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Assessment for Teaching

Assessment for Teaching is a comprehensive and highly practical introduction to assessment and learning in primary and secondary school settings.

Grounded in contemporary, evidence-based research, this book treats assessment as a source of data that informs teaching strategies. It replaces a deficit model of assessment with a development model: a framework which recognises the importance of identifying what the student is ready to learn, rather than 'teaching to the test'. The book also promotes collaboration between teachers in professional learning teams – encouraging the sharing of assessment data and team-based interpretation – to improve student outcomes and to plan goals for students based on a development scale.

Each chapter contains:

- an exercise for applying the course content to classroom practice
- a response template for the exercise
- guidelines on assessing the value of the exercise in a professional learning team
- a short test for participants to cross-check their understanding of the course content.

Further examples of test questions are also available on the companion website at www.cambridge.edu.au/academic/arcots.

Written by a team of experts from the Assessment Research Centre at the University of Melbourne, this is an essential resource for both pre-service and in-service teachers.

Patrick Griffin holds the Chair of Education (Assessment) at the University of Melbourne and is Associate Dean of the Graduate School of Education. He is the Director of the Assessment Research Centre and Executive Director of the Assessment and Teaching of 21st Century Skills project.

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Abbreviations

ALP	Assessment and Learning Partnerships
ARC	Assessment Research Centre
ARCOTS	Assessment Research Centre Online Testing System
ATAR	Australian Tertiary Admission Rank
CARL	curriculum, assessment and reporting leader
CAT	common assessment task
IRT	item response theory
LOTE	languages other than English
MIP	Managed Individual Pathway
NAPLAN	National Assessment Program – Literacy and Numeracy
OECD	Organization for Economic Co-operation and Development
PISA	Program for International Student Assessment
PLT	professional learning team
SOLO	Structure of the Observed Learning Outcome [taxonomy]
SOSE	Study of Society and the Environment
SWANs	students with additional needs
TIMSS	Trends in International Mathematics and Science Study
UNESCO	United Nations Educational, Scientific and Cultural Organization
ZAD	zone of actual development
ZPD	zone of proximal development

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Contributors

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Contributors

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Preface: A collaborative approach to assessment for teaching

Patrick Griffin

About this book

This is not just another book on assessment. Many of you will have read generalised books on assessment, and some of you will even have written them. I published one myself in the 1990s. This book is different: it takes a clinical approach to assessment and the use of data in the classroom. It is about changing the culture of schools based on the use of assessment data and developing skills among teachers to enable them to use assessment information to make decisions about targeted teaching intervention. The book introduces a new kind of thinking, though some of the content is not new – note the case study written in 1970 that concludes the Introduction.

The approach described here is simple, but it is not simplistic; rather, it demands conceptual reasoning and higher-order thinking. In the six years during which a program based on this approach has been taught at the University of Melbourne, it has developed and matured. We now know that pre-service teachers can cope with this use of assessment and that in-service teachers can also change their practices in the light of it. Over 1500 teachers have participated in the program through online and face-to-face delivery. Over 3000 student teachers have studied the program and many have told us that they were able to secure employment because of their knowledge of this approach to assessment. Many of the 1500 practising teachers who have participated in the online program have testified that it has changed their way of thinking about the use of assessment data and the ways in which they can help teachers to organise classrooms. Of course, some did not change.

There is no point in adding to the assessment literature based on translating psychometric theory and multiple-choice test design. This is not a book that regurgitates the old ideas about assessment wrapped up in the language of psychometrics. Instead, it takes a new approach. The old ways of teaching principles of measurement, specifications and item analysis for multiple-choice test design have had many consequences. Teachers have become alienated from testing because of the complexity of the process and the lack of meaning for their teaching practice. Despite the fact that the deficit method has been in schools for more than 100 years and it continues to fail, teachers persist in identifying deficits and trying to fix them without a scaffolding approach to intervention. Parents have been asked – even encouraged – to endorse a deficit model of teaching and learning. Teachers are afraid to take a new

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approach in case that doesn't work either. So instead, they continue with a system that we (and they) know is not effective.

Systems of education reinforce these old approaches by ranking students and schools using statistical comparisons to goad schools into action by focusing only on improving scores. In such a context, where the emphasis is on methods of objective test development, teachers are expected to have an advanced knowledge of statistics and quantitative methods. Consultants feed on this expectation by offering programs and in-service courses on how to interpret test and statistical data. Quite often, they provide well-meaning but misleading advice, and teachers become even more alienated from assessment. They focus on low scores and the dangers of failure when they should be focusing on all students and the celebration of every individual student's successes. The problem is exacerbated by teachers working in isolation rather than in collaborative teams such as those we discuss in this book. In general, their assessment literacy is not profound, and the current assessment literature adds to and reinforces the confusion around the use of assessment data to improve teaching. So the teaching profession seeks comfort in rhetoric. It offers the rhetoric of assessment *of*, *as* and *for* learning. There is a rhetorical thrust towards what is called authentic assessment. I often wonder what is meant by this, and what inauthentic assessment might be.

