

Rethinking psychological literacy for introductory courses in pre-tertiary and higher psychology education

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Psychological literacy has become a key concept for the teaching and learning of psychology in higher education and is a laudable goal of pre-tertiary psychology education. The widely used definition of McGovern and his colleagues enables a subject-specific contribution to liberal education. Nevertheless, this definition also includes general educational goals and is not specific enough for introductory courses on psychology, which provide an overview of the field and familiarise students with various ways of psychological thinking. This practice exchange paper shows how Sternberg's triarchic model of psychology learning and teaching could be used to elaborate a more subject-specific notion of psychological literacy which would interlink psychological knowledge, psychological thinking skills and reflective psychological attitudes that are necessary to critically reflect common-sense psychology. This more focused and comprehensive understanding of psychological literacy challenges the unquestioned topical approach to the teaching of introductory psychology and requires a rethinking of the basic arrangement of course materials.

Keywords: *Psychology Education; Higher Education; Pre-tertiary Education; Psychological Literacy; Introductory Psychology; Sixth Form College.*

BONEAU (1990) originally conceptualised psychological literacy by empirically identifying the hundred most valued psychological key concepts in ten subfields of psychology. Since then, psychology faculties have been teaching a wide range of psychology courses to an increasing number of students enrolled in degree and non-degree studies. This increasing number of non-psychologists trained by research-oriented psychology faculties has inspired reform endeavours and an on-going debate about the aim of undergraduate education in psychology. In this context, McGovern and his colleagues (2010) introduced 'psychological literacy' as a key concept to respond to the new challenges of psychology education and re-examined the previous identification of psychological literacy with content knowledge.

According to McGovern and his colleagues, having a basic knowledge of psychology became just one important element of their definition. Their notion also included several skills like taking a creative and sceptical approach to problem

solving, applying psychological principles to personal, professional, and societal concerns, using information technologies, communicating effectively, and becoming aware of one's own and others' mental processes. In addition, this notion also refers to the epistemic and social attitudes of valuing scientific thinking and analytic skills for agency and respecting cultural diversity. Their definition also includes the foundational capacity of humans of 'acting ethically' which relates attitudes and skills in a practical way and embed it to liberal education (McGovern et al., 2010, p.11).

McGovern and his colleagues' definition is also a good starting point to elaborate an understanding of 'psychological literacy' in pre-tertiary education, as it interrelates knowledge, skills and attitudes as teaching objectives and refers it to liberal education (Geiss, 2016; Jarvis, 2011).

Nevertheless, this definition of psychological literacy is not subject-specific enough to guide the teaching of introductory psychology, as the majority of elements refer

to generic skills which could also be developed in other disciplines such as history or philosophy. For this reason, we cannot simply clarify their concept in terms of a meta-literacy that would include subject knowledge and subject-specific and generic skills, as Murdoch (2016) has recently proposed for psychology degree study. We rather have to find an understanding of psychological literacy focused on core elements of the field that would be sensitive to the promotion of the corresponding generic skills. If students are expected to become 'psychologically literate citizens' (Cranney & Dunn, 2011), it might be useful to review different models of psychology teaching in order to discuss the implications of common sense psychology for attaining psychological literacy.

Models of psychology teaching

It is generally agreed that psychological literacy is based on a well-defined knowledge of psychology, which has always been a main concern in psychology classes, independent of the three prevailing models of teaching described by Sternberg (1999).

Memory-based models for teaching psychology focus on the memorisation of knowledge. The role of the teacher is to highlight the importance of concepts and facts and to expand on the information found in textbooks. However, scholars and teachers agree that a teaching approach which focuses only on content knowledge is not effective, as it leads to superficial learning processes and 'inert knowledge' that students cannot use in their personal lives (Jarvis, 2011; Sternberg, 2011).

For these reasons a critical-thinking-based model of teaching has become popular at psychology faculties and in pre-tertiary psychology classes. The teaching of critical thinking aims to make students analytical thinkers about the domain of psychology. They continue to learn and assimilate psychological knowledge, yet are expected to understand the fallacies and biases of scientific thinking (e.g. confirmation bias, false conclusions, hindsight bias, Riggio &

Halpern, 2006; Sternberg, 1999). As a result, a large variety of literature has emerged on the application of critical thinking skills in psychology courses (e.g. Dunn et al., 2008; Halpern, 2003).

