1

Pedagogies in Context

Why Remodel Lessons?

The purpose of this book is to apply the best practices emerging from research and theory in order to help you, the teacher, build lessons that are creative, engaging to students, and as effective as possible in facilitating the learning process.

To achieve this, you'll begin by exploring the context of what's known about pedagogies, tracing some of the major developments in learning theory and recent research to support effective lesson planning and design. By the end of Chapter 1, you should have a basis for understanding how to improve lessons.

In Chapter 2, you'll be introduced to the process of lesson remodeling and, by applying the content of this book, walk through the re-creation of several sample lessons that are connected to the Common Core State Standards for English Language Arts, Literacy in the Social Studies, and Science and Technical Subjects, as well as to the Common Core State Standards Anchors. We then invite you to do the same for your own lessons, drawing on the 95 pedagogical strategies in Chapters 3, 4, and 5 to create better, more creative, and evidence-based lessons. The payoff will be increased student engagement, and perhaps even enhanced teacher engagement, as you challenge yourself to reinvent your lessons by infusing new strategies into the learning process.
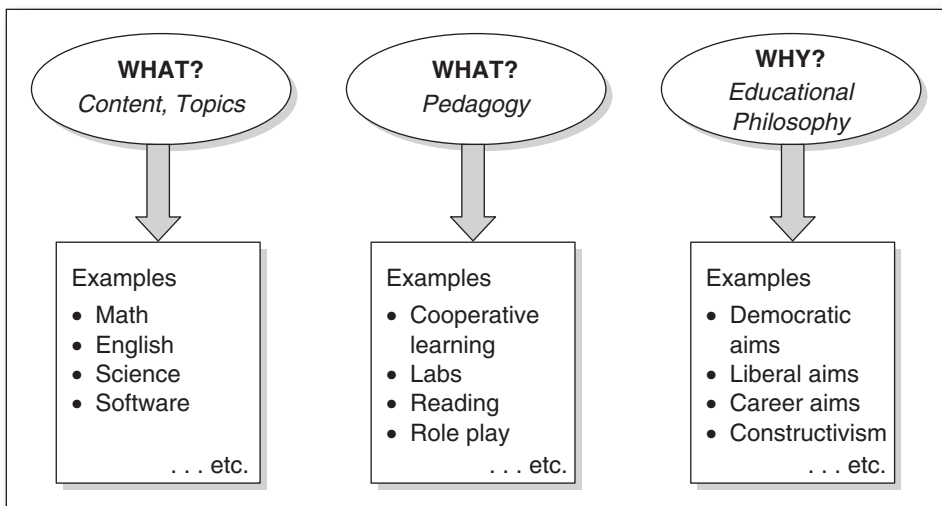
Pedagogies as a Dance to the Music of the Content

The word *pedagogy* comes from the ancient Greek *paidagogos*, the slave who took little boys to and from school. *Merriam-Webster's* defines pedagogy as "the art, science, or profession of teaching." Put in simpler terms, pedagogy is the *how* of education—what teaching/learning/instructional strategies are used. Chapters 3, 4, and 5 of this book provide you with a library of pedagogies to use.

One helpful analogy is that of the dance. Think of pedagogy as the steps in the dance, the body movements, and so on. You cannot dance knowing the steps alone; you also need music. And you need the right music for the steps (or vice versa); salsa dance steps will not work with waltz music. In our analogy, music is the content or topics taught. When you put the music and the steps together, you can dance. Similarly, when you put the pedagogy and the content together, you can teach and students can learn.

While pedagogy is defined as a discrete part of education, it does not happen in isolation from content or from educational philosophy. It influences and is influenced by content and topics (e.g., a teacher must ensure that pedagogies fit with content and topics). Educational philosophy shapes pedagogies as well, and in turn, a teacher's educational philosophy might be shaped by the pedagogies he or she uses. This is illustrated in Figure 1.1.

Figure 1.1   The What, How, and Why of Education

WHAT? Content, Topics	WHAT? Pedagogy	WHY? Educational Philosophy
Examples • Math • English • Science • Software . . . etc.	Examples • Cooperative learning • Labs • Reading • Role play . . . etc.	Examples • Democratic aims • Liberal aims • Career aims • Constructivism . . . etc.

Part of your professional responsibility as a teacher is making pedagogical decisions—choosing from the countless pedagogies available and adapting them to your classroom.

