Chapter 6

Teaching for Success: Methods and Models

Education is not the filling of a pail, but the lighting of a fire.
— W. B. Yeats
The how of teaching is influenced by a number of factors, but the two main influences are you—the teacher—and the learner. The factors that affect you, the teacher, begin with the following:

- Your background in the subject you will teach
- Your understanding of the learners’ developmental stages
- Your preparation for each day of teaching
- Your teaching strategy, or how you organize and deliver your teaching plan

Traits of an Effective Teacher

Experienced and successful educators know that the teachers whose students perform at exceptional levels and who receive high praise from parents and supervisors are those with the following traits:

- They are excited about what they are teaching, and show it.
- They treat their students with fairness.
- They have a positive attitude about teaching, learning, and being with their students.
- They are prepared for each lesson, each day.
- They are sincere in their motives and actions and acknowledge that they might make mistakes.
- They have high expectations for their students and challenge them daily.

Factors Influencing Student Success

Even the most experienced teacher can be daunted by a learner who is not responding to instruction for reasons that may or may not be under the student’s control. Some of the factors that influence student success are as follows:

- Cultural background
- Language
- Learning disabilities
- Age
- Gender
- Ability level
- Socioeconomic status
- Peer relationships
- Religion
- Parenting style
- Temperament

Ways to Balance Factors Influencing Student Learning

Each factor affecting students calls for a separate solution, and sometimes each student requires individual attention. However, some general guidelines can provide you with direction:

- Instruction should be sensitive to the students’ diverse needs: Consider that your students may not have a place to study at home or may not be able to afford materials other students take for granted. Also, avoid references to Mom or Dad. Always remain objective.
Make great efforts to relate the material to students’ lives in any way possible: Always begin instruction in concrete, visual terms and then move to the abstract after you think your students are grasping the meaning of the lesson. (Use Bloom’s taxonomy and carefully design your lessons to move from the knowledge level to the evaluation level of cognition.)

Consistency is the key to cohesive classroom instruction: Be diligent about instructions on work sheets and projects and be consistent in the application of the rules for all students. Provide additional help to those who are struggling, and always work with the special education teacher to fulfill modifications listed on a student’s individualized education program (IEP).

Rely on the support services available to you: The school nurse, the social service worker, the school psychologist, the special education director, veteran teachers, guidance counselors, the principal, and the vice-principal are all people from whom you should seek help when you are confronted with a child’s problems that are adversely affecting the learning process. These professionals are trained and equipped to assist you in the classroom.

Using Direct Instruction Teaching Methods

A third factor in the how of teaching is the method. There are many ways to teach, but the method you choose will depend on you—specifically your skills and ability—as well as on your students and the numerous factors affecting them.

The two fundamental categories of teaching methods are direct and indirect teaching. How can you make these methods work for you, and when should you use each? The following discussion should be of help.

Because all instruction must begin with the basic elements of direct instruction, it is a teaching method you will use to deliver much of your curriculum. The basic elements are presentation of material, explanation, and reinforcement. These elements are an inherent part of the teaching regimen, even for the most student-directed lessons.

Direct instruction is a model for teaching that comprises several structured and sequential steps. The best example is the Madeline Hunter model (see your Briefcase CD for a lesson plan template and checklist). The following elements generally compose the direct instruction model:

Introduction and review: The teacher introduces the lesson by reviewing what was previously taught on the subject, then segues into the current lesson.

Presentation and demonstration: The topic of the lesson is presented on an overhead, on a poster, in a lecture, or through multimedia. Guidelines are provided on the work required, teacher expectations, grading, and so forth. The teacher gives some type of demonstration that models what is expected of the students.

Questioning: Questioning provides the teacher with feedback on student comprehension and serves as a platform from which to expand student knowledge of and skill with the material being taught.

Dependent practice: Through a dependent-practice exercise (work sheet, board work, oral presentation), students work with the material presented, with strong teacher input. This exercise also helps the teacher to ascertain what the students have not understood or misunderstood and to provide feedback.
**LESSON PLAN TEMPLATE FOR THE HUNTER MODEL**

- **Anticipatory set:** [The “hook” to grab your students’ attention and get them to relate to the new material]
- **Objectives:** [These are set before the lesson and guide you through the entire lesson]
- **Teaching:** [Your presentation of the new knowledge or skill by using a lecture and possibly one of the following: a film, a tape, overheads, the blackboard, or pictures]
- **Modeling:** [Examples of what you expect the students to produce as a result of the knowledge or skill taught]
- **Guided practice:** [An exercise given to the students to help them practice what you have taught]
- **Checking for understanding:** [Revisitation of the concepts and assessment of whether the students comprehend the material; questioning strategies are essential]
- **Independent practice:** [Homework, group work, or individual practice that allows students to practice, on their own, what they have learned; should challenge students to achieve at a higher level than that of the guided practice]
- **Closure:** [Summary of the material and responses to cues from the students that may indicate confusion or ambivalence; clarification and reteaching of concepts that may have been misunderstood; reflection on the holistic concept and its applications]

**In Real Time: Homework**

The best reinforcement for a daily lesson is the homework assignment. However, you must grade or check homework as quickly as possible. Homework should always be included as part of the student’s grade.

