

Contents

Preface	v
About the Author	xi
1. Differentiated Instruction: Then and Now	1
2. Universal Design and Differentiated Instructional Models	25
3. Technology and the New Differentiated Instruction	59
4. Response to Intervention and Differentiated Assessment Strategies	91
5. Instructional Support Strategies for Differentiated Instruction	123
6. Cognitive Strategy Instruction for Differentiated Classes	149
Appendix	177
References	185
Index	195

Preface

Differentiated instruction has become one of the—if not *the*—most widely adopted instructional approach since the concept was articulated by Dr. Carol Tomlinson in her seminal work, *The Differentiated Classroom* (Tomlinson, 1999). Not only has this instructional approach captured the hearts and minds of educators across the nation, it has been applied to one degree or another in virtually every state and in many nations around the world (Bender, 2009a; Bender & Waller, 2011a; 2011b; Berkeley, Bender, Peaster, & Saunders, 2009). In fact, differentiated instruction has now been enshrined in various response to intervention (RTI) initiatives in nearly every state since many state RTI plans have differentiated instruction embedded within them as the basis for Tier 1 instruction in the general education classroom (Berkeley et al., 2009).

Differentiated instruction has become the most widely adopted instructional approach in recent years.

This relatively simple idea that teachers should present varied instructional options and activities based not only on the academic content to be covered but also on the learning styles, preferences, strengths, and weaknesses of the learners in the class has clearly taken root (Bender, 2012a, 2008; Tomlinson, Brimijoin, & Narvaez, 2008), and today it is difficult to find a teacher that is not re-creating his or her instructional approach with an eye toward increasing the variation of instructional activities and assessment practices in his or her classroom.

This idea that teachers should present varied instructional options based not only on the academic content to be covered, but also on the learning styles and preferences of the learners has clearly taken root.

Moreover, it is difficult to find anywhere in the history of educational reforms in this nation any comparable fundamental change in instructional paradigm that was not based in either legislation or a court-mandated educational transition. Differentiated instruction is, indeed, a major transition of instruction that has been and continues to be based on a grassroots movement among educators seeking a more effective way to teach the highly diverse students found in most classrooms today (Bender, 2012b; Bender & Waller, 2011b). Thus, Dr. Tomlinson has done a great service to all educators and, more importantly, to all students in this nation and around the world with the development of this instructional approach.

As this book is published in 2012, it is safe to assert that the concept of differentiated instruction has not only been widely adopted but has indeed grown up (Sousa & Tomlinson, 2011; Tomlinson, 2010)! In fact, the meaning of the

term *differentiation* has changed or migrated to some degree over time from the initial construct as proposed in 1999, and understanding this change over time is critical to understanding the differentiated instructional construct. In fact, there are several notable changes in the theoretical basis for differentiated instruction, as well as multiple other educational initiatives and transformations in instructional practice, that are impacting teachers' collective efforts to differentiate the instruction in their classrooms (Bender & Waller, 2012b). Thus, the concept of a new *differentiated instruction*, as introduced herein, seems very apropos.

Differentiated instruction today emphasizes many different conceptualizations of learning styles, student learning preferences, and ability differences.

For example, unlike the initial work on differentiated instruction, today's differentiation is not tied exclusively to one learning style approach any longer (Bender & Waller, 2011a; Sousa & Tomlinson, 2010, 2011). Rather, differentiated instruction emphasizes many different conceptualizations of learning styles, student learning preferences, and ability differences. Also, both increased

application of instructional technologies and the more recent response to intervention initiative (RTI) have impacted the differentiated instructional approach to such a degree that discussion of any one of these factors in isolation—differentiated instruction, technology in the classroom, and RTI—is virtually meaningless (Bender & Waller, 2011a). In today's classroom, each of these factors impacts the other, and thus, they must be considered together in order to make meaningful instructional recommendations for teachers.

This book represents an initial attempt to explore how differentiated instruction has been transformed by the cross-fertilization of these recent educational initiatives. The various chapters emphasize instructional suggestions for educators working with students with learning disabilities and other disabilities in the general education-inclusive class as well as with nondisabled students who may be struggling in the curriculum. Thus, any educator with a focus on the primary and elementary grades may find this book useful, including

General education teachers	Special education teachers
School psychologists	School administrators
Professional learning communities	Other educational administrators

DESCRIPTION OF THIS BOOK

This book is intended as a professional development book for practicing teachers and, possibly, a supplemental book in college instructional methods courses. With a strong focus on 21st century teaching practices, the book provides numerous instructional strategies for teaching within the context of the Common Core State Standards (www.corestandards.org/the-standards), standards which have been adopted by many states as one foundation of the school curriculum. Each chapter in the book will present specific instructional strategies related to these standards and intended for the general education class.

