

# Contents

<b>Foreword</b> by Alistair Smith	7
<b>Introduction</b>	9
<b>The inside story</b>	
◆ Intention of the book	11
◆ Accelerated learning	11
◆ Learning how to learn	12
◆ Modelling the learning process	13
◆ Neuro-Linguistic Programming	14
◆ Expanding the paradigm	15
◆ Compelling reasons	16
◆ Signposts to the chapters	18
<b>Chapter 1</b>	19
<b>Maps</b> – charting their history, value, function, design and applications	
◆ The wisdom of maps	20
◆ Cognitive cartography	27
◆ Information architecture	30
◆ Stylish learning	31
◆ The bottom line	34
◆ Use it or lose it	35
<b>Chapter 2</b>	37
<b>How to map</b> – mapping demystified, deconstructed and put back together again	
◆ Unlocking texts	38
◆ Getting it together	48
◆ Holographics	55
◆ Mapping – just like that	57
◆ Notes – a model mapper’s perspective	69
<b>Chapter 3</b>	71
<b>Teaching mapping</b> – changing linear learners into holographic thinkers	
◆ Why teach mapping?	72
◆ How to teach mapping	73
◆ Linking to experience: introducing keywords, selection and organisation	74

<b>Chapter 4</b>	85
<b>Thinking skills</b> – subject to visible thinking	
◆ Thinking skills in context	86
◆ Arguments for thinking skills programs	87
◆ Arguments against thinking skills programs	88
◆ Subject-specific thinking	90
◆ Resolving the problem	91
◆ Model mapping as an arena for subject thinking	92
◆ Maps and the integration of thinking skills into subject delivery	93
<b>Chapter 5</b>	97
<b>Teaching and learning systems</b> – wising up communication between teachers and learners	
◆ Identifying the system in place in your classroom	98
◆ Developing a positive feedback loop using model mapping	100
◆ Using the loop to develop key thinking skills	104
<b>Chapter 6</b>	107
<b>Maps in the classroom</b> – mapwise classrooms in action	
◆ Explanation	108
◆ Planning	111
◆ Applying maps to the Accelerated Learning Cycle	115
<b>Chapter 7</b>	127
<b>Cleverness and internal maps</b> – understanding how we understand	
◆ Intellectual capital	128
◆ Being clever	129
◆ Distinguishing cleverness	130
◆ Giving it away	135
◆ Putting cleverness into schools	136
<b>Gallery of maps</b>	139
<b>References &amp; Acknowledgements</b>	153

## Foreword

The *Accelerated Learning Series* attempts to pull together new and innovative thinking about learning. The titles in the series offer contemporary solutions to old problems. The series is held together by the accelerated learning model which, in turn, is underwritten by an informed theoretical understanding.

The term 'accelerated learning' can be misleading. The method is not for a specific group of learners, nor for a given age range, nor for a category of perceived ability. The method is not about doing the same things faster. It is not about fast-tracking or about hot-housing. It is a considered, generic approach to learning based on research drawn from disparate disciplines and tested with different age groups and different ability levels in very different circumstances. As such, it can be adapted and applied to very different challenges.

The books in the *Accelerated Learning Series* build from the accelerated learning cycle. The cycle starts by attending to the physical, environmental and social factors in learning. It proposes the worth of a positive and supportive learning environment. It then deliberately attempts to connect to, and build upon, prior knowledge and understanding while presenting an overview of the learning challenge to come. Participants set positive outcomes and define targets towards reaching those outcomes. Information is then presented in visual, auditory and kinesthetic modes and is reinforced through different forms of intelligent response. Frequent, structured opportunities to demonstrate understanding and to rehearse for recall are the concluding feature of the cycle.

Accelerated learning makes the lofty claim to derive its structure from emerging brain research. In the books in the series you will see frequent reference to published work on the human brain. Terms like 'brain-based' are frequently used. This is at once a strength and a weakness. Scientific knowledge is not yet dealing in absolutes when it comes to findings about the human brain. Educators want solutions to their questions now. Science says 'maybe' or 'perhaps' or 'here is a model' or 'this is as much as we can say'.

According to the scientists, sites within the brain that contribute to visual and spatial recall are more highly developed in individuals who, for a living, have to use such functions on a daily basis. Taxi drivers with 40 years of experience have greater neural density within sites of the hippocampus devoted to spatial organisation and recall than does the average member of the public.