**What Makes Direct Instruction Successful?**

The key elements of success for the direct instruction model are as follows:

- A **well-organized lesson plan** with a great deal of material that provides clear examples and depth of information
- A **demonstration** accompanying the lesson, with clear and readable graphics on an overhead, the whiteboard, or the computer
- A **questioning** period in which students get feedback on the lesson (student responses inform how you will clarify ambiguities)
- A **dependent practice** with examples that are incremental from least difficult to most difficult so that students can gauge their success with the material presented
- An **independent practice** to help students work with the material on their own, which gives them a sense of what they understand
- A **review** or summary of the material taught to provide further feedback for clarification or reteaching
- **Smaller classes and sessions of 40 minutes or less** depending on the students’ age
How Is Direct Instruction Effective?
Teaching a lesson by using direct instruction is thought to be effective for a number of reasons. Among them are the following:

☑ Direct instruction helps both the teacher and the student to stay on task and on schedule. Students know exactly what is expected of them because they see the lesson presented in a linear and clear manner.

☑ Direct instruction enables the teacher to present one or two clear examples to explain the concept being taught and to frequently review how the examples apply.

☑ Direct instruction focuses student attention on the specific information being taught.

When Should I Use Direct Instruction?
Direct instruction is a valuable instructional tool for almost all lessons, and elements of it will be used in most lessons. However, the step-by-step direct instructional method is best used when your students need to grasp the initial concepts of a topic. Therefore, literacy, math, and science teachers usually favor direct instruction. It is also recommended for teaching higher order thinking skills because it presents critical-thinking steps in sequence and reinforces the concepts through student dependent and independent practice (Adams & Englemann, 1996). In short, direct instruction should be used to introduce material, for review, and to transition to other topics and concepts.

What Are the Disadvantages of Using Direct Instruction?
Some instructors would say that direct instruction has no disadvantages (see the Association for Direct Instruction Web site, listed at the end of this chapter). However, one general criticism is that direct instruction can stifle teacher creativity because it is so formulaic. Likewise, direct instruction is structured and sequential, which can inhibit excursions into other areas if a student raises an interesting point that is off topic. In addition, using direct instruction to develop higher order thinking skills requires a great deal of planning and expertise and general skill in using the Socratic method (discussed in the next section). Other possible disadvantages of using direct instruction are as follows:

☑ Lecturing quickly leads to student disconnection.

☑ Teachers who do not monitor themselves may use a great deal of class time in repetitious explanations.

☑ Direct instruction challenges a teacher’s ability to maintain classroom order because it requires a high level of student attention.

Socratic Method
One of the most ancient teaching techniques originated with Socrates. According to Plato, who related the famous story of Meno, Socrates took a young man through a series of questions that ultimately led all listeners, including the student, to a higher understanding of a concept. The actual “method” was to ask a series of questions that built on each other until the student realized aspects of the concept by asking questions of his or her own (Elkind & Sweet, 1997).

A step-by-step tool for using the original Socratic method is not available. However, if the method is combined with standard questioning techniques, the following examples may provide you with some direction if you are unfamiliar with the process. Once the instructor presents the concept, he or she might begin with a series of questions:
What Makes the Socratic Method Successful and Effective? The greatest benefit of using the Socratic method is that it moves the lesson away from the teacher as holder of knowledge to the student as an individual given the power to think through the problem and gain ownership of his or her learning. Looking directly at a student, speaking his or her name, and asking for his or her input on the topic at hand is powerful. It signals your interest in the student as a learner and that you value his or her abilities and viewpoint. Skillful questioning is an effective tool for engendering true student engagement in the learning process. The Socratic method is effective because it does the following:

- Involves the student in the learning process
- Helps clarify difficult concepts
- Helps introduce new concepts or learning objectives
- Opens a wide range of perspectives encouraging higher order thinking

One major advantage of this method is that it requires little to no resources beyond time and energy. Therefore, the following are true:

- It can be initiated in any setting and skillfully sustained for as little or as much time as is available.
- It can help stimulate the student who is quieter to speak up when he or she hears a comment that strikes a chord of understanding or protest.
- It reminds students that their opinions are valued and therefore motivates them to participate.
- It is an ancient tool born in the perennialist spirit of education that appeals to teachers who want to inspire their students in the classical manner.

