Chapter 3

Using Clinical Supervision to Promote Effective Teaching

Author's Note

What does it takes to be a good teacher? It's an important question, so I don't mind that I've spent much of my career trying to answer it.

Among other approaches, I've tried addressing the question from the perspective of a student—a role I was in recently. My goal was to learn how to create a website, so it would be easy for people to access my vita and working papers. I defined a good teacher as anyone who could help me toward that goal.

I started by attending a workshop. The instructor tried to be helpful, but he had too many students. His presentation was too abstract and general for my purposes. When I got confused, there was no opportunity to ask questions.

Subsequently, I approached several colleagues who specialize in educational technology. One of them, Irene Smith, was especially helpful. She gave me a simple software program (Claris Home Page), and suggested I work through its tutorial and come to her whenever I had questions. Sure enough, I had questions—many of them. And Irene had the answers—clear answers. In addition, she was supportive and encouraging and delighted when I showed signs of learning.

In short, Irene was effective because she was knowledgeable, supportive, clear, approachable, and sensitive to my individual learning needs. I suspect that other intrinsically motivated learners would want their teachers to have the same qualities.

The qualities of a good elementary or secondary teacher are harder to define. Curriculum goals are often ambiguous, and students show up for class not necessarily because they want to, but because they must. Also, school-age students can't rely on their own assessment of learning progress (as I did), but must take tests designed by the teacher—or by the teacher's district or state.

For many decades, researchers have sought to define what it means to be a good teacher under these difficult conditions—ambiguous curriculum goals, unmotivated students, imposed testing. In this chapter, we review what the researchers have learned. I think you'll find that most of the qualities of good teaching they've identified are consistent with those you'd want from a teacher as you pursue your own learning goals.

In my opinion, the one thing supervisors cannot do is duck the question of what it means to be a good teacher by saying that it's impossible to answer, because all teachers are unique. At some level, this might be true, but in fact teachers are expected to follow certain norms that imply certain notions of good teaching.

You undoubtedly have some conception of the qualities you expect to see in a good teacher. We invite you to make explicit what these qualities are, and then compare them with the qualities identified in the research literature that we review in this chapter.

MDG

In various research studies I have been a part of over the past fifty years, I have found that many popular, respected practices were not supported by research. Indeed, practice often went in a direction opposite from the existing research evidence. Thus, while educational practice kept moving in the direction of the progressive, student-centered approaches, the research evidence kept growing in support of traditional, teacher-centered learning.

—Jeanne Chall[1]

INTRODUCTION

We reviewed various models of clinical supervision in Chapter 1. One of their common elements is the goal of helping teachers become more effective. But what does "effective" mean?

The same question arises in connection with the standards for the teaching profession being developed by various agencies and commissions. These standards, which we discussed in Chapter 2, represent a consensus of beliefs about what constitutes an effective teacher. However, the basis for these beliefs—and therefore the underlying meaning of teacher effectiveness—is not always clear.

One basis for deciding what it means to be an effective teacher is the empirical knowledge that is generated by researchers who study teachers and the learning process. However, some educators reject this approach by arguing that the criteria of effective teaching differ for every instructional situation and every teacher, and therefore no empirical generalizations are possible. We are sympathetic to this argument, but our experience and examination of the research literature suggests otherwise.

As a demonstration of this point, we suggest that you list five characteristics of a good elementary, secondary, or college teacher. (You can elaborate on this task by listing five characteristics of an *ineffective* teacher.) Most educators find this task relatively easy. Moreover, they usually agree with one another's lists. Rarely do we find a controversial characteristic—one that some educators think represents good teaching and other educators think represents bad teaching. Disagreement, if it occurs, usually concerns the relative importance of characteristics.

Richard and Patricia Schmuck interviewed more than two hundred teenage students to find out, among other things, what they considered to be the characteristics of good and bad teaching.[2] Here are the most frequently occurring answers. To what extent do these characteristics agree with your list?

Characteristics of Good Teaching

- Gives students respect, is patient, and easy to get along with.
- Makes the subject interesting and fun by involving students in activities and demonstrations.
- Tells jokes and smiles a lot—good sense of humor.
- Listens to students' questions and makes changes in class to help students learn.

Characteristics of Bad Teaching

- Low respect for students, lacks patience, and treats you like you are stupid.
- Seldom smiles, very serious and stern, and issues either too harsh or too permissive discipline.
- Doesn't care about or pay attention to individuals; not helpful.
- Doesn't explain well, lazy, hands out worksheets and tests; you have to learn everything on your own.
- Has favorites; favors the smart students or one sex over the other.

Before you finalize your list of characteristics of good teaching, we recommend that you read the research findings in this chapter. To understand the research, however, you need to know something about how it is conducted. Often, researchers compare the teaching practices of more effective teachers and less effective teachers. This type of inquiry is commonly called causal-comparative or correlational research. Another research paradigm is to have a group of teachers (the experimental group) try a particular teaching practice. A different group of teachers (the control group) is asked to follow their usual practices or try a different teaching practice. If the experimental teaching method produces superior results, it is considered effective. This type of inquiry is commonly called experimental research.

In correlational research, it is necessary to identify a criterion by which to define the more effective and less effective teachers whose teaching practices are to be compared. Similarly, in experimental research, it is necessary to identify a criterion to determine the relative effectiveness of the experimental and control groups.

Researchers have used various criteria in their studies. These criteria reflect different perspectives about what is important in schooling. If you do not agree with the criteria used by the researchers, you probably will disagree with their conclusions about what constitutes effective teaching. Because the criteria are so important to understanding this research, we have organized the following review into sections that correspond to different criteria of teaching effectiveness.

EFFECTIVE TEACHING OF ACADEMIC KNOWLEDGE AND SKILLS

Much of the general public and many educators believe that the major purpose of school is to help students acquire the knowledge and skills associated with reading, mathematics, history, geography, music, art, foreign languages, and other academic disciplines studied in the K–12 curriculum. From this perspective, a teacher is more or less effective depending on how much of the academic curriculum is mastered by his or her students.

The usual research procedure to determine how much is learned by the students of a particular teacher is to give the entire class a standardized achievement test before and after a period of instruction (usually at the start and end of a school year). Teachers whose students make substantial gains in their test scores are considered more effective, whereas teachers whose students make small gains are considered less effective.

The meaning of teacher effectiveness in this type of research obviously depends on the achievement test that is used. If a teacher's students make large gains on a reading test, the teacher can be judged to be effective in teaching reading, but that does not mean he is necessarily effective in teaching mathematics. It would be necessary to give the students a mathematics achievement test to make this determination.

In short, the achievement test used by a researcher places limits on the generalizability of the teaching methods that are found to be effective. Teachers who are effective in teaching reading might rely on method A more extensively than teachers who are less effective in teaching this subject. However, this does not mean necessarily that method A is effective for teaching another academic subject, such as mathematics. In the following research review, we emphasize teaching methods that were found to be effective across at least several school subjects.