I cannot say whether or not this report is true. It does seem to support a number of our underlying principles for accelerated learning. It is a case of 'use it or lose it' and, following Hebb, 'cells that fire together, survive together and wire together'. What's more, 'our capacity for visual and spatial recall is potentially enormous'. For taxi-cab drivers, not only does this mean that they have accurate recall of their ultimate destination, but know the most circuitous route with which to get you there! For our

learners, it again reminds us of the benefit of tapping into the enormous human capacity for visual and spatial organisation.

*MapWise*, like all other books in the *Accelerated Learning Series*, is distinct. It attempts to model the practices it espouses. It is transparent, not only in its ideas and how they can be used but where these ideas originate. Its medium is also its message. It demonstrates the quality of metacognition and invites you to make your own connections. The tools described and demonstrated throughout *MapWise* encourage connectivity. It is connectivity which takes us out of the realm of creating visual images and into the possibility of developing and extending thinking. A good chess player not only remembers the look of the pieces and the positions on the board but also can readily envisage the connective possibilities inherent in each combination of moves. Anyone with a good memory can remember the look of and the spatial location of the pieces. This does not make you a grandmaster. In everyday life and in the classroom, exposure and rehearsal of novel information is not enough. It is only when connectivity is emphasised in our everyday maps of the world that recall improves and our quality of understanding is enhanced.

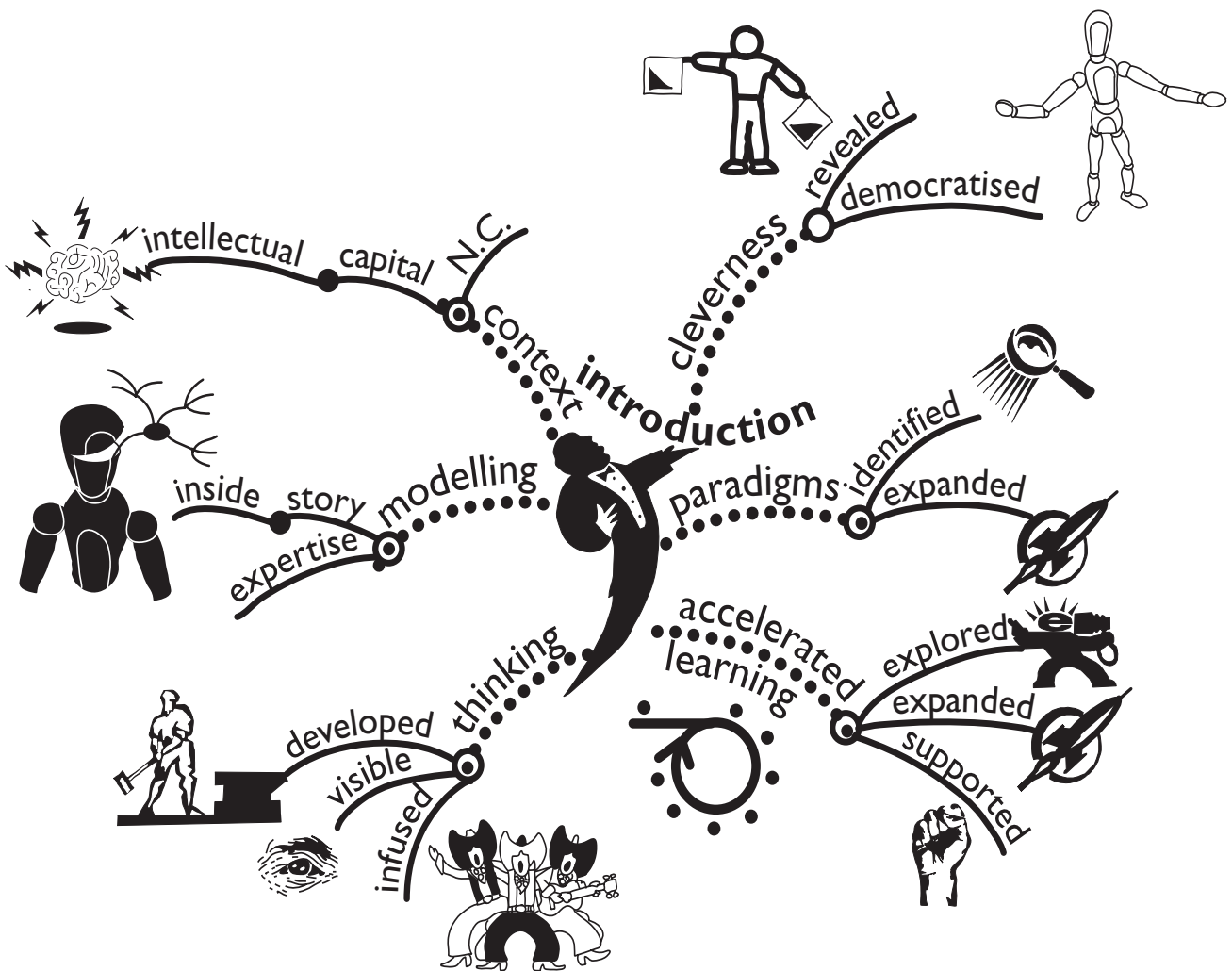
Stephen Pinker neatly epitomises our argument when he says, 'Visual thinking is often driven more strongly by the conceptual knowledge we use to organise our images than by the contents of the images themselves'. He goes on to say that, 'at some point between gazing and thinking, images must give way to ideas' (*How the Mind Works*, by Stephen Pinker, Penguin, 1997, page 298).