When Should I Use the Socratic Method? The Socratic method is always effective when you are introducing new concepts in all subject areas. It is also useful as a reinforcement tool to help students look at two perspectives of an issue. For example, you could stimulate student questions about how they would feel if they were Southerners prior to the Civil War or as a way to discover the motives of the antagonist and protagonist in a novel.

What Are the Disadvantages of Using the Socratic Method? The disadvantages of using the Socratic method are similar to those for any teaching method. Spending an entire period or 40 minutes on random questions to arrive at an understanding of a single concept is sufficient and, depending on the student’s age, possibly extreme. The main disadvantage is that the time consumed by questioning may detract from student dependent practice or other explanations that may be necessary to clarify your topic. In the pre–Civil War example given in the preceding section, if too much time is spent trying to establish the Southerners’ perspective, you may run out of time and be unable to provide specific dates, people, and events that are also necessary for a clear perspective. Other noted disadvantages of the Socratic method are as follows:

- The teacher may inadvertently ask questions that will elicit comical or off-task remarks: If by mistake you or one of the students stumbles onto a question that can be taken as off-color or inappropriate, do not linger or explain it. Move on.
Some students may not be able to follow the train of thought created by the questions and will lose interest quickly: Speedy questioning may be attractive to some students, but it confuses and bores the individuals who have difficulty processing information. Ask questions slowly and be patient with students’ responses.

Some students may find this line of teaching too unstructured and seek to find the purpose of the questions: Undoubtedly, some students will want to know “where this is going.” Try to craft your questions so that a direction is obvious to all your students. If they begin to become confused, simplify the questions or stop and give an explanation.

The greatest asset of the method, being able to introduce new concepts, is also a liability if the questioning does not produce a clear explanation of the concept: Before using this method, know in advance where you want your students to conclude. Keep in mind that the concept being taught must be in clear focus at the end of the session.

Using Indirect Instruction Teaching Methods

Indirect instruction is not in itself an instructional technique as direct instruction is. Rather, the term indirect instruction has come to mean any method used in which the student is an active (rather than a passive) participant. Therefore, indirect instruction comprises a number of instructional techniques that encourage students to participate actively in their learning. Educator and researcher Linda Meyer (1984) provides a clear definition:

Indirect instruction is an approach where the process of learning is inquiry, the result is discovery, and the learning context is specific to problem-solving. (p. 383)

In her definition, Meyer mentions two specific techniques: discovery and inquiry learning, and problem solving. Both methods invite students to become actively involved. What follows is an examination of the methods that compose indirect instruction.

Discovery and Inquiry-Based Learning

Discovery and inquiry-based learning is a well-known method of teaching that gained popularity with the proliferation of computers and the Internet. Jerome Bruner (1983) is credited with introducing discovery learning, which is a teaching method whereby the student is encouraged to seek his or her own answers to problems or questions posed by the teacher. The student then works with the material discovered to form his or her own perspective relating to the material.

What Makes Discovery Learning Successful and Effective?

Discovery learning is effective for the following reasons:

- It actively engages the learner in the discovery process.
- It stimulates student interest by directly relating learning to the student.
- It connects to the learner’s prior knowledge.
- It enables students to reach new conclusions from what is discovered.

Students should be made a part of the instructional process.
Most important, discovery learning fosters initiative and student engagement. Providing students with the opportunity to seek answers to questions and to solve problems makes them an active part of the learning process.

Discovery learning does the following:

- Encourages student initiative and commitment, which is directly related to cognitive comprehension
- Creates an atmosphere of responsibility and therefore supports a student’s accountability for his or her work
- Is a key avenue for developing problem-solving skills that encourage cooperation among peers
- Provides the teacher with a clear picture of how well the student is grasping the material and using it at the higher levels of cognition

**When Should I Use Discovery Learning?**  Discovery learning is most appropriate for any lesson that seeks to involve students in an exploration of more ideas associated with the main theme. Therefore, this method works best at the expanding and refining stages of the teaching process. After an introduction is given through direct instruction or the Socratic method, discovery learning might be appropriate as students explore how the concept being taught permeates both the physical and the ideal world.

**What Are the Disadvantages of Using Discovery Learning?**  The main disadvantage of using discovery learning is that it requires additional classroom management and supervision of your students. Discovery learning often takes students out of the classroom into different areas of the school (the library, the computer center, offices, etc.). It may also require them to work outdoors on the playing field, which necessitates additional supervision.