Nine Teacher Characteristics Associated with Gains in Student Academic Achievement

Barak Rosenshine and Norma Furst synthesized the research that was done on teacher effectiveness up until approximately 1970.[3] They identified nine characteristics of teachers whose students make greater gains in academic achievement than students of other teachers. Those characteristics are:

1. clarity.
2. variety in use of materials and methods.
3. enthusiasm.
4. task-oriented, businesslike approach to instruction.
5. avoidance of harsh criticism.
6. indirect teaching style.
7. emphasis on teaching content covered on the criterion achievement test.
8. use of structuring statements that provide an overview for what is about to happen or has happened.
9. use of questions at multiple cognitive levels.

Research studies reported after 1970 have continued to demonstrate the effectiveness of these teacher characteristics in promoting student learning. Procedures for observing each characteristic are described in Unit 4.

Direct and Indirect Teaching

Ned Flanders initiated an important line of research on effective teaching in the 1960s.[4] He identified two contrasting styles of teaching—direct and indirect. Direct teaching is characterized by teacher reliance on:

1. lecture.
2. criticism.
3. justification of authority.
4. giving directions.

Indirect teaching is characterized by teacher reliance on:

1. asking questions.
2. accepting students' feelings.
3. acknowledging students' ideas.
4. giving praise and encouragement.

Many research studies have found that students of "indirect" teachers learn more and have better attitudes toward learning than students of "direct" teachers.[5] However, Flanders believes that both direct and indirect behaviors are necessary in good teaching. For example, teachers can effectively use a direct teaching strategy, such as lecture and demonstration, to clarify a difficult curriculum topic. Even in this situation, however, the teacher can make the lecture and demonstration more indirect by asking questions occasionally to determine whether students are following the presentation. Effective teaching behavior, then, involves appropriate use of indirect teaching techniques, not total reliance on them.

The Explicit Teaching Model

Researchers have made a concerted effort to identify teacher behaviors that facilitate student learning in specific curriculum areas. Much of this research has focused on reading and mathematics instruction at the primary and elementary school levels, because mastery of these subjects is critical to subsequent academic achievement.

Barak Rosenshine synthesized the findings of this body of research into an organized model of teaching, which he calls "explicit teaching."[6] The teaching is "explicit" because the teaching goals and steps are predictable and can be clearly analyzed and described. The six parts of the explicit teaching model are described in Table 3.1. You will note that the first five parts of the model correspond approximately to a daily lesson plan. The sixth part—review—is incorporated into the lesson plan at periodic intervals. There is a striking correspondence between the explicit teaching model and Madeline Hunter's model of effective teaching.[7] Her model, sometimes called Instructional Theory into Practice (ITIP), has had a major influence on American education. The seven components of the model and their counterpart in the explicit teaching model (in parentheses) are as follows:

1. anticipatory set (review).
2. stating of objectives (presentation).
3. information input (presentation).
4. modeling (presentation).
5. checking for understanding (presentation; correction and feedback).

Table 3.1 The Six Elements of the Explicit Teaching Model

1. *Review.* Each day, start the lesson by correcting the previous night's homework and reviewing what students have recently been taught.
2. *Presentation.* Tell students the goals of today's lesson. Then present new information a little at a time, modeling procedures, giving clear examples, and checking often to make sure students understand.
3. *Guided practice.* Allow students to practice using the new information under the teacher's direction; ask many questions that give students abundant opportunities to correctly repeat or explain the procedure or concept that has just been taught. Student participation should be active until all students are able to respond correctly.
4. *Correction and feedback.* During guided practice, give students a great deal of feedback. When students answer incorrectly, reteach the lesson if necessary. When students answer correctly, explain why the answer was right. It is important that feedback be immediate and thorough.
5. *Independent practice.* Next, allow students to practice using the new information on their own. The teacher should be available to give short answers to students' questions, and students should be permitted to help each other.
6. *Weekly and monthly reviews.* At the beginning of each week, the teacher should review the previous week's lesson. At the end of the month, the teacher should review what students have learned during the last four weeks. It is important that students not be allowed to forget past lessons once they have moved on to new material.

Source: Adapted from: Rosenshine, B. V. (1986). Synthesis of research on explicit teaching. *Educational Leadership, 43*(7), 60–68.

6. guided and independent practice (guided practice; independent practice).
7. closure (weekly and monthly review).

Hunter based her model on a different, older base of research knowledge than did Rosenshine, yet they drew similar conclusions about the elements of effective teaching.

Rosenshine claims that the explicit teaching model is applicable to any "well-structured" school subject, such as "mathematical procedures and computations, reading decoding, explicit reading procedures such as distinguishing fact from opinion, science facts and concepts, social studies facts and concepts, map skills, grammatical concepts and rules, and foreign language vocabulary and grammar."[8] These examples represent what is generally known as lower-cognitive objectives. Effective teaching of higher-cognitive objectives requires different methods, which are discussed in the next section. Rosenshine further delimited the situations for which the explicit teaching model is effective:

> *It would be a mistake to say that this small-step approach applies to all students or all situations. It is most important for young learners, slow learners, and for all learners when the material is new, difficult, or hierarchical. In these situations, relatively short presentations are followed by student practice. However, when teaching older, brighter students, or when teaching in the middle of a unit, the steps are larger, that is, the presentations are longer, less time is spent in checking for understanding or in guided practice, and more independent practice can be done as homework because the students do not need as much help and supervision.*[9]

These qualifications about the use of the explicit teaching model have an important implication for the supervision of teachers. Specifically, they imply that a supervisor should not use the explicit teaching model, or any other teaching model, as an absolute set of criteria for evaluating a teacher or for setting improvement goals. Rather, the supervisor needs first to determine the teacher's instructional context through a planning conference (see Chapter 7). Then the supervisor and teacher can discuss appropriate teaching methods to use in that context. This discussion, in turn, provides a basis for determining which aspects of the teacher's behavior to record during the observation phase of the supervision cycle.

Effective Teaching of Thinking Skills

A distinction between lower-cognitive and higher-cognitive learning outcomes is often made. In Bloom's taxonomy, for example, six cognitive levels of learning are distinguished.[10] The knowledge, comprehension, and application levels are generally considered to be lower-cognitive learning outcomes, whereas the analysis, synthesis, and evaluation levels are higher-cognitive learning outcomes. (These outcomes sometimes are called "thinking skills.") Many educators are concerned about the development of students' thinking skills in addition to their mastery of the basic school curriculum. Nancy Cole observed that lower-cognitive and higher-cognitive objectives in the curriculum reflect different theories about learning and different measurement approaches.[11] With respect to lower-cognitive learning, Cole observed:

> *By the 1960s, behavioral psychology dominated conceptions of learning in psychology and in education. The learning theory with which a generation of educators grew up came directly from this field. It was heavily based on studies of animal learning and was closely connected with the learning of specific, discrete skills described as precise, well-delimited behaviors. . . .*
>
> *The theories that supported behavioral psychology were well suited to the political times of increasing public concern that children were not learning to read, write, nor perform basic arithmetic operations. There was also public concern that students were not learning basic factual information. The result of this merging of theoretical and political orientation was a decade (the seventies) in which the strongly dominant conception of educational achievement in public discussion was in terms of specific, separate, basic skills and facts.*[12]

Much of the research that led to the development of the explicit teaching model described above involved this conception of learning.

