

Thinking Visually

*Step-by-step exercises that promote visual, auditory
and kinesthetic learning*

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This chapter provides an overview of the implementation of the thinking skills used in mapping with an emphasis on subject-specific instruction. This chapter also illustrates how maps assist students in achieving outcomes itemized in official curriculum documents.

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This chapter explains the way in which mapping can be both the catalyst for, and the tool of, an interactive loop between teacher and student. It contrasts the limitation of a linear delivery model of teaching. The chapter also explores how mapping is related to task completion, including examination tasks.

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Foreword

Students learn better when they are able to articulate their thought and learning processes when completing a task. While this is particularly true for struggling learners, gifted students also recognize the benefit of being explicit about their thinking when they confront challenging learning tasks. *Thinking Visually* is a companion to other professional resources that focus on the value of helping students learn how to learn.

Thinking Visually promotes the power of mapping for thinking and learning. While other resources offer collections of graphic organizers, *Thinking Visually* provides step-by-step guides for mapping ideas, subjects, projects and concepts. It argues that mapping is most effectively learned in the context of ongoing subject study. While other sources on strategic learning stress the value of articulating one's approach before, during and after completing a task, *Thinking Visually* facilitates a visual articulation of one's approach throughout the learning process. *Thinking Visually* amplifies the message that teachers should model strategies.

Thinking Visually is solidly rooted in learning theory – particularly the insight that new learning needs to fit into existing familiar structures or mental models. Mapping is a useful strategy for expressing one's current understanding of a topic and for noting one's developing understanding. Therefore, *Thinking Visually* complements professional resources which advocate a demystifying of the learning process and let students in on the secrets of learning.

Other resources on thinking skills and strategies such as *I Think, Therefore I Learn*, recognize that thinking and learning are enhanced when students reflect on their learning tasks, consider alternatives, figure out what works best for them and set goals for future learning. Visual learning strategies, especially mapping, are useful and motivational options for wide-ranging learning tasks. Current resources on thinking and learning unrelentingly emphasize the importance of students articulating how they go about completing tasks; *Thinking Visually* amplifies this emphasis.