Therefore, the main disadvantages of using this method are as follows:

- Increased supervision of students who are working out of the classroom
  - Keep good records as to the whereabouts of all your students. Implement a sign-out system that is strictly enforced.
  - Increased supervision of the students in the classroom who are working in dyads or groups
    - Circulate among the groups as they are working and move from group to group regularly.
  - The possibility of parental involvement beyond what is best for the student
    - Advise your students about too much parental help on homework; encourage them to seek help from their parents, but put them on the honor system to do the work on their own.
- The high incidence of plagiarism from the Internet because students are unfamiliar with citing references
  - Advise your students on the illegal use of Internet-copied materials. Give them a lesson on plagiarism and its penalties. Cite some high-profile cases of famous authors who have lost millions of dollars or have damaged their careers. Show them what is correct and incorrect when they are gathering material from the Internet.
- Student confusion as a result of no specific framework or sequence of material being taught
  - Provide clear instructions from the outset, but be ready to revise the directions as the project ensues. Do not be afraid to make changes.
What Are Some Possible Discovery Learning Projects? Discovery learning projects can be developed from virtually any lesson presented. However, the following types of projects lend themselves to discovery learning:

- Researching the Netherland’s policy and actions toward Jews during World War II
- Finding as many ways as possible to determine how to mow a square piece of lawn beginning at the center
- Determining the temperature and precipitation levels of the Northeast during the past decade
- Finding architecture with characteristics similar to those in the world’s largest cities
- Comparing the typical diets of people from Mexico, France, and Poland
- Finding the fat and carbohydrate content of typical meals at local fast-food restaurants

Project-Based and Problem-Based Learning

Project-based learning and problem-based learning (PBL) are often seen as two teaching methods but overlap in principle; thus, they can be looked at simultaneously. The essential element of PBL is its use of real-world situations for which students must solve a problem by using observational and critical-thinking skills. This method, although seemingly new to modern educators, has its roots with John Dewey’s experiential learning model (Aspy, Aspy, & Quimby, 1993). What makes this model of teaching so appealing is the high level of student interest in dealing with the real world.

Some features of PBL are the following:

- Students are given a problem to solve requiring them to gather information, often in teams or dyads.
- PBL is somewhat unstructured because the parameters for the students are expanded, which enables them to construct their own meaning of what they find when they are solving the problem.
- The problem is framed in a real-world situation, such as the following:
  - “We are building an A-frame house and need to know what size furnace and air-conditioner are required.”
A specific species of fish is disappearing from a local river. What procedures or actions are necessary to rectify the situation? What obstacles might be encountered?

“The issue of gun control is emotional. How can this issue be resolved in a compromise that would satisfy people on both sides of the issue?”

“We are going to depict a nature scene by using three artistic mediums: clay, metal, and canvas and paint. All three must be incorporated.”

In each of the preceding examples, students must gather a substantial database of information and design a plan of action before solutions can be obtained. Most important, students must record the obstacles that they encountered, how they overcame these obstacles, and what effects the solutions have on other people or systems.

**What Makes PBL Successful and Effective?** The effectiveness of the PBL teaching method rests with the heightened student response to solving problems. The nature of this method stimulates curiosity and encourages engagement. However, the main reason PBL is effective is the student’s use of higher order thinking skills on a natural level. Unlike simply solving a puzzle offered by the teacher, finding the answers to real-world problems has the additional factor of being gratifying in a sense that the student is making a contribution.

**When Should I Use PBL?** PBL is an excellent tool for helping your students extend and refine their learning of a concept. However, as with discovery learning, students must have some working knowledge of terms, facts, and statistics, as well as direction, before they can address the problem. Such working knowledge can be provided through lectures, or direct instruction. PBL is best used when you are seeking to help your students grasp the meaning of a larger concept through their own initiative and work. Therefore, use PBL at the point in your lesson when the student is expected to grasp the essential meaning of the concept being taught.

**What Are the Disadvantages of Using PBL?** Although no drawbacks to using PBL are readily apparent, a teacher should be cautious before launching a PBL lesson or unit. Some of the factors to be aware of are as follows:

- ✔ What materials and resources will be necessary to implement the lesson, and do I have the ability to get them ready on time?
  - Long-range planning can prevent this problem. Look at the project thoroughly and make a list of materials and resources needed.

- ✔ How well does PBL apply to this particular topic, and does it align with district and state standards?
  - When designing weekly or monthly lesson plans, align the state and district standards; do not wait for the day of the lesson.