Many of these strategies will emphasize technology applications as well as the most modern and relevant differentiated instructional practices. Various interest boxes will be presented for supplementary information as needed, and numerous teaching tips, holding specific instructional guidelines for specific teaching tactics will be included in each chapter.

Chapter Descriptions

Chapter 1: *Differentiated Instruction: Then and Now.* This chapter will briefly describe the history of differentiated instruction as a concept, beginning in 1999 and moving through 2012. The chapter will open with an extended discussion of several things that have impacted the differentiated instruction concept, including increased emphasis on brain-compatible instruction and less on the multiple intelligences paradigm. Then, a variety of brain-friendly instructional examples are provided. Next, technology will be described as one factor that can increase and enhance differentiated instruction, along with implementation of Common Core State Standards and the response to intervention (RTI) instructional approaches. Further, the case will be made that these three instructional innovations—differentiation, RTI, and increased use of technology, are mutually supporting in today’s classrooms. Then the application of differentiated instruction specifically for students with learning disabilities and other learning challenges is discussed.

Chapter 2: *Universal Design and Differentiated Instructional Models.* This chapter presents the concept of universal design as the basis for effective classroom organization, showing how universal design will assure access to the general education curriculum for students with learning disabilities and other learning problems. Initially, the chapter describes methods for organizing the class for effective differentiation. Finally, four models of differentiated instruction are described, including modification of a traditional lesson plan using learning centers for differentiation, project-based learning as a differentiated instructional model, and the newest model of differentiated instruction, the “flipped” classroom.

Chapter 3: *Technology and the New Differentiated Instruction.* This chapter will describe a variety of innovative technology-based instructional tactics appropriate for differentiating classroom activities. Initially, a description of the changing model of knowledge for the 21st century will be presented, which will lead to a focus on technology-based instructional ideas, including webquests for differentiating instruction, class blogs, and using wikis in the classroom. Next, several specific instructional tools will be described in detail, including use of social networking for instruction, simulation and gaming formats, the flipped classroom, and Khan Academy—an anytime, anywhere teaching and learning tool. Finally, these tech-based teaching tools will be discussed in terms of the new differentiated instruction and how these tools are transforming the teaching and learning process.

Chapter 4: *Response to Intervention and Differentiated Assessment Strategies.* RTI will be described as a recent innovation that is working for students with learning disabilities and other learning challenges across the nation. RTI is

described in terms of the three-tier pyramid with an emphasis on differentiated instructional assessments in Tier 1 coupled with multiyear universal screening measures. Next, progress monitoring practices in differentiated instruction is discussed, and progress monitoring in Tiers 2 and 3 is described in detail. Next, a case study RTI procedure is presented, with an emphasis on the assessment practices within RTI. Finally, a brief discussion on grading in differentiated instruction is presented, and specific options for grading differentiated instructional activities are provided.

Chapter 5: *Instructional Support Strategies in Differentiated Classes.* Provision of a variety of instructional supports for students with learning disabilities and other learning challenges is critical in differentiated classes for all students with academic deficits because such supportive strategies allow teachers to differentiate the lessons based on students' needs. This chapter presents a variety of supportive instructional techniques, including scaffolded instruction, content enhancements, story maps, graphic organizers, study guides, classwide peer tutoring and reciprocal teaching.

Chapter 6: *Cognitive Strategy Instruction for Differentiated Classes.* In addition to the instructional support strategies above, the research on metacognition has presented an array of additional strategies for the differentiated class. This chapter presents several metacognitive instructional strategies that have been proven to work for students with learning disabilities and other academic deficits. These may be used in the general education class, in special education settings, and in Tiers 1, 2, or 3 in an RTI framework. Strategies include implementation of a cognitive strategies model and self-monitoring. A case study RTI procedure will be described in which an eighth-grade student with reading comprehension problems received a Tier 2 cognitive strategies intervention to increase reading comprehension.

Next, as schools move into 21st century teaching, personal responsibility for learning has been increasingly emphasized, and self-regulation strategies for planning and monitoring of one's own cognitive understanding and behavior have become increasingly important. Self-monitoring and self-regulation of learning for differentiated classes are presented in detail, along with guidelines for implementation.

Appendix: *Intervention Curricula Used for Differentiated Instruction and RTI.*

The Goal

Schools will continue to move into several new and uncharted areas over the next decade, including implementation of the Common Core State Standards, the growing emphasis on the flipped classroom, Internet-based learning, the use of Facebook, Twitter, or other social media, or continuing RTI implementation, including implementation in the upper-grade levels. It is clear that all educators need an understanding of how these innovations fit within their efforts to provide differentiated instruction for all students. Many of the changes are already under way in education, and most will provide excellent opportunities for teachers to structure highly differentiated instruction in their classes.

However, it is one thing to understand and implement any of these single innovations; it is another thing altogether to understand how they fit within the “whole” of differentiated instruction in the classroom, and the latter understanding is critical.