Sternberg proposes a third approach to psychology teaching, the triarchic model, which is based on his triarchic theory of intelligence (Sternberg, 1984) and which maximises learning outcomes by employing three modes of thinking:

- a. Analytic thinking can be identified with critical thinking (with cues like 'Evaluate...', 'Critique...', 'Assess...', 'Judge...', etc.)
- b. Creative thinking is linked to synthetic thinking (with cues like 'Invent...', 'Design...', 'Suppose...', etc.)
- c. Practical thinking refers to the application of psychological knowledge and skills to everyday world experiences and problem solving (cues like 'Use...', 'Give an example...', 'Put into practice...', etc.)

Sternberg holds the triarchic model to be superior to the memory and critical-thinking based models, as instructed students score better in analytic, creative, and practical performance assessments (Sternberg, 1999).

It is important to note that both McGovern's and his colleagues' notion of psychological literacy and Sternberg's triarchic model extend teaching goals from critical thinking skills about psychology to psychological thinking about real world problems. Both contributions make a case for the application of psychological principles to personal, professional and public concerns. This also involves some reflected form of common-sense psychology, if psychological principles are applied in the present and prospective living environment of students. Both issues are to be addressed next.

Basic psychological thinking and action skills

In the literature, the definition for psychological thinking skills and psychological action skills are unclear. Some definitions are too closely linked to a specific professional

field like health and clinical psychology. Larson's 'psychological coping and interpersonal helping skill' (1984, p.4), for example, describe professional action skills of therapists; other concepts are too comprehensive and intermingle generic and subject-specific modes of thinking. For example, Halonen's 'demystifying' framework for critical thinking skills in psychology includes subject-specific skills like 'describing and interpreting behaviour', but also more general academic skills like 'applying and evaluating theories' or 'generating hypotheses' (Halonen, 1995, p.80; cf. Lawrence et al., 2008). Similarly, Halpern's conceptualisation of critical thinking in psychology also refers to more general skills and attitudes that are also relevant for scientific thinking and evidence-based rational problem solving in other disciplines (Halpern, 2003; Halpern & Butler, 2011).

In any case, there seem to be some agreement in the field not to equate psychological and scientific thinking. This is due to the fact that not all psychologists accept the empirical scientific epistemological approach (Aronowitz & Ausch, 2015; Fox et al., 2009), as well as to the belief that the scientific method is not suitable for all types of professional problem solving. According to McGhee 'sometimes psychologists do need to think like scientists but we also on occasion need to think like philosophers, anthropologists, historians or therapists' (McGhee, 2001, p.4). For example, the justification of the general teaching goals of psychology education affords a philosophical argument, whereas some professional psychologists tend to use theoretical models like historians as heuristic tools to understand single cases and need communication skills of therapists.

Therefore, it would seem reasonable for instructors to acquaint psychology majors at the beginning of their studies and/or vocational education with the main research paradigm of their psychology faculty but also with different theoretical perspectives and ways of 'doing' psychology. In this way they might also get a more coherent framework

for the discipline as a whole and the epistemic skills needed to assess research results of different schools of thought. Such theoretical and methodological pluralism could also serve the needs of future psychologists working in different professional fields.

Basis psychological skills of laypersons and psychologists

Basic psychological thinking and action skills are defined not by an established method of enquiry and epistemology but by modes of thinking about the subject: understanding human behaviour and mental process.

It is important to note that laypersons and psychologists share a common concern, when they try to describe, understand, explain, predict, evaluate and influence human behaviour and mental processes, although they do it in different contexts. Whereas laypersons use common sense to orientate themselves in everyday life and make judgments based on experience, psychologists use basic psychological thinking and action skills to solve research problems or to practise. In both contexts, they implement these skills more accurately, systematically and in a controlled way due to their professional training.

In order to develop practical thinking skills proposed by Sternberg, McGovern and colleagues, psychology education has to deal not only with critical thinking about scientific research and theory but also with mental phenomena in their natural, non-laboratory environment. This lack of attention to phenomenal matters is – according to Bischof – a shortcoming of current mainstream psychology biased by counterintuitive, experimental, and constructive orientations (Bischof, 2014).

Whereas some of these modes of thinking are typical for the scientific approach (such as describing and explaining regularities and making predictions) and others for approaches in the humanities (describing, understanding and explaining single cases), psychologists disagree about whether human behaviour can be scientifically assessed by value judgments due

to differing and often non-explicit epistemologies of psychological approaches (McGhee, 2001). Nevertheless, the linking of these modes of thinking to behaviour and mental process makes them genuinely psychological and always cross-linked with value judgments in real world agencies.

