The broad implications are discussed, including the use of this AI approach as a personalised training tutor for students, helping them to transfer theory to (simulated) practice contexts. Another implication is that in any summative assessment using ToPL, a controlled testing environment with no access to the Internet would be required. Overall this paper indicates a psychologically literate approach on the part of the authors, who are interested in developing effective teaching and assessment approaches to aspects of psychological literacy that should be developed during an undergraduate psychology program.

A report titled, in part, *Not Exactly 'Dragon's Den*,' by **Rosenkranz and colleagues (UK)**, references the enterprise challenge televised in many countries (and called *Shark Tank* in the USA and Australia). Similar to competitors on these enterprise-challenge shows, teams of students develop a creative pitch to solve a real-life challenge being faced by a nonprofit

organization in their community, and pitches are judged by a panel of experts. The authors describe their process of designing the challenges in conjunction with external organizations, discuss two case studies, and provide evaluation data from six previous challenges. Evaluation data demonstrate that students' perceived psychological literacy increased following their participation in this activity, which is not surprising, given that the teaching and assessment activities were designed to develop the capacity to apply psychological knowledge, skills, values and attitudes, particularly in terms of skills in cultural responsiveness, critical thinking and problem solving, communication, and personal and professional development. Because Rosenkranz and colleagues provide a detailed overview of several variants of enterprise challenges, this is a valuable blueprint for educators who wish to implement and assess similar teaching strategies.

Taylor and Whitty (UK) investigate undergraduate psychology students' perceptions regarding the relevance of their psychology education to subsequent potential careers in cybersecurity. This is particularly important in nations where the minority of graduates from a psychology major become professional psychologists or psychological scientists, such that the remaining students, graduates, and indeed governments (e.g., Halonen, 2011) ask: "what use is undergraduate psychology education?". The authors target an alternative career destination which is becoming increasingly important within our global society, and in which the relevance of human behaviour is clear. Among other findings, students were able to identify the majority of McGovern and colleagues' (2010) nine aspects of psychological literacy as being more relevant to psychology than to cybersecurity careers; nevertheless, most aspects were still rated as relevant to cybersecurity careers. The authors provide suggestions for how to increase psychology students' awareness of the relevance of their psychological literacies to cybersecurity careers, and how to 'bridge the gap' in terms of better preparing them for such careers. Educators will see relevance to the development of students' capacity to apply

psychological skills to work contexts and in particular, career development learning. Overall this paper provides a useful resource for those psychology education leaders interested in increasing graduates' psychological literacy and, in particular, their preparedness for careers beyond the psychology-named professions.

Tick and colleagues (Netherlands) describe five first- and second-year course/unit initiatives within an undergraduate program that, commensurate with Nolan and colleagues' (2024b) definition of psychological literacy, attempted to support students to *integrate and apply* their psychological knowledge from various sub-disciplines in problem-solving regarding (simulated) 'real-life' psychological challenges. The authors gathered both student and educator data regarding their experiences with these units, and identified and discussed perceived strengths and weaknesses with the innovations, with suggestions for how to improve future unit implementation. It could be argued that these units as a whole contribute to the ongoing development of students' capacity to apply psychology knowledge, skills, values and attitudes to work and community contexts, as well as problem-solving and science communication skills. Overall, this paper provides a valuable resource for those educators interested in integrating the development of psychological literacy into their undergraduate curriculum.

Concluding Comments

The authors in this special issue work in five different nations (Australia, Germany, Netherlands, UK, and USA) with an additional nation (Brazil) represented by one of the guest editors; these contributors also speak multiple languages. This representation of mostly Western countries is similar to the representation in the multi-national analysis of psychological literacy conducted by Cranney and colleagues (2022b). Based on their analysis, these authors concluded that there is "moderate internationality and some collaborative

internationality in the [psychological literacy] literature, but there is room for improvement"

(p. 13).

The contributions to this special issue reflect rich and varied approaches to embedding

psychological literacy in psychology higher education. It is our hope that they will inspire

psychology educators to consider how psychological literacy is incorporated in their

courses/units and program curricula, both in terms of teaching strategies and assessments. We

are optimistic that, going forward, psychological literacy will be considered by a more

geographically diverse cohort of educators.

The current work on psychological literacy, including the ICUPO work referenced

earlier, is occurring at the same time that the United Nations 2030 Agenda for Sustainable

Development (https://sdgs.un.org/2030agenda) highlights the importance of applying the

knowledge and skills that a psychology education imparts (see also Nolan et al., 2024a). As

such, we see the importance of a larger dialog, one that includes the thoughtful and often-

groundbreaking articles in this special issue, on how psychological literacy and related

concepts could drive learning outcomes internationally.

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