Connecting Learning and Teaching

Main Idea of This Chapter
Establishing a foundation for your teaching helps you understand your teaching decisions.

Principle 1 PEDAGOGICAL CONTENT KNOWLEDGE: The teacher understands the central concepts, tools of inquiry, and structures of the discipline(s) he or she teaches and can create learning experiences that make these aspects of subject matter meaningful for students.

Principle 2 DEVELOPMENTALLY APPROPRIATE TEACHING: The teacher understands how children learn and develop and can provide learning opportunities that support their intellectual, social, and personal development.

Principle 3 LEARNER DIFFERENCES: The teacher uses an understanding of individual and group motivation and behavior to create a learning environment that encourages positive social interaction, active engagement in learning, and self-motivation.

Focus Questions

- What are your beliefs about teaching and learning, and how have they changed over time?
- What makes an effective teacher?
- What kind of educator do you want to be?

DA 2: Learning Principles List
DA 3: What Is Effective Teaching?
DA 4: Your Mission Statement
Before we work through the instructional design (ID) process, we need to establish connections between learning and teaching and between planning and instructional design. Figure 1.1 visualizes these connections and the sequence of the sections in Chapter 1 and Chapter 2.

Chapter 1 examines different views on learning by describing three learning theories and a current conceptualization of what we know about learning from research. We then describe three historical views of teaching and describe the features of learning environments that promote the transfer of learning from the classroom to the students' world.

The four Design Activities in this chapter are particularly important, because they record on paper your views on teaching and learning. You will revisit these drafts in Chapter 10, Reflecting on Your Learning. Collectively, these Design Activities describe the kind of educator you want to be. Before we look in more detail at how people learn, record your perceptions of learning and instruction.
What Is Learning?
What Is Instruction?

Task Rationale  The purpose for this first activity is to define these two important terms.

Task Guidelines
1. What is learning?
2. What is instruction?

Reflectivity
• Cite some examples from your student or teaching experiences that led to what you wrote.
• How do you feel about what you wrote?

Without some reflection, these can be daunting questions. What you write probably represents the basis for your teaching decisions. Now that you have written about your views, let us proceed to the next section, which summarizes the development of different views of learning.

VIEWS OF LEARNING

Historical development of learning theories

Over the past century, three theoretical approaches have provided the primary guidance for instructional practice: behaviorism, cognitive psychology, and constructivism. Mayer (1992) suggested three metaphors that parallel each of these approaches and provide ways of thinking about these theories. These metaphors are learning as response acquisition, learning as knowledge acquisition, and learning as knowledge construction. Next, we briefly discuss each learning theory and its corresponding implications for the design of instruction (Wildman, 1996).

Behavioral learning theory

Behavioral psychology dominated the study of human learning during the first half of the twentieth century. From a behavioral perspective, learning is the acquisition of responses to features in our environment. Learning is achieved through frequent responding and immediate reinforcement of appropriate behaviors. Humans learn over time through the gradual shaping of these desired responses.
Adopting the behavioral theory provides an organized and systematic set of guidelines for instructional design. First, given that the value of the reinforcement is based on the individual learner's needs and interests, the teacher-designer must allow for individual pacing and progress. Subject matter has an inherent organization that must be programmed so that one learns in the appropriate sequence. Consequently, design decisions must follow the caveat "Teach first things first." The sequence of this book follows a logic of first establishing important connections (Chapters 1–2) and then learning about content, learners, and context (Chapter 3), lesson development (Chapters 4–7), and unit development (Chapter 8).

Specific learning objectives specify the performance of the actual task to be mastered. A task analysis (see Chapter 3) breaks down the behavior needed to complete the task into the correct sequence of behaviors. Learning is demonstrated by objective measures in which behavior is defined and measured according to some behavioral indicator.

**Cognitive learning theory**

Mayer's second metaphor, learning as *knowledge acquisition*, reflects the cognitive theory, which has been dominated by the information-processing model of human memory. Beginning in the 1960s and continuing today, learning theorists turned to studying mental models and mental processes, such as thinking, remembering, and problem solving. Key memory structures and processes were identified, with the computer as the metaphor for the human memory system. Memory and recall depend on the quality of processing. New information is built onto existing knowledge structures. Internal executive control is required to enable the entire system to function efficiently.

