



Instructional
Methods
for Differentiation &
Deeper
Learning

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Introduction

Portions of this material appear in Stronge, Grant, and Xu (2015).

Sometimes classrooms seem like isolated, black boxes. To discover what makes a teacher effective, we need to look into the black box of the classroom and see how teachers translate their content knowledge, pedagogical skills, and resources into opportunities for student learning. In essence, quality instruction counts; *how* teachers instruct plays a powerful and lasting role in student learning and success.

We have the chapters on instructional delivery organized into two books. The first, *Instructional Strategies for Effective Teaching* (Stronge & Xu, 2016), provides a variety of well-established strategies of teaching, which not only have a strong rationale but also are backed up by lines of research regarding their impact, how they work, and in what scenarios they work best. They form a foundation for quality teaching. There is not a single instructional strategy that can serve as a magical silver bullet and work for all types of learning objectives; instead, effective teaching calls on a broad repertoire of strategies and involves dynamic interactions among content to be learned, pedagogical methods applied, and needs of individual learners.

The second, *Instructional Methods for Differentiation and Deeper Learning* focuses on two distinguishing features of excellent teaching: (1) differentiation and (2) deeper learning. Instead of discussing instructional strategies one by one, this book organizes ideas and practices that cross approaches or models of teaching. These chapters help teachers and instructional leaders think about the needs of students and better understand the strategies in *Instructional Strategies for Effective Teaching* and how to use them to the best benefit of student learning. The strategies presented in *Instructional Strategies for Effective Teaching* are adaptable. Teachers should validate and adjust the methods in their specific classrooms. This book, while still providing standalone teaching skills and strategies, can be considered as necessary and, thus, more mandatory to providing the best instruction to all students. Let's take a closer look at each.

Differentiation

Students come to the classroom varying in culture, socioeconomic status, interests, and abilities. Instead of using uniform strategies for all students, effective teachers design instruction that motivates each student and builds on prior learning and individual ability. The benefits of this approach are great. Adeptly implementing a variety of classroom techniques and strategies enhances student motivation and decreases discipline problems (Dolezal, Welsh, Pressley, & Vincent, 2003).

Differentiated instruction enables teachers to address learner variance by adjusting curriculum, materials, learning activities, learning environment, and assessments. It provides students with optimal avenues to process new knowledge and develop skills according to their readiness and interest, while enjoying equal access to high-quality learning (Tomlinson, 2003).

Deeper Learning

Researchers expect employment in the professional, scientific, technical, and computer systems fields to increase by 45 percent between 2010 and 2018 (U.S. Department of Labor, 2010), and this trend is likely to continue. These fields rely heavily on logic, reasoning, and critical thinking. Thus, business leaders, policymakers, and educators have begun to recognize the development and transfer of complex thinking skills as primary goals for education. Education expert Tony Wagner (2008a, 2008b) has conducted conversations with several hundred business, nonprofit, philanthropic, and education leaders and conducted walkthroughs of classrooms in some of the most highly regarded public schools in the United States. He discovered a disconcerting gap between the qualities that students need to become productive citizens in the 21st century (such as critical thinking

skills, problem solving, collaboration, leadership, adaptability, entrepreneurialism, creativity, effective communication, curiosity, and imagination) and the schooling the students are getting (passive learning environments and uninspired lessons that focus on test preparation and reward memorization). He notes that this problem exists in low-performing *and* high-performing schools.

Beyond this disconnect of expectations, however, effective teachers are aware that brain researchers consider students to be optimized for the development of higher-order cognitive processes. They care about students' ability to transfer learning into out-of-school and other real-world contexts. They focus on meaningful conceptualization of knowledge and skills rather than on isolated facts (Fullan & Langworthy, 2013; Rogers-Chapman & Darling-Hammond, 2013; Wenglinisky, 2004). They provide in-depth explanations of academic content and cover higher-order concepts and skills thoroughly (Wenglinisky, 2004). Again, the benefits are high; Robert Sternberg (2003) finds that elementary and middle school students who receive instruction emphasizing both critical thinking *and* memorization perform better on academic achievement tests than students in classrooms where instruction emphasizes critical thinking *or* memorization.

An Overview of the Book

Because differentiation and deeper learning are so important to effective instruction, each chapter in this book focuses on an important aspect of these two instructional delivery methods. The three chapters in part I focus on differentiation. Chapter 1 is about delivering differentiated remedial instruction. Chapter 2 covers delivering differentiated instruction for gifted students. Finally, chapter 3 details delivering differentiated instruction for culturally and linguistically diverse students.

