

# What Is Learning Theory?

## Introduction

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*Physicians cannot cure an ailment if they do not know how various organs and tissues work. In the same way, a teacher could not solve a learning or motivation problem without knowledge of how the mind works. Presenting an instructional method to a teacher without giving him or her knowledge of the mind is like presenting a drug therapy to a physician without explaining how the drug operates with the body. The more mysterious a therapy or instructional program is (e.g., "It works, but I don't know why"), the more likely it is to be used ineffectively or inappropriately.<sup>1</sup>*

Over the last several decades, opinions on "how to teach" have swayed back and forth from a focus on teachers' methods and approaches to one that includes considerable attention to students' reception of those methods and approaches. In recent years, we have developed a better understanding of the value of "learner-driven" teaching—an approach to classroom instruction and management that purposefully begins with what we know about our students' strengths, weaknesses, thought processes, cognitive development, learning styles, interests, behaviors, and learning differences in hopes of ensuring that our instruction and management are designed purposefully to lead our students to academic success most efficiently.

A number of trends are contributing to this push toward "learner-driven" education:

- **Accountability for student learning.** The growing emphasis on teachers' and schools' accountability for student learning has given new energy to the quest to study systematically which methods and approaches are "working" and which are not—an inquiry that recognizes student learning (rather than teacher mastery or student engagement) as the ultimate measure of an instructional method's success. The U.S. Department of Education, for example, created the "What Works Clearinghouse," which aims to be a central source for scientifically-supported best practices.<sup>2</sup>
- **Advanced research methodologies.** To a greater extent than ever before, rigorous research methodologies—often developed in other areas of social science—are being applied to the evaluation of pedagogy, leading us to greater insights about how children at different ages best process information, interact with others, catalog new knowledge, etc.
- **Learning differences.** The last two decades have seen a marked increase in society's basic understanding (and schools' legal responsibility) regarding learning differences, a trend that encourages us to think critically about how our generic instructional methods and management strategies are received differently by individual minds.

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<sup>1</sup> Byrnes, James P. *Cognitive Development and Learning In Instructional Contexts*, 2d Ed. Allyn and Bacon: Boston, 2001, p. xiii

<sup>2</sup> What Works Clearinghouse website, <http://ies.ed.gov/ncee/wwc/>, accessed 7/1/2010.

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- **Neuroscience and cognitive research.** Significant advancements in neuroscience and cognitive research have altered the way we conceive of human understanding, though scholars acknowledge that we are only beginning to uncover the processes in the brain underlying how we think and learn.

The result of all of these interconnected trends is a realization by educators that we have an obligation to know how our students learn so that we can more effectively and efficiently teach them. As one education expert explains, “when teachers have a thorough understanding of how the brain develops, learns, and organizes itself, they will make better decisions about teaching, and will use programs such as multiple intelligences, learning styles, and cooperative learning more effectively.”<sup>3</sup>

### I. Implications of Learning Theory

This text on Learning Theory will provide you with some basic background about how students learn. We hope that this background will inform your thoughts about each of the other texts you will read this spring, especially *Instructional Planning & Delivery* and *Classroom Management & Culture*. For example, the information discussed here may provide insights into the following questions:

- My school just switched me from fifth grade to second grade. Will the same rules and consequences that I used with fifth-graders work with second-graders? How should I adjust them to match a second-grader’s understanding of rules and consequences?
- In drafting my objectives from my state standards, I find myself consistently teaching to a relatively superficial level of understanding. I know I want to take my students beyond rote memorization. How can I best teach my students concepts, taking them into the realm of higher-order thinking?
- I know from my own school experience that not all students learn the same way. But now that I am a teacher, in what ways should I consider adjusting my lesson planning so that I am sure that I am reaching all students?
- I have three students with learning disabilities in my classroom, one of whom is also diagnosed with Attention Deficit/Hyperactivity Disorder. How should that fact affect my instruction for those students and for the whole class?
- One of my students is homeless and seems to come to school hungry and sleepy every day. These problems are clearly interfering with his ability to learn. What should I do to address those problems? What is my role? How will these challenges affect our goals for his academic achievement?

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<sup>3</sup> Sousa, David. “Is the Fuss About Brain Research Justified?” *Education Week*: Vol. 18, No. 16; December 16, 1998, p. 52.

## II. An Overview of This Text

**Chapters One and Two.** In Chapter One of this text, we will explore several of the most basic—and most commonly used—models for thinking about thinking and learning, including Bloom’s Taxonomy and theories of multiple intelligences and learning modalities. In Chapter Two, we will survey childhood and adolescent cognitive development, highlighting the implications of that information for instructional planning and classroom management. Both of these chapters are designed to give you insight into (and a model for thinking about) what is happening in your students’ minds and how you can adjust your instruction to match your students’ mental processes.

**Chapter Three.** In the third chapter, we will explore learning differences that students bring to your classroom, highlighting particular conditions and diagnoses that almost all teachers encounter in their classroom, including Attention Deficit and Attention Deficit/Hyperactivity Disorders (ADD and AD/HD), emotional disturbances, and various learning disabilities. Chapter Three will also provide tips for adapting instruction for students who learn differently from other students in your classes.

**Chapters Four and Five.** Chapters Four and Five highlight the insights of learning theory into two aspects of instructional planning and implementation that new teachers often find most challenging. First, in Chapter Four, we discuss what it means to “get in your students’ minds” as you lesson plan so that you are ensuring that optimal learning occurs. To that end, we will discuss what it means to “explain” a concept and survey several student-driven strategies for enhancing learning. Then, in Chapter Five, we will focus on the challenges posed by—and benefits of—teaching beyond lower-order objectives to higher-order concepts and processes.

**Chapter Six.** Finally, in Chapter Six, we will take a step back and consider student-centered issues at the very foundation of learning theory—your students’ physical and emotional readiness to learn. Some teachers—especially those teaching in high-poverty areas—find that accessing resources to address students’ extra-academic needs can be a critical component of their relentless pursuit of academic achievement. This chapter will survey some of the health-, safety-, nutrition-, hygiene-, and sleep-related challenges that some students may bring to your classroom, and we will make suggestions on how to address them.



Thus, this text will provide an overview of a wide range of topics related to how students learn. The ultimate purpose of this text, however, is not actually to ensure that you memorize all of this information, but rather to ensure that you, as a teacher concerned with leading your students to academic achievement, are customizing your instruction and management strategies to impact your students’ learning most effectively.