Cole observed that another conception of learning recently has come into prominence:

> *Alongside the conception of achievement as mastery of basic skills and facts, and often competing with it, stands a dramatically different conception of educational achievement. This conception focuses on a more complex level of achievement—the achievement of higher order skills (using such terms as critical thinking or problem solving) and of advanced knowledge of subjects (using words such as understanding or expertise).*[13]

Measurement experts are currently working to develop tests that assess students' learning of thinking skills. These tests are strikingly different from the multiple-choice response tests traditionally used to assess student achievement.[14]

If you and the teacher value the teaching of thinking skills, you will need to decide which teaching practices and assessment techniques are effective for this purpose. Research on this problem is still fragmentary, but it does provide general guidance.

Discussion Method

The discussion method is, at this time, the best validated approach for promoting higher cognitive learning.[15] Most of this research, however, has involved college students and other adult learners. There is no reason why younger students would not benefit from discussion teaching, but it might be more difficult to create the necessary classroom conditions. For example, M. D. Gall and Joyce Gall stated that the essential elements of a discussion are small group size (six to eight students) and students talking to each other rather than to the teacher.[16] The teacher can set the problem for discussion, but then serves primarily as moderator and facilitator of student-to-student interaction. We, and others, have found it possible to train even young students in discussion skills and to organize them into small groups.

Higher-Cognitive Questions

Another teaching practice to promote the development of thinking skills is asking higher-cognitive questions. These questions can be asked in a variety of instructional contexts: in discussions, in inquiry teaching, in reviewing what students have read (i.e., the traditional recitation), and even interspersed in a lecture or demonstration.

Researchers have not yet determined for certain the effectiveness of higher-cognitive questions. Philip Winne reviewed the research and concluded that it made no difference to student learning whether the teacher emphasized higher-cognitive or lower-cognitive questions.[17] Doris Redfield and Elaine Rousseau reviewed essentially the same research, but concluded that teacher emphasis on higher-cognitive questions led to more learning.[18] Complicating the picture is Barak Rosenshine's review of three major classroom studies, from which he concluded that lower-cognitive questions were more effective.[19] Also complicating the picture is that most of the studies included in the reviews did not differentiate the effects of higher-cognitive questions on thinking skills and on lower-cognitive learning outcomes.

Our view of the situation is that higher-cognitive questions are probably necessary, but not sufficient, for the development of students' ability to think. Higher-cognitive questions cue students that thinking is expected and important. However, these questions might be ineffective if the student is unable to respond appropriately. For example, the three studies reviewed by Rosenshine were done in primary-grade classrooms in low-achieving urban schools. Higher-cognitive questions, in the absence of any other intervention, might very well have no effect on—or even frustrate—these students. By contrast, Christiaan Hamaker found in his review of research that higher-cognitive questions inserted in reading passages had a consistently positive effect on students' thinking skills.[20] Most of this research involved college students, which is a population that would be able to handle the response demands of questions at the higher-cognitive levels.

For younger students, we think teachers should ask higher-cognitive questions routinely, but also provide appropriate instruction and conditions for answering them. This means, for example, modeling the appropriate thinking processes, which can be done by

"thinking aloud" for students. Also in contrast to explicit teaching, the teacher needs to give students opportunities for self-expression (rather than carefully defined tasks), substantial projects and tasks (rather than drill-type worksheets), and elaborated, open-ended feedback (rather than correct–incorrect feedback).

Constructivist Teaching

In recent years, researchers and practitioners have come to conceptualize the teaching of thinking skills as a process of helping the learner construct deep understandings of a particular academic discipline. This type of teaching is sometimes called constructivist teaching, as Jacqueline and Martin Brooks explain:

> *Traditionally, learning has been thought to be a 'mimetic' activity, a process that involves students repeating, or miming, newly presented information . . . in reports or on quizzes and tests. Constructivist teaching practices, on the other hand, help learners to internalize and reshape, or transform new information. Transformation occurs through the creation of new understandings . . . that result from the emergence of new cognitive structures . . . . For example, . . . many high school students read Hamlet, but not all of them transform their prior notions of power, relationships, or greed. Deep understanding occurs when the presence of new information prompts the emergence or enhancement of cognitive structures that enable us to rethink our prior ideas.*[21]

Although constructivist teaching methods appear to have merit, little is known about how effective they actually are in helping students develop deep understanding of academic concepts and principles. There is concern, though, that these methods might be difficult to implement in conventional classroom settings.[22] In particular, Lee Shulman and Kathleen Quinlan have reviewed research indicating that the quality of teaching for understanding is dependent on the teacher's own understanding of the subject matter and ability to transform that understanding into accurate representations (e.g., examples, models, and explanations of concepts such as ecology in biology, the preterite tense in Spanish, and acceleration in mathematics).[23] In addition to accuracy, the representations should connect with students' prior understandings.

We suspect that many teachers have not had the opportunity to study their academic discipline in sufficient depth to create powerful representations of key disciplinary concepts and use other constructivist teaching methods effectively. In fact, a substantial percentage of teachers are "misassigned," meaning that they teach subjects for which they hold no teaching license or endorsement during some or all of a school day.[24]

Although research on constructivist teaching is fragmentary, it appears to have promise for developing students' ability to think. For certain teachers, it might be a worthwhile professional goal to learn about this model and experiment with its use.[25]

Effective Use of Time in Teaching

Classroom instructional time is a limited resource. Researchers have found that teachers' use of this resource affects how well students master the curriculum.

One aspect of time is *allocated time*, which is the amount of time that the teacher provides for instruction on each subject or topic. David Berliner and his colleagues found that some elementary teachers spend as little as 16 minutes per average day on mathematics

instruction, whereas other teachers spend as much as 50 minutes per average day.[26] The range of allocated time was even greater in reading instruction: from a low of 45 minutes per average day to a high of more than 2 hours per average day. Walter Borg concluded from his review of research on allocated time that the more time a teacher allocates to instruction in a particular content area, the more students learn about that content area.[27]

If allocated time is the focus of supervision, the supervisor and teacher can review how the teacher plans the amount of time to be spent on each subject during a typical school day. In secondary school instruction, this type of planning is not relevant because the length of class periods and course subjects are fixed. However, most secondary teachers have discretion about allocation of time for particular topics—for example, in a U.S. history class, how much time to spend on the Civil War versus the Reconstruction period following the war. Similarly, the teacher might have discretion about how much time to allocate to historical facts versus historical concepts. The teacher and supervisor can discuss alternative time allocation patterns and their respective merits.

