Using Psychology in the Classroom

Stephen James Minton

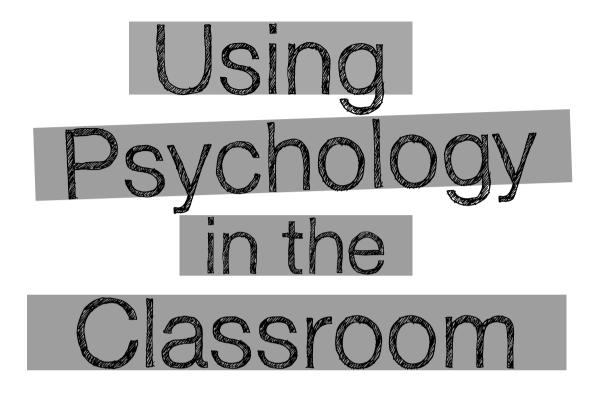# Using Psychology in the Classroom
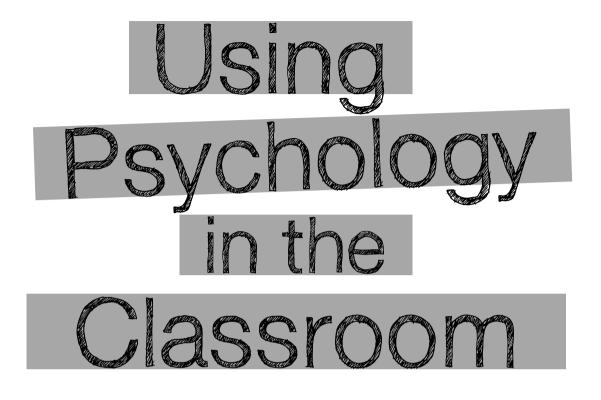
Education at SAGE

SAGE is a leading international publisher of journals, books, and electronic media for academic, educational, and professional markets.

Our education publishing includes:

- accessible and comprehensive texts for aspiring education professionals and practitioners looking to further their careers through continuing professional development

- inspirational advice and guidance for the classroom

- authoritative state of the art reference from the leading authors in the field

Find out more at: **www.sagepub.co.uk/education**

⑤SAGE

Using Psychology in the Classroom

Stephen James Minton

Contents

List of Figures

About the Author

Dr Stephen James Minton is a chartered psychologist and a full-time lecturer in the psychology of education at the School of Education, Trinity College Dublin, and a graduate of the University of Glasgow and Trinity College Dublin. He is the co-author of *Dealing with Bullying in Schools: A Training Manual for Teachers, Parents and Other Professionals* (SAGE, 2004), and has authored and co-authored numerous scholarly articles on the psychology of education, particularly on the subject of school bullying and violence. Dr Minton is regularly called upon to provide training to various groups within schools and the broader community in Ireland and beyond.

Dr Stephen James Minton CPsychol
School of Education
Trinity College Dublin
Ireland

Tel: +353 1 896 2216
E-mail: mintonst@tcd.ie

Acknowledgements

1

Introducing Psychology in the Classroom

The goals for this introductory chapter are two-fold. Firstly, it is designed to provide the reader with an understanding of the scope of psychology as it applies to educational practice. This is undertaken through examining the question '*What is psychology?*', before providing *a very brief history of psychology.* The second aim is to inform the reader about *the psychology of education* and *about this book.* This chapter concludes with a selective and annotated list of *further reading* and *useful websites.*

What is Psychology?

Defining Psychology

In the *Penguin Dictionary of Psychology*, under the entry for 'psychology', Arthur S. Reber (1995) asserts that 'psychology cannot be defined; indeed, it cannot even easily be characterised'. He argues that definitions such as '"the science of mental life", "the science of behaviour" . . . reflect the prejudices of the definer more than the actual nature of the field', but does state that 'psychology is what scientists and philosophers of various persuasions have created to try and fulfil the need to understand the minds and behaviours of various organisms from the most primitive to the most complex' (p. 617).