ID considerations expanded, adopting the cognitive theory. Instruction is designed to promote thinking activity that approximates an expert. The lesson and unit development of expert teachers are discussed in Chapter 2, and we provide learning aids in the form of lesson and unit plan outlines. These tools structure your thinking and teaching decisions. Such task structure is a feature of cognitive learning theory.

Using a cognitive learning theory in one's teaching means that appropriate activities are designed for students to help them "process" new information. In addition, specific learning strategies are taught to ensure that the learner efficiently acquires information or solves a problem. This book's Teacher Decision Cycle uses a set of questions to unpack the decision making of expert teachers. Another cognitive strategy is the use of organizers as instructional aids to help teachers structure conceptual knowledge. The organizers at the beginning of each chapter in this book visually represent the scope of the chapter, and tables throughout the text summarize important ideas.
Social constructivist learning theory

Since the 1980s, learning has been depicted as knowledge construction. In what is most frequently termed a constructivist framework, unique understandings are assumed to be natural, and responsibility for learning resides primarily with the learner. Of particular importance is the assumption that all thinking is embedded in particular settings, and these, along with learning tools and tasks, must be taken into account in designing instruction.

There are many different kinds of constructivism (Phillips, 1995). Radical constructivism views understanding as totally individual (e.g., von Glaserfeld, 1984). A Piagetian approach is predominantly individual, and social interaction is seen as a catalyst (Greeno, Collins, & Resnick, 1996). Social constructivism (e.g., Vygotsky, 1978) emphasizes the social world to define reality and knowledge.

Learning goals and activity are the focus within teacher–learner interactions. The idea of communities of learners (Brown, 1994) is that both teachers and students are learners. Learning involves problems that are relevant to the learner and frequently emerge during learning activity. Teachers, other adults, or peers do not disseminate information but assist learners (Tharp & Gallimore, 1988). Assessment practices have students solve real-life problems and promote self-reflection and learner responsibility. This theory provides the basis for the Design Activities in this book. The best way to learn how to develop lessons and units is to design, teach, reflect, and improve them.

Figure 1.2 visualizes the metaphoric differences of learning according to these three theories and their implications for instructional design.

<table>
<thead>
<tr>
<th>Learning Theory</th>
<th>Metaphor of Learning Theory</th>
<th>Implications for ID</th>
</tr>
</thead>
</table>
| Behavioral theory     | Learning as response acquisition | • Individual progress  
                        |                                                           | • Content sequencing  
                        |                                                           | • Analysis of learning task  
                        |                                                           | • Assessment keyed to behavior |
| Cognitive theory      | Learning as knowledge acquisition | • Structure activity  
                        |                                                           | • Support expert development  
                        |                                                           | • Learning strategies  
                        |                                                           | • Organizers  
                        |                                                           | • Assessment keyed to performance on activity |
| Constructivist theory | Learning as knowledge construction | • Share control with students  
                        |                                                           | • Emergent understandings  
                        |                                                           | • Authentic activity  
                        |                                                           | • Peers and adults assist learner  
                        |                                                           | • Assessment includes self-reflection and learner responsibility |

**FIGURE 1.2.** Learning Theories, Metaphors, and ID Use.
Current concepts of learning

The following sections describe the five major themes of learning that have emerged from the last thirty years of research. This summary is based on work from the National Research Council (NRC) documented in *How People Learn* (Bransford, Brown, & Cocking, 2000). The sixteen experts who wrote this report consulted many other experts in their fields.

**Organizing knowledge in memory**

Research in cognition has identified two types of conceptual mechanisms to explain how humans store learning as short-term or working memory and as long-term memory. If we had only short-term memory, our behavior and thinking would be limited to the amount of information we could remember and recall quickly. Without a means for storing this learning, we would have to start all over again. Research has demonstrated that there are limits to what information people can hold in their short-term memory without repeating the learning.