Students are seldom attentive during the total time allocated for each subject. The percentage of allocated time that students are attentive is sometimes called *engaged time* or *at-task time*. Walter Borg concluded from the review of research mentioned above that classes with a high percentage of at-task time have better academic achievement than classes with a low percentage of at-task time. For this reason, at-task time is a frequent focus of clinical supervision. Chapters 10 and 12 present procedures for collecting observational data on this important instructional variable.

If students' at-task time is found to be low, the supervisor and teacher should consider methods for improving it. One possibility is for teachers to increase substantive interaction with students. (Substantive interaction involves explaining content to students, asking them questions, giving feedback, and providing assistance during seat work.) We make this suggestion because Charles Fisher and colleagues found that teachers who had more substantive interaction with their students had a higher percentage of student at-task time.[28] Their research involved elementary teaching, but it seems reasonable that a similar relationship would be found in secondary school teaching.

A high rate of substantive interaction might not be necessary if students are motivated and have good independent learning skills. Students who are lacking in these characteristics, however, can easily get off task if left to work on their own for long periods of time. For these students, substantive interaction with the teacher is likely to be effective.

Homework extends the amount of possible time that students can be engaged in mastering the curriculum. Harris Cooper found in his extensive review of the research on homework that it has relatively little effect on elementary school students' achievement, but a substantial effect on the achievement of older students.[29] The supervisor and teacher can review the teacher's homework policy to determine whether homework is desirable for his or her students; and if so, the amount and type of homework that should be assigned, and how it should be reviewed in class and graded.

Generic Guidelines for Good Teaching

Jere Brophy recently synthesized the literature on teaching to derive a set of principles that teachers can use to design and deliver effective instruction.[30] The principles draw, in part, from the research that we reviewed above. In addition, they draw from theory and

Table 3.2 Generic Guidelines of Good Teaching

1. *Supportive classroom climate.* Students learn best within cohesive and caring learning environments.
2. *Opportunity to learn.* Students learn more when most of the available time is allocated to curriculum-related activities and the classroom management system emphasizes maintaining students' engagement in those activities.
3. *Curricular alignment.* All components of the curriculum are aligned to create a cohesive program for accomplishing instructional purposes and goals.
4. *Establishing learning orientations.* Teachers can prepare students for learning by providing an initial structure to clarify intended outcomes and cue desired learning strategies.
5. *Coherent content.* To facilitate meaningful learning and retention, content is explained clearly and developed with emphasis on its structure and connections.
6. *Thoughtful discourse.* Questions are planned to engage students in sustained discourse structured around powerful ideas.
7. *Practice and application activities.* Students need sufficient opportunities to practice and apply what they are learning, and to receive improvement-oriented feedback.
8. *Scaffolding students' task engagement.* The teacher provides whatever assistance students need to enable them to engage in learning activities productively.
9. *Strategy teaching.* The teacher models and instructs students in learning and self-regulation strategies.
10. *Cooperative learning.* Students often benefit from working in pairs or small groups to construct understandings or help one another master skills.
11. *Goal-oriented assessment.* The teacher uses a variety of formal and informal assessment methods to monitor progress toward learning goals.
12. *Achievement expectations.* The teacher establishes and follows through on appropriate expectations for learning outcomes.

Source: Brophy, J. (2001). Introduction. In J. Brophy (Ed.), *Advances in research on teaching* (Vol. 8, pp. 1–23). Oxford: JAI Elsevier.

research on curriculum-instruction-assessment alignment, social-constructivist instruction, and standards-based curriculum. The principles do not define a single model of teaching (e.g., explicit teaching), but instead are at a level of generality that can accommodate various teaching methods, school subjects, and grade levels.

The principles are stated succinctly in Table 3.2. To fully understand their meaning and research findings on which they are based, you and the teachers whom you supervise will find it helpful to read one of the sources in which they are presented.[31] This reading should renew your appreciation for the complexity and subtlety of the instructional process. Also, it should stimulate teachers to generate additional ideas for improving their instruction.

EFFECTIVE DEVELOPMENT OF STUDENT ATTITUDES AND MOTIVATION TO LEARN

Attitudes and learning motivation involve the affective domain of education. They are not easy terms to define, but their manifestations are easy to recognize. We usually can tell through observation whether students are eagerly involved in a learning task, bored by it,

or repelled by it. Also, most students, if asked, will tell you which subjects they like and dislike.

Researchers generally distinguish three components of attitudes: beliefs, feelings, and actions. For example, a student who has a positive attitude toward mathematics might believe that math plays an important role in the world of work, might experience positive feelings when working on a challenging math problem, and might act by choosing to learn something new about mathematics rather than engaging in some other activity. Of the three components of attitudes, the most observable—and probably the most important—is action.

By observing how students act in situations that allow choice, we can tell fairly well whether they have a positive or negative attitude toward an "object" (a person, event, book, place, etc.). A positive attitude is manifested by choosing to approach the object, whereas a negative attitude is manifested by choosing to avoid the object. School attitudes can be internalized at different levels of personality. At a superficial level of internalization, the student is motivated to learn, but only with proper stimulation by the teacher. At the deepest level of internalization, the attitude has become an integral part of the student's personality. We can say that the attitude has become a value because it motivates much of the student's life without external prompting. David Krathwohl and colleagues developed a taxonomy that differentiated the various levels at which attitudes can be internalized.[32]

Each of us has many different attitudes. In other words, we have opinions and feelings about virtually everything with which we come into contact. With respect to education, students usually have an attitude toward each subject they study, toward their teachers, toward their school, and even toward themselves (sometimes called academic self-concept or academic self-esteem).

The development of positive academic attitudes is an important outcome of instruction. One of the most famous of educators, John Dewey, made this point compellingly:

> *Perhaps the greatest of all pedagogical fallacies is the notion that a person learns only the particular thing he is studying at the time. Collateral learning in the way of formation of enduring attitudes of likes and dislikes, may be and often is much more important than the spelling lesson or lesson in geography or history that is learned. For these attitudes are fundamentally what counts in the future.*[33]

In the public school curriculum, academic knowledge and skills are given more emphasis than attitudes, yet some instructional outcomes involving attitudes can be found. Teachers of social studies typically want students to develop informed beliefs about important social issues and to act as responsible citizens. Teachers of foreign languages typically want students to appreciate the cultures that speak the language they are teaching. And teachers of scientific disciplines want students to value scientific inquiry and to develop an appreciation of the natural world.

Which teaching methods are effective for helping students develop these and other attitudes? Research has been done to answer this question, but the findings are not yet definitive. Therefore, they should be presented as tentative when used in clinical supervision.

Researchers have investigated the effects of teacher enthusiasm on student attitudes. A. Guy Larkins and colleagues reviewed this research and concluded that teaching with

enthusiasm generally promotes positive student attitudes.[34] Procedures for observing a teacher's level of enthusiasm are described in Chapter 11.

Another teaching technique whose effect on student attitudes has been investigated is use of praise. N. L. Gage reviewed this research and concluded that teacher praise has a positive effect on student attitudes.[35] More recent research suggests that the effectiveness of teacher praise depends on its content and context.[36] Guidelines for effective use of praise are presented in Chapter 9.

