CHAPTER

1

Studying Your Constructivist Practices

This book invites you to become a career-long student of your constructivist practices. The purpose of this chapter is to provide an overview of that invitation. In the spirit of inquiry that guides this text, this chapter is organized as a set of specific responses to the following open-ended questions. As you read these questions, consider your own response to each.

1. Why should you become a career-long student of your teaching?
2. What are constructivist teaching practices, and why and how should they be studied?
3. What is a good way to provide advice for the career-long study of teaching?

What are your thoughts about these inquiries? You may want to keep them in mind as you read this chapter.

Career-Long Study

Studying your teaching can help facilitate your personal and professional development. Sirotnik (1989) writes that schools should become **centers of inquiry**, not targets of other people's inquiry. He makes this point for a very important

reason. If you are always the target of someone else's thinking, you may become good at following orders but not at developing abilities that will guide your personal-professional growth. Sergiovanni (1992) notes that when teachers engage in continuous professional study, they no longer need to be told how to teach. They become responsibly empowered professionals. Sergiovanni (1992) writes:

> A commitment to exemplary practice means staying abreast of the latest research in practice, researching one's own practice, experimenting with new approaches, and sharing one's insights. Once established, this . . . results in teachers accepting responsibility for their own professional growth, thus reducing the need for someone else to plan and implement staff development programs for them. (p. 43)

Teacher inquiry—studying your own teaching—is also an important consideration in discussions of educational reform. The improvement of teachers is central to the improvement of education. Barth (1990) stresses this connection as follows:

> Those who value . . . education, those who hope to improve our schools, should be worried about the stunted growth of teachers. Teacher growth is closely related to pupil growth. Probably nothing within a school has more impact on students in terms of skills development, self-confidence, or classroom behavior than the personal and professional growth of their teachers.
>
> . . . Inquiry for teachers can take place both in and out of the view of students, but to teacher and student alike there must be continuous evidence that it is occurring. For when teachers observe, examine, question, and reflect on their ideas and develop new practices that lead toward their ideals, students are alive. When teachers stop growing, so do their students. (pp. 49–50)

An example of two teachers' differing approaches to the same topic will help clarify the value of teacher inquiry. Jack Dusett is a sixth-grade teacher preparing to teach a social studies unit on Christopher Columbus's "discovery" of America. Mr. Dusett wants to take a questioning approach with his students. In effect, he wants his students to relate their own experiences and interests to the content of the unit. He turns to the teacher manual for a social studies text that he will be using in this unit, and he discovers some useful guiding questions. For example, he decides to use the following questions from the manual:

> If Christopher Columbus hadn't discovered America in 1492, how might the history of the United States have been different? Have you ever discovered something in your neighborhood, such as a new playground, a new movie theater, or a new restaurant? How did this discovery make you feel? How do you think Christopher Columbus felt when he discovered America?

The students learn about Christopher Columbus's voyage to the new world, but they are not overly excited about this social studies unit; in fact, they generally perceive Mr. Dusett as a mechanical, unimaginative teacher. Furthermore, because he isn't particularly inquiring about his work, Mr. Dusett's teaching has remained fairly constant from year to year. Past students have also felt that he was mechanical. In fact, Mr. Dusett has developed the reputation of being a very rou-

tine instructor—a reputation that will probably not change unless he begins a more systematic study of his teaching practices.

Karen Smiley is also a sixth-grade teacher, but her practices are guided by a deep commitment to personal-professional study. As she plans her unit on Columbus, she looks for materials that help her critically examine the topic. She reads Kirkpatrick Sale's *The Conquest of Paradise: Christopher Columbus and the Columbian Legacy* (1990), which questions Columbus's motives and ecological values. Based on this examination, she decides to include activities that will broaden her students' multicultural perspectives. She shows students a segment of an old cowboy movie in which Native Americans are portrayed as savages. Then she asks students to list adjectives that express how they feel about Native Americans. While teaching the unit, Ms. Smiley presents information from the Native American as well as the European point of view. When the students have completed the unit, she asks them to make another list of adjectives expressing how they feel about Native Americans. She analyzes and discusses any differences between the two lists with her students. She also wants to know how her students feel about her teaching. To get feedback on her work, she conducts an open-ended classroom conversation on the following types of questions:

> We challenged the motives behind Christopher Columbus's "discovery" of America. What do you think about this type of challenge? Do you ever challenge your friends' motives? Do you think it's good to be so questioning? Did you enjoy our approach to this social studies unit? Is there anything I could do to make social studies more interesting for you?

Ms. Smiley's inquiries aren't limited to the context of her classroom. She has developed an inquiring relationship with several colleagues who enjoy exchanging ideas and evaluating one another's teaching practices. Once or twice a week they gather after school to discuss their experiences. Together they examine the quality of their teaching with the idea of constantly improving their instruction. At one of these meetings Ms. Smiley discusses her unit on Columbus. They collaborate over the virtues of her curriculum decisions. One colleague arranges to observe several of Ms. Smiley's lessons and shares constructive feedback with the group. All of the teachers look forward to learning new ideas and approaches from these group inquiry experiences. They have talked about changes in their school that would encourage more professional collaboration, and they are beginning to consider ways to provide leadership for such institutional reform.