Reber's (1995) assertions are certainly well-made, given the diversity of the field of psychology, its areas of inquiry, and it applications. However, a shorter – and,

I would argue, broadly acceptable – defining statement is that psychology is 'the science of mind and behaviour' (Gross, 2010), which applies to most modern (and especially experimental) psychology. However, even at this early stage we run into problems. The scientific method, to which we shall return below, and again according to Reber (1995), is characterised by: (i) a clearly defined problem being stated in a way that (ii) ties it in with 'existing theory and known empirical fact' (p. 458), (iii) leading to the formulation of a testable hypothesis and (iv) the determination of investigatory procedures, which lead to (v) the collection and analysis of data which, when analysed, in turn lead to (vi) the support or rejection of the hypothesis, and ultimately to (vii) the modification of the existing body of scientific knowledge to accommodate the new findings. With this is mind, one can see how the scientific method may be more easily applied to the study of 'behaviour', which is, after all, external, physical, observable and measurable, than it might be to the study of the 'mind', which is, of course, an internal, metaphysical, non-observable entity with no clear means of direct 'measurement'. Yet Gross's (2010) definition comes at least close to incorporating, in a single sentence, an accurate description of the ways in which modern psychology is, or at least should be, conducted (the 'scientific method'), and the broad areas with which psychologists have concerned themselves. Indeed, the roots of the word 'psychology' come from the Ancient Greek *psyche*, meaning 'the mind' (notice this prefix in many related terms, such as 'psychiatrist' and 'psychoanalyst'), and *-ology*, meaning 'the study of' (again, notice this common suffix in the names of many academic fields, e.g. 'biology' and 'sociology').

A respectable proportion of what trainee teachers learn in both theoretical and methodological modules in their pre-service education is informed by the discipline of psychology. However, psychologists who are proud of their discipline's contribution should be aware that education and teaching are informed by many disciplines, of which psychology is just one (which is one reason why pre-service teacher training can be challenging). In order to see how psychology can be related to other disciplines, we will now turn our attention to the origins of psychology.

The Philosophical Background of Psychology

How can psychology, as a discipline, be framed within the more general field of human inquiry? Indeed, how can the field of human inquiry itself be systematised? In terms of the latter, few have tried; but one attempt is particularly well known. In 1946, the British philosopher Bertrand Russell wrote his *History of Western Philosophy*, based on the series of lectures he had given during the war years in the United States. The book seems to divide commentators: Ray Monk

says it 'remains unchallenged as the perfect introduction to its subject' (Russell, 1995); Richard H. Popkin (1999a) describes it as 'most engaging as Russelliana, but hardly as a history of philosophy'. Be that as it may, the book is an attempt to connect western philosophy with 'political and social circumstances from the earliest times to the present day', and is structured into three divisions that, helpfully for this discussion, constitute three major time periods within both western thought and political/social history:

> *Ancient Philosophy* (corresponding to the period of Classical Civilisation) (ca. 500 BC – ca. 400 AD);
> *Catholic Philosophy* (corresponding to the Middle Ages (ca. 400 AD – ca. 1600 AD); and
> *Modern Philosophy* (corresponding to the Modern, post-Renaissance Period (ca. 1600 AD – the present day).

Viewed in this light, some of the problems that western *philosophers* have been engaged with over the last 2,500 years (e.g. the nature and scope of knowledge, questions of belief and of the best way to live, how we perceive and reason, the nature of the mind, the nature and usage of language and so on) are also engaged with today by *psychologists*. The feature that is unique to the discipline of psychology is *how* these problems are engaged with. To my mind, therefore, the chief demarcation point of psychology – at least, as a research discipline – from its parent discipline of philosophy is in the methods of inquiry that it uses. Whereas in philosophy one might use logical analysis, introspection, rational argument and so on, the methods that psychologists use belong to the modern period, and in particular to the methods of *science*.

Important Philosophical Ideas in Psychology

The scientific method, as it applies to psychology, owes a good deal to the philosophy that is known as *British Empiricism*. 'British' here is used in a geographical sense, referring to the British Isles origin of its original proponents, and to the region in which it first attained greatest popularity and influence. In a curious correspondence with many schoolyard jokes, these 'original proponents' were an Englishman, an Irishman and a Scotsman – respectively, John Locke (1632–1704), George Berkeley (1685–1753) and David Hume (1711–1776). All were interested in the nature and limits of human knowledge; all argued that knowledge was dependent on *experience*. This opposed the philosophy of René Descartes (1596–1650), which asserted that 'there were fundamental truths innate in the human mind only awaiting identification by an active intellect' (Rogers, 1999). For example, in book one (*Of Innate Notions*) of his *Essay Concerning Human*

Understanding (1689), Locke argued there was no *a priori* knowledge; the mind, at birth, is a *tabula rasa* ('blank tablet', or 'blank slate'), upon which knowledge, gained solely through life's experiences, may be written. An image for teachers arises here – of an empty blackboard/whiteboard/exercise book, which is filled with (hopefully) useful knowledge as is, as a consequence, the student's mind. One can understand, perhaps, how influential Locke's empiricism has been in informing traditional 'chalk-and-talk' methods of teaching over the past 300 years. As we shall see (below), Locke's arguments were also important for a particular type of psychology known as *behaviourism.*