Wilbert McKeachie and James Kulik reviewed research at the college level comparing the effectiveness of the lecture method and the discussion method in changing attitudes.[37] They concluded that discussion is the more effective method. In a review of research involving younger students, Joyce and M. D. Gall similarly concluded that the discussion method has positive effects on the attitudes of elementary and high school students. The Galls claim that the distinguishing characteristic of discussion is its emphasis on student-to-student interaction, which is lacking in lecture and other common methods such as recitation and seatwork.[38]

Although discussion is effective in developing student attitudes, it has the potential to be misused. For example, discussion can change students' attitudes by exposing them to new information that changes their belief system (a component of attitudes). Therefore, the teacher must be careful that students do not learn inaccurate information. Another pitfall is that a discussion can reinforce existing negative attitudes, such as racial prejudice, if all the students in the group feel the same way about the topic being discussed.[39] This problem usually can be avoided by forming heterogeneous discussion groups.

Cooperative learning has become a popular teaching method in recent years. It is similar to the discussion method in that students contribute to each other's learning by working together in small groups. It differs from the discussion method, however, because it usually requires the completion of a specific academic task—such as a list of ideas, a visual display, or the solution to a problem—that can be evaluated and graded. By contrast, discussion does not usually have a tangible goal that can be evaluated, and students are not required to cooperate with each other, except by listening carefully to each other and avoiding personal attacks.

Research on cooperative learning has found that it is effective both for improving students' academic achievement and for developing important social attitudes. Robert Slavin, who reviewed this body of research, stated that these attitudinal outcomes include: increased liking and respect among students of different racial or ethnic backgrounds, improved social acceptance of mainstreamed students by their classmates, more friendships among students, gains in self-esteem, and liking of school and of the subject being discussed.[40]

Student motivation to learn is not quite the same thing as an attitude, but it is similar. We can think of motivation to learn as how the student feels about becoming engaged in instruction, whereas an attitude is how the student feels following instruction.

Jere Brophy identified various teaching methods that can increase student motivation to learn. The methods stem from two basic principles:

> *In order to motivate their students to learn, teachers need both to help their students appreciate the value of academic activities and to make sure that the students can succeed in these activities if they apply reasonable effort.*[41]

For example, if students believe that they are likely to fail their general science course even if they apply effort, they will lack motivation and develop a negative attitude toward the course and toward science generally. Also, if students do not see the relevance of science to their lives or do not value the consequences of doing well in the course (e.g., a good grade, teacher and parent approval), they will not be motivated to learn. Teaching methods that allow students to be successful or that show them the importance of the topic being studied are likely to be effective in improving students' motivation to learn.

To summarize, various teaching methods can improve students' attitudes and motivation to learn. The implications for clinical supervision are clear. If the teacher is concerned about his or her students' attitude to instruction, the supervisor and teacher can plan to collect observation data on the teacher's use of the practices described above—enthusiastic teaching style, praise, discussion and cooperative learning, the opportunity for students to experience academic success, and helping students see the relevance and value of learning. What all these teaching practices have in common is the development of a positive classroom climate involving all participants: teacher with students and students with each other.

TEACHER EFFECTIVENESS IN RESPONDING TO STUDENT DIVERSITY

The typical criterion in research on teacher effectiveness is how much the teacher's class as a *whole* learns over a particular period of time. Thus, we would conclude that a teacher is effective if the mean score of the class on an achievement test increases from its first administration to the second. However, you need to realize that the gain might result from a small number of students benefiting substantially from instruction, while other students learn relatively little or nothing at all.

Some researchers deal with this problem by investigating whether teachers behave differently toward different groups of students. Other research concerns whether different teaching practices are effective for different groups of students. For example, teaching method A might be effective for male students, whereas teaching method B is effective for female students.

In this section, we briefly review major findings on effective teaching of different types of students present in a typical classroom.

Effective Teaching of Students Who Differ in Achievement Level

Thomas Good reviewed the research literature on differential teacher treatment of high-achieving and low-achieving students.[42] He identified seventeen teaching practices that are used with different frequencies with these two groups of students. The teaching practices are listed in Table 3.3. They define a pattern of diminished expectations for low-achieving students' ability to learn, and perhaps a lower regard for their personal worth as learners.

Academic achievement is highly correlated with social class, meaning that low-achieving students are more likely to come from disadvantaged home backgrounds, whereas high-achieving students are likely to come from advantaged home backgrounds. Therefore, the differential teaching practices listed in Table 3.3 suggest a pattern of discrimination based on students' social class as well as their achievement level.

Table 3.3 Differences in Teacher Behavior toward High-Achieving and Low-Achieving Students

1. Wait less time for "lows" to answer questions.
2. Give "lows" the answer or call on someone else rather than try to improve their responses by giving clues or using other teaching techniques.
3. Reward inappropriate behavior or incorrect answers by "lows."
4. Criticize "lows" more often for failure.
5. Praise "lows" less frequently than "highs" for success.
6. Fail to give feedback to the public responses of "lows."
7. Pay less attention to "lows" or interact with them less frequently.
8. Call on "lows" less often to respond to questions, or ask them only easier, nonanalytical questions.
9. Seat "lows" farther away from the teacher.
10. Demand less from "lows."
11. Interact with "lows" more privately than publicly and monitor and structure their activities more closely.
12. Grade tests or assignments in a differential manner, so that "highs" but not "lows" are given the benefit of the doubt in borderline cases.
13. Have less friendly interaction with "lows," including less smiling and less warm or more anxious voice tones.
14. Provide briefer and less informative feedback to the questions of "lows."
15. Provide less eye contact and other nonverbal communication of attention and responsiveness in interacting with "lows."
16. Make less use of effective but time-consuming instructional methods with "lows" when time is limited.
17. Evidence less acceptance and use of ideas given by "lows."

Source: Good, T. L. (1987). Two decades of research on teacher expectations: Findings and future directions. *Journal of Teacher Education, 38,* 32–47.

If observational data reveal that a teacher treats high-achieving and low-achieving students differently, the clinical supervisor can help the teacher recognize this pattern of behavior and adopt more equitable, effective patterns. For example, suppose a teacher discovers that he waits less time for low-achieving students to respond than he waits for high-achieving students. This teacher might set the goal of giving low-achieving students at least as much time to respond, and perhaps more time if they need it. Similar goals for equitable treatment of low-achieving or socially disadvantaged students could be set for the other sixteen teacher behaviors listed.

Effective Teaching of Ethnically and Racially Different Students

There is research evidence that some teachers act differently toward students depending on their ethnic background or race. An important study of this phenomenon was done by Gregg Jackson and Cecilia Cosca.[43] Their study was sponsored by the U.S. Commission on Civil Rights to determine whether teachers in the Southwest distribute their verbal behavior differentially among Anglo and Chicano students. Observers recorded verbal behaviors in fourth-, eighth-, tenth-, and twelfth-grade classes in fifty-two schools. A modified form of the Flanders Interaction Analysis System (see Chapter 12) was used to

classify each verbal interaction and whether it was directed to, or initiated by, an Anglo student or a Chicano student.