As you can see, there is a qualitative difference between Jack Dusett and Karen Smiley's reflective practices. Mr. Dusett's commitment to thinking about his teaching is quite limited, while Ms. Smiley is dedicated to the professional study of her practices. Her deeper commitment results in the continuous improvement of her work. She constantly seeks opportunities for mutual questioning and discovery among both her students and her peers. In fact, she hopes that in time her entire school will become an inquiring community in the spirit of Dewey's (1939/1989) vision of democratic learning organizations: "Self-governing institu-

tions are the means by which human nature can secure its fullest realization in the greatest number of persons." (p. 101)

Constructivist Teaching Practices

A constructivist teaching practice can be defined as any deliberate, thoughtful educational activity that is designed to facilitate students' active understanding. Cohen, McLaughlin, and Talbert (1993) describe this type of professional service as central to the educational reform policies of all major subject areas. They write:

> Education reform goals challenge America's schools and teachers to move away from transmitting knowledge and facts to promoting students' deeper understanding of academic subjects—understanding based in active engagement with subject area concepts. This vision of teaching and learning, called *teaching for understanding* to distinguish it from traditional modes of instruction, would promote students' critical thinking skills and authentic learning. (p. xi)

In a recent publication of the Association for Supervision and Curriculum Development, Brooks and Brooks (1993) provide an overview of constructivist teaching:

> Constructivism stands in contrast to the more deeply rooted ways of teaching that have long typified American classrooms. Traditionally, learning has been thought to be a "mimetic" activity, a process that involves students repeating, or miming, newly presented information. . . . Constructivist teaching practices, on the other hand, help learners to internalize and reshape, or transform, new information. (p. 15)

There are many sources of insight into learning-for-understanding. One of the most significant sources is research in cognitive psychology. Resnick (1983) summarizes three principles that emerge from this research:

> First, learners construct understanding. They do not simply mirror what they are told or what they read. Learners look for meaning and will try to find regularity and order in the events of the world, even in the absence of complete information. This means that naive theories will always be constructed as part of the learning process.
>
> Second, to understand something is to know relationships. Human knowledge is stored in clusters and organized into schemata that people use both to interpret familiar situations and to reason about new ones. Bits of information isolated from these structures are forgotten or become inaccessible to memory.
>
> Third, all learning depends on prior knowledge. Learners try to link new information to what they already know in order to interpret the new material in terms of established schemata. (pp. 472–473)

As Brooks and Brooks (1993) note, the guiding questions of constructivist teaching practices are:

- Can students demonstrate comprehension of concepts, not memorize information?
- Can they imaginatively solve problems, not rotely follow procedures?
- Can they inquire into complex issues, not parrot rehashed beliefs?

Brooks and Brooks (1993) also identify five principles for constructivist teaching:

1. Students should engage in active inquiry activities that are based on meaningful problems.
2. Inquiry material should be organized holistically, through the use of broad concepts, so as to encourage diverse problem-solving styles and strategies.
3. Teachers must encourage students to cultivate their own points of view on the instructional topics.
4. Curriculum materials must be responsive to students' problem-solving suppositions.
5. Evaluation should be authentically linked to students' inquiry experiences.

Constructivist teachers see their students as active participants rather than passive recipients during the learning process. In metaphoric terms, students are not just vessels into which the teacher pours knowledge. Rather, students are viewed as **conscious agents** possessing a present- and future-oriented intentionality and a background of prior knowledge and dispositions (Searle, 1992). The constructivist teacher invites these conscious agents to become fellow inquirers on a journey of discovery—perhaps eventually to become contributing members of a particular community of inquiry. If certain students don't respond to a specific inquiry invitation, the constructivist teacher reflects on three general questions: (1) What are these students' actual learning intentions? (2) What prior knowledge and/or dispositions prevents them from accepting my learning invitation? and (3) Was my inquiry invitation sufficiently compelling?

To summarize, the teacher understands **constructivist learning** as a complex interaction between students' personal purposes, their prior knowledge and dispositions, and the requirements for specific subject-matter inquiry. Figure 1.1 shows a diagram of this interaction. Do you have experience with constructivist teachers? Such teachers didn't ask you to memorize facts and practice rote skills. Instead they found ways to inspire and facilitate meaningful inquiry learning.

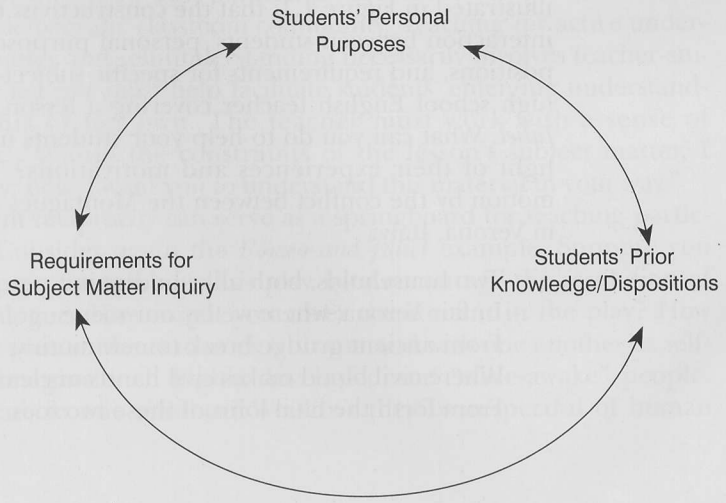


Figure 1.1
A Constructivist View of Learning

Why Study Constructivist Practices?

