Preface

Leslie Laud

Historically, students of all ages learned together in the one-room schoolhouse. Teachers had no choice but to teach in a way that addressed the different age groups. Differentiation "was how they did school" (Tomlinson, 1999). Students used varied materials and often tutored one another as they learned. As schools expanded, students began to learn with peers in their own age group. Out of this emerged the whole-class teaching model. Unfortunately, so did the problems that come with this model—mainly boredom and frustration. Research has shown how essential it is for students to be taught at the appropriate instructional level and through varied pathways so that they are appropriately engaged (Huebner, 2010).

Instruction must be differentiated in these ways to engage students so that they can learn optimally. Fortunately, we have come a long way since the one-room schoolhouse; this book does not advocate a return to that model, though its reliance on differentiation serves as the guiding premise. In these chapters, current research on the most effective differentiation practices is brought alive through the many suggestions and examples for how these practices might play out in the each of the three major content areas: literacy, mathematics, and science.

Several themes permeate the three sections in this book. The first theme is the differentiation of content. The authors call on teachers to develop common understandings by offering students varied materials, presenting present numerous alternative options and specific examples for doing so. The second focus is on instructional methods. These authors describe in-depth research-based practices such as curriculum compacting or scaffolded support models that demonstrate the kinds of alternative methods that can be used for teaching the same material. They eschew the domination of teacher-directed activities, instead providing innumerable examples of how students can be systematically empowered to drive their own learning. Finally, the pacing of material is another major theme. These authors recognize that not only do students operate at different instructional

levels and learn best through multiple varied experiences and pathways, but that they also move at different paces.

In Part I, the authors address the full gamut of how to differentiate literacy instruction. In Chapter 1, Carolyn Chapman and Rita King cover the arena of reading comprehension, emphasizing diverse options for structuring reading experiences. They describe how to support students with emerging reading comprehension skills bymodeling increasingly complex strategies until these students master those skills. They also describe advanced approaches, such as independent projects and extensions, as well as options for students who fall between these two ends on the spectrum of learning needs. Chapter 2, by Lois A. Lanning, takes differentiation to the next step, demonstrating how to use a guided release of responsibility model so that teachers can prepare students to become more self-directed and self-propelling readers. In a differentiated classroom, teachers often work with small groups and cannot directly guide the full class at all times; students must learn to self-regulate their own learning. Preparing students to take fuller responsibility for directing their own learning is challenging, but with Lanning's guidance, this goal becomes far more attainable.

The first section concludes with Sheila Alber-Morgan's chapter on writing instruction. Continuing the thread of structuring instruction so that students are empowered to take more of the lead in their learning, Alber-Morgan describes the most well-researched writing methods, including the self-regulated strategy development (SRSD) model. Citing the large-scale research that underscores its effectiveness, she provides examples that make the SRSD approach easily accessible to readers familiar and unfamiliar with this model. In Chapter 3, she also describes other writing interventions with the same clarity and extensive research overviews.

Part II gives an overview of how to differentiate mathematics instruction. In Chapter 4, William N. Bender reminds the reader of the traditional model of mathematics instruction in which all students work on the same problem set, taught via one method to the class as a whole. In sharp contrast, he then presents a model for mathematics instruction that is based on the latest brain research about how students learn. This model shifts toward offering students problems to solve that are differentiated, all based on evidence the teacher has gathered about where the students are in their thinking, as related to each new topic they study. Bender offers a teacher-friendly model that acknowledges the busy realities of teachers' lives.

The two following chapters, both by Leslie Laud, cover how to fine-tune how teachers differentiate for students who struggle with mathematics and for students who excel and therefore need additional challenge. Following informal pre-assessments such as those described in Chapter 4, some students with greater needs may require more formal assessments to

help uncover specific areas in which they can benefit from additional assistance. Chapter 5 provides these more fine-tuned assessments along with research-based strategies for addressing the three main areas in which students may struggle: basic facts, conceptual understanding, and procedural algorithms. For each area, specific examples, activities, and reproducibles are offered for teachers to use to strengthen students' understanding. In the next chapter, strategies for stretching students who show greater capability are provided; many are similar to those described in the literacy chapters in Part I. Laud explains how these strategies can be applied to the mathematics curriculum, and addresses unique issues that arise when differentiating in the area of mathematics.

In the final chapter of Part II, Paul J. Riccomini and Bradley S. Witzel detail how to differentiate mathematics instruction within a response to intervention (RTI) model. In this practical and comprehensive treatment describing how to implement RTI in mathematics, these authors cover the research base and address the most pressing and common questions on teachers' minds. They also offer abundant realistic suggestions and resource lists of many of the most strongly research-supported options for tiering mathematics instruction.

Part III, the last section of the book, addresses differentiated instruction in science. Chapter 8, by Douglas Llewellyn, provides an in-depth model of a differentiated lesson, while the second chapter in this section, by Gayle H. Gregory and Elizabeth Hammerman, gives a bird's-eye view regarding how to differentiate across the many facets of the curriculum. Llewellyn's model lesson on motion energy presents the standards addressed in the lesson and the pre-assessments to use, and then demonstrates several different ways in which the lesson can be experienced through different activities that all culminate in similar learnings. Gregory and Hammerman's chapter shows the bigger picture of varied options for differentiating each area of the science curriculum and all the diverse cognitive areas that come into play. The many options they overview, along with the in-depth model Llewellyn offers, leave science teachers well equipped to begin differentiating their own curricular topics.

When one-room schoolhouse teachers differentiated to meet the needs of the multi-age student populations they served, they used practices that are well-supported by today's research findings, such as providing different leveled materials and cross-age tutoring. However, they did not have the benefit of much of the current research on more sophisticated models for differentiating such as curriculum compacting or models for systematically building self-direction in students. Moreover, they often worked in isolation and did not have access to the creative suggestions and models currently available to educators, and reflected in this compendium. Today's teachers are fortunate to live in an information age that makes the kind of teaching described in this book so widely available.