Jackson and Cosca found that teachers directed significantly more of their verbal behaviors toward Anglo students than toward Chicano students. The most striking results were that teachers "praised or encouraged Anglos 35% more than they did Chicanos, accepted or used Anglos' ideas 40% more than they did those of Chicanos, and directed 21% more questions to Anglos than to Chicanos."[44] The researchers also found that Anglo students initiated more verbal behaviors than did Chicano students. In a review of related research, M. D. and Joyce Gall found that black students tend to participate less in discussions than white students.[45]

The research discussed above consists of older studies, so they might not accurately represent current practices. However, because of the importance of student ethnicity and race, clinical supervisors should be sensitive to whether teachers provide equal opportunities for students of all ethnic backgrounds and races to learn, and also whether teachers include multicultural dimensions of the curriculum in their instruction.

Educators differ in what they consider effective teaching practices for these purposes. The differences reflect different philosophies of multicultural education. James Banks distinguished between three such philosophies.[46] They are as follows:

1. *Cultural pluralism:* the goal of the curriculum is to help students function more effectively in their own ethnic culture and to help liberate them from ethnic oppression.
2. *Assimilationism:* the goal is to help students develop a commitment to the common culture and its values.
3. *Multiethnicism:* the goal is to help students learn how to function effectively within the common culture, their own ethnic culture, and other ethnic cultures.

It is important for teachers to be clear about which of these philosophies, or other philosophy, guides their instruction. Otherwise, they run the risk of ignoring multicultural aspects of teaching, or, worse, succumbing to their prejudices and thereby depriving some students of equal opportunity for learning.

Geneva Gay reviewed the literature on effective multicultural teaching practices and teacher characteristics to create a model of instruction that she labels *culturally responsive teaching*.[47] The key characteristics of culturally responsive teaching are listed in Table 3.4. (The characteristics are consistent with other syntheses of the literature on effective multicultural pedagogy.[48]) These probably are effective teaching practices and qualities, irrespective of the teacher's philosophy of multicultural education. The picture that emerges from the list is of a teacher who respects all students, takes responsibility for knowing about their cultural backgrounds, and uses this knowledge in his or her teaching.

Effective Teaching of Male and Female Students

There is strong evidence that some teachers treat boys and girls differently during classroom instruction. For example, Jere Brophy found that teachers interact more frequently with boys, give them more feedback and help, and criticize and praise them more frequently.[49] These differences perhaps are more pronounced in traditionally male-

Table 3.4 Effective Practices in Culturally Responsive Teaching

1. Acknowledging the legitimacy of the cultural heritages of different ethnic groups, both as legacies that affect students' dispositions, attitudes, and approaches to learning and as worthy content to be taught in the formal curriculum.
2. Building bridges of meaningfulness between home and school experiences as well as between academic abstractions and lived sociocultural realities.
3. Using a wide variety of instructional strategies that are connected to different learning styles.
4. Teaching students to know and praise their own and each others' cultural heritages.
5. Incorporating multicultural information, resources, and materials in all the subjects and skills routinely taught in schools.

Source: Gay, G. (2000). *Culturally responsive teaching: Theory, research, & practice.* (p. 29). New York: Teachers College Press.

stereotyped subjects, such as mathematics. For example, in research on fourth-grade mathematics classes, Elizabeth Fennema and Penelope Peterson found that teachers

1. initiated more interactions with boys for the purpose of socializing and classroom management.
2. received and accepted more "call out" responses from boys.
3. more frequently called on boys for both the answers and the explanations of how the answers were obtained when working on word problems.[50]

These findings indicate that teachers tend to treat boys more favorably than girls. If a teacher is observed to do this, the clinical supervisor can help the teacher reallocate interaction patterns so that girls are treated more equitably. In the case of traditionally male-stereotyped subjects, more radical changes might be necessary. Fennema and Peterson found that competitive games tended to help boys learn basic math skills, but tended to harm girls' learning of these skills. A different pattern was found for cooperative learning activities: they tended to help girls, but not boys, learn math problem-solving skills. These findings suggest that teachers need to learn how to maintain a delicate balance of competitive and cooperative activities, so that both boys and girls have equal opportunity to use learning styles that are effective for them.

Fennema and Peterson also make this recommendation:

> *Perhaps the most important thing that a teacher can do is to expect girls to work independently. Teachers should encourage girls to engage in independent learning behavior and praise them for participating in and performing well on high-level cognitive mathematics tasks.*[51]

This type of encouragement may not be necessary for the typical male student, for whom independence and problem solving have been internalized as part of his role identity.

Although Fennema and Peterson's recommendations focus on mathematics instruction, they seem appropriate to other male-stereotyped subjects, such as the sciences and mechanical trades.

Effective Teaching in Response to Individual Students' Interests and Needs

The preceding discussion focused on effective methods for teaching particular groups of students, such as males and females or students who share a certain ethnicity. However, each student is also a unique individual. Teachers must attempt to understand and accommodate this uniqueness if they are to be truly effective. This is a difficult task, because we humans are so complex. It seems impossible for a teacher to know even a few students in depth and respond accordingly.

Research knowledge about how teachers can effectively respond to individual diversity among students is scant. There has been some theoretical work, in particular, the theory of multiple intelligences developed by Howard Gardner.[52] However, there is little empirical research testing the theory's validity and its educational implications. At the present time, then, we must look to "best practices," that is, the practices recommended and used by expert teachers and other educators.[53]

In general, best practices for accommodating student diversity involve:

- using the theory of multiple intelligences to identify and develop each student's strengths and weaknesses.
- acknowledging students' different interests by giving them choices with respect to curriculum, class assignments, and homework.
- representing facts, concepts, and skills in different forms (e.g., examples, analogies, videos, demonstrations) to accommodate individual differences in students' preferences for cognitive processing.
- providing extra time to complete assignments and tests for students who need it.
- providing extra instruction (e.g., by peer tutoring and cooperative learning) for students who need it.

Carol Ann Tomlinson has compiled a list of these and other best practices for accommodating student diversity.[54] The list is presented in Chapter 12.

EFFECTIVE CLASSROOM MANAGEMENT

Daniel Duke defines classroom management as "the provisions and procedures necessary to establish and maintain an environment in which instruction and learning can occur."[55] This definition implies that classroom management is not the same thing as teaching, but is a necessary precondition for teaching.

As one would expect, researchers have found that students' academic achievement is higher in well-managed classrooms.[56] This is probably because students are more on task in such classrooms, and their learning processes are better organized.

Many teachers, both preservice and inservice, have difficulty managing their classroom. This difficulty typically is manifested in two ways: (1) the progression of classroom events is disorganized and frequently interrupted, and (2) many of the students are off task. The occurrence of these problems is usually distressing for the teacher, as well as for the clinical supervisor. Therefore, supervisors should know effective classroom management practices that can help the teacher bring the class under control.