As a reflective teacher, you want to be careful to not embrace a new teaching strategy—constructivist or behavioristic, for example—until you have thought about your purposes for using it. You want to avoid technicizing your work, that is, thinking only about the means and not the end result of what you do. Elaborating on the dangers of **technicism**, Posner (1992) writes:

> Technicism focuses on the techniques of the perspective, examining only their relative effectiveness and efficiency without serious regard for their goals. . . . A preoccupation with technique diverts attention from the theoretical assumptions from which the technique derives and by which it derives meaning.
>
> It is possible to technicize any perspective, although some are more prone to technicism than others. The extreme case is the behavioral perspective. It focuses on developing effective behavior modification techniques. While claiming to be only a technology, it contends that its techniques are appropriate for any educational ends and are therefore value-neutral, and it regards behavioral psychologists as the experts in, and therefore the proper authorities on, educational decision-making. These characteristics reveal its inherent technicism. (pp. 262–263)

To avoid technicizing your constructivist practices, you must thoughtfully examine your purposes for engaging in this type of teaching. Three general goals will be presented in this section. You will need to adapt each goal to the setting in which you work. Furthermore, other valid purposes may occur to you as you gain experience with constructivist teaching. The three goals are:

- To help students actively understand subject matter with reference to their past experiences and personal purposes.
- To help students actively understand themselves.
- To help students actively understand participatory democracy.

The first goal is simply a restatement of a point made in the previous section and illustrated in Figure 1.1: that the constructivist teacher sees learning as a complex interaction between students' personal purposes, their prior knowledge and dispositions, and requirements for specific subject-matter inquiry. Imagine you are a high school English teacher covering a lesson on Shakespeare's play *Romeo and Juliet*. What can you do to help your students understand this literature classic in light of their experiences and motivations? The drama in this play is set in motion by the conflict between the Montagues and the Capulets, two households in Verona, Italy:

> Two households, both alike in dignity,
> In fair Verona, where we lay our scene
> From ancient grudge break to new mutiny,
> Where civil blood makes civil hands unclean.
> From forth the fatal loins of these two foes

A pair of star-cross'd lovers take their life. . . .
(Shakespeare, c. 1595–1596/1952, p. 285)

How can you use your knowledge of your students to make this "ancient grudge" worth studying? What experiences have they had with civil strife? Could they discover any value in studying a longstanding conflict between two households in Italy? Constructivist teaching requires you to find answers to such questions. If you are successful in creating meaningful lessons with the *Romeo and Juliet* subject matter, you will have accomplished the first goal.

The second constructivist goal builds directly on the first. As you deliberate over your students' experiences and motivations, you may want to contemplate the quality of their self-knowledge. How well do your students know themselves? In arguing for this goal, educational philosopher Maxine Greene writes: "I would like to think of teachers moving the young into their own interpretations of their lives and their lived worlds, opening wider and wider perspectives as they do so" (Greene, 1986, p. 441). In another publication, Greene (1978) describes this goal as facilitating students' "wide awakeness."

To return to the *Romeo and Juliet* example, suppose you decide that one purpose for teaching this play is to help your students better understand themselves. In Maxine Greene's terms, you want them to be more wide-awake by the time they have finished studying this subject matter. What do you do? By understanding the play, will they also come to better understand themselves? Or, must you do more? What else can you do to facilitate self-insight? How can you encourage your students to look into their own hearts, minds, and souls? When contemplating these questions, you are reflecting on the second constructivist goal.

The third goal of helping students actively understand **participatory democracy** builds on the first two goals. A social philosopher and political scientist describes participatory democracy as a "process of ongoing, proximate self-legislation . . . [resulting in] the creation of a political community capable of transforming private individuals into free citizens and partial and private interests into public goods" (Barber, 1984, p. 151). This political process could serve as the referent for the creation of a democratic classroom community. Teaching for active understanding of subject matter and self-understanding necessarily involves teacher-student reciprocity. The teacher must help facilitate students' emerging understanding—not promote his or her own. The teacher must work with a sense of constructivist equity: "Within the constraints of the lesson's subject matter, I understand in my way; now, I want you to understand this material in your way."

This teacher-student reciprocity can serve as a springboard for teaching participatory democracy. Consider again the *Romeo and Juliet* example. Suppose you decide that one purpose for teaching this play is to encourage the resolution of conflicts through dialogue. How might you cover the content in the play? How could you encourage your students to work with you and with one another as self-aware individuals? Imagine such highly developed and "wide-awake" people. How would they relate to one another? Wouldn't they be respectful of human

to practice a certain type of teaching. By practicing this teaching, you liberalize yourself and your students. You help yourself and your students to be more eclectic—to understand a topic from many different points of view (Schwab, 1978).