Critically reflecting common sense psychology

Sternberg's model of teaching and the acknowledged notion of psychological literacy makes common sense psychology highly relevant for teaching. In many introductory textbooks, the implications of common sense psychology for applying psychological principles are not clarified or discussed, however. The authors rather describe its limits by showing its contradictory implicit maxims (e.g. 'opposites attract' and 'birds of a feather flock together') and unquestioned flaws (e.g. hindsight bias). In this way, the shortcomings of common-sense psychology are used to justify the necessity of the scientific method and to show the need for studying psychological knowledge and critical thinking about psychology (Blair-Broeker & Ernst, 2008; Crane & Hannibal, 2012; Myers, 2008).

Nevertheless, Heider already showed in his classical study *The Psychology of Interpersonal Relation* (Heider, 1958) that 'ordinary' people, just as professional psychologists, attribute observable behaviour to unobservable causes such as intentions or desires, for example. Heider claimed that 'the ordinary person has a great and profound understanding of himself and other people' (1958, p.2) and that this understanding 'is expressed in our everyday language and experience' (1958, p.4). Kelley has confirmed this view and presented evidence that common sense psychology is valid 'when it refers to events that exist at a middle level (rather than at a macro- or micro-level), that are familiar (rather than alien), and of which people are observers (rather than involved participants)' (Kelley, 1992, p.6). Often highly visible and easily detectable

attributes, mono-causal explanations, the overestimate of single cases or the confusion of causal relations with correlations distort common-sense judgments (Nolting, 2012).

Reflective psychological attitudes

The application of psychological principles to real world problems requires the clarification of nonreflective common-sense intuitions. Thus, practical psychological thinking can only be developed when unquestioned common-sense beliefs are critically assessed, transformed, adapted and/or refined. To this end, teachers must not only impart psychological knowledge and critical thinking skills but also encourage students to acquire a reflective and critical psychological attitude with regard to their own common-sense intuitions. This critical psychological attitude has motivational, volitional and social aspects.

1. Motivational attitudes

People start to think psychologically when expectations do not match observed behaviour (e.g. a student does not behave properly in class). This motivational aspect of psychological thinking is based on an experience of discrepancy in which prevailing cognitive schemata cannot be adapted to new experiences and have to be accommodated – a process described by Piaget in his classical theory of infantile cognitive development (Piaget & Inhelder, 1969). This cognitive disequilibrium can be linked to an experience of change, to an experience of otherness or to the lack of suitable interference by involved persons (cf. Nolting & Paulus, 2018). This motivational attitude also involves a disposition for wonder and sceptical reflection on experience, a propensity to disregard plausible common-sense explanations, and a readiness to search for more truthful explanations of the experienced situation and to acquire psychological knowledge for practical problem solving (Geiss, 2016).

2. Volitional attitudes

Reflected practical psychological thinking will be only efficient, however, if volitional

attitudes are also acquired: on the one hand, our students need to gain a critical attitude toward their common-sense psychology; on the other, they need to balance it with the critical acquisition of psychological knowledge and principles.

3. Social attitudes

Psychological knowledge and skills can be used for purely selfish interests. For this reason, we must educate our students to use their psychological skills for their own well-being and for the wellbeing of others. Although only content knowledge and some taught skills can be examined and measured as immediate learning outcomes, we must nevertheless help our students to develop these critical psychological attitudes without indoctrinating them. Thus, McGovern and his colleagues' concern about dispositions for acting ethically is relevant for both high school and university students.

In this way, teaching practical psychological thinking increases the psychological literacy of students and makes a subject-specific contribution to the development of students' personalities. It enables them to become mature citizens and to take responsibility in their private, professional, and public life.

Revised notion of psychological literacy

Our arguments lead to a more straightforward subject-specific notion of psychological literacy, which can be explicated as a set of dispositions for:

- i. acquiring psychological knowledge,
- ii. implementing analytic and synthetic psychological thinking skills which are
- iii. applied to current and future real-world problems of students,
- iv. and to the corresponding motivational, volitional and social attitudes. These attitudes include the marvelling about psychological problems, the search for truth, the sceptical (critical) approach to scientific and common-sense psychology and the use of knowledge for the well-being of one's own self and others.

These attitudes do not only enable us to critically evaluate our own common-sense intuitions but also help to assess the relevance of academic psychological knowledge for real-world problems.

Our notion of psychological literacy also serves as a normative reference point for liberal psychology education, helping to identify and select subject-specific content, skills and attitudes that could be taught in the classroom to specific groups of students. In this way, the topical approach in introductory psychology education, which makes students familiar with various research topics of different branches or domains of psychology and gives general overviews of these domains, is not very suitable to promote this more comprehensive understanding of psychological literacy.