Under these conditions, assessment and teaching regress into a sea of folk wisdom about the use of assessment data. Most of the common ideas of best practice in authentic assessment are, in fact, no more than folk tales spread by discussion groups through which people are looking for answers that don't involve an ocean of statistics. In this book, some recognition is given to the old style of approach to assessment (see Chapter 8) without taking it to the same lengths as other textbooks.

For years now, the areas of assessment and curriculum have been combined in education administration and teacher training. Curriculum specialists have been the major providers of information about assessment. If assessment specialists were to provide information about curriculum and teaching, there would be an outcry, but because everybody has been assessed – everybody has sat tests and suffered under the weight of oppressive assessment – we all regard ourselves as experts and we are all looking for different ways and means of getting information about learning. But our knowledge of assessment in general is often not a result of experiential learning. Instead, it is a result of experiencing failure – either to understand the process of assessment or to link the concept of assessment to the ideas of success and the lack of it.

This book eschews the concept of failure and takes a developmental approach involving targeted intervention under the rhetoric of readiness to learn. It assumes that everybody can succeed, and that all we need to do is find out what they are ready to learn and able to learn when encouraged by teachers who draw on professional knowledge of background factors to guide their interventions.

Jay McTighe and Grant Wiggins (2004) developed the idea of a process called backward mapping. They recommend the following steps:

- Review the assessment task to identify prerequisite knowledge and skills.
- Develop driving questions (to organise the learning unit), revisit the essential teaching questions and break them down.
- Outline major teaching points for each question.
- Identify formative assessment procedures.

This is not the focus of the approach presented in this book. The basic difference is a shift away from assessment questions to an emphasis on a level of development and a zone of proximal development. The intervention at that zone is the major emphasis. Hence ours is more of a forward mapping than a backward mapping approach.

A developmental approach makes no assumptions about the effects of background factors on teaching and learning. In a deficit model, student demographics such as age, gender, race, socio-economic status, language background, intellectual capacity and other factors are treated as explanations for why people have failed to learn. A developmental method views that approach as a search for excuses. This book encourages teachers to identify, within a developmental paradigm, the point where students are ready to learn, and to intervene appropriately at that point. Then the factors listed above – age, gender, race, socio-economic status, language background, intellectual capacity and so on – determine how the intervention takes place, not why the student is struggling. We assume that if these factors are taken into account in the professional judgement of teachers to select the appropriate intervention strategy, then every student will learn. Under this approach, the ideas of remediation and deficit make no sense at all. We also strongly advocate that teachers work in collaborative teams, removing the isolation of individual teachers making decisions without the support of their peers.

It is important that a consistent stance is taken into account in reading each chapter of this book. The focus is on teachers working in teams – which does not mean team teaching – in order to collaborate on evidence-based decision-making that can improve student learning markedly. Our published papers on the research underpinning this program, some of which are provided on a website that accompanies this book, present almost irrefutable evidence of the impact of peer-group collaboration on teachers and targeted intervention. The evidence shows that collaboration among teachers yields significant and important gains among students. But it requires a cultural change in schools, and this cultural change is an integral part of the success that schools can enjoy if a collaborative, evidence-based approach to the use of assessment data is implemented on a whole-school basis.

We make no apologies for what at times can be a confronting approach that challenges the ways in which teachers use assessment data and how assessment is

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reported. We regard the teacher as a facilitator, not an expert who passes all necessary information to the students. In the digital age, students can quite readily gain information via the internet and other sources. Our role as teachers needs to change to that of facilitators, as outlined in the case study in the Introduction to this book, which demonstrates the effectiveness of our approach in the 1970s. It is even more important now. Students need to be taught how to critically appraise information as well as to access it. Teachers need to show students how to access information, but also give them the problem-solving and critical appraisal skills that are necessary in the digital age. Education – both teaching and curriculum – needs to change. And if this is to happen, assessment *must* change.

How to use this book

This book is about the necessary change in assessment. It links the new ideas to teaching and learning, assessment and reporting, and curriculum resources. All three areas or domains need to be rethought and redeveloped. We hope this book is a beginning. With this in mind, a set of Learning Objectives is provided at the beginning of each chapter, identifying what we hope you will gain by reading the chapter. We invite you to explore the ideas presented in each chapter and, together with your fellow students or colleagues, exercise your right to challenge the concepts, ideas and instructions that are included. We encourage you not to simply accept the written word but to challenge and discuss the content. In order to encourage this discussion, we ask you to apply the ideas in practice. For those in pre-service programs, the opportunity to apply them will be limited, although tutorial groups and placements in schools may provide opportunities for discussion and challenge. For in-service programs, we ask teachers to apply the ideas in the classroom and evaluate their effectiveness for both student learning and teaching practice. Our premise is that if these practices do not change or improve student learning, they are not worth implementing. The whole point is to help promote, accelerate and support student growth along a developmental continuum. The application in practice is important because the observation of student engagement and learning is a critical indicator of success, no matter which approach is being used. Finally, at the end of every chapter there is a series of Check Your Progress questions to help you assess your understanding. Throughout the chapters, we also ask you to engage in other exercises that will help you and your fellow learners or colleagues check whether you have understood, or even agreed with, the approach suggested.