There are many criteria you probably already consider—sometimes consciously, sometimes intuitively—in making pedagogical choices. These criteria might include the following:

- Appropriateness for the content or subject (e.g., in a science course, a hands-on pedagogy for students to perform experiments and experience lab activities)
- The degree to which it addresses particular learning outcomes, such as Common Core State Standards and Anchor Standards
- Age appropriateness for the grade level taught
- Evidence that the pedagogy contributes to student achievement (e.g., past experience, readings, advice from colleagues)
- Alignment with the teacher's educational philosophy or views on education (e.g., for a student-centered teaching philosophy, encouraging students to be active learners)

As you think about pedagogy, keep the following assumptions in mind:

- No two students are alike.
- No two students learn in the identical way.
- An enriched environment for one student is not necessarily enriched for another.
- In the classroom, we should teach students to think for themselves.

In the next section, you'll receive an overview of how our understandings have evolved over time.

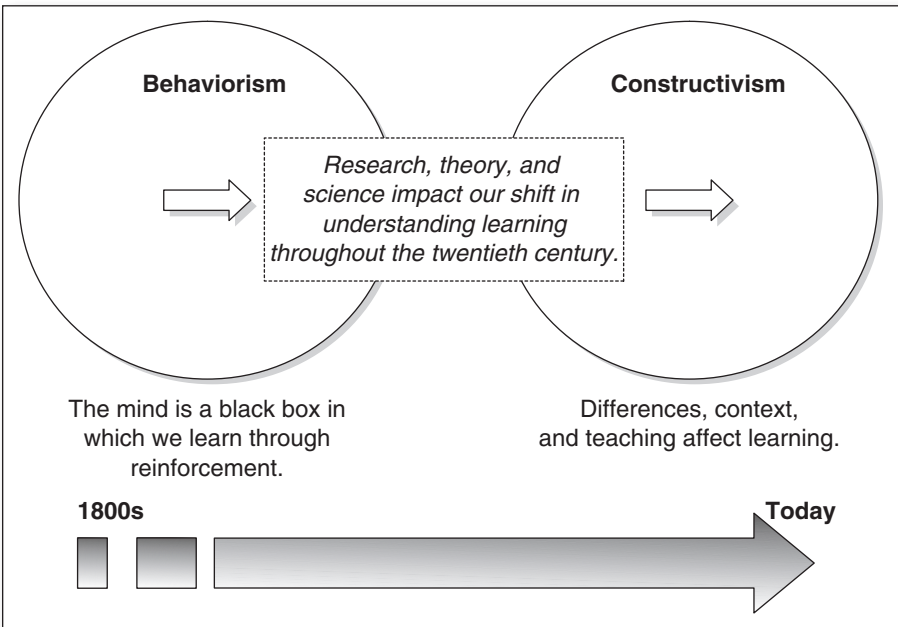## Learning Theories Over Time

Since theorists started examining education, a number of frameworks to understand learning have come and gone. This section will provide a very brief introduction to some of the major theories and frameworks, as summarized in Figure 1.2.

To begin, let's explore the body of knowledge on teaching and learning over time. Figure 1.3 illustrates how we have gone from fairly simple cause-and-effect understandings of education to more intricate theories that address the complexities of how learners participate in the process of making meaning.

| Figure 1.2 | Major Theories Summarized |

Behaviorism	It defines learning as a change in behavior.
	The learner is passive, responding to environmental stimuli.
	Behavior is shaped through positive or negative reinforcement immediately after a behavior, which increases the probability that the behavior will happen again.
Constructivism	Learning is an active process of constructing knowledge based on personal experiences in a specific context.
	Learners continuously test these hypotheses through social negotiation and bring past experiences and cultural factors to any situation.
	As defined by Vygotsky (1978), learning occurs within the zone of proximal development (ZPD), which is the distance between a student's ability to perform a task under adult guidance or with collaboration and the student's ability to solve the problem independently.

Figure 1.3   Pedagogical Theories Over Time

Behaviorism

Constructivism

Research, theory, and science impact our shift in understanding learning throughout the twentieth century.

The mind is a black box in which we learn through reinforcement.

Differences, context, and teaching affect learning.

1800s

Today

These theories also shed light on the underlying assumptions that we as teachers all hold when thinking about teaching and learning. While teachers continue to use elements of behaviorism, many of us blend it with aspects of constructivism, design-based learning, and humanism.

Much has been written about constructivist learning over the past decade, and it is certainly the predominant paradigm in contemporary educational understanding. The key underlying principle of constructivism is the assumption that understanding must be created by students rather than given to them. According to Moersch (1998), constructivism is a philosophical view on how we come to know and learn, and it can be summarized using three fundamental propositions:

1. Understanding is in our interactions with the environment.

2. Cognitive conflict or puzzlement is the stimulus for learning and determines the organization and nature of what is learned.

