



FOREWORD

(to the Original Edition)

Everyone agrees that what teachers do in classrooms should be based on what we know about how people learn. However, until recently, we have had few clues to unlock the “black box” that holds the secrets of the brain. New research from the neurosciences is changing this scenario. Our understanding of the neurological underpinnings of the learning process has increased tremendously in the past few decades. We now have a much more solid foundation on which to base educational decisions.

But while the theoretical information is readily available, the translation of this information has not been. How do teachers sift through the enormous amount of available information and determine what applies and what doesn't? What does a brain-compatible classroom look like? Gayle Gregory and Terence Parry have tackled this challenging job of translating the research into classroom practice and provided teachers with what they've been looking for, a guide to brain-compatible instruction.

The book begins with a very understandable synthesis of cognitive research, pulling from the work of leading neuroscientists, psychologists, and educators. An introduction to brain organization and architecture, the role of emotion in attention, and memory systems leads to a listing of general principles of how the brain works. This leads to a discussion of pedagogical theory and how pedagogical researchers and other education professionals have identified a number of powerful instructional techniques that enhance learning.

Intelligence has become a major topic for discussion in recent years. With the publication of Daniel Goleman's *Emotional Intelligence* and Howard Gardner's proposal of multiple intelligences, educators have come to realize that intelligence is much broader than we had previously thought. We have come to understand that IQ measures a very narrow band of intelligence, yet most of our assessment has been based on this measure. Gregory and Parry provide an excellent overview of alternate theories of intelligence, not only looking at Coleman's and Gardner's work but also weaving in Art Costa's description of intelligent behaviors.

Three major instructional methodologies are the focus for a large part of the book. Cooperative group learning (and the collaborative skills students need to work cooperatively), thinking skills, and graphic organizers are presented in a format that offers first a brain-based rationale and description of the method, followed by

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a discussion of why it is needed and how to do it. Readers will find guidelines for using each of the strategies along with numerous examples of what they look like in the classroom.

Instruction that fits well with how the brain learns best is an admirable goal, but it will be difficult to reach if the way we measure attainment doesn't match the instruction. Gregory and Parry address this issue by including an excellent section on assessment. Again, they use the format of describing authentic/performance assessment strategies, discuss why they are needed, and finally, address the practical issue of how to move from the more traditional forms to alternate and more authentic assessments.

Human brains remember what they've seen, and the authors make good use of this finding by including numerous charts, diagrams, and other types of visual tools in this book to increase not only understanding but also retention of the strategies they discuss.

There's a strong possibility that this will become one of the most used books on the educator's bookshelf, and that's all to the good because ultimately it will be the students (and their brains) who benefit.

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