*MapWise* is a challenging book. It looks good but is not about being good looking. It uses language, but suggests that language can bury or surface thought. It provides very detailed information, but suggests that information is redundant unless it is connected to other information. It is not about art, but represents itself through striking visual data. I invite you to accept the *MapWise* challenge and would therefore wish to draw *your* attention to the very powerful tools it provides.

Alistair Smith  
*Accelerated Learning Series* General Editor

# Introduction

## ◆ The inside story



Perhaps the best way to illustrate what can be achieved using *MapWise* is to borrow some key phrases from David Blunkett, addressing a conference as UK Minister for Education, and Carol McGuiness, author of the DfEE's report 'From thinking skills to thinking schools'.

*MapWise* 'is about the ability to analyse and make connections, to use knowledge effectively, to solve problems and to think creatively' (1). It is based around a technique called model mapping – a 'theory of cognition, which sees learners as active creators of their knowledge and frameworks of interpretation'.

'Learning is about searching out meaning and imposing structure ... It equips students to go beyond the information given, to deal systematically yet flexibly with novel problems and situations, to adopt a critical attitude to information and argument, as well as to communicate effectively ... If students are to become better thinkers – to learn meaningfully, to think flexibly and to make reasoned judgements – then they must be taught explicitly how to do it.'

Through model mapping, *MapWise* does exactly this – it shows how to help students become better thinkers, and thus 'democratises' cleverness. Model mapping ensures that tasks will always 'have a degree of open-endedness and uncertainty to permit learners to impose meaning or to make judgements or to produce multiple solutions'. Model mapping enables learners 'to make their own thought processes more explicit'; it ensures that 'talking about thinking – questioning, predicting, contradicting, doubting – is not only tolerated but actively pursued' (2).

Governments are now actively promoting thinking skills. They are doing this now with an acknowledgement that making teachers' and pupils' thinking visible is a necessary and very powerful strategy. Yet many schools still conceive of mapping as a specialised technique, appropriate only for visual learners or for specific activities such as revision. By the end of this book you will realise the limitations of these views. You will also see that the claims made in this book about what can be achieved through model mapping are not exaggerated, nor are they particularly ambitious. By the end of the book you will see that they are, in fact, obvious.

## ◆ The inside story

This book gives you access to the 'inside story' of your own thinking and your students' learning. The book is not about what people say or do, but rather what happens that enables them to say or do it. By looking beneath the surface, you can create a uniquely powerful leverage for your teaching.

It is not necessarily easy to explain to others how you do what you do. Even when very skilled people are highly motivated and indeed paid, to tell others how they



"Teaching thinking skills not only makes children more intelligent, it raises standards of achievement."

*Michael Barber, Times Educational Supplement, May 1999*

achieve what they achieve, they mostly fail to do so. It seems that there is not yet an awareness of the need, let alone an agreed technology, for the explanation and demonstration of interior learning processes – the ‘inside story’.

## ◆ Intention of the book

Model mapping has been available for a long time, though you may know it by other names, such as ‘mind mapping’ or ‘memory mapping’. Using this technique, you are able to produce models of your thoughts about a particular concept or idea – hence the name ‘model mapping’.

