



Assessment

Evidence-based Teaching
for Enquiring Teachers

Chris Atherton

First published in 2018 by Critical Publishing Ltd

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without prior permission in writing from the publisher.

The author has made every effort to ensure the accuracy of information contained in this publication, but assumes no responsibility for any errors, inaccuracies, inconsistencies and omissions. Likewise every effort has been made to contact copyright holders. If any copyright material has been reproduced unwittingly and without permission the Publisher will gladly receive information enabling them to rectify any error or omission in subsequent editions.

Copyright © 2018 Chris Atherton

British Library Cataloguing in Publication Data

A CIP record for this book is available from the British Library

ISBN: 9781912096497

This book is also available in the following e-book formats:

MOBI ISBN: 9781912096480

EPUB ISBN: 9781912096473

Adobe e-book ISBN: 9781912096466

The right of Chris Atherton to be identified as the Author of this work has been asserted by him in accordance with the Copyright, Design and Patents Act 1988.

Cover design by Out of House Limited

Text design by Out of House Limited

Project management by Out of House Publishing Solutions

Printed and bound in Great Britain by Bell & Bain, Glasgow

Critical Publishing

3 Connaught Road

St Albans

AL3 5RX



www.criticalpublishing.com



For orders and details of our bulk discounts please go to our website or contact our distributor NBN International by telephoning 01752 202301 or emailing orders@nbninternational.com.

Contents

Meet the series editor and author	vi
Foreword	vii
Chapter 1: Introduction	1
Chapter 2: Mapping the area	7
Chapter 3: Assessment and feedback	20
Chapter 4: Assessment and memory	30
Chapter 5: Metacognition and assessment	42
Chapter 6: Assessment and peer learning	53
Chapter 7: Assessment and curriculum design	63
Chapter 8: How has assessment been most effectively implemented?	71
Chapter 9: Putting assessment into practice	82
References	93
Index	109

Meet the series editor

Val Poultney

Val Poultney is a senior lecturer at the University of Derby. She teaches on initial teacher education and postgraduate programmes. Her research interests include school leadership and school governance with a particular focus on how to develop leadership to support teachers as researchers.



Meet the author

Chris Atherton

Chris Atherton is an English teacher, head of department and research lead at Sir John Deane's Sixth Form College in the North West of England. His personal academic interests are cultural evolution, linguistics and cognitive science.



Foreword

It is a great pleasure to introduce this new book by Chris Atherton entitled *Assessment*, which is the first book in the series 'Evidence-based Teaching for Enquiring Teachers'. Chris, who is head of department and research lead at Sir John Deane's Sixth Form College in the North West of England, was in part influenced by Daisy Christodolou's book *Making Good Progress? Her work sought to offer a link between formative assessment and cognitive science. Practitioners will be acquainted with the two variants of assessment: Assessment of Learning and Assessment for Learning (AfL). While the former has a focus on grading and reporting (often referred to as summative assessment), the latter draws more heavily on theoretical ideas being operationalised in the classroom and is a form of formative assessment that seeks to move learning along (Black and Wiliam, 1998). The aim of Chris' book is to draw together evidence generated from academic research about assessment and present it in a way that allows practitioners to look for and critically interpret the evidence base to inform their own planning and teaching. After all, practitioners are best placed to understand their students' learning, where they are in that learning journey, where they need to go and the best course of action to get them there.*

The decentralisation of the education landscape has meant that schools now seek different alliances not just with other schools but also with universities, private providers and businesses, to name but a few. The resurgence of teachers as researchers (Stenhouse, 1975) inquiring into their own practice and generating their own knowledge has seen a shift in the ways in which teachers are approaching their own learning and professional development. There has been a proliferation of bodies such as ResearchED (<https://researched.org.uk/>), the Educational Endowment Foundation (<https://educationendowmentfoundation.org.uk/>) and the Mapping Educational Specialist knowHow webpages known as the MESH guides (www.meshguides.org/mesh-guides/), all of which seek to close the gap between academic research on assessment and how those outcomes might be put into practice in schools. There is also a government push for teachers to be a bigger part of school-based reform, so it is important for teachers to be able to generate and evaluate evidence that will support not only assessment criteria but the learning needs of all their students.

In the spirit of encouraging practitioners to engage in research and enquiry, this book focuses on helping teachers to critically engage with a range of issues around assessment and offers them the opportunity to reflect on their own practice. Complex research issues are broken down and summarised in ways that are easily accessible to busy practitioners while offering a broad

range of follow-up readings for those interested in pursuing topics in more depth. The principles behind the efficacy of AfL are explained, drawing upon the evidence bases and how these ideas can be practically implemented in the classroom setting with learners.

It is my belief that Chris' book will inspire colleagues in schools and universities to take a fresh look at AfL through the evidence-informed lens. It aims to offer an alternative way of thinking about assessment strategies that are applicable to all phases of schooling. The format is accessible and practical and of particular interest to a range of professionals, including Initial Teacher Education students, newly qualified and experienced practitioners alike.