Berkeley is known for articulating the anti-materialist idea that essence and perception are one and the same; there is no hidden 'real world' behind what we perceive. We can *only* say that we *perceive* chocolate to be brown and sweet; it is an abstraction too far to say that it *is* so. With this principle, he believed he had established a sound basis for the limits of human knowledge (Bracken, 1999). Hume was influenced by Berkeley's writing, and praised his arguments on abstraction; the purpose of his *A Treatise of Human Nature* (1739) was to 'introduce the Newtonian method of reasoning into moral subjects' (Popkin, 1999b). Although Hume expected the book to be a success, it was not well received (Gaarder, 1991); however, he re-worked the material into two more popular presentations, *An Enquiry Concerning the Principles of Human Morals* (1751), and *An Enquiry Concerning Human Understanding* (1777). According to Hume, we can only know, from an inspection of our ideas, things that resemble or contradict each other, and degrees of quantity or number. In Section XII of the latter, Hume asserts:

> If we take into our hand any volume – of divinity or school metaphysics, for instance – let us ask, 'Does it contain any abstract reasoning concerning quantity or number?' No. 'Does it contain any experimental reasoning concerning matter of fact and existence?' No. Consign it then to the flames – for it can contain nothing but sophistry and illusion.

This well-known quote has been interpreted both as a caution against metaphysical enquiry (in both philosophy and psychology) and a limit of what we can be said to know (which is perhaps closer to Hume's original purpose). One such limit is *causality* – according to Hume, we do not perceive that one thing causes another, we perceive only the progression of sense impressions in time (Popkin, 1999b), and learn to expect that this sequence will reoccur in future instances. But because we learn to expect things – our experience of the world effectively becomes ridden with such perceptual habits – it is easy to conclude things prematurely, which is surely a point of some importance and caution in

a human science such as psychology. If we are to be genuinely unbiased and scientific in our enquiries, even though we may have seen many and only black crows in our life, for a scientist 'it can be important not to reject the possibility of finding a white crow. You might almost say that hunting for the "white crow" is science's principal task' (Gaarder, 1991, p. 231). This is a point to which we will have occasion to return in a short while.

The skepticism and limits to knowledge and enquiry advanced by the British Empiricists has had considerable influence in the way in which science, and scientific psychology, is undertaken, where Hume's attempt to use the methods of the physical sciences in enquiries into human nature and behaviour remains an ideal. In scientific psychology, as you will see from reading this book, there is a preference for experimental or at least broad-scale survey research methods, and psychological investigations are very carefully designed. 'Evidence' that is gained in other ways – from opinion, literature, introspection, rhetoric and so on – is not, to the scientific psychologist, really evidence at all, and is thus dismissed as 'anecdotal evidence', inadmissible on the grounds of its unreliability, and being impossible to validly generalise from. 'Consign it then to flames', indeed.

Furthermore, in the twentieth century, two well-known philosophers independently turned their attention to science, each highlighting (in different ways) that the neutrality and objectivity which scientists pride themselves on may in fact be compromised. Their names were Karl Popper (1902–1994) and Thomas Kuhn (1922–1996), and what they had to say in this respect carries important implications for the self-monitoring way in which scientific psychology *should* conduct itself. The 'white crow' argument outlined above by Gaarder (1991) to illustrate Hume's arguments also exemplifies what Popper had to say about *falsification* and its position as a standard in science. In *The Logic of Scientific Discovery*, Popper (1959) was critical of a good deal of what passed for human science in the nineteenth and early-twentieth century; in particular, he was dissatisfied with the circularity which abounded in many theoretical positions, such as Marxism (in sociology) and Freudian theory (psychology). With regard to these examples, criticism is difficult to advance to their adherents, as it may be taken to be evidence of 'false' or 'bourgeois consciousness', or 'resistance to uncomfortable truths', respectively. Popper was concerned that any intellectual system which thus defended itself from the testing of its hypotheses necessarily became biased. Falsification is the hallmark of empirical science; as soon as a theory ceases to be falsifiable, it ceases to be scientific – we should always look out for the 'white crow'. Falsification has important implications for the design of psychological investigations, and also for the statistical procedures that psychologists use in the assessment of their data (the latter of which, the non-