- ✔ As in the cooperative learning method (discussed subsequently), team members often do not work well together and usually are in conflict over workloads.
  - Try to compose your teams of members who vary in interest, ability, and gender; always remember that diversity is a goal.

- ✔ Some students will have difficulty understanding the material or organizing themselves well enough to begin the project or problem solving.
  - Work closely with the special education teacher and aides; be sure to check with the guidance counselor about students who are struggling. The more informed you are, the better prepared you will be to help your students.
What Are Some Possible PBL Lessons? Each subject area presents ample opportunities for using PBL, but it is most effective when it is used to expand and refine material already presented. Following are some suggestions for lessons using PBL:

- “What is the national debt and how does it affect our economy?” (intermediate grades)
- “What is the pollution rate of European and Eastern European countries? How does it compare with that of the United States? What are the major pollutants?” (middle to high school)
- “As financial director of your athletic program, you must budget all monies for all sports at the school. Construct a formula that would give equal funding to all sports. Provide a credit and debit sheet of all materials and other costs.” (middle school)
- “What type of books would you like to see in a private library in the classroom?” After a visit to the local library, students must compile a list of books by type, then by title and author. (primary grades)

### SAMPLE PROBLEM-BASED LESSON

**What if**

In 1999, Robert Cowley published a book titled *What If? The World’s Foremost Military Historians Imagine What Might Have Been*. It poses a series of questions about probable outcomes of history if different choices had been made. Using this concept as a theme for all subject areas, students can work on problems involving changed perspectives. This lesson provides an outside-the-box view of historical, factual, and biographical events that encourages students to think about the elements of the problem as they are, and as they could be. Following are some ideas about how you might use this problem-solving technique.

<table>
<thead>
<tr>
<th>Problem solving using . . .</th>
<th>What if . . .</th>
</tr>
</thead>
<tbody>
<tr>
<td>English language arts</td>
<td>The main character in our story did not succeed in overcoming her obstacle? The antagonist decided to become a protagonist? The story took place in modern times or ancient times?</td>
</tr>
<tr>
<td>Social studies</td>
<td>The British decided not to send troops to quell the revolution? America refused to join the French and English during World War I? The stock market crashed in 1939 instead of 1929?</td>
</tr>
<tr>
<td>Science</td>
<td>Nuclear reactors could supply all our energy needs? Our streams and rivers became polluted at a greater rate and threatened freshwater supplies? Weather patterns affected agricultural production?</td>
</tr>
<tr>
<td>Math</td>
<td>All schools gave first graders laptop computers? Retail store cash registers failed for an entire week? There were no prime numbers? We reduced everything you see in the room to one quarter its size?</td>
</tr>
<tr>
<td>Music</td>
<td>We wrote a song using only four notes? Beethoven had never lived? We could use only the bass clef? We combined rap music with classical music?</td>
</tr>
<tr>
<td>Art</td>
<td>We found a famous painting hanging in our library? We redecorated the entire school in a modern art design? Our nation’s capital was redesigned by Frank Lloyd Wright?</td>
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</tbody>
</table>

Cooperative Learning

Probably the most popular teaching method, besides direct instruction, is cooperative learning. Because it so closely follows experiential learning, capitalizing on student experiences and cooperation among students, this method is considered the most valuable when you want students to comprehend the material being taught. In cooperative learning, a
A group of students is given a task related to the concept being taught. The effort may be directly related to meaning, as in PBL, or to refining concepts already discussed and grasped. This method requires each student to assume a portion of responsibility for the assignment and to report to his or her team members.

Many types of cooperative learning are used. However, the following seem to be most popular:

- **Student teams achievement divisions (STAD)** is a system in which each team is placed on an achievement level on the basis of scores on tests or quizzes the students give themselves. Team members form study groups in any way they want and test and quiz one another on the material. They then sum a team score to compare with other teams’ scores. STAD is effective when teachers want students to master a specific skill, such as one in math, a foreign language, or science.

- **Jigsaw** is a similar team exercise, except each student on the team is responsible for a specific portion of the material to be learned. He or she then “teaches” it to the other team members. Finally, the teams present what they have learned to the other teams.

- **Group investigation** is a technique that more closely follows the PBL model. Each team must develop its own strategies for isolating the meaning of the topic, then develop subtopics, plot a method to find information on the topic, and finally organize the information into a formal presentation. Each team also evaluates itself at the completion of the project.

- **Carousel feedback** is a specific technique developed by Spencer and Laurie Kagan (2000).