Researchers have also studied how people learn the meaning and understanding of information by developing and retaining personally meaningful structures in their minds. If you knew how each of your students made sense of and used new information, then you could present this information more effectively. Teachers must also attend to the ways in which they structure and present new information or learning activities. Assessment requires ongoing review of student learning as students make sense of new knowledge in unique ways. Teachers encourage students to consider more correct representations of new knowledge, skills, or procedures.

**Solving problems**

Research on expert-novice differences has contributed directly to the purpose of school as envisioned by the National Commission on Teaching and America’s Future (1986)—namely, to prepare students for the global economy. Attributes valued in this global economy are abilities to learn more than one job, adjust and adapt to changing conditions, communicate with others, and solve problems. Solving any problem requires exposure to strategies that help the learner determine relevant information and the problem type, formulate a technique to solve the problem, and evaluate the result. The research into how experts solve problems has given us an understanding of what information they acquire and how they organize, represent, and interpret this knowledge for particular problem types and situations.

**Developing learners**

Taking a developmental view of students provides teachers with insights on learner differences and different conceptions of how humans generally learn
in stages over their lifespan. Piaget's stage theory of cognitive development (i.e., sensorimotor, preoperational, concrete operational, and formal operational stages) gives teachers typical characteristics of cognitive abilities at each stage (Driscoll, 2000). Family, friends, role models, the community, and one's ideological and social culture provide additional influences. Other views of child development may take a more holistic or systems view of children in their environment (Bronfenbrenner, 1979) and address different influences of biology, psychology, and social factors.

Another aspect of a developmental perspective is the differences between children and adult learners in terms of learner characteristics. Examples of learner characteristics are age, gender, educational level, achievement level, prerequisite knowledge and skills, socioeconomic background, learning preferences, motivation, beliefs and attitudes, and expectations. Understanding students' learning characteristics can enable you to adjust your teaching to meet the needs of individual students.

A third aspect of the developmental view is an individual's different ways of interacting with the world and of learning from the world. The field of special education contributes understanding of the vast differences in children's physical, cognitive, and social capabilities. Special education teachers and specialists can be critical collaborators in helping general education teachers respond appropriately to the success of these individuals.

**Learning how to learn**

Cognitive research has also provided insights on how humans understand how they learn and make judgments on changing the way they learn, sometimes referred to as metacognition, or thinking about one's thinking. This topic raises teachers' awareness to the differences in how individuals learn and provides ways of responding to these differences. Study strategies, which help individual students become aware of how they learn, can be incorporated into learning activities. Different reading and studying strategies are useful here, such as different techniques for note taking that help students recall and use information.

**Living and learning in the world**

Researchers have acknowledged the influence of the social and cultural context of learning. Learning to cope in a global economy requires, then, that teaching takes into account the social environment in which children live and that these influences can be included in learning activities. Involving parents and the community in school decisions acknowledges the social and cultural heritage of children within the school. One of the characteristics of an effective teacher, discussed later in this chapter, is helping students apply what they are learning in school to participating in unique forms of activity in the global community.
Learning principles

Many teachers use learning principles from one or more learning theories in their teaching. A learning principle is a statement about ways people learn that is based on a learning theory that is backed by research (Ormrod, 2000). For example, shaping is a behavioral principle that involves reinforcing a gradual change in behavior until the desired behavior is reached. An example of applying this learning principle is when a teacher helps students experience success in small writing tasks and then progressively increases the scope of the writing.

The next Design Activity asks you to identify the learning principles that match your view of teaching and the theory (or theories) that support them. This activity requires that you read outside sources to learn more about the educational application of these learning principles.
Learning Principles List

Task Rationale
Identifying learning principles that are important to you can help you document a theoretical foundation for your teaching, a foundation that may tap principles from more than one learning theory.

Task Guidelines
1. Identify one article or book chapter that addresses each of the three learning theories: behavioral, cognitive, and constructivist.
2. Read each article or chapter and record the learning principles that are important in your teaching.
3. On a separate piece of paper, identify and record ten learning principles and label each with the appropriate learning theory or theories. For each, provide an example of how this learning principle is used or could be used in your teaching.