The goal of this book, therefore, is to provide specific instructional strategies for a variety of primary and elementary instructional situations that integrate these innovations in such a way as to result in provision of highly differentiated instruction for students with learning disabilities and others who may struggle in the general education classrooms. I sincerely hope and honestly believe that this book will be of use in that regard.

© Hawker Brownlow Education

Differentiated Instruction

1

Then and Now

DIFFERENTIATED INSTRUCTION: THE FIRST DECADE

Both general education teachers and special education teachers are generally familiar with the concept of differentiated instruction because of the highly diverse learning characteristics displayed by the students in general education classrooms today (Bender, 2008; Bender & Waller, 2011b). Since Tomlinson wrote the initial book on differentiated instruction in 1999, teachers across the nation have begun to implement a wider variety of activities in their classes, based on the differentiated instructional paradigm (O'Meara, 2010; Sousa & Tomlinson, 2011; Tomlinson, 2010). While any group of students is likely to demonstrate considerable variation in their learning characteristics, the learning characteristics that are displayed by many kids with learning disabilities and/or other learning disorders within the general education classroom are likely to further necessitate a variety of learning activities in most general education classes.

As every veteran teacher realizes, students with learning disabilities and other learning disorders may be less engaged in the learning task, unable to cope with multiple instructions, and poorly organized in their thinking and work habits when compared with students without disabilities. Approximately 75 percent of students with learning disabilities are males, and because males are more physically active than females at many age levels (Bender, 2008; King & Gurian, 2006), the mere volume of physical activity shown by males with learning disabilities in the typical classroom can enhance the difficulties these students have. When these deficits are coupled with severe academic deficits, the result can be very challenging for general education and special education teachers alike. Thus, these teachers are hungry for tactics and ideas that work for these challenging students. The differentiated instructional approach, while appropriate for virtually all general education classes, is particularly helpful to students with this array of learning challenges (Bender, 2008).

Origins of Differentiated Instruction

Differentiated instruction is best conceptualized as a teacher's response to the diverse learning needs of students.

The concept of differentiated instruction was originally based on the need for teachers to differentiate instruction to meet the needs of diverse learners in the general education class (Chapman & King, 2005; 2003; O'Meara, 2010; Tomlinson, 1999; 2003). This includes students with learning disabilities as well as

a number of other mild and moderate disabilities, since students with mild and moderate disabilities are quite likely to be included in general education classes. Differentiated instruction was and is best conceptualized as a teacher's response to the diverse learning needs of students in the general education classes (Tomlinson, 2010; 1999; Tomlinson & McTighe, 2006).

Teachers must know the learners in the class, understanding not only such things about each learner as her learning abilities, her academic levels, and her individual learning styles and learning preferences but must also show a concern for each student by tailoring instruction to meet her unique needs. In creating the concept of differentiation, Tomlinson (1999) incorporated a wide range of recent research on how diverse students learn. The concept was primarily founded on Dr. Howard Gardner's concept of multiple intelligences, coupled with the more recent instructional suggestions emerging from the brain-compatible research literature (Gardner, 2006; Goleman, 2006; Moran, Kornhaber, & Gardner, 2006; Sousa & Tomlinson, 2011; Tomlinson, 1999). With this emphasis on diverse learning styles as a backdrop, Tomlinson encouraged teachers to personalize the instructional activities in order to challenge students with a highly interactive, challenging, and interesting curriculum. Teachers were encouraged to consider students' unique learning styles and then differentiate the educational activities presented in the class to provide for those divergent learning styles.

In particular, Tomlinson encouraged differentiation in three areas:

1. *Content* (what is learned)
2. *Process* (how the content is mastered by the student)
3. *Product* (how the learning is observed and evaluated)

The learning content involves what students are to master and what we want the students to accomplish after instruction (Tomlinson, 1999; Tomlinson, 2010). The academic content that students are expected to master is today delineated in state-approved curricula or (for many states) within the Common Core State Standards (www.commoncorestandards.org). Thus, the content, in many ways, is a "given" in education today and typically cannot be varied a great deal by the teacher. However, the presentation of that content can be varied, and teachers might choose to present content in a variety of forms including modeling the content, rehearsal, choral chanting, movement associated with the content, educational games, or student-developed projects associated with the content. Of course, these variations should be established with specific learners and their needs in mind, and all have been

discussed in the literature on differentiation (Bender, 2008; Chapman & King, 2003; 2005; Gregory, 2008).

Differentiated instruction also emphasized the learning process that students must complete in learning the content (Tomlinson, 1999). Of course, different students learn in different ways—some through movement associated with the content, and others through visual aids or graphic organizers, while others learn via outlining (Bender, 2008; 2009a; Sousa & Tomlinson, 2011). In short, the learning process might vary from student to student, so teachers are encouraged to offer a variety of learning options and fit those options to the learning process that best meets the needs of individual students in the class.