### What Makes Cooperative Learning Successful and Effective?

Extensive research has revealed that cooperative learning provides strong academic improvement, as well as overall positive benefits in student behavior, self-esteem, and motivation. (Slavin, 1995). Some of the key benefits of cooperative learning are as follows:

- It mirrors real-life work situations in which employees work together to solve problems.
- It engenders cooperative behaviors more so than whole-class teaching does.
- Students engage in social interactions that help foster cooperative behaviors.
- As a group, students can explore a broader perspective of the topic and approach it at higher levels of thinking.
- Groups can also help provide a routine in class work by assigning repetitive tasks to the group as a whole.

### In Real Time: Success Using Cooperative Learning

Cooperative learning is only as effective as teacher organization, monitoring, and assessment. Students who are gifted can either promote or destroy the cooperative unit. They must be given clear guidelines and enough initiative to challenge their abilities. They also must be allowed the opportunity to lead as well as made to understand the integrity of the group dynamic and the benefits that derive from it.
Cooperative learning is best used to generate student comprehension, generalization, and expansion of concepts that have been taught. It works best when students are solving a problem or seeking information on a topic.

Some teachers use cooperative learning almost exclusively; however, much depends on the subject being taught. For example, social studies lends itself to cooperative learning because students seek to explore the causes and effects of historical events, and reproduce, in real life, the dynamics of historical documents.

**When Should I Use Cooperative Learning?** Cooperative learning is best used to generate student comprehension, generalization, and expansion of concepts that have been taught. It works best when students are solving a problem or seeking information on a topic.

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**Carousel Feedback Technique**

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>The class is divided into groups. Each group completes a project. For example, each team might devise a clean-air bill to present to Congress for passage.</td>
<td>This model, summarized here, is one of many cooperative learning paradigms established by Dr. Spencer and Laurie Kagan (2000). Their approach gives teachers greater control over the process by offering dozens of methods with which to approach topics in a cooperative manner. Carousel Feedback promotes student participation and cooperation while exposing the entire class to the declarative knowledge of the topic. To overcome the main obstacle of cooperative learning—when stronger, more aggressive members of the group dominate—help them divide the tasks evenly so that everyone has some area of responsibility. Be sure to establish guidelines for accountability and to give weaker members the help they will need to be successful. Intervene in groups in which some members are “taking away the project” for themselves.</td>
</tr>
<tr>
<td>The teams spread their projects around the room, and each team stands in front of its project.</td>
<td></td>
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<tr>
<td>They then rotate clockwise to the next project, where they observe and orally react to the others’ projects. One person from each group records feedback.</td>
<td></td>
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<tr>
<td>The teams then rotate again, and observe, discuss, and give feedback on the next project in line.</td>
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<tr>
<td>A new recorder is selected for each round to write up feedback.</td>
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<tr>
<td>This process continues until each team reaches its project.</td>
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<tr>
<td>The feedback forms are then given to each team for reflection.</td>
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</tbody>
</table>
LEGAL SIDEBAR

Mandated Instruction Policy

Introduced by Senator Robert Byrd (D–WVA), the Consolidated Appropriations Act, 2005 (2004), implemented Constitution Day and Citizenship Day on September 17 of each year. On this day, schools are required to teach some aspect of the U.S. Constitution. Although such instruction is mandated, the application has a great deal of flexibility.

What Are the Disadvantages of Using Cooperative Learning? A teacher should not discount lightly the disadvantages of using cooperative learning, especially the potential of disrupting classroom harmony. In fact, many teachers avoid using this method because of the heavy potential for students to misbehave. However, such misbehavior need not be the case. Some of the disadvantages of using cooperative learning, and possible remedies, follow:

- Placing students in teams is welcoming a social interaction that leads to comedy, loud noise, and off-task behavior.
  - Before the beginning of the lesson, review the procedures to follow for the specific project. Discuss with your students the need for quiet and on-task behaviors, as well as respect for other teams and the class as a whole. Provide clear lines of accountability for students exhibiting disruptive and off-task behaviors. Keep active in the room, moving from group to group to present a physical presence that will help deter such behavior.

- In group work, one or two students may become the leaders and rush ahead to accomplish the tasks. Other members, who cannot keep up, then give up. Quicker members complain that they are doing all the work.
  - This serious flaw in the cooperative learning model can be remedied by assigning each student a specific task for which he or she is responsible. Also, provide clear evaluation rubrics that inform each member of how the final grade will be compiled.

- Sometimes the dynamic of the group simply is not working because of serious personality conflicts. This situation can inhibit the goals and work of the team.
  - Intervene immediately when disruptions occur because of personality conflicts. Try to resolve them through standard conflict management techniques (e.g., talk out the problem, and try to sway perspective). If this approach does not work, consider rearranging the team members.