This view of liberal professional inquiry is based on a certain understanding of liberalization—of how people should be free. Barber (1992) captures the essence of this sense of freedom and its relationship to education:

> Democracy is the rule of citizens, and citizens alone are free. For citizens are self-conscious, critical participants in communities of common speech, common value, and common work that bridge both space and time. As freedom yields community, so the forms of community and commonality alone yield freedom. Education makes citizens; only citizens can forge freedom. Democracy allows people to govern themselves; indeed, it insists that they do so. Education teaches them the liberty that makes self-government possible. (p. 265)

In this book, you are practicing a study method designed to facilitate your growth as a teacher who can help students—and others, as you will learn—cultivate the discipline of democratic self-government. Think back to the three constructivist goals: teaching for active subject matter understanding, self-understanding, and democratic understanding. This text will encourage you to incorporate all three goals into your teaching deliberations. This may be a challenging developmental ideal, but what are the alternatives? Should teachers only facilitate subject matter understanding? This type of learning should help their society's economy. But what about its civics? Should teachers facilitate self-understanding without encouraging a strong, participatory democratic ethic? What would be the quality of life in a society composed of personally insightful but highly private individuals?

How to Study Constructivist Practices

You will be invited to study your constructivist practices as a **progressive decision-maker**. Teachers who are progressive decision-makers exhibit four key characteristics:

1. Their decisions are sensitive to the context of the situations in which those decisions are embedded.
2. Their decisions are guided by a continuous cycle of fluid planning, empowered enactment, participant observation, and a pragmatic reconsideration of their knowledge.
3. Their decisions are informed by personal-professional knowledge that is under continuous critical examination.
4. Their decisions are enhanced by informal and formal study projects.

We now turn to a careful examination of these four characteristics because they form a frame of reference for this book. Teaching-as-progressive-decision-making is this text's guiding ideal. The better you can comprehend and appreciate this view of enlightened teacher reasoning, the more you will understand the book's study advice.

Context Sensitivity

Teachers must make decisions in the context of their interactions with their students. If they are not sensitive to the many subtleties and nuances associated with their students' meaningful learning, they will not be successful as constructivist educators. They must base their actions on their best perceptive and judicious abilities. Van Manen (1991) calls this *pedagogical thoughtfulness*:

> Children are not empty vessels who come to school merely to be filled with curricular content by means of special instructional methods. Moreover, children who come to school come from somewhere. Teachers need to have some sense of what it is that children bring with them, what defines their present understandings, mood, emotional state, and readiness to deal with the subject matter and the world of the school. . . . It is possible to learn all the techniques of instruction but to remain pedagogically unfit as a teacher. The preparation of educators obviously includes much more than the teaching of knowledge and skills, more even than a professional ethical code or moral craft. To become a teacher includes something that cannot be taught formally: the most personal embodiment of a pedagogical thoughtfulness. (pp. 7, 9)

Teachers must also be sensitive to other contexts. They must understand the perspectives of those who supervise their work, the expectations of their students' parents, the norms and values in their school's surrounding neighborhood, and the social trends of the society in which they work. Teachers have a lot to consider as they engage in decision-making. Their work is embedded in many subtly unique and overlapping contexts.

This book contains many teaching stories, and you will notice that each narrative is embedded in its own unique context. The study advice in this book is general in nature. It will be up to you to adapt the advice to the specific setting in which you work. The idiosyncrasies in the narratives should serve as a reminder that progressive decision-making requires **context sensitivity**.

Decision-Making Cycle

When teachers function as empowered agents rather than as subjects of other people's decisions, they are free to engage in a proactive **decision-making cycle**. This cycle has four phases: (1) a fluid, open-ended, experimental type of planning; (2) teaching-learning enactments that flow from this planning; (3) sensitive participant observations of the consequences of these enactments; and (4) a **pragmatic reconsideration** of knowledge in light of these consequences. The final phase may involve some personal discomfort. When reconsidering their personal-professional knowledge, teachers may experience some cognitive dissonance (Festinger, 1957) before altering their ideas and beliefs. **Cognitive dissonance** is a feeling of discomfort engendered by experiences that are perceived to be in conflict with fundamental constructs. For example, suppose a teacher believes that he treats students fairly. Then, through careful observation, he discovers that he consistently pays more attention to certain children—maybe white males, high-achieving middle-class females, or athletes. A strong feeling of disso-

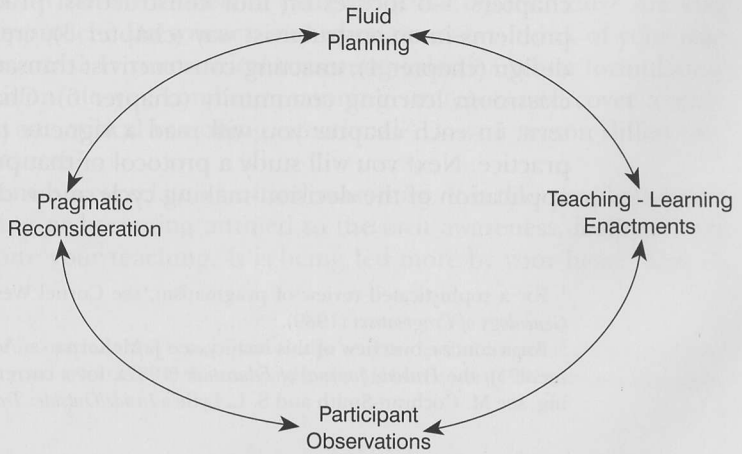
Figure 1.
The Decis

nance is likely to occur. The teacher can resolve this dissonance through a reconsideration of basic constructs or future plans and actions. Figure 1.2 provides a schematic illustration of the four-phase decision-making cycle. McCutcheon (1995) provides an example of a teacher engaging in this decision-making cycle. This brief narrative illustration begins with the participant observation phase:

> . . . Mark Schaefer, third-grade teacher . . . recently observed that his students did not understand the definition of even numbers in his school system's mathematics curriculum and that he was to implement the concept that "even numbers are numbers that can be divided by two." Compared to previous classes he taught in Mapleton, he viewed these students as somewhat less capable, but he was momentarily perplexed because not even his brightest students in class understood this definition until they had learned about division (which was not to occur until fourth grade, according to the graded course of study). He saw it as a sequencing problem in the graded course of study. He used this reflection in his [planning] decision to remind students of the chant, "Two, four, six, eight, who [sic] do we appreciate" and to return to the definition later in the year after he introduced division (he was permitted to exceed the grade objectives). Following the [enacted] teaching of the chant, students were able to sort numbers into odd and even on worksheets [that] he made. . . . (p. 40)

Three related foundational concepts provide important insight into the decision-making cycle: pragmatic intelligence, action research, and experiential learning. The concept of **pragmatic intelligence** is drawn from the philosophical tradition of pragmatism. This tradition includes the works of Ralph Waldo Emerson, C. S. Peirce, William James, W. E. B. Du Bois, John Dewey, and Richard Rorty.[1] John Dewey is arguably the most influential member of the pragmatist group. In *How We Think* (1910/1933), Dewey analyzes pragmatic intelligence. Grimmett (1988) provides a precise summary of Dewey's analysis. First, we experience "a state of doubt, hesitation, perplexity, or mental difficulty. . . . " (p. 6).

Figure 1.2
The Decision-Making Cycle



We then seek to resolve this problematic experience in a suitable way. We arrive at a tentative conclusion that is based in part on our past experiences with solving problems. This conclusion also infers to some degree that what we did in the past to solve our problems will work again. We act tentatively because we do not know if our inference will lead to a productive solution. Sometimes our problem-solving inferences are correct, and sometimes they are not. Because we act tentatively, we are willing to engage in further inquiry and, as necessary, reconstruct our knowledge until we arrive at a conclusion that we believe is "trustworthy" (Dewey, 1910/1933, p. 47). This means that we must be "willing to endure suspense and to undergo the trouble of searching" (Dewey, 1910/1933, p. 16). This suspense is based on a paradox of pragmatic intelligence (Grimmett, 1988, p. 8). We cannot know if our tentative efforts will be successful until we act, but it is difficult to act without knowing exactly what to do. To be intelligent problem solvers, we must persist despite this paradox. **Action research** also has a long history, and Kurt Lewin is a central figure in this intellectual tradition. In *Resolving Social Conflicts* (1948), Lewin discusses the key dimensions of good action research: analyze a problematic situation, gather additional useful information, define the problem, hypothesize a solution, act to solve the problem, observe the results of your actions, and make a judgment as to how best to proceed. In the past half century, there have been many adaptations of Lewin's work in teaching and teacher education.[2] Kolb (1984) provides a sophisticated analysis of the process of **experiential learning**. He notes that during experiential learning "one moves in varying degrees from actor to observer, and from specific involvement to general analytical detachment" (p. 31). You can best realize this type of learning when you maintain a balance between acting and observing and between participation and thoughtful detachment. Examine the decision-making cycle as illustrated in Figure 1.2. You will note how it is guided by this principle of dual balancing.

Though this book cannot provide specific guidance for idiosyncratic and unique teaching settings, you will receive general advice on how to move through the decision-making cycle as a constructivist educator. The study guidance in chapters 3–6 focuses on four constructivist practices: solving complex learning problems in a constructivist way (chapter 3); creating a constructivist curriculum design (chapter 4); enacting constructivist transactions (chapter 5); and creating a classroom learning community (chapter 6). Chapters 3–6 follow the same pattern. In each chapter you will read a vignette that introduces the constructivist practice. Next you will study a protocol of that practice. The protocol is a general application of the decision-making cycle and is designed to facilitate your experi-

[1] For a sophisticated review of pragmatism, see Cornel West's *The American Evasion of Philosophy: A Genealogy of Pragmatism* (1989).

[2] For a concise overview of this history, see J. McKernan's "Action Research and Curriculum Development" in the *Peabody Journal of Education* (1987); for a current discussion of action research in teaching, see M. Cochran-Smith and S. L. Lytle's *Inside/Outside: Teacher Research and Knowledge* (1993).

ential learning on that particular constructivist practice. You will then read a narrative written by an experienced teacher that illustrates the protocol. The narrative provides a personalized and contextualized description of the pragmatics of the chapter's constructivist practice.

Hopefully this material will help you practice the decision-making cycle as a constructivist educator. As you study chapters 3–6, keep in mind that the constructivist practices are presented separately to facilitate your professional learning. In the real world of teaching, the four constructivist practices are usually closely integrated. It will be up to you to find a meaningful way to apply this study material to your own teaching circumstances.