<table>
<thead>
<tr>
<th>Learning Principle</th>
<th>Learning Theory</th>
<th>Example</th>
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Reflectivity
- Which learning theory was predominant?
- Why did you favor or not favor a particular learning theory?

VIEWS OF TEACHING

Historical views of teaching

Different views of teaching have evolved in a way somewhat parallel to the shifting views on how humans learn. Three views are presented here in terms of their predominant metaphor.

Teacher as behavioral manager

The first view of the teacher, as conceptualized by the research community, was the skilled manager of student behavior and a master of technique (Clark & Yinger, 1987). In this view, which is still valued today, a competent teacher possesses a set
of skills or competencies, usually evaluated by standardized achievement measures (Good & Brophy, 1987). So, what could be wrong with this view? Isn’t this what we are paying teachers for? Is this not what is known as a master teacher?

Taken literally, the implication of this view is that good teaching involves mastery of technique and that teachers react rather than act as professionals. Professionals in any field call upon their expertise, as well as on the expertise and codes of conduct developed by others. Master teachers call on years of experience in appraising “where” their students are, both developmentally and academically. The agenda that teachers are responsible for is much too complex to be addressed by a technical approach. No bag of tricks is large enough to account for the endless contingencies facing a teacher. There is no index comprehensive enough for the new teacher to consult.

**Teacher as decision maker**

The image of the teacher as behavioral manager came to be complemented by a view of the teacher as a skilled decision maker. This second wave of researchers examined aspects of teacher thinking, which was based on the conceptualization of the teacher as a human who acts and thinks. Teaching was viewed as a trio of thoughts: a teacher’s theories and beliefs, the planning of what one does before teaching, and the thinking during the actual implementation of the planning. This view acknowledged the reciprocal effect that teacher thinking had on student behavior, teacher actions, and student achievement (Clark & Peterson, 1986) and that student achievement, for example, had on changes in teacher thinking and actions.

The goals for the teacher thinking research program were to (a) describe the mental lives of teachers, (b) understand how the behavior of teachers takes on numerous forms and functions, and (c) understand how humans manage the complexity of classroom teaching. This second view of teaching corresponds to a cognitive portrayal of teaching (Clark, 1983).

**Teacher as reflective practitioner**

A new view of the teacher then emerged that acknowledged teacher thinking and actions, but within a rich context of influences, activities, interactions, and change. In addition to the unpredictability of the classroom, other constraints and opportunities entered the picture, including the influences of parents, schools, and state and national governments (Borko & Shavelson, 1990). Teaching that acknowledges this complexity and uncertainty requires teachers who can experiment, reframe, and reflect during and after teaching. Thus, teachers came to be viewed as *reflective practitioners* (Schön, 1983, 1987) who are continually engaged in their own learning as well as the learning of their students. This view of the teacher operating within a changing context resonates with the third theory of learning—namely, the social constructivist view.
Figure 1.3 summarizes how the different learning theories align with different views of teaching.

- Each of the three learning theories and views of teaching has merits.
- A teacher must master many skills, but this development takes time and desire, resources, and administrative support.
- New teachers tend to value competency in technique and management of student behavior more than reflective thinking.
- Instructors in public schools and higher education, other educators, parents, and politicians look at educational issues in different ways.
- Just because the research community views teaching as a reflective activity does not mean that teachers believe this or that they choose to be reflective.

This text is based on our view that teachers are skilled decision makers but that teachers must continually reflect and adjust their teaching in response to changing classroom conditions and an ongoing awareness of student needs.
How do you view teaching?

It is sometimes difficult to know how to proceed when reading conceptual views of teaching, as described by the foregoing discussion of learning environments. The next Design Activity asks you to identify words or short phrases that describe your view of effective teaching.

**DESIGN ACTIVITY 3**

What Is Effective Teaching?

**Task Rationale**  This task provides another means of examining your views on teaching.

**Task Guidelines**  
1. List the top three features that characterize effective teaching.
2. List three qualities of effective teaching that you would like to develop as a teacher.
3. List three habits or behaviors you would like to change.

