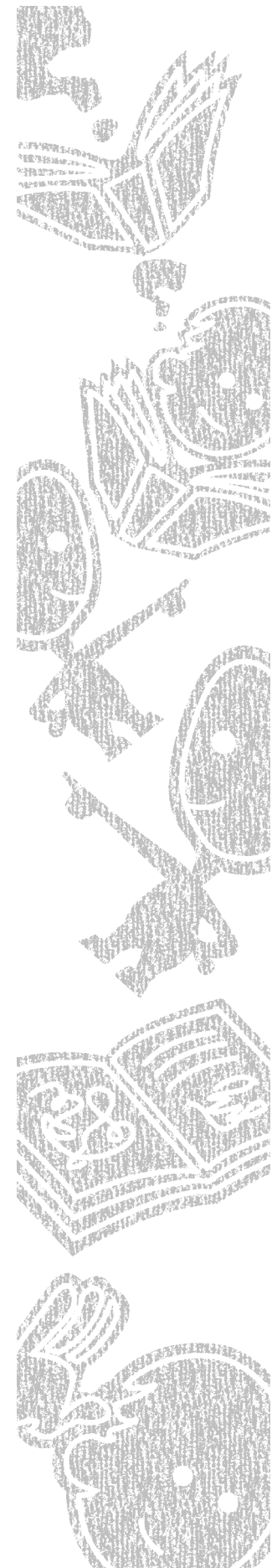




# Table of contents

<b>Acknowledgements</b> .....	<b>2</b>
<b>About this book</b> .....	<b>3</b>
Advantages of the intervention .....	3
<b>Section 1 What is ADHD?</b> .....	<b>5</b>
History of ADHD .....	6
Current understanding of ADHD .....	6
Diagnosis .....	9
Treatment .....	11
Long-term effects .....	15
ADHD and schooling .....	15
<b>Section 2 ADHD and the reading process</b> .....	<b>17</b>
Impact of executive-function deficits on the reading process .....	18
<b>Section 3 The reading intervention</b> .....	<b>23</b>
Components of the intervention .....	24
Implementation .....	30
Assessment .....	32
<b>Section 4 Lesson plans</b> .....	<b>43</b>
Lesson 1 .....	45
Lesson 2 .....	47
Lesson 3 .....	48
Lesson 4 .....	50
Lessons 5 and 6 .....	51
Lesson 7 .....	52
<b>Appendix 1 Templates and certificates</b> .....	<b>53</b>
<b>Appendix 2 Commonly asked questions</b> .....	<b>63</b>
<b>Appendix 3 Sample paragraph summaries</b> .....	<b>67</b>
<b>References</b> .....	<b>72</b>





## About this book

Attention Deficit Hyperactivity Disorder (ADHD) affects up to one in ten children aged between six years and seventeen years (NSW Department of Health 2002): up to three students in every class. A significant number of these students also have learning difficulties, with reading problems being the most common. Dealing with the reading problems experienced by students with ADHD is an ongoing task that the classroom teachers and parents of these students are faced with on a daily basis. Concerns are justified, as it is widely accepted that the ability to read is the core of literacy and success in reading is necessary for students to meet the challenges of learning and living in our rapidly changing society (Slee 2004).