Critical Examination of Personal-Professional Knowledge

Our examination of the second characteristic of progressive decision-making revealed that the decision-making cycle includes a pragmatic type of reflection. The third characteristic—the continuous critical examination of **personal-professional knowledge**—incorporates two other types of reflection. These are called **critical reasoning** and **critical engagement**. Both types of reflection are necessary because teachers' pragmatic decisions are grounded in rational and intuitive considerations. In other words, progressive teachers base their decisions on justified reasons and on more personalized tacit knowledge, conscious and unconscious feelings, and guiding metaphors.[3] Critical reasoning is the process of examining one's reasons for particular decisions. Ennis (1987) writes that "Critical thinking . . . is a practical reflective activity that has reasonable belief or action as its goal" (p. 10). You can practice this type of thinking in diverse ways. Consider your own style of critical reflection. When you confront competing interpretations on a topic, how do you justify your position, and what do you include and exclude in your justifications? For example, are you deductive, acting on the basis of general principles? If so, what are these principles? Or, when you are rational, do you tend to be inductive, carefully studying a situation before deciding how to act? What is included in your inductive observations? Are you more tacit in your approach? Do you act; and when necessary, think of your reasons for acting afterwards? Is your critical reasoning eclectic? When formulating or defending a position, do you combine reasoning strategies and cover a wide range of topics? Is your critical reasoning situational? Do you reason differently in different circumstances?

Critical engagement is a correlate of critical reasoning. It is the complementary process of considering or becoming attuned to the tacit awareness, feelings, and metaphors that inspire your teaching. It is being led more by your heart than by

[3] There is a great deal of research on the type of knowledge and understanding that guides teachers' decision-making. For a good overview of this research, see McCutcheon (1995), especially pages 44–45.

your head. This type of critical work is aesthetically immediate rather than analytically detached. Through critical engagement you open yourself to your highest intentions, your best virtues, and your deepest sense of inspiration. The great poet John Milton writes:

> Virtue could see to do what virtue would
> By her own radiant light, though sun and moon
> Were in the flat sea sunk. And Wisdom's self
> Oft seeks to sweet retired solitude,
> Where with her best nurse Contemplation
> She plumes her feathers, and lets grow her wings
> That in the various bustle of resort
> Were all too-ruffled, and sometimes impair'd.
> He that has light within his own clear breast
> May sit i' th' centre and enjoy bright day;
> But he that hides a dark soul and foul thoughts
> Benighted walks under the midday sun;
> Himself is his own dungeon.
> *(Milton, 1632/1952, pp. 41–42)*

Teachers often face situations that require them to make wise educational decisions, and critical engagement can enlighten their decision-making with aesthetic sensibility.

Critical engagement is as open-ended as critical reasoning. There are many ways to become aesthetically attuned, and what is nourishing and invigorating to one person may be ordinary and uninspiring to another. Aoki (1992) encourages this type of reflection as follows:

> I ask you now to think of a really good teacher that you have experienced in your time. Allow him or her to be present before you. I believe that the truth of this good teacher of yours is in the measure of the immeasurable. And, now, say to him or her: he *is* the teaching; she *is* the teaching. And after you have said these words, allow the unsaid to shine through the said. Savor now the elusively true, the mystery of what teaching essentially is. (p. 27)

Does Aoki's meditative invitation inspire you? If not, what would? In what ways can you identify deep feelings that will energize your teaching life? How will you practice critical engagement?

You may not have a good feel for your critical reasoning and critical engagement preferences. You may not have yet cultivated a definitive way to critically examine your personal-professional knowledge, and you may be interested in several models as to how to proceed. In chapter 2, four imaginary teachers will introduce themselves, each representing a dominant ideological position in the teaching profession. They function as distinctive, headstrong, and contrary characters in a novel, and so they are called **teacher-characters**. They have each cultivated a distinctive **critical style**, a unique way to critically examine their teaching.

They will discuss their approaches in chapter 2. These ideological discussions have been created as study material to help you ascertain your critical style. The four teacher-characters also provide commentary on the four constructivist practices in chapters 3–6; the purpose of this ideological commentary is to help you critically examine your personal-professional knowledge.

Chapter 7 will present a broad, career-long overview of this book's study method. You will read the developmental stories of two experienced teachers who have reflected on their growth as progressive decision-makers. Their autobiographical reflections are guided by a consideration of four teaching virtues associated with constructivist practices. The four virtues are teaching as a **calling** and as **caring**, **creative**, and **centered** work. They will be called the **4C virtues** because they all begin with the letter *C*. The autobiographies have been written to help you appreciate the value of sustained professional study.

Because the referent for the autobiographical accounts are the 4C virtues, they are crafted to highlight critical examination. There is a reason for this narrative emphasis. In today's fast-paced world, professional work often stresses the pragmatic over the critical. Unfortunately, this understanding of professionalism can be dangerously unbalanced. It can result in businesslike, matter-of-fact decision-makers who lack a deep sense of the virtues of their work. They function without a refined appreciation for the aesthetics and ethics of the services they provide.

This type of skewed professionalism is particularly problematic when teachers attempt to facilitate the three constructivist goals of subject-matter understanding, self-understanding, and democratic understanding. This type of educational service requires a teachers' best pragmatic and critical development, and this book has been designed to encourage this type of comprehensive personal-professional growth.

Chapter 7 also includes teacher-character commentary on the 4C virtues. Their analysis should help you further craft your own critical style. It should also serve as a reminder that considerations of best practice in education are inherently diversified. Tolerance for diversity is an important consideration in chapters 8 and 9, the final two chapters of this text. An overview of these two chapters will be presented shortly.