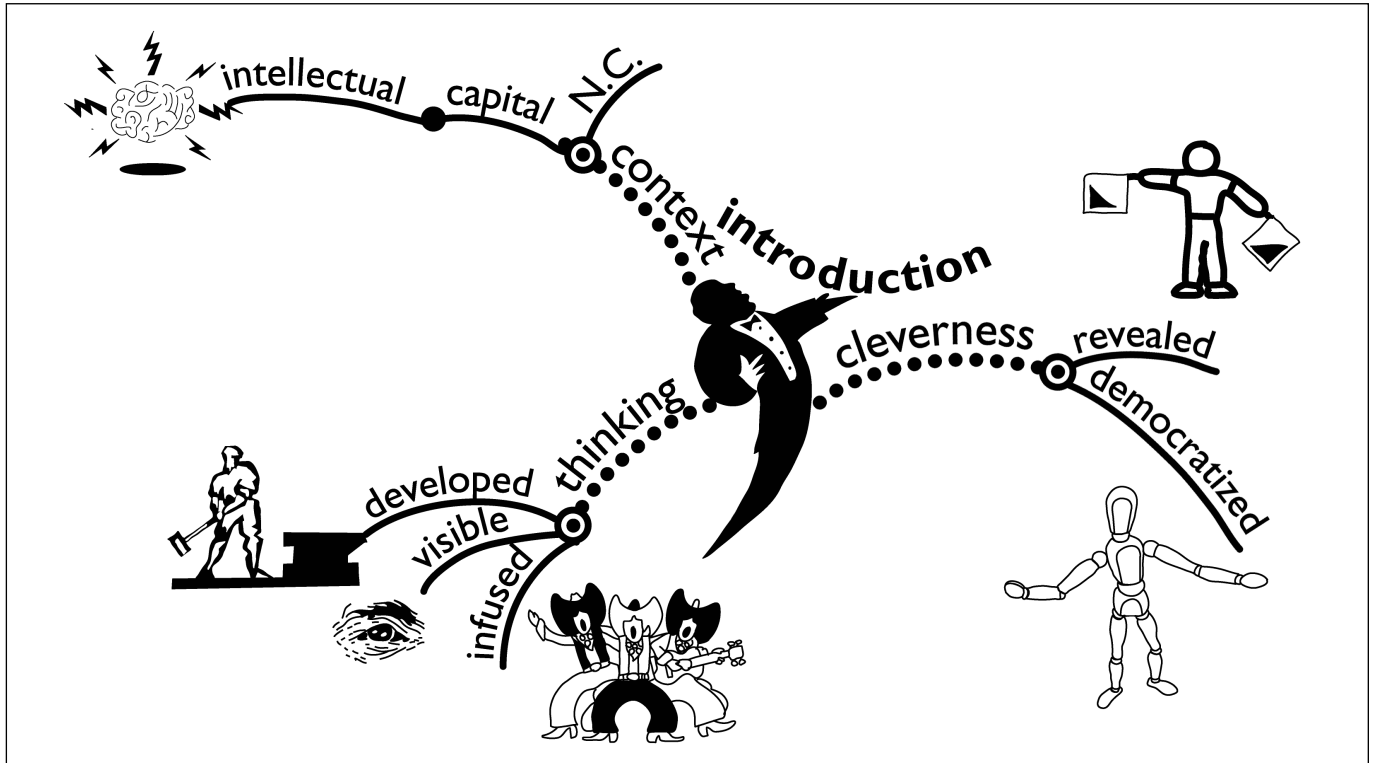
Teachers interested in differentiated instruction will value the book's attention to how mapping benefits visual, auditory and kinesthetic learners. *Thinking Visually* also looks at how mapping can be used to develop thinking skills emphasized in current curriculum documents. Samples of student and teacher maps will certainly be useful for examples and models in the classroom.

Thinking Visually is a valuable reference for teachers and anyone else committed to student ownership and responsibility for their own learning.

Graham Foster
author of *I Think, Therefore I Learn*

Introduction

the inside story



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

Michael Barber, Times Educational Supplement, May 1999

“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 judgments – then they must be taught explicitly how to do it.”

Through mapping, students become better thinkers and learners. Mapping ensures that tasks will always “have a degree of open-endedness and uncertainty to permit learners to impose meaning or to make judgments or to produce multiple solutions”. 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”.

Thinking Visually describes a technique with several names: model mapping, mind mapping, memory mapping, semantic mapping, thought-webbing and sometimes just mapping or webbing. The mapping technique challenges students to comprehend meaning and to impose structure as they learn. It helps students develop and consolidate concepts and to learn new vocabulary. Throughout this book, this technique will be referred to as “mapping”.

Using mapping, you are able to produce models of your thoughts about a particular concept or idea – hence the name “mapping”. *Thinking Visually* shows how mapping can be used as a powerful learning technique available to

both teachers and learners. *Thinking Visually* will emphasize how mapping can be used to

- teach thinking skills as part of subject delivery
- improve reading and writing skills
- support each stage of the 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.

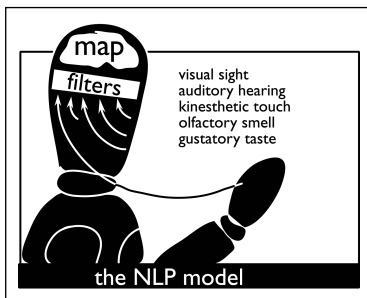
Ultimately *Thinking Visually* will support you in helping your students to understand themselves and the world around them, both at school and beyond. *Thinking Visually* is intended to increase both your own and your students' capacity for learning.

Learning how to learn

It is interesting to note, that while teachers *are* now focusing on the “process of learning”, this term has not emphasized 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 multi-sensory 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”.