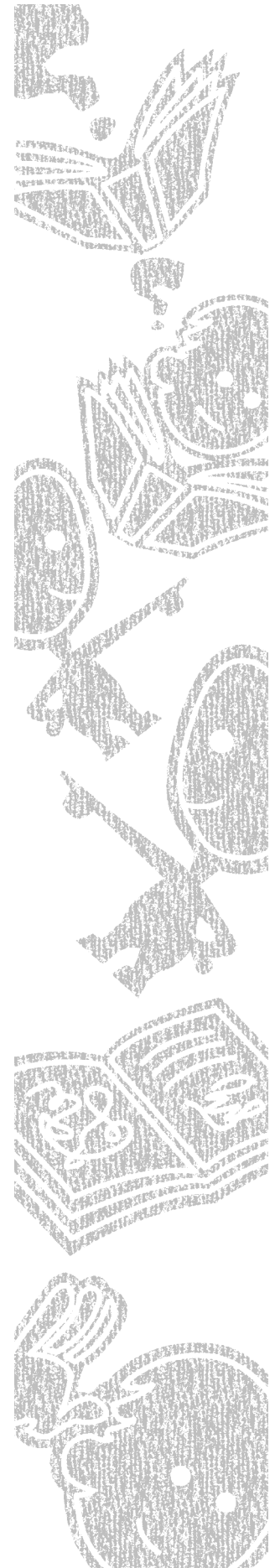
The intervention presented in this book has been specifically designed to meet the needs of students with ADHD, and their parents and teachers, as each student endeavours to improve their level of reading competence. The current understanding of ADHD is still incomplete, and many aspects remain controversial; however, more recent understanding of the disorder has been used to design this reading intervention.

The intervention has been structured to develop independent readers who are capable of monitoring and adjusting their own reading behaviour to meet the demands of the text they are reading. Participation in the program also helps students to view reading as an enjoyable and worthwhile activity. As such, the intervention is useful for teachers, teacher aides and parents who are faced with the problems associated with teaching students with ADHD to read. Trials in schools demonstrate that students with ADHD from early primary through to senior high school are able to benefit from the program.

This book will provide readers with sufficient information to implement and maintain the reading intervention. Section 1 provides a brief overview of the current understanding of ADHD. Section 2 briefly outlines the theoretical underpinnings of the intervention program. Section 3 presents the components of the intervention. Section 4 consists of a series of lesson plans that take the reader step-by-step through the implementation of the intervention. The appendices include the necessary templates for forms and certificates, as well as samples of students' work and answers to commonly asked questions about the intervention and the implementation process.

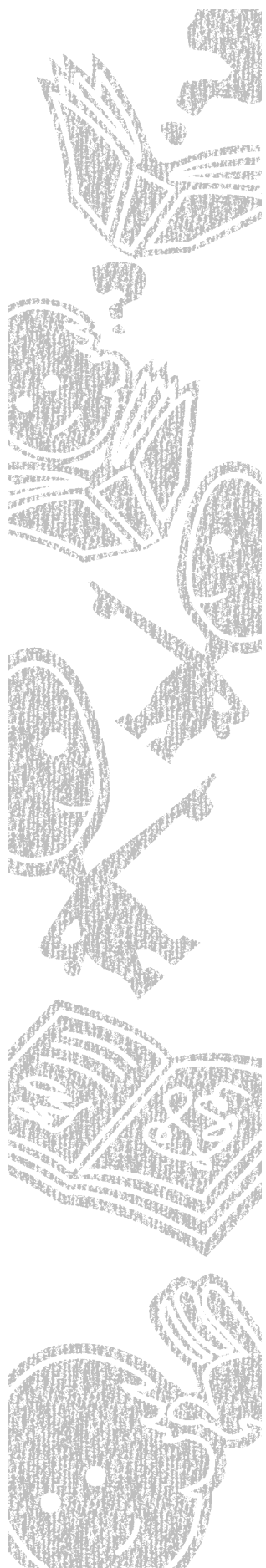
## Advantages of the intervention

- Externalises the reading process so that it is available for analysis and adjustment by the student
- Provides explicit quality performance criteria
- Skills are easily transferred to all reading contexts and tasks
- Leads to independent readers
- Makes reading fun and enjoyable
- Helps students learn to think like successful readers





- Suitable for a wide range of reading abilities
- Suitable for a wide age group
- Relatively low cost to implement
- Low cost to maintain
- Can be delivered by a range of people, including parents, community volunteers, teacher aides, teachers and students
- Minimal demand on classroom teacher
- Increases student motivation to read
- Does not require the purchase of specific reading material for students



## History of ADHD

ADHD as we know it is not new. The education community has known of its existence for many years, although it has used different definitions and labels. Children showing symptoms like those of ADHD were observed and documented in the mid-1800s. In these cases the symptoms appeared after the individual suffered central-nervous-system damage or disease (Barkley 1989).