Carolyn Evertson reviewed the research that she and others have done to identify practices used by teachers who are effective classroom managers.[57] The practices are listed in Table 3.5. These effective management practices were identified by research in elementary and junior high school classes, but they seem equally applicable to high school classes.

As shown in Table 3.5, carefully formulated rules and procedures are at the heart of a good classroom management system. The teacher needs to analyze instruction in a classroom setting in all its complexity, and formulate a rule or procedure to cover each situation. Walter Doyle's comprehensive analysis of classroom management suggests that rules and procedures are needed for all the tasks and situations shown in Table 3.6.[58] The list of tasks and situations demonstrates that managing a classroom is a complex process. It also suggests how a class can easily get out of control if students do not have clear rules and procedures to follow.

Another important aspect of classroom management is the teacher's procedures for handling student misbehavior. Common types of misbehavior are: tardiness, cutting class, failure to bring supplies and books to class, inattentiveness, noisiness, call-outs, and verbal or physical aggression. Even effective teachers experience student misbehavior, but they manage it differently than less effective teachers. One of their primary techniques is to deal with the misbehavior early before it has a chance to escalate. Another technique is to use an intervention that stops the misbehavior with the least disruption to the ongoing

Table 3.5 Practices of Teachers Who Are Effective Classroom Managers

Rules and Procedures

1. *Analysis.* The teacher carefully analyzes the rules and procedures that need to be in place so that students can learn effectively in the classroom setting.
2. *Description.* The teacher states the rules and procedures in simple, clear language so that students can understand them easily.
3. *Teaching.* The teacher systematically teaches the rules and procedures at the start of the school year, or when beginning a new course with new students.
4. *Monitoring.* The teacher continuously monitors students' compliance with the rules and procedures, and also careful record keeping of students' academic work.

Physical Arrangement of Classroom and Supplies

1. *Visibility.* Students should be able to see the instructional displays. The teacher should have a clear view of instruction areas, students' work areas, and learning centers to facilitate monitoring of students.
2. *Accessibility.* High-traffic areas (areas for group work, pencil sharpener, door to the hall) should be kept clear and separated from each other.
3. *Distractibility.* Arrangements that can compete with the teacher for students' attention (seating students facing the windows to the playground, door to the hall, face to face with each other but away from the teacher) should be minimized.
4. *Supplies.* The teacher takes care to secure an adequate supply of textbooks and materials for all the students in the classroom.

Source: Evertson, C. M. (1987). Managing classrooms: A framework for teachers. In Berliner, D. C., & Rosenshine, B. V. (Eds.). *Talks to teachers* (pp. 52–74). New York: Random House.

Table 3.6 Classroom Tasks and Situations for Which a Teacher Needs Rules and Procedures

1. Seat assignment in the classroom
2. Start and end of class (e.g., "Be in your seat and ready to work when the bell rings.")
3. Handing in of assignments, materials, etc.
4. Permissible activities if a student completes seatwork early
5. Leaving the room while class is in session
6. Standards for the form and neatness of one's desk, notebooks, assignments, etc.
7. Supplies and materials to be brought to class
8. Signals for seeking help or indicating a willingness to answer a teacher question addressed to the class as a whole
9. Acceptable noise level in the room
10. Acceptability of verbal and physical aggression
11. Moving around the room to sharpen pencils, get materials, etc.
12. Storage of materials, hats, boots, etc., in the classroom
13. Consumption of food and gum
14. Selection of classroom helpers
15. Late assignments and make-up work

Source: Doyle, W. (1986). Classroom organization and management. In M. C. Wittrock (Ed.), *Handbook of research on teaching* (3d ed., pp. 392–431). New York: Macmillan.

instruction. Eye contact, physical proximity to the misbehaving student, or "the look" are examples of such interventions. In the words of Walter Doyle, "successful interventions tend to have a private and fleeting quality that does not interrupt the flow of events."[59]

Other techniques are also effective in managing student misbehavior. Discussion of these techniques, as well as comprehensive models of classroom discipline, is available in various sources.[60]

EFFECTIVE PLANNING AND DECISION MAKING

Madeline Hunter defined teaching as "the process of making and implementing decisions, before, during, and after instruction, to increase the probability of learning."[61] If this is true, it is important for the clinical supervisor to help teachers make the most effective decisions possible.

Teacher decisions that are made before and after instruction are commonly referred to as teacher planning. This planning is important for the obvious reason that it affects the instruction that students receive in the classroom. For example, Christopher Clark and Penelope Peterson found in their review of research that teachers' plans influence the content of instruction, the sequence in which topics get taught, and the allocation of time to different topics and subjects.[62]

Christopher Clark and Robert Yinger did a research study in which they found that teachers engage in as many as eight different types of planning during the course of a school year.[63] Two of the types—unit planning and lesson planning—involve the content of instruction. The other six types involve planning for different time spans of instruction: daily, weekly, short-range, long-range, term, and yearly. Clark and Yinger also found that planning is not a linear process and that it does not occur at a single point in time. Rather,

teachers develop their plans incrementally, starting from a general idea and then gradually elaborating it. The development of their plans is influenced by their reflections on previous plans and experience in the classroom. Clark and Yinger's study involved elementary school teachers, but the findings seem equally applicable to teachers of other grade levels.

Clinical supervisors find that some teachers have difficulty with instruction because they do not plan effectively. One approach to helping these teachers is to ask them to make written lesson plans. However, the research reviewed above suggests that this approach is not sufficient, because it does not acknowledge the incremental, cyclical nature of lesson planning or the fact that other types of planning (e.g., unit, weekly) might be more important to a particular teacher. The writing of structured lesson plans might be a useful starting point for the development of planning skills, but it probably should not be the only focus of clinical supervision.

Researchers have not determined whether particular types of planning are more effective than other types in promoting student learning. It seems likely, though, that more effective teachers engage in careful, reflective planning, whereas less effective teachers engage in sporadic or no planning. A clinical supervisor who agrees with this supposition would work with teachers to increase the amount of time they spend planning and help them develop detailed, reflective plans of the various types described above.

We turn now to the decisions that teachers make during the act of instruction. These decisions—sometimes called interactive decisions—involve a deliberate choice to act in a specific way while teaching. Clark and Peterson, in their review of research, found that "on the average, teachers make one interactive decision every 2 minutes."[64] This research finding supports Madeline Hunter's characterization of teaching as a process of decision making.

Researchers have discovered several principles of effective interactive decision making.[65] One of their findings involves teachers' decision making when they judge students' classroom behavior to be unacceptable. Teachers who are prone to consider alternative teaching strategies to handle the problem, but who decide not to implement them, have lower-achieving classes.

Teachers who do not act on alternatives perhaps have a rigid teaching style. Supervisors need to help them learn how to make on-the-spot changes in teaching strategy to accommodate the idiosyncratic, circumstantial nature of student behavior in the classroom.