The book has a particular structure to help deal with its dual purpose: while it is written primarily for pre-service education, it is also written to meet the needs of in-service teachers. It would be folly to change the approach of only pre-service programs if the new approach were unwelcome in the schools where graduates seek work.

The Introduction illustrates a mathematics approach in a secondary school. Each has led to the ideas embedded in this book.

Chapter 1 outlines the book's major concepts and ideas, and provides a rationale for each of these.

Chapter 2 discusses our approach to developmental teaching and assessment. It is critical of the deficit model and encourages the reader to take a developmental approach using a series of developmental paradigms and frameworks. It shows how assessment data can be used to identify the zone of proximal development.

Chapter 3 describes the procedure for conducting assessments, and explains why it is important that these assessment administration instructions are followed closely. An example is provided of an online assessment system that gives immediate and detailed feedback to teachers and students.

Chapter 4 shows how these successful approaches to team-based learning can help teachers develop collaborative practices based on the professional use of data. This is the first stage in what we describe as a cultural change in schools, which extends to staffrooms, professional meetings and classroom teaching. It emphasises the need to focus on teaching decisions that are informed by evidence rather than inference.

Chapter 5 describes the role of the school and team leadership in both enhancing and reinforcing the cultural change that is needed. While the book is targeted at pre-service and in-service teachers, it is critical that everyone understands the important role that leadership and cultural change play in improving the use of assessment data in teaching decisions.

Chapter 6 explores subjective assessment, otherwise known as judgement-based assessment, and provides a method that our research has shown produces reliable and valid data on which inferences about learning and intervention can be based.

Chapter 7 shows how judgement-based assessment can be interpreted within a developmental paradigm, and provides a systematic approach to the writing of assessment rubrics and the interpretation of data linked directly to teaching intervention.

Chapter 8 acknowledges the notion of test design for more objective assessment. It is perhaps the only part of this book that gives recognition to the old forms of measurement-oriented assessment. Those who wish to study more of this form of assessment can consult the plethora of books and articles available on test design and multiple-choice testing.

Chapter 9 suggests that it does not matter whether the assessment approach is subjective or objective. The important things are that assessment data be interpreted within a developmental paradigm and that the developmental paradigm be defined by a 'construct' or over-arching concept. This chapter empowers teachers to design assessments that can be used to identify an underlying developmental progression that can be linked directly to teaching.

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Chapter 10 takes this exercise a little further. It illustrates how a relatively simple method of item analysis can be used to identify zones of proximal development. Early in the chapter, the emphasis is on dichotomous data (derived from assessments that allow only two responses – yes/no, true/false and so on). In an extension of this idea, the item analysis is applied to rating scales and rubrics such as those discussed in Chapters 6 and 7.

Chapter 11 brings all of this together in reports that are designed for individual students (the learning readiness report), for teachers (the class report) and for parents (the profile report). The use of these reports is then linked directly to teaching intervention rather than taking a summative approach that addresses what has been learned and whether this is acceptable or unacceptable. The reports are formative, and we take the view that they should be helping students to learn, teachers to teach and parents to understand the overall performance of the student and the growth that has taken place regardless of age, gender, race, socio-economic status, language background or intellectual capacity. Development is about growth and the impact of teaching on student learning.

Chapter 12 illustrates the application of these ideas to the teaching of students with additional needs. It summarises the approach described in the preceding chapters with a focus on students who have disabilities and special educational requirements.

Chapter 13 provides a case study of a secondary school where the approach described in this book has been implemented. It illustrates how this approach to assessment requires not only a cultural change among teachers, but an administrative and organisational change in the school, demonstrating a whole-school approach to assessment for teaching.

Appendix A describes how to use the online tests and reports that are available via a link provided with this book, which offers short-term access to the ARCOTS system to provide some practice with online testing and reporting.

Appendix B deals with some of the common issues that have arisen over the past few years in the research that informs this book. These are covered in the form of frequently asked questions for professional learning teams.

Finally, Appendix C provides a condensed version of the overall approach for school leaders.

Pre-service teachers should focus on the Introduction and Chapters 1–3, followed by Chapters 6–11. They would also benefit from reading the implementation chapters, Chapters 12 and 13. In-service practising teachers should read all the chapters, including Chapters 4 and 5 on cultural change. School leaders and principals should focus on the Introduction, Chapters 1–5 and 12–13, and Appendix C. We hope the book offers something for everyone in your course or school, and that we are educating student teachers to take their place in a supportive and informed professional

environment when they start teaching. We encourage all participants in education to read the relevant sections of the book.

We hope you enjoy this book but, more than that, we hope it helps you to improve evidence-based decisions and teaching interventions, and that students ultimately are the beneficiaries.