Since this early identification of the disorder both the name and the diagnostic requirements have changed several times and reflected the understandings of the era. Some of the previous names have included 'Brain Damage Syndrome' (Silver 1990), 'Hyperkinetic Reaction of Childhood' (McBurnett, Lahey & Pfiffner 1993) and the more familiar 'Attention Deficit Disorder' (McBurnett et al. 1993). Such changes have contributed to the many misconceptions and prejudices that currently exist about the disorder despite the availability of a wide body of scientific knowledge (Hutchins 1997; Wall 2000). However, the problems presented by the presence of a student with ADHD in the classroom are real and confronting to teachers and overshadow these ongoing debates and controversies. Giorcelli states:

A great deal of pedagogical energy has been wasted on such debate, obfuscating educators' vital work of having students learn more effectively (despite their presenting behaviours) and bedevilling teachers' efforts to come to grips with what is essentially an old phenomenon described anew. (1997, p. 132)

## Current understanding of ADHD

ADHD is described in the *Diagnostic and Statistical Manual of Mental Disorders* as having three main characteristics: hyperactivity, impulsivity and inattention (American Psychiatric Association 1994). However, in some circles (Barkley 1996, 1998) the disorder is believed to have only two main characteristics, hyperactivity and impulsivity; inattention is believed to be part of another, distinct disorder.

The current understanding of ADHD is that it results in deficits in executive functioning (Akhutina 1997; Anderson 1997; Barkley 1996, 1998; Grainger 1997; Wall 2000). Executive functions have been described as functions of the brain that allow us to:

- analyse information
- reflect on our current knowledge
- plan and organise
- monitor our own behaviour (self-monitoring)
- focus our attention
- pause before responding to a situation (inhibition) (Douglas 1980; Purvis & Tannock 1997).

They allow self-regulation and are necessary for the initiation and maintenance of goal directed behaviour (Barkley 1996; Fiore, Becker & Nero 1993).



Barkley combines these deficits in the label *disinhibition*. This term helps describe individuals with ADHD as people who have trouble inhibiting, or keeping private, behaviours that may be inappropriate at the time. For example a child with ADHD may enter a room and notice some new equipment, such as a stereo. Rather than just thinking about how it might work or feel, they will begin touching it and investigating how it works.

## Impact on executive functions

Barkley has developed a theoretical model of ADHD that provides further insight into the role of executive functions in causing ADHD behaviours. This model forms part of the theoretical foundation of the reading intervention, and is reproduced in Figure 1 (see page 8). It identifies inhibition as the primary executive function that affects four other executive functions:

- working memory
- self-regulation of affect
- internalisation of speech
- reconstitution.

## Behavioural inhibition

In Barkley's model behavioural inhibition is seen as having three roles:

- to create a delay or pause before responding to a situation or task
- to protect that delay from outside distractions
- to help stop inappropriate reactions or behaviours that may have already started.

Deficits in inhibition prevent or interrupt thoughtful responses or actions.

## Working memory

Working memory retrieves relevant information from long-term memory and allows students to remember that they intend or need to finish a task. It also assists students to remember what the task requires as well as prompting them to get back on task after an interruption.

## Self-regulation of affect

Self-regulation of affect allows students to consider emotional responses before responding and helps to modify inappropriate responses. Students with ADHD tend to have intense emotional reactions to events that other children may only find mildly upsetting. Their reaction is instant and they have difficulty moderating it.

This difficulty with regulating emotion poses another significant problem, as students with ADHD have great difficulty generating the emotion of self-motivation. This reduces their ability to carry out boring and repetitive tasks that have no motivating factors or interest for them.