Another finding is that the decisions of effective teachers are more conceptually based, rapid, and simpler than the decisions of less effective teachers. This finding suggests that clinical supervisors should recommend to teachers that they learn a conceptual model, or models, of teaching. A starting point might be to have teachers study the models presented in this chapter. In addition, the supervisor can recommend that teachers learn other models through workshops, courses, or independent study. It makes sense that these models would facilitate decision making. They simplify the teacher's thinking by focusing attention on salient aspects of instruction. This simplification, in turn, enables quick decisions and changes in actions without disturbing the flow of instruction.

EFFECTIVE IMPLEMENTATION OF CURRICULUM CHANGE

The school curriculum is constantly changing. The following are just a few examples of curriculum innovations that are currently being introduced into many schools: standards-based instruction; instruction in mathematical problem solving; study skills instruction; interdisciplinary curriculum; performance assessment; thinking skills instruction; project-based learning; technology-enhanced curriculum. Even the traditional curriculum changes with each new textbook adoption. Some textbook topics are added or given more emphasis, while others are dropped or given less emphasis. The curriculum also is revised to reflect changing perspectives about ethnicity, gender, and other aspects of society.

The manner in which a teacher implements a curriculum change affects students' learning. For example, suppose a school district changes its mathematics curriculum to put more emphasis on problem solving. Teachers who implement the new curriculum fully will give their students more opportunity to learn mathematical problem-solving skills than teachers who implement it halfheartedly or not at all. As would be expected, researchers have found that students' opportunity to learn a curriculum affects how much of the curriculum they actually learn.[66]

The preceding analysis demonstrates that one aspect of effective teaching is implementation of curriculum change. Clinical supervisors should be sensitive to this aspect of teachers' work and help teachers who experience difficulty with it. To do this, supervisors need to be knowledgeable about the process of curriculum implementation and factors that affect it. The following discussion focuses on teacher characteristics that affect curriculum implementation. Research on other factors is reviewed in other sources.[67]

One of the supervisor's first tasks is to assess the teacher's level of implementation of the curriculum change. Gene Hall and Shirley Hord conducted research that is relevant to this task.[68] They found that there are eight levels at which teachers can implement curriculum change or any other kind of change. The levels are shown in Table 3.7. Hall and Hord have developed several interview procedures that supervisors can use to assess the level at which the teacher is implementing a curriculum change.[69]

As a supervisor, you will want to know not only teachers' level of implementation, but also their concerns about using the new curriculum. Hall and Hord found that these concerns follow a predictable progression of stages. The stages are shown in Table 3.8.

Table 3.7 Levels at Which Teachers Implement Educational Change

- *Level 0—nonuse.* The teacher has no knowledge of or involvement with the new curriculum.
- *Level I—orientation.* The teacher is acquiring information about the new curriculum.
- *Level II—preparation.* The teacher is preparing for first use of the new curriculum.
- *Level III—mechanical use.* The teacher is trying to master the basics of the new curriculum.
- *Level IVA—routine.* The teacher's use of the new curriculum is stabilized.
- *Level IVB—refinement.* The teacher varies use of the new curriculum to increase its impact on students.
- *Level V—integration.* The teacher combines his or her own efforts with those of colleagues to maximize the benefits of the new curriculum for students.
- *Level VI—renewal.* The teacher reevaluates his or her quality of use of the curriculum, modifies the new curriculum in a major way to improve its effectiveness, studies new developments relating to the curriculum, searches for new alternatives, and explores new goals for self-improvement or improvement of aspects of the school system that relate to the curriculum.

Source: Hall, G. E., & Hord, S. M. (2001). *Implementing change: Patterns, principles, and potholes.* (p. 82). Boston: Allyn and Bacon.

Table 3.8 Stages of Concern About Implementing a Curriculum Change

Stages of concern	Typical expressions of concern
	Self concerns
0. Awareness	I am not concerned about it (the curriculum change).
1. Informational	I would like to know more about it.
2. Personal	How will using it affect me?
	Task concerns
3. Management	I seem to be spending all my time getting material ready.
	Impact concerns
4. Consequences	How is my use affecting kids?
5. Collaboration	I am concerned about relating what I am doing with what other instructors are doing.
6. Refocusing	I have some ideas about something that would work even better.

Source: Adapted from Hall, G. E., & Hord, S. M. (2001). *Implementing change: Patterns, principles, and potholes.* (p. 61). Boston: Allyn and Bacon.

The first three concerns focus on the self, and are typical of teachers whose use of the new curriculum is at level 0 (nonuse) or I (orientation). Management concerns typify teachers at level II (preparation) or III (mechanical use). Finally, impact concerns typify teachers at level IVB (refinement), V (integration), or VI (renewal).

The supervisor can assess the teacher's concerns in the conference phase of the clinical supervision cycle. Another approach is to administer the Stages of Concern Questionnaire (SoCQ), a simple paper-and-pencil instrument consisting of thirty-five rating items.[70]

Walter Doyle and Gerald Ponder identified additional teacher concerns that affect teachers' implementation of a curriculum change.[71] They found that teachers follow a "practicality ethic" in deciding how much commitment to make to a curriculum change. This means that teachers judge the curriculum change to be practical to the extent that it is (1) stated clearly and specifically, (2) congruent with teachers' existing beliefs and practices, and (3) cost-effective in terms of benefits to students relative to teachers' expenditure of energy. Research by Georgea Mohlman, Theodore Coladarci, and N. L. Gage confirmed the importance of the practicality ethic in determining the extent to which teachers implement a curriculum change.[72]

To summarize, one indicator of effective teaching is how well the teacher implements a curriculum change. Effective teachers achieve a high level of implementation (levels IVB, V, and VI in Hall's model), whereas ineffective teachers are fixated at lower levels. Their fixation might be caused by unresolved concerns or perceptions that the new curriculum is impractical. Supervisors can help these teachers by addressing their concerns and perceptions through a clinical supervision process.

A DEFINITION OF EFFECTIVE TEACHING

We invite you to develop your own definition of effective teaching by drawing on the body of research knowledge reviewed above. We undertook this exercise for ourselves and developed the following definition:

Effective teaching involves the ability to:

- provide instruction that helps students develop the knowledge, skills, and understandings intended by curriculum objectives.
- create an instructional climate that causes students to develop positive attitudes toward school and self.
- adjust instruction so that all students learn, irrespective of their ability, ethnicity, or other characteristic.
- manage the classroom so that students are engaged in learning all or most of the time.
- make sound decisions and plans that maximize students' opportunity to learn.
- respond to initiatives for curriculum change so that the new curriculum's intents are fully realized.

The research reviewed in this chapter demonstrates that there is a growing body of knowledge about teaching practices that can improve teachers' instruction. Because research is an ongoing enterprise, supervisors and teachers should stay informed about new developments. However, this does not mean that teachers should abandon the way they currently teach and unconditionally adopt research-validated practices. Rather, practices that are supported by research evidence should be viewed as possible alternatives to a teacher's current practices. We make this recommendation based on our view of clinical supervision as a process of helping teachers reflect on data (clinical observations, research findings, etc.) and use these reflections to experiment with their instruction for the purpose of continuous professional development.

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