Continuing Study Projects

The fourth key characteristic of progressive decision-making is engagement in informal and formal study projects. Personal-professional growth is also fed by the stimulation of new knowledge. Chapters 3–6 and 8–9 each conclude with a list of further readings to help facilitate your continuing education. However, since meaningful project work tends to be specific to each situation, this general study book cannot possibly provide the personally tailored guidance you will need. You will ultimately need to rely on your own best context sensitivities.

AN IMAGINARY CRITICAL INCIDENT

The following fictionalized episode provides a brief illustration of the four characteristics of progressive decision-making:

Carolyn Dickson has been teaching French at Lewis and Clark High School for twelve years. During her first year of teaching, she made a personal vow to reflect on her teaching practices at least four hours a week. She decided that if she could discipline herself to exercise four hours a week, she could certainly devote the same amount of time to her chosen profession. Over the years she has kept her vow by engaging in a variety of formal and informal study projects, such as study groups, workshops, and university courses.

As part of her commitment to professional development, Carolyn subscribes to three journals. One journal recently carried several articles on cultural pluralism. After reading them, Carolyn began reflecting on her teaching. Though her school's population included African-American, Hispanic, Native American, and White students, her classes were predominantly White. She wondered what she could do about this.

Suddenly, Carolyn had an idea. She began to think of the culturally diverse populations in many French-speaking cultures in the Caribbean, such as Haiti. She thought of the varied population in French Canada. Perhaps she could prepare one or more inquiry units on these societies. Maybe over time, the inclusion of these units would encourage minority students to take French.

Carolyn wondered if this experiment would work. Would it be worth the time and effort? She believed that she would only know the answer to this question after careful planning, observation, and further reflection. She decided to start with a unit on Haiti. This was a logical choice since this country had received so much news coverage in recent years.

As Carolyn began her planning, she further considered her reasons for teaching this unit. It would enable her to break away from her current emphasis on Parisian French. After all, French is spoken in many different ways throughout the world. It would also enable her to work with literature from countries besides France. She could also tap into local resources she hadn't used before. For example, there was a small Haitian subculture in her city. She soon discovered that some members of this ethnic group were willing to help; but if she hadn't been working on this unit and trying to expand her teaching horizons, she wouldn't have made the contacts.

As Carolyn contemplated the potential power of this inquiry unit on Haiti, she felt fortunate to live in a culture that had democratic traditions. Haiti, with its history of military dictatorships, was such a contrast to her society. Carolyn was inspired by the image of diverse social groups working out their differences in a

peaceful way. Haiti was trying to build this kind of society. This would be an important point for her students to understand. Maybe then, they could better appreciate the value of the democratic struggles in their own society. All in all, the more Carolyn thought about this unit, the more excited she became. She thought to herself, "I can hardly wait to begin this experiment. I wonder what I will learn about myself and my students?"

You have now been introduced to the study method that will be used in this book—and in the workbook that accompanies this text. You will be guided to approach your constructivist practices as a progressive decision-maker. You will be given the latitude to develop your own reflective approach, but with the encouragement that you undertake a balanced pragmatic and critical study.

An image may help you visualize the study method advocated in this book. To repeat a point made at the beginning of this chapter, you are studying your teaching so as to facilitate your personal-professional growth. In effect, you are working on constructing your best teaching self as a constructivist educator. This developmental work could be likened to weaving a fabric using three types of fiber. The three types of fiber represent the three forms of reflection introduced in this chapter: pragmatic reconsideration, critical reasoning, and critical engagement. The three fibers are pictured in Figure 1.3. Teachers can use slightly modified versions of each fiber, and they may weave in many different ways. The result is that each teacher weaves his or her own distinctive fabric. Each teacher's development unfolds in its own unique way.

Figure 1.4 portrays a medley of weavings, representing the developmental diversity that results from the study method in this book. It may take you time to learn how to function as a progressive decision-maker. This book presents a study method that requires hard work and perseverance. This chapter began with an