COOPERATIVE LEARNING TEAM STRUCTURE

<table>
<thead>
<tr>
<th>Team member</th>
<th>Duties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recorder</td>
<td>Keeps records of the team’s progress; keeps notes for the presentation</td>
</tr>
<tr>
<td>Reader</td>
<td>Reads directions and notices pertinent to the task</td>
</tr>
<tr>
<td>Manager or timer</td>
<td>Keeps the team on task and on schedule</td>
</tr>
<tr>
<td>Ambassador</td>
<td>Communicates with other teams and the teacher or other resource people such as the librarian</td>
</tr>
<tr>
<td>Researcher</td>
<td>Is responsible for acquiring information in addition to what the team has already found</td>
</tr>
</tbody>
</table>
When in a cooperative group, students may strike bargains to share each other’s work on a scale that leaves some members doing little.

- To prevent this situation, (a) provide a clear set of expectations for each group member (e.g., speaker, reporter, researcher) and (b) provide a rubric and an evaluation form that reveals grading levels.

What Are Some Possible Cooperative Learning Projects? There is no end to the use of cooperative learning groups in the classroom. Cooperative learning is conducive to all subject areas at all levels from K through 12. Following is an assortment of possible lessons for the cooperative learning mode:

**History**
Create a time line for a specific era in U.S. or world history. Each group is assigned a time period.

**Math**
Have each group create a graph with an x and y axis to simulate a portion of a street map. Different groups may be assigned different cities. Museums, hotels, and restaurants can be plotted by using x and y indicators on the graph.

**Reading**
Use the concept of *Readers’ Theater* or *Literature Circles*. Each team can read a book or story, following the Jigsaw method or the Carousel Feedback model. Each group then reports on its story or book.

**Biology**
For a middle school or an intermediate lesson, students investigate the systems that function in the human body. Each group examines a system or a part of the system, with each member assigned a body organ.

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**VOICES IN THE CLASSROOM**
Using Cooperative Learning

We were studying agriculture in my fifth-grade class. I had set up cooperative learning groups to explore all aspects of agricultural America. The culminating project was for the students to construct a physical representation of the concept of agriculture. Naturally, most of these representations were farms.

On the day of the presentations, I stood before five perfect projects, one as flashy and shiny as the other. In one particular project, at least 20 farm animals were made out of plaster, not plastic. I picked up the pig, and on the bottom was a price tag: $5.95. I calculated that those animals had cost almost $100. In fact, the entire farm was built with expensive wood, stained and varnished.

One of the students confessed that Jennifer’s father had “helped” with most of the project, and he bought the animals. I was awestruck and speechless. How would I ever be able to grade this project—or the others for that matter?

Each of the projects demonstrated time, energy, creativity, and applicability to the theme. They all received a 100, but Jennifer thought theirs was worth more because it was obviously the best. I learned a valuable lesson that day about parental involvement and the wisdom of establishing a detailed rubric to be given to the students at the outset.

—A wiser teacher
Concept Teaching

Concept teaching is a variation on thematic units, except it provides a broader application of topics. Using any concept that relates to your topic, such as roads in social studies, or change in science, or relationships in language, or a triangle in math, you can construct meaning that will expand to a broader and more comprehensive application of the material.

Another word for concept is category. By looking for ways to categorize topics in your lesson, students can begin to make connections that form a comprehensive “picture,” which will increase the probability that they will be able to grasp the material you have taught.

Concept teaching does the following:

- It supports building relationships among categories and topics, which makes them easier to understand (Rosch, Mervis, Gray, Johnson, & Boyes-Baren, 1976). An example might be the triangle: In math it has three sides and a variety of uses; in social studies, the three branches of government form a triangle of balanced power. Examining all aspects of the direct and relational meanings of the concept helps take students to levels of thinking outside their normal scripts and opens opportunities for new concepts to be formed (Taba, 1967).
It stimulates critical thinking as students begin to think in terms of definitions and applications. They may see not only what characterizes an idea, but also what characteristics are not present in its function. An example might be studying the concept of climatic aberrations in hurricanes or tornadoes, but also looking at damage caused by the same dynamics not classified as a hurricane or tornado.

Concepts are generally assigned two attributes: critical and noncritical. Critical attributes define the concept and clearly separate it from other concepts. An example might be the attributes of a car—motion, fuel, speed, braking, and steering; they are necessary for a car to function. A noncritical attribute would be speed from 0 to 60, air-conditioning, or CD players. These attributes are not found in all cars and therefore affect the meaning of car.