**Reflectivity**  
• Elaborate briefly on the reasons why you chose your three features of effective teaching.

Your views of learning and teaching

The following Design Activity taps what you wrote in earlier Design Activities, including (a) your initial definitions of learning and instruction, (b) your list of learning principles, and (c) your beliefs about effective teaching.
Your Mission Statement

Task Rationale  The purpose of this task is to crystallize your learning principles into a draft statement that guides your instructional development efforts.

Task Guidelines  This activity may require multiple drafts over time, so trust yourself to make an initial mission statement and then revise one or more times, until you are satisfied with the results.
1. Prioritize your list of Learning Principles to a top-five list.
2. In a paragraph, pull together your ideas about learning and instruction, using some of your learning principles.

Reflectivity  • Write about the thinking and strategies that went into completing your mission statement paragraph. This question is a metacognitive question.
• What were your reactions to this activity and to what you wrote?

Current concepts of teaching

The degree to which a teacher is able to support the transfer of learning from the classroom to applications outside the school is directly related to the learning environment "created" by the teacher. The four interconnected features of learning environments discussed next were developed from research conducted by the Cognition and Technology Group at Vanderbilt University (Bransford, Brown, & Cocking, 2000). Although discussed separately, these features overlap and support each other.

Learner-centered

The principal characteristic of a learner-centered learning environment is the degree to which a teacher values what students know and the source for their understanding. This means continually learning about students' backgrounds,
interests, and concerns and adapting instruction to take advantage of students' interests. In addition, learner-centeredness values students' representations of their understanding. Although younger students' conceptual understandings may be faulty, the teacher addresses these difficulties by first seeing the types and ranges of misrepresentations. A third feature of a learner-centered environment is the teacher-as-learner, or the degree to which teachers see themselves as learners, actively integral to student inquiry, rather than as always knowing the answer. In a global society, no one is privileged to have all the answers, and teachers can model this ongoing learning attitude by engaging in learning activity with students. A fourth characteristic of a learner-centered environment is student responsiveness or the degree to which a teacher supports student learning by an ongoing process of "where students are" and where they as teachers "need to be." Responsiveness can take other forms, including personal concern for students, responsive feedback, strong expectations, and the modeling of moral and responsible behavior.

**Knowledge-centered**

A major characteristic of knowledge-centered learning environments is the degree to which they foster student understanding of knowledge and how students use this knowledge in a variety of applications. Success depends directly on the teachers' awareness of this goal; the design for understanding in lessons, units, and curricula; and its implementation. This design for understanding is discussed in later chapters. Instructional design provides the structure to improve the likelihood of success in this area. Coming to understand the developmental differences of children helps the teacher design appropriate instruction.

**Assessment-centered**

The major characteristic of an assessment-centered learning environment is the degree to which assessment is used to monitor student learning and give constructive feedback to students as they learn. Assessment in this context contributes to student learning rather than merely being an evaluative judgment. Many of the skills we urge children to learn for survival in the global economy require teacher feedback—feedback that is consistent, constructive, and prompt. Peer assessment or feedback is underused as an assessment tool. Another important criterion to an assessment-centered learning environment is alignment of teaching and assessment decisions. If problem solving is the goal for the future citizenry of a global economy, then assessing student understanding, competence, and mastery must be conducted by using problem-solving activities in a variety of applications.
Community-centered

Manning, Curtis, and McMillen (1996) identify several characteristics of community. The first characteristic is having a community vision. What are our values? Where do we want to go, and how do we get there? Having a vision for your teaching and a collective vision shared with students creates a shared learning environment where students could become less passive and more invested. A second characteristic of community is having interpersonal skills. Can we get along and have true dialogue over differences? Do we truly value relationships? Interpersonal skills become an important item in content learning and require instructional time. A third characteristic for community is the value of human diversity. Can we come to understand others outside our perspective? Can we suspend judgment and learn from others? Diversity becomes another component to what is taught and learned. Finally, a fourth characteristic of community is the empowerment of people. Can we help ourselves by using our abilities and sensibilities to help others? In short, if we can build community in schools, the "learning transfer" is significant, and students can model community for others in their neighborhoods.

Figure 1.4 summarizes the features of the four interconnected aspects of today's learning environments, all of which can be designed by the teacher.