3. Knowledge evolves through social negotiation and through the evaluation of the viability of individual understandings. (p. 51)

Within constructivism, then, the accent is on the learner rather than the teacher. Unlike the behaviorist tradition, in which the learner is seen as passive, absorbing information transmitted by teacher, constructivism demands activity on the part of the learner. Being passive, the learner is powerless and is subject to the authority of the teacher or trainer, whose main concern is to deliver a standard curriculum and to evaluate stable underlying differences between learners.

It's worth noting that constructivism is largely attributed to John Dewey, an American philosopher, psychologist, and educational reformer. While Dewey's work from the early to mid-1900s reached far beyond education to include philosophy, democracy, and society, he had a major influence on our knowledge of learning in the present day, which he outlined in his works over several decades—*My Pedagogic Creed* (1897), *The School and Society* (1900), *The Child and the Curriculum* (1902), *Democracy and Education* (1916), and *Experience and Education* (1938). Throughout his work, Dewey argued that learners thrive in an environment where they are allowed to experience and interact with the curriculum, and all students should have the opportunity to take part in their own learning. John Dewey believed that education depended on action. Knowledge and ideas only emerged from a situation in which the learners had to draw them out of experiences that had meaning and importance to them. These situations had to occur in a social setting, such as a classroom, where students were involved in manipulating materials; therefore, a community of learners was built and knowledge was formed together within the community.

Research tends to support constructivist pedagogies as effective in deep student learning. Indeed, more recent neuroscientific research (for example, Blakemore & Choudhury, 2006; Rushton & Rushton, 2008; Tate, 2010; van Duijvenvoorde, Zanolie, Rombouts, Raijmakers, & Crone, 2008) focusing on brain development in children and adolescents further supports a movement away from teacher centeredness if we are to create environments that stimulate student learning.

It is generally accepted that teachers ought to *scaffold* learning so that students begin with learning lower-order concepts (knowledge and facts) and work their way up to higher-order skills (synthesizing, analyzing, and applying). Scaffolding means structuring learning sequentially so that topics and assessment build on one another from lower- to higher-order thinking. In practice, this means that questions on a worksheet should move from knowledge to understanding, to application, and so on. To begin scaffolding, first ask students for their prior knowledge on the topic and follow with questions moving upward from knowledge. The concept of scaffolding is derived from Vygotsky's zone of proximal development (ZPD), the difference between what a learner can do without help versus with help.

Understanding Student Centeredness in Learning

Now we will take our discussion of learning theory to a more concrete level. Consider that pedagogies are often discussed in terms of *teacher centeredness* (or teacher directed) versus *student centeredness* (or student directed)—yet another classification system used for understanding pedagogy. Generally speaking, teacher-centered approaches are associated with behaviorism, while student-centered approaches are associated with constructivist and humanist theories. Constructivism requires that the locus of responsibility for learning shifts from the teacher to the learner, who is no longer seen as passive or powerless. The learner is viewed as an individual who is active in constructing new knowledge and understanding, while the teacher is seen as a *facilitator* rather than a dictator in the process.

Also, central to constructivism is that the learner interacts with his or her environment and through that interaction gains an understanding of its features and characteristics. Learners construct their own understandings and find their own solutions to problems rather than being told what to know or do by a teacher. Learning is believed to be the result of individual mental construction in small steps where the learner matches new against given information

rather than by memorization. This does *not* mean giving the learner a problem and leaving it up to him or her to figure it out. Rather, the teacher's job is to structure the path that will lead to the problem's solution—to guide the learning toward success and not leave the learner to struggle.

Both teacher- and student-centered approaches have their place in education—the challenge is to strike a balance that works for the students involved, as well as the subject matter. The table in Figure 1.4 suggests just a few examples in each category.

The work of Edgar Dale (1969) during the 1960s argues that student-centered learning results in greater learning and retention. His *Cone of Experience* (see Figure 1.5) summarizes his theory and research and is consistent with the constructivist perspective that, if students are to learn, they must be actively engaged in the process.