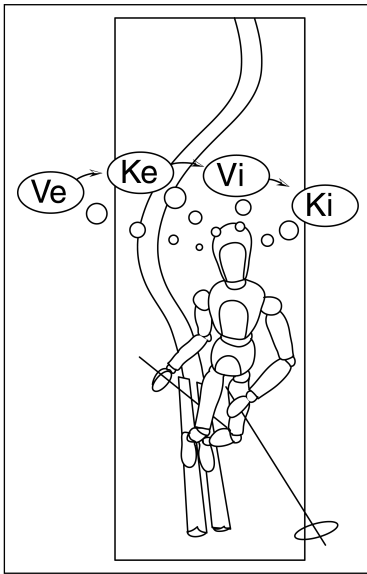
In short, it is currently not strictly accurate to say that effective instruction is about “learning how to learn”. A more accurate description might be “learning how to make learning more likely”. When asked what they mean by “learning how to learn”, colleagues' answers relate to the conditions of learning.

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, organize concepts, ensure recall and model the thinking of subject specialists? And what if this tool was fun to use, very individualized and easily communicable? Furthermore, what if it was of equal benefit to teachers in their planning, teaching and assessment of students' understanding?



Neuro Linguistic Programming

The authors are not alone in their passion for modelling the origins of excellence; the very basis of NLP (Neuro Linguistic Programming) is predicated on this intention. In her book on NLP and learning, Dianne Beaver looks at modelling successful learners. She goes about this by modelling what she can see — behavior. Much to her consternation, the best students in the class



exhibited the worst physical states for learning. They slouched, breathed shallowly, frowned, and worried over their work! This failure is instructive. It shows the limits of lower order analysis.

By contrast, Anthony Robbins, an extraordinarily successful NLP practitioner, has looked at modelling learning from the inside. Through extremely detailed questioning of people who have mastered various activities, Robbins was able to come up with what he calls “the syntax of success”. In modelling an expert skier, for example, Robbins found the exact sequence of internal sensory action he needed to go through. It consisted of very precise directions for attention, such as switching from visual external (watching the expert skier) and kinesthetic external (moving your body as the expert skier is moving), to visual internal (creating an internal picture of the expert skier) and then to kinesthetic internal (feeling the sensation of moving without actually moving).

The sequence continues, but this much gives a sense of the possibility of entering into the same mental landscape as those you are modelling. It is this ability to access internal terrains that gives model mapping such potential for transformation learning. What is going on in the terrain that we call our mind? How can we see the “inside story”?

Compelling reasons

The emphasis of this book is to show how mapping can “democratize” cleverness by literally showing us what it looks like. It can externalize the internal and organized thinking of clever people, which is the basis for their effective decisions and actions. If thinking is spread out onto a map, understanding can be both communicated and developed. Translating rapid, private, ephemeral and abstract thinking into static, public, concrete and accessible demonstrations reveals concepts to all learners.

Essentially, then, mapping supports teachers’ explanations and learners’ understanding. The qualities of mapping that are brought to the fore in *Thinking Visually*, in addition to the established benefits of left-right brain laterality promoted by Tony Buzan, should make mapping irresistible to schools.

Teachers enhance learning by helping students recognize the connection between skills and strategies. In this book skills refer to WHAT students do to complete a learning task. Bloom’s taxonomy is a familiar hierarchy of thinking skills including knowledge, comprehension, application, analysis, synthesis and evaluation. Strategies refer to KNOW-HOW students employ to complete a learning task. Mapping is a powerful strategy that relates to a wide range of thinking skills. Through mapping, students summarize and synthesize knowledge as part of learning tasks that require application, analysis and evaluation.

Thinking Visually aims to provoke you to consider why you are not yet providing this invaluable tool to your students. By completing the step-by-step instructions, you will become accomplished in creating maps. By integrating maps into your teaching, you and your students will benefit. Quite simply, you will be expanding your students’ capacity for learning and thinking.