<table>
<thead>
<tr>
<th>Features of Learning Environments</th>
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<tbody>
<tr>
<td>Learner-centered</td>
</tr>
<tr>
<td>• Student backgrounds, interests, concerns</td>
</tr>
<tr>
<td>• Student representations</td>
</tr>
<tr>
<td>• Teacher as learner</td>
</tr>
<tr>
<td>• Responsiveness to student needs</td>
</tr>
<tr>
<td>Knowledge-centered</td>
</tr>
<tr>
<td>• Student use of knowledge</td>
</tr>
<tr>
<td>• Design for understanding</td>
</tr>
<tr>
<td>• Students' individual differences</td>
</tr>
<tr>
<td>Assessment-centered</td>
</tr>
<tr>
<td>• Monitoring of student learning</td>
</tr>
<tr>
<td>• Alignment of teaching with assessment</td>
</tr>
<tr>
<td>Community-centered</td>
</tr>
<tr>
<td>• Community vision</td>
</tr>
<tr>
<td>• Interpersonal skills</td>
</tr>
<tr>
<td>• Human diversity</td>
</tr>
<tr>
<td>• Empowerment of people</td>
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</tbody>
</table>

Used with permission of the National Academy of Sciences.

New teachers frequently write about their desire to create student-centered environments. The previous discussion suggests several items to consider in the design of instruction. These features provide an experienced teacher with a checklist if learner-centered environments are the goal. Other features suggested here, such as knowledge, assessment, and community, contribute to the transfer of school learning to the learner's wider world.
Recapping Chapter 1: Making Connections

- We connected teaching with instructional design by identifying how different chapters of the text matched one or more of the INTASC principles for new and experienced teachers.
- Chapter 1 connected teaching and learning by viewing the historical evolution of learning theories and views of teaching. You can still find educators, parents, and politicians who subscribe to each of the views discussed in this chapter.
- Chapter 2 will contrast the differences between planning and instruction. We will examine four different ID models that have been designed to help teachers think more systematically about their teaching.

An Idea Worth Thinking About

"Learning is a human enterprise. With this understanding, we cannot dismiss or ignore the value of our beliefs about learning in the design of learning opportunities. Such a stance complicates designing, but it also opens the doors for many possibilities."  
(Shambaugh & Magliaro, 1997, p. 4)

By continually reexamining your views and beliefs on learning and teaching, you remain cognizant that your intentions as a teacher appropriately address student learning.

Reflective Teaching

"A Note to All Readers"... from Stephanie Runion

At the end of each chapter, you will find a section entitled "Reflective Teaching." I am the author of these reflective teaching scenarios. I am a public school teacher and have taught Title I for the past four years in public schools. I have received a bachelor’s degree in elementary education, a master’s degree in reading, and, most recently, my second master’s, in technology education.

As I read through this text, I tried to think of a teaching experience that I have either had personally or encountered that would tie into the main theme of each chapter. I hope that you, as a teacher, find my reflectivity beneficial as you design and develop lessons and units to use in your classroom settings.

As I began to write for each of the chapters, one central theme kept running through my head. Teaching is an extremely complex profession! What do you do when you spend forty-five minutes a day, five days a week, trying to help a child learn basic sight words but the child just doesn’t seem to be making any progress? What do you do when you know a child could make leaps and bounds when it comes to reading if only the child practiced with guidance
at home, but you can't get the parent to commit to your suggestions? What do you do when you want more than anything to teach reading but the students in your class are too hungry, too tired, or too worried about “grown-up” issues like custody to care much about reading?

No matter what stage of teaching you are in—just beginning or just about ready to retire—your job as a teacher will change each and every day. As a teacher, you have many issues and concerns running through your head simultaneously on a daily basis. It's a constant juggling act! It truly takes a teacher who is knowledgeable, prepared, and dedicated to be able to keep all of the balls in the air.

Best of luck to you in your education and as you begin your career as a teacher. I truly believe that you have chosen one of the most challenging and rewarding professions in the world. Best wishes!