Val Poultney, series editor
Senior Lecturer in Education, University of Derby

References

Black, P and Wiliam, D (1998) Inside the Black Box: Raising Standards Through Classroom Assessment. *Phi Delta Kappan*, 80: 139–48.

Stenhouse, L (1975) *An Introduction to Research and Development*. London: Heinemann.

Chapter 1

Introduction

1.1 Chapter overview

This chapter will outline:

- 1.2 what assessment is;
- 1.3 the assessment debate;
- 1.4 why it is important to take an evidence-based approach;
- 1.5 the topics covered by this book.

1.2 What is assessment?

Assessment is a fundamental component of learning. It is ‘a process of gathering information for the purpose of making judgments about a current state of affairs’ (Pellegrino, 2002, p 48). It serves as a tool both for measuring achievement and driving the learning process. When those working in education use the term, they are also describing a strand of pedagogy with its own specific theory, evidence and practice. In recent years, research has increasingly shown that assessment is one of the most powerful tools available for improving standards in education.

Types of assessment

The most important distinction is the distinction between *formative* and *summative* assessment.

Table 1a Formative and summative assessment

Summative assessment	Assessment in the traditional sense, where you measure a student’s success against criteria to assign success or failure at the the end of the learning process.
Formative assessment	The use of assessment as a tool for learning during the learning process. Assessment is used to evaluate comprehension and learning, thereby facilitating better teaching.

The basic principle of formative assessment is that through assessing performance throughout the learning process (not just at the end), we can generate better conditions for learning. This is achieved either through offering feedback, or through adapting later learning to better fit the needs of the student. As Stiggins (2002, p 759) explains:

once-a-year tests are incapable of providing teachers with the moment-to-moment and day-to-day information about student achievement that they need to make crucial instructional decisions. Teachers must rely on classroom assessment to do this.

The line between summative and formative assessment can often feel very subjective. Cowie and Bell (1999, p 105) try to explain the distinction by describing formative assessment as *'the process used by teachers and students to recognize and respond to student learning in order to enhance that learning, during the learning'*. Formative assessment is an ongoing process and a mode of practice, whereas summative assessment is infrequent and final.

Assessment for Learning

One common synonym that you may encounter is Assessment for Learning (AfL), a term which has come to replace formative assessment in some recent policy discussions. This term was probably coined by Scriven (1967) but has been popularised through the work of Stiggins (2002; 2005). This term arose out of the need to try to clarify a particular definition of formative assessment, one which *'differs from assessment designed primarily to serve the purposes of accountability, or of ranking, or of certifying competence'* (Black et al, 2004, p 10). As assessment is also often used for accountability purposes, the fear was that unless a distinction was made between formative assessment in the wider sense and AfL, teachers may not focus on the right version. The value of this distinction is still questioned (Wiliam, 2016, p 105) as it has both muddied the waters further, and also because it fails to capture all possible dimensions of formative assessment. This debate over the use of this term, while interesting, is not resolved, so this book will adopt the term *formative assessment* for all manifestations of the concept, unless it is exclusively tackling research in which AfL is discussed in its narrow sense.

1.3 The assessment debate

For those seeking to raise standards in education, improving learning through better or more appropriate assessment is a very attractive concept. Formative assessment has developed a reputation for being low-cost, highly effective and scalable. It is not surprising that it has been made a central plank of education reform in the UK. At least one proponent has dubbed it *'transformative*



assessment' (Popham, 2008, 2011). Proponents of formative assessment have been working with policymakers and school leaders for over a decade now, leading to what Baird et al (2014, p 4) call the '*rise of assessment*'. This rise is not without controversy, and some have been critical of the way in which it has been associated with a neoliberal model of education, where learning is quantified to make it subject to market forces (Hursh, 2007; Pratt, 2016). Given this controversy, and that formative assessment is now embedded as policy at a local and national level, it is more important than ever to reflect critically on the evidence which underpins it.

One of the key issues is the inherent difficulty in defining what we mean by improving learning through assessment. There is considerable evidence of powerful effects in relation to formative assessment techniques, but we do not have a robust and mutually understood definition of what formative assessment is. Even Dylan Wiliam who, alongside Paul Black, is considered by many to be the original intellectual force behind formative assessment, offers the confounding assertion that '*formative assessment is not a thing*' (Wiliam, 2016, p 106). This deliberately provocative assertion is not meant to undermine the idea, but to illustrate the difficulty in defining formative assessment as separate from assessment in a wider sense. The most recent iteration of the idea has defined formative assessment as the bridge between teaching and learning. In this definition, rather than being a set of universal strategies, it manifests differently in different academic environments. The debate has shifted from *can formative assessment improve learning?* to *how do I get it to work in my classroom?*

This book is designed to examine and evaluate the evidence on both sides of the assessment debate for teachers working in all sectors of the education system. It will explore the tension between universal and specific claims about assessment and the role that wider structures (school culture, Continuing Professional Development (CPD), national policies) play in classroom assessment. In doing so, it will show how an evidence-based approach is the best way to find answers to these controversies. This book aims to give you a tour of the evidence base on which those claims have been made, highlighting the areas of strength and weakness and evaluating the validity of the claims made.