Part II consists of chapters 4 through 10, which address the following aspects of cognitive challenge: questioning, metacognition, creativity, critical thinking, complex thinking, active learning, and problem-based learning.

To make the book relevant and useful, each chapter includes the following sections.

- An introduction to the instructional method
- What research says about the instructional method
- How to move from research to practice

To end each chapter, we include several handouts to help teachers use these instructional methods immediately. Our intent is for teachers and school leaders to take the methods they find useful right off of the page and put them into practice as seamlessly as possible.

Teachers can use many of the featured methods for self-assessment and reflection. They are also useful for administrators to assess instructional practices from the formative perspective. As summarized in table I.1, we support three specific groups of educators in the important work of delivering effective teaching.

Table I.1: Goals for Each Audience

Audience	Goals of Book
Teachers improving practice	<ul style="list-style-type: none"> • Self-reflection • Guided study • Teacher-directed growth
Teachers teaching teachers	<ul style="list-style-type: none"> • Mentor tips • Instructional coaching tips • Peer networks
Leaders supporting teachers	<ul style="list-style-type: none"> • Directed growth • Supervisor support for teachers • Coordinated curriculum

Summary: So Where Do We Go From Here?

Our goals for this book include improving, supporting, and sustaining student learning with high-quality instructional delivery. The focus of this book is on providing the instruction that students really need—differentiated instruction and instruction that fosters deeper learning—to be successful in not just learning subject-specific knowledge in the classroom but also developing skills they need to address the pressing problems in the 21st century. The chapters in this book represent the idea that quality instruction is a continuous endeavor of refining practice to identify the optimal level of challenge in learning tasks,

increase the rigor of learning, and enhance engagement of students in the learning process. We hope you find this guide on instructional methods practical, solidly researched, and easy to use. Now, let's put these methods to use in your school or classroom.

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Part I

Differentiated Instructional Methods for Effective Teaching

Teachers report that meeting the needs of students with a wide range of learning abilities and backgrounds is one of the greatest challenges they encounter in the classroom. The low self-efficacy related to differentiation has to do with the perceived lack of knowledge and skill about adapting curriculum materials and adjusting instructional strategies efficiently and effectively during the flow of teaching and learning (Tobin & Tippett, 2014). When differentiating instruction, the teacher uses multiple, flexible instructional materials, activities, and assessment techniques so that there are options for students engaging in learning. It also maximizes outcomes.

In order to make differentiated instruction more manageable and practicable, the three chapters in part

I approach differentiation from the following perspectives: delivering differentiated remedial instruction, delivering differentiated instruction for gifted students, and delivering differentiated instruction for culturally and linguistically diverse students. The core information running through these chapters is that instead of using one-size-fits-all strategies for all students, teachers can use differentiated instruction to communicate content and skills in a way that makes them accessible to students based on their individual prior learnings and abilities. Differentiated instruction involves recognizing and acting on students' diversity of readiness, prior knowledge, and interests to enhance each student's growth through diverse materials and optimal support.

Part II

Deeper Learning Methods for Effective Teaching

The concept of deeper learning has become a vital topic of conversation in U.S. education. The three-part definition of deeper learning given by the American Institutes for Research (2014) has a dual focus on academic learning inside of school and real-world application outside of school:

- A deeper understanding of core academic content
- The ability to apply that understanding to novel problems and situations
- The development of a range of competencies, including people skills and self-control (p. 1)

Given the ever-evolving expectations for education, teachers need to examine how instruction has to adapt to be relevant for students' learning needs for their college, career, and citizenship in the 21st century. What type of teaching can prepare the students

to navigate the seismically changing world, have a rewarding career in a rapidly changing workplace, and live a happy and self-fulfilling life? We visualize teaching that develops knowledge, higher-order skills (such as the 4Cs of creativity, critical thinking, communication, and collaboration), and character, as well as establishes lifelong learning habits and an ability to learn how to learn.

In part II, we have selected seven research-based instructional strategies: (1) questioning, (2) metacognition, (3) creativity, (4) critical thinking, (5) complex thinking, (6) active learning, and (7) problem-based learning. These seven chapters will illustrate specific methods to facilitate students' development of a deep understanding of core content and students' ability to think critically, solve problems, communicate effectively, collaborate, self-reflect, and understand how to learn.