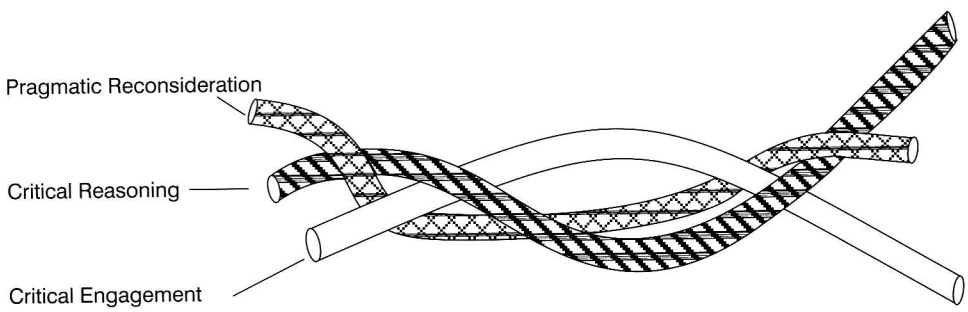


Figure 1.3
The Text's Three Forms of Reflection

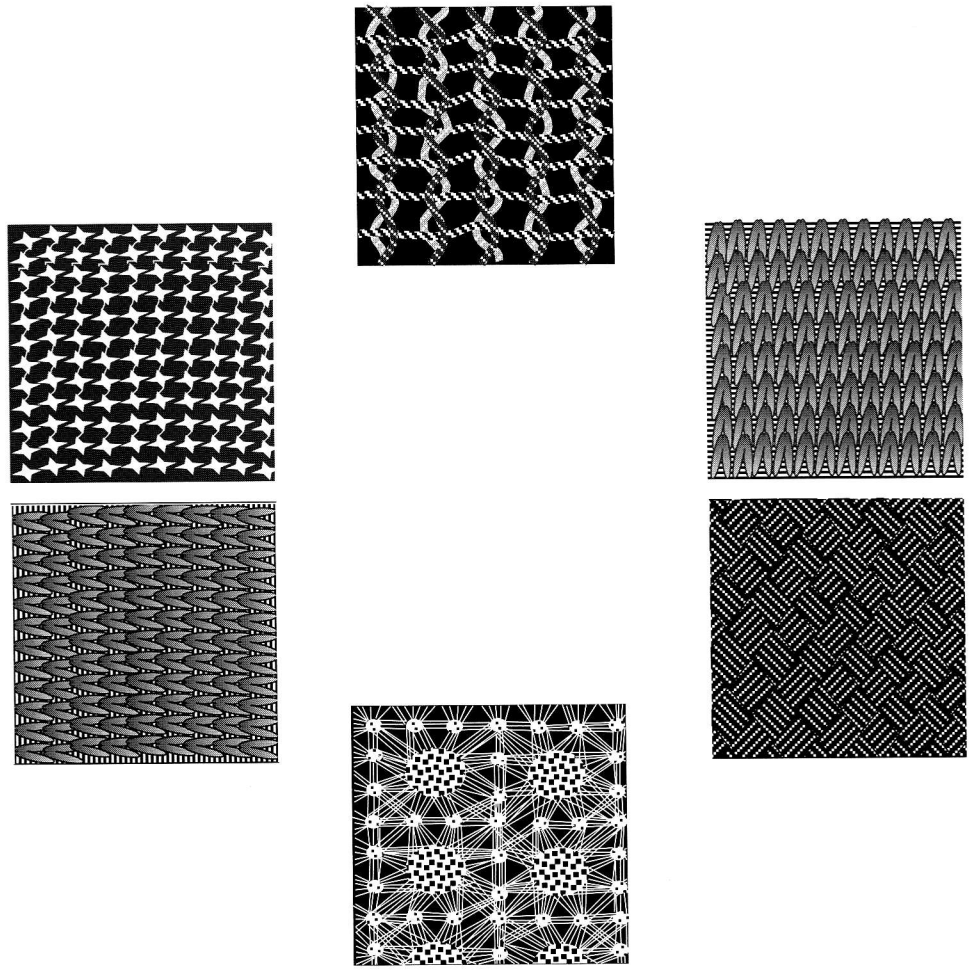


Figure 1.4
Teachers' Development: A Medley of Weavings

invitation for you to become a career-long student of your constructivist practices. Rome wasn't built in a day, nor will you be able to take full advantage of this book's study method in a day.

Few individuals can practice progressive decision-making without systematic collegial and institutional support. Chapter 8 presents strategies on how to study your constructivist practices in collaboration with other teachers. Chapter 9, the final chapter, addresses the topic of **transformative teacher leadership**. This is a type of leadership in which teachers function as agents of fundamental change. They work to help initiate and sustain progressive decision-making and to facili-

tate the necessary organizational changes that must accompany this sophisticated reflective practice.

To conclude this section, keep in mind the underlying referent for this text's study method. Through continuous pragmatic reconsideration, critical reasoning, and critical engagement, you are liberally educating yourself in a particular way. You are developing your abilities to govern your own teaching—you are democratically empowering yourself and positioning yourself to help others with democratic self-government.

Metacognitive Guidance

The study advice in this book has been organized as **metacognitive guidance**. Metacognition is the conscious monitoring of one's thought processes (Haller, Child, & Walberg, 1988; Wittrock, 1986). Think of metacognition as a mental prompt analogous to a shopping list that you use when you go to the store. You don't mechanically follow this list, but you use it to remind yourself of things you may need. A metacognitive strategy is a mental reminder. The more you begin to regulate your thinking by following conscious thinking strategies, particularly in a supportive collegial environment, the better you will be able to integrate these strategies into your everyday teaching (Vygotsky, 1978).

Metacognitive guidance in education can be pictured as scaffolded instruction. A scaffold is an "adjustable and temporary" support system (Palincsar, 1986, p. 75). In effect, this book provides you with scaffolding for becoming a career-long student of your constructivist practices. Use it in this spirit. As you begin to internalize this structured assistance—to integrate the metacognitive guidance into your continuing professional inquiries—discard the scaffolding. In the future, you may want to use metacognitive guidance in your teaching. You can easily engage in this practice by providing your students with a relevant but temporary thinking scaffold they can use to monitor their inquiries during specific constructivist lessons.

CONCLUSION

You have now read responses to the three questions that opened this chapter. Do you agree with the way these questions have been answered? If so, why? If not, why not? Keep in mind that as you read this book, you will be encouraged to think for yourself. Functioning as an independent thinker is at the heart of empowered professional inquiry. However, such independence requires a strong sense of responsibility. In this book, you will be urged to consider your responsibilities as an educator in a diversified, ideologically complex democratic society.

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