*MapWise* shows how model mapping can be used as the most powerful accelerated learning technique available for both teachers and learners. It is the first book that demonstrates how model mapping can be used to

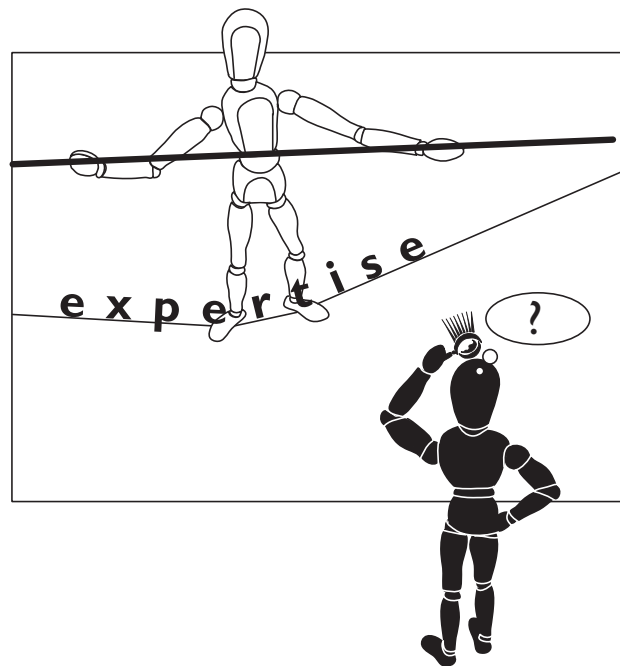
- ◆ teach thinking skills as part of subject delivery
- ◆ support each stage of the accelerated learning process
- ◆ demonstrate and develop intelligence
- ◆ develop four essential learning skills that all learners need – irrespective of their preferred learning style
- ◆ transform the teaching and learning systems in operation in classrooms.

Ultimately *MapWise* will support you in helping your students to understand themselves and the world around them, both at school and beyond. *MapWise* is intended to increase both your own and your students’ capacity for learning.

## ◆ Accelerated learning

Accelerated learning is about learning how to learn. It places emphasis on developing stimulating environments and positive personal states in order to optimise learning. Accelerated learning was once merely a minority interest of those looking for cutting edge approaches to actualising human potential, but it is at last mainstream and making an impact on thousands of students in schools up and down the country. Even the Government (4) is now advocating accelerated learning techniques to teachers and headteachers.

Through accelerated learning, teachers have developed an arsenal of strategies that are tuned to the needs of the learner. They are now rethinking their approaches to



teaching in the light of what research tells us about how our brains work. They are aiming to manage the learning process in order to maximise students' ability to access the content of the curriculum.

With this light shining clearly on learners' needs, the self-esteem of students and their positive outlook on learning are inevitably blossoming. The outcome of learners' new curiosity about themselves is, naturally enough, an improvement in academic results. Focusing on the process of learning in this way is raising standards.

## ◆ Learning how to learn

It is interesting to note, however, that while teachers *are* now focusing on the 'process of learning', this term has not so far included any models of, or strategies for, the actual processes of thinking and learning that occur within the learner's mind. Schools have learned how to design visually stimulating environments, how to create safe and challenging cultures, how to foster self-esteem, how to deliver material in multisensory ways and in a brain-friendly sequence, how to engage the learner's memory, how to meet the learner's physiological needs, and even how to integrate ambient music into learning. All these strategies are a tremendous boost to the learner and make learning more likely to happen. But these strategies do not tell us what learning actually *is* or how it occurs. They therefore comprise only part of what is involved in the well-worn phrase 'learning how to learn'.

In short, it is currently not strictly accurate to say that accelerated learning is about 'learning how to learn'. A more accurate description might be 'learning how to make learning more likely'. When asked what they mean by 'learning how to learn', colleagues' answers relate to the conditions of learning.

It is time this phrase was examined – that the 'inside story' was investigated. There is still a missing set of tools that can do for the mind what accelerated learning has already done for the environment, culture and psycho-physical state of the learner. Now we are able to see the effects that 'external' conditions can have on learning, we are ready to consider the impact that cognitive tools can have on the process of learning itself.

How much better would results be if learners, in addition to experiencing stimulating environments and positive personal states, also had a tool that gave them access to the very structure of their thinking and learning? What if all learners had a technique that could be used to develop their thinking skills? What if all learners knew how to generate ideas, organise concepts, ensure recall and model the thinking of subject specialists? And what if this technology was fun to use, very individualised and easily communicable? Furthermore, what if it was of equal benefit to teachers in their planning, teaching and assessment of students' understanding?