Psychological literacy as a touchstone of course design

Psychological literacy is a worthy goal of psychology education. In addition to the concept of critical thinking, which includes many attributes of psychological literacy, it also refers to the practical application of psychological principles to real life problems of mature citizens. The focus on ethical concerns and the life-world context of students is an important benchmark for balancing the professional approach to teaching introductory psychology in higher education, which is often promoted by psychology faculties wanting students to know 'everything!' (Tavris & Wades, 2001, p.xv) and making pre-tertiary psychology experiences correspond better to the demands of tertiary study (BPS, 2013).

The overall aim of psychological literacy also supports the general goal of teaching psychology and psychological thinking in high schools to prepare students for academic careers. Psychological themes can only be taught on a scientific base and with an academic foundation in the classroom. However, it implies the need to assess topics with regard to their suitability to promote psychologically literate citizens. This is also

true for introductory psychology classes in higher education, which aim at providing students with psychological knowledge, critical thinking skills and opportunities to apply psychological principles to real world problems. Thus, psychological literacy is not merely about adding or improving something in prevailing introductory courses but rather about scrutinising content with regard to its potential to promote the complex goals of psychological literacy and to enhance the liberal education of students. For this reason, teaching content of introductory psychology should not uncritically mirror the disciplinary structure and its topical approach to subjects, but rather be selected after an intense and careful scrutiny:

- How relevant and representative is a topic (e.g. memory versus dissociative identity order) or working method (e.g. experiment versus sociogram) for the field of psychology, for its basic problems and principle (e.g. reinforcement or insight), and for its different theoretical approaches (e.g. cognitive or behaviourist)?
- How relevant is a topic (e.g. migration or brain functions) for the current and prospective living environment of the learning group (ethnic minority or educated middle class)?
- Is this topic suitable for promoting psychological literacy as a comprehensive overall goal (e.g. stress, memory) or does it rather promote critical thinking skills about a specific research field of psychology (e.g. test construction, inferential statistics)?

If we rethink psychological literacy in this way, three recommendations for the teaching practice can be deduced:

1. Shared responsibilities in psychology education

Psychology education could gain from being committed to a shared responsibility for psychology as a field and for the liberal education of mature citizens. In this way it could create a reflective space to mediate the

justified demands for the ‘ability to study’ or ‘employability’, on the one hand, and the interests of young people in ‘building their own minds’ (Nussbaum, 1998) and becoming responsible citizens, on the other. This is the case, when curricula give space to elective courses with a large choice of meaningful topics, which addresses current and future real world problems of students like gender, migration, multi-culturalism or environment.

2. Perspective based approach of psychology teaching

Introductory text books better promote psychological literacy, if they make the question ‘What should an educated citizen know about psychology?’ to a normative benchmark for arranging course materials (Tavris & Wade, 2001). Instead of introducing into research domains, textbook could benefit from an arrangement of materials which familiarise with different perspectives of psychological thinking (behaviourist, psychoanalytic, humanistic, evolutionary, cognitive, biological) and their practical usage, as Medcof, Roth and colleagues already proposed at Ryerson University (Toronto) in 1979 (Medcof & Roth; cf. Fernald, 2008; Glassman & Hadad, 2009; Jarvis, 2000; Sämmer, 1999). Such an approach would select typical research topics of these perspectives which are meaningful to the living environment of students and also provide a coherent picture of psychology as a field. Thus, instructors choose, for example, models of memory to introduce to the cognitive or conditioning to explain the behaviourist perspective.

3. Integrative approach to psychology teaching

Psychological literacy could also well be nurtured, if the solving of psychological problems and the acquiring of psychological knowledge is referred to an integrative model of the mental system, which relates observable behaviour to inner experience (Nolting & Paulus 1985; 2018). In this model, current mental process is explained

through situational and interpersonal factors at the one side, and personal and developmental factors at the other side. This model is splitting current mental process into a receptive strand (perception => conceiving thinking => emotion) and a processing strand (motivation => organising thinking => behaviour). It helps to interlink mental aspects usually studied separately in different specialised fields of psychology, to improve transferable thinking skills and to convey a coherent terminology. Thus, this model serves also as heuristic tool to critically reflect common-sense intuitions which adhere to first plausible explanations, when, for example, a student's improper behaviour in the classroom is explained with failed parenting.

Rethinking the course content of introductory psychology is especially important at British sixth form colleges, which came under pressure to abandon the perspective-based approach established since 2000 to make

the pre-tertiary experience more coherent to the professional education of psychologists. Our more comprehensive understanding of psychological literacy provides a good base to argue for maintaining this approach in pre-tertiary education.

Being in its 15th edition in Germany, Noltning's and Paulus' introduction to psychology (2018) might be also useful in British psychology education, if it became available in English as an alternative approach to the learning of psychology.

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