**Teacher Inquiry**

- Describe any investigation you have conducted about your teaching. What do you believe teacher inquiry is about?
- What learning principles form the core basis for your teaching? Which new learning principles interest you, and how will you apply them in your teaching? Which of these might form the basis for teacher research?
- Consider joint research with one or more peers. Your focus might be on use of a particular teaching strategy. Your inquiry might involve teachers in your school or one or more teachers from a neighboring school.

**REFERENCES**


**RESOURCES**

**Print Resources**

**Reflectivity**


Teaching is viewed through four critical lenses: teacher autobiographies, students, peer perceptions, and theoretical literature. Tools suggested include teaching diaries, role model profiles, participant learning portfolios, structured critical conversation, the Critical Incident Classroom Questionnaire, and the Good Practices Audit.


Guides students through field experiences.


This title is one of the most cited books on professional reflectivity. The author writes in the context of the architectural design studio, but his thoughts on the "reflective practitioner" also apply to teaching.


Discusses the "paradoxes and predicaments" of reflecting within professional activity. Includes three examples of reflectivity.


Makes a case for three types of reflective thinking: technical, contextual, and dialectical. Describes activities to introduce reflective thinking to teachers. Describes observations, journals, teaching evaluation rubrics, narrative, mental models, and action research as tools to develop reflectivity.


Reflective stories from eighteen teachers discussing inclusion and developmentally appropriate practice. Each teacher discusses and provides reflective comments and resources.
Text may be helpful for teachers looking to use reflectivity in their teacher inquiry.


Designed for the new and student teacher, this ninety-two-page handbook is organized into four categories: Before the Teaching Experience, Methods of Observation, During the Teaching Experience, and After the Teaching Experience.

http://www.iloveteaching.com/mentor/

An online guide to using this text.

Learning Theory


This book summarizes a science of learning and concentrates on a cognitive psychology and the important concerns of social and cultural contexts to learning. This text is also available online: www.nap.edu


Well-organized, compact, and readable treatment of learning theories and learning applications.


Implementing a Piagetian view of constructivist principles. See “A Child’s-Eye View of Knowing,” “Learning with Breadth and Depth,” “The Virtues of Not Knowing,” and “Teaching as Research.”


Implementing constructivist principles in learning settings.


How one designs specific conditions for learning, depending on the type of learning. A classic worth reading and rereading.


Translates behaviorist principles for instructional settings.


Implementing a Vygotskian view of constructivist principles.

Views of Teaching and the Teacher


www.ccsso.org/content/pdfs/corestrd.pdf


Study of American schools and teaching.


Report on views of effective teaching.


Report on the principles for design of professional development schools.


Report on how teacher education programs need to change to fully implement the “partnership” idea of professional development schools.


Teachers may spend some time in schools addressing parental involvement in their students’ education. Parental involvement is a special form of community building. This is a business book, but it combines concepts and tools with a human view of work.

A convenient resource of twenty-three essays from Shulman, a leading advocate of teaching and teachers in public schools and higher education. Visionary ideas coupled with pragmatic suggestions for implementation.


**Web-Based Resources**

INTASC Model Core Standards for Licensing Teachers
www.ccsso.org/content/pdfs/corestrd.pdf

The Interstate New Teacher Assessment and Support Consortium (INTASC) standards were developed by the Council of Chief State School Officers and member states. Copies of the INTASC standards can be downloaded from the council’s website. CCSSO is a nonpartisan, nationwide, nonprofit organization of public officials who head departments of elementary and secondary education in the states, the District of Columbia, the Department of Defense Education Activity, and five U.S. extrastate jurisdictions.

**Learning Theories**

Theory into Practice Database
http://tip.psychology.org/

Web-based links with brief summaries of fifty major theories of learning and instruction.

**Reflectivity**

Reflect: *How can I reflect upon my teaching practice?*
Active Learning Practices for Schools.
http://learnweb.harvard.edu/alsps/reflect/index.cfm

**Views of teaching and the teacher**

American Association of Colleges of Teacher Education
www.aacte.org

Holmes Scholars Program
www.holmes-scholars.org

A program of the Holmes Partnership (formerly the Holmes Group) to support minority graduate students in education.

National Council for Accreditation of Teacher Education
www.ncate.org