The PAR Model: Applying Evidence to Practice

Research suggests that students only retain 20% of what they learn (Gardiner, 1998). How much do you remember from your high school courses? Why?
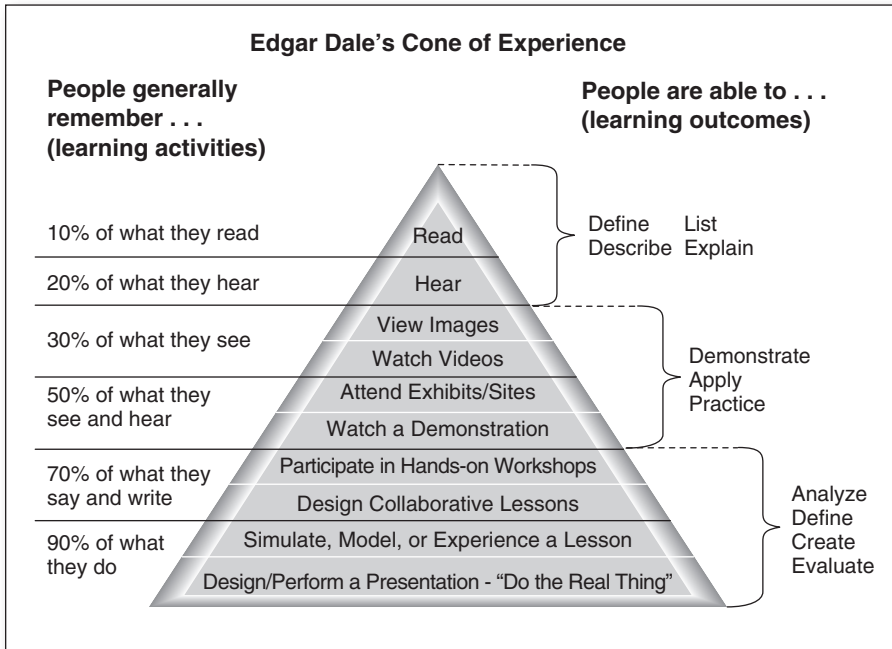
Geoff Petty's (2009) extensive research into effective teaching suggests that the Present-Apply-Review (PAR) model is the most effective (see Figure 1.6). This is the framework that guides this book and the process of lesson remodeling that we offer in Chapter 2.

In his research, Petty (2009) found that optimal learning occurs when no more than 35% of instructional time is spent on the presentation of

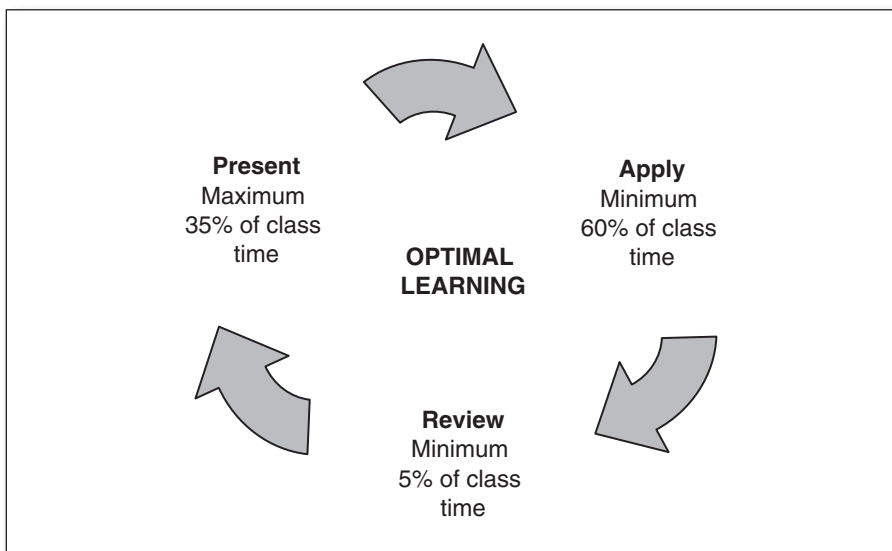| Figure 1.4	Examples of Teacher- and Student-Centered Pedagogies

Teacher-Centered/Directed Pedagogies (Instructional Strategies)	Student-Centered Pedagogies (Learning Strategies)
Lecture	Cooperative learning
Readings	Authentic and project-based learning
Demonstration	Cooperative learning (role play, simulation, discussion, dramatization, concept maps, mind maps, debates, seminars, interviews, in-basket exercises)
Socratic	
Case studies	
Field trips	
Guest speakers	
Drill and practice	
Worksheets	

Figure 1.5   The Cone of Experience

Edgar Dale's Cone of Experience

**People generally remember . . .
(learning activities)**

**People are able to . . .
(learning outcomes)**

10% of what they read	Read
20% of what they hear	Hear
30% of what they see	View Images / Watch Videos
50% of what they see and hear	Attend Exhibits/Sites / Watch a Demonstration
70% of what they say and write	Participate in Hands-on Workshops / Design Collaborative Lessons
90% of what they do	Simulate, Model, or Experience a Lesson / Design/Perform a Presentation - "Do the Real Thing"