Finally, the learning product is of paramount importance because varied demonstrations of learning allow the teacher to determine the students who have mastered the material and those who may need more time and continued instruction (Tomlinson, 1999). Again, the learning styles of the students in the class should help determine what types of products the teacher may wish to accept as demonstrations of learning. In the differentiated learning classroom, it would not be uncommon for a given unit of instruction to have four or five different types of culminating projects that students may choose in order to demonstrate their knowledge of the topic. Art projects, role-play minidramas for groups of students, library or web-based research, digital media portfolios, multimedia projects, as well as paper-and-pencil projects, written reports, or oral reports, all represent excellent projects that students may complete to demonstrate their knowledge (Bender & Waller, 2011b). The various assessment options associated with differentiated instruction are discussed throughout the text.

Using this early view of differentiated instruction, teachers have been expected to modify the instruction in these three areas—content, process, and product—in order to address the individual learning needs of all of the students in the class (Bender, 2008; Tomlinson, 1999; 2010). Furthermore, the teacher's relationship with, and knowledge of, the students in the class was considered the basis for the differentiation, and so the relationship between the teacher and the pupil was and is viewed as critical for effective instruction. Only a solid positive relationship and fairly complete knowledge of the student's abilities, learning styles, and preferences can provide an effective basis for differentiated instruction.

Teachers have been expected to modify the instruction in these three areas—content, process, and product—in order to address the individual learning needs of all of the students in the class.

Multiple Intelligences Theory And Differentiated Instruction

As noted above, Tomlinson based many of her ideas on the theory of multiple intelligences of Dr. Howard Gardner (2006, 1983; Tomlinson, 1999). In short, Tomlinson described the diverse learning needs of students in terms of the various abilities (which Dr. Gardner referred to as intelligences), so in many ways, the early discussions of differentiation were in the early years, clearly tied to the multiple intelligence theory (e.g., Bender, 2008; Chapman & King, 2005). For that reason, some discussion of the multiple intelligences theory is necessary, in order to understand the early perspectives on differentiated instruction.

Dr. Howard Gardner's work on intelligence in children (Gardner, 2006; Moran et al., 2006) has served a crucial function in education, since his work, and other work on learning styles and learning preferences, has refocused how educators understand student learning. Essentially, Gardner postulated eight different intelligences, which he refers to as relatively independent but interacting cognitive capacities (Gardner, 2006; Moran et al., 2006). The eight intelligences that Dr. Gardner considers confirmed are presented in Box 1.1 below. Dr. Gardner has likewise tentatively identified a ninth intelligence (moral intelligence), but does not, as yet, consider the existence of that intelligence confirmed (Gardner, 2006; Sousa & Tomlinson, 2011).



BOX 1.1: GARDNER'S MULTIPLE INTELLIGENCES

Verbal-linguistic: An ability to understand and use spoken and written communications, abstract reasoning, symbolic thinking, and conceptual patterning. Individuals with this strength make excellent poets and attorneys. This intelligence is highly emphasized in schools.

Logical-mathematical: Ability to understand and use logic and numeric symbols and operations, recognize patterns, and see connections between separate pieces of information. These individuals tend to excel in math and related fields such as computer programming.

Musical: Ability to understand and use such concepts as rhythm, pitch, melody, and harmony. These individuals often are highly sensitive to sounds, and will excel in music composition, but note that this intelligences does not necessarily mean the individual has performing talent in each of these areas.

Spatial: Ability to orient and manipulate three-dimensional space. Judgments based on spatial intelligence allow some individuals to shoot a basketball through a hoop 30 feet away with relative ease. These individuals can excel in architecture, mapmaking, and games requiring visualization of objects from differing perspectives.

Bodily-kinesthetic: Ability to coordinate physical movement, or use the body to express emotion. Students with this strength often excel in athletics.

Naturalistic: The ability to distinguish and categorize objects or phenomena in nature, master taxonomy, or demonstrate extreme sensitivity to nature. The ideal occupation for a person with this strength is zoologist.

Interpersonal: An ability to understand, interpret, and interact well with others. Students who seem to "come alive" when working in small-group work represent this type of learner, and the ideal occupation for this person include politics and/or sales.

Intrapersonal: The ability to interpret, explain, and use their own thoughts, feelings, preferences, perceptions, and interests. This ability can assist persons in any job, since self-regulation is one component of success in almost every task. These persons succeed in reflective professions (e.g., authors) and entrepreneurship.

Moral intelligence (the potential ninth intelligence): An ability to contemplate phenomena or questions from a superordinate, moral perspective, beyond sensory data, such as contemplations of the infinite. This is the more recent of these intelligences described, and there are still questions about the reality of this as a separate intelligence.