Teaching in concepts requires the use of concept mapping. Helping students brainstorm the many concepts composing the topics you teach is facilitated by the use of the concept map. The concept map is the same technique used in process writing that is known as clustering or webbing. Students make relational connections by using a graphic organizer. (Note: The Inspiration software program is an excellent tool for creating concept maps.)

What Makes Concept Teaching Successful and Effective? The main reason concept teaching is effective is the wide spectrum of topics it provides, which enables students to see relationships among familiar ideas and apply them in novel ways.
Concept teaching promotes discussion and generates student-initiated learning. It is unquestionably a powerful method for stimulating higher order thinking about important concepts related to your curriculum.

The effectiveness of concept teaching is seen almost immediately as students grapple with their own definitions of such concepts as liberty, probability, change, inertia (scientific and social), entropy, responsibility, sharing, and community. These are just a few random concepts whose introduction will stimulate student discussion and help generate an understanding of more than a single perspective.

When Should I Use Concept Teaching? Concept teaching may be used from K through 12 (and beyond), in all subject areas. Every subject taught in school or curriculum (overt and hidden), is in some way associated with a single concept or group of concepts. Concept teaching is no more or less effective in math than in social studies, in foreign language or in art, in music or in health. Each of these subjects can be identified with a host of concepts that underpin their definition and function.

A most appropriate use of concept teaching is when you are using thematic units. Each theme may be explored for the concept or concepts that underlie the essence of the theme. For example, a fourth-grade class exploring the theme of erosion in science or social studies (or both) may also deal with the concept of farming and the differences between northeastern farms and western farms. Students begin to discover that farming techniques are suffused with the concepts of growth, climate conditions, and marketing. Soon, the concept of economy is introduced as an underlying cause affecting various ecological concepts.

Concept teaching is generally not as effective when you are attempting to teach a specific skill, such as factoring a polynomial. It focuses on ideas, not skills.

What Are the Disadvantages of Using Concept Teaching? Concept teaching has a few disadvantages beyond the most obvious. Because the concept lesson is carefully prepared in advance and is aligned with district and state standards, only teacher facilitation will adversely affect its effectiveness. Consider these potential problems:

- The single most obvious disadvantage of using concept teaching is the possibility that students who process information more slowly than others will become confused and eventually bored.
  - Use of a graphic organizer or a concept map will help decrease this problem. Students who can see the visual growth of the relational pieces of the concept will be more likely to participate.
- Because concept teaching focuses on ideas, not skills, it will not be effective for teaching a specific skill.
  - Use the concepts surrounding the teaching of the skill to help students grasp a broader view of the process. For example, the concept of cause and effect is pervasive throughout most subject areas.

What Are Some Possible Concept Teaching Lessons? Possibilities are endless when you are using concepts. Following are some of the concepts teachers have used effectively:

- Choose a historical character (e.g., George Washington; Martin Luther King, Jr.; or Susan B. Anthony) and create a concept map of his or her life. Then, identify one concept that can be further brainstormed, categorized, sorted, and prepared for research.
- The topic cellular structure can provide an excellent interdisciplinary lesson between science and social studies. Students brainstorm the word cell and find relational terms that support the definition. Through discussion, and possibly essays, students configure the functions of cells in a variety of venues.
For a novel or short story, create a storyline map that focuses on the main theme of the work. Identify the key concepts that underlie the action or plot, and encourage students to find relational concepts that affect character motive.

In the primary grades, for math, teaching students grouping of hundreds can be approached from both concrete and then abstract (or application-level) concepts. Students begin with concrete items such as stones or chips and then move to dollars and cents.

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<thead>
<tr>
<th><strong>DOS AND DON’TS</strong></th>
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<tr>
<td><strong>Don’t</strong></td>
<td><strong>Do</strong></td>
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<tr>
<td>Begin the year with a lengthy lecture on the kind of teacher you are</td>
<td>Begin the year by becoming familiar with your students and allowing them to question you about your expectations</td>
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<tr>
<td>Create unreasonable rules for the class that immediately create obstacles between you and some of the class members.</td>
<td>Begin the year with clear, concise, and few rules that reflect the needs of the child as well as the need for order</td>
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<tr>
<td>Label your students by intelligence level</td>
<td>Avoid assigning stereotypes on the basis of a student's past record in either academics or behavior</td>
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<td>Assume that all students hear, see, and process information equally</td>
<td>Allow for the many ways students learn, and accommodate their learning styles</td>
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<tr>
<td>Present your material too quickly or in large segments</td>
<td>Pace instruction to allow for reflection and downtime to process information</td