Define   List
Describe Explain

Demonstrate
Apply
Practice

Analyze
Define
Create
Evaluate

Source: Creative Commons (http://en.wikipedia.org/wiki/File:Cone_of_learning_export_11x17.png)

Figure 1.6   The PAR Model

Present
Maximum
35% of class
time

Apply
Minimum
60% of class
time

**OPTIMAL
LEARNING**

Review
Minimum
5% of class
time

new material, at least 60% of instructional time allows students to actively apply concepts, and no less than 5% of instructional time is spent on reviewing learning or material.

When we layer this evidence with what we know about effective instruction, we can conclude the following:

- Relatively little time (no more than about one-third) should be spent on presenting new content, and the presentation of new content should avoid teacher centeredness whenever possible.
- The majority of instructional time should be spent allowing students to apply new concepts and ideas through active learning. Students' active application should be structured and carefully thought out by teachers to ensure that students master learning expectations or outcomes. In addition, opportunities to apply should be varied to address learner difference and to engage students through well-designed and novel experiences.
- Some review is necessary for closure, but the time spent on review should not be excessive, though no less than 5% of instructional time. As with presenting and applying, teachers must strive to offer students meaningful opportunities for review, which are student centered, varied, and engaging.

Applying PAR also involves differentiating instruction for your students. Some have used the analogy of an orchestra to illustrate the concept of differentiated instruction. In this analogy, the teacher is the conductor. The conductor has a variety of musicians playing simultaneously—each one has a different strength and a different way of playing the song based on his or her instrument. Thus, the conductor has to ensure that everyone in the orchestra knows the same song but knows it in different ways.

In differentiated instruction, the teacher applies the same learning expectations to all students (the song in our analogy), but how students in the class experience or demonstrate those learning expectations will vary depending on their learning styles, preferences, needs, and strengths.

Essentially, there are four ways to differentiate:

1. Differentiating content/topic, which might involve allowing students to do independent projects based on their interests, curiosities, or strengths; varying an assignment or activity. For example, in a

marketing class, you might have students study advertising campaigns; however, allow students to select which industry interests them in order to promote a higher level of engagement.

2.   Differentiating process/activities, which would entail varied lesson plans so that different students have unique opportunities to learn simultaneously. Suppose you were having students research a particular topic. You might allow some students to work independently in the lab to conduct online research. Some might work in small groups in the classroom, while others might venture out into the community to conduct interviews with community members.

3.   Differentiating product, which might involve different assignments or performance tasks. However, regardless of the type of assignment, all students would be assessed with the same learning expectations. For instance, at the end of a unit, you might give students the option of creating a webpage, a PowerPoint presentation, or an essay to showcase their understanding of a topic. Thus, the topic or content would be the same, but the way it is presented would be differentiated. By differentiating the product, you might also allow highly motivated students to create a more complicated product, and those struggling, a less elaborate product. Again, the learning expectations would remain the same; how those expectations take shape would be different.

4.   Differentiating by manipulating the environment and/or accommodating individual learning styles. Of the four, this is the most complicated way to differentiate learning, though it can go hand in hand with the other three. You might manipulate the environment to address multiple intelligences; thus, process/activities are also differentiated. You might accommodate individual learning styles by differentiating the product students create.

This book helps you to achieve that type of differentiation by applying Petty's research to meet the needs of all learners. By flipping through the many strategies in Chapters 3, 4, and 5, you will have a wealth of ideas at your fingertips that you can vary to meet the needs of all learners while engaging them in order to promote student success.

The strategies in this book are fully aligned to the Common Core State Standards for English and Language Arts, Literacy in the Social Studies, and Science and Technical Subjects (see the online correlations at http://www.corwin.com/95strategies). This allows you to select evidence-based instruction while working toward meeting the expectations laid out in the anchors.

Chapter Conclusion

The body of knowledge about what works in education has evolved over time. We now know that student achievement requires good teaching that is student centered, differentiated, and varied to meet multiple learning needs and preferences and that follows a Present-Apply-Review format.

   In the next chapter, you will be introduced to the process of lesson remodeling, which will guide you through the process of taking an existing lesson and retrofitting it by applying evidence-informed promising practices. Chapters 3, 4, and 5 provide you with the pedagogical *steps and moves* that you can set to the *music* of your subject discipline to enhance your teaching with the needs of your students in mind.