1.4 Why take an evidence-based approach to assessment?

In recent years, a diverse group of researchers, educational leaders and teachers have advocated for evidence-based pedagogies. These advocates have emerged from academic communities, government, charities and professional networks on social media. In the process, they have built government-funded institutions like the Education Endowment Foundation, resource banks for





teachers, and teacher-organised conferences like ResearchED (whose slogan is ‘*working out what works*’). This group is, at best, informally organised and understood, and has emerged in parallel with government advocacy evidence-based approaches to teacher training (Carter, 2015). At present, research-based pedagogies are in the ascendance, largely because they offer something that previous initiatives have never done – empirical evidence of their own effectiveness. However, this does come with significant new challenges for teachers. Research evidence is subject to much higher demands of proof than previous approaches, and the profession itself is generally untrained in using and critically reading research. In addition, all the old pressures on assessment remain, including Ofsted expectations and individual school cultures. There is still much work to be done on the intersection between academic research and schools themselves, particularly in the development of school–university partnerships. The path of evidence into the classroom has been neither smooth, nor universally successful. Changing the status quo is a challenge that the whole profession must undertake, and Goldacre (2013) has suggested that education is experiencing something like the paradigm shift which took place in medicine in the early twentieth century.



This book is a guided tour through the evidence on assessment from a teacher’s perspective, but with the academic rigour to engage with the evidence in a way that few teachers are trained to do. If you’ve been asked to ‘use assessment better’ by a manager, or a university tutor, this book will help you understand what that might actually mean. This book is described as *evidence-based* because:



- it presents the evidence on assessment in the classroom;
- it only evaluates approaches to assessment that have an evidence base to suggest their efficacy, and maintains scepticism towards those that do not.

Making assessment work is not a trivial issue. In a recent Department for Education survey of teacher workload, teachers identified marking, planning and data management as the three biggest challenges that they face (Higton et al, 2017). All three of these are directly related to how we conduct assessment, and there is therefore a moral duty for teacher and leaders alike to reflect upon the efficacy of different assessment approaches. Wasting time on assessment that doesn’t work causes excess workload for teachers and has a negative impact on student achievement. Similarly, effective assessment interventions can lead to measurable improvements in summative assessment outcomes, and learning efficiency.

What does good research look like?

The evidence available to teachers is often patchy and of a mixed quality, which makes it even more critical that teachers know what good research looks like. Coe (2012) argues that there are six characteristics of effective educational research (see Table 1b).

Table 1b Criteria for valid educational research, adapted from Coe (2012, p 10)

Critical	It questions claims, methods and professional assumptions.
Systemic	It is deliberate and planned, and follows through on lines of enquiry in a logical way.
Transparent	All the aspects of value to making an assessment, such as the aims, methodology, data etc, are available to those seeking to evaluate the claims being made.
Evidential	Claims are based on evidence and data, not intuition or common-sense readings.
Theoretical	Research is both guided by theory, and tests and provides evidence for and against theories.
Original	It aims to add to existing knowledge.

This book will summarise the available evidence, and discuss its implications for professional practice. The focus will be on research which meets these six criteria, and where relevant, the strengths and limitations of individual pieces of research will be discussed.

There has been an explosion of other extremely useful sources of information over the past few years, including teacher blogs and social media. While these are often excellent informal sources of information for teachers, they will not be discussed in this book as its focus is on peer-reviewed research. The sources used in this book are all peer-reviewed and have been chosen for their robust academic credentials. This is not to say, however, that you should not read them critically, or that they are guaranteed to be correct or work for your particular school or context.

1.5 What topics does this book cover?

Chapter 2 begins by exploring the definitions of formative assessment as well as the history of the term, and lays out a framework for the whole book. Next, **Chapter 3** examines the most fundamental question in the literature: *what is the relationship between assessment and feedback?* In particular, the chapter explores what evidence tells us about making feedback effective, and what this might mean for student learning. **Chapters 4 and 5** presents the evidence around cognitive science and assessment, making a case for the pre-eminence of this approach in understanding assessment, and the importance of metacognitive development. **Chapter 6** examines an element which rarely features prominently in discussion of formative assessment: *peer learning*, exploring the opportunities and challenges you will face when implementing peer learning effectively. Given the questions that the evidence raises for educators, **Chapter 7** examines what this means for designing effective assessments and curriculum structures for students. It examines the evidence for the effectiveness of different types of assessment design and curriculum structure. After exploring the evidence for the individual elements of formative assessment, **Chapters 8 and 9** focus on how formative assessment has been successfully implemented in schools and studies, examining the common errors of implementation that have been made, and reflecting on the evidence from a decade of attempts to make formative assessment work at a system-wide level. As part of this discussion you will be able to reflect on what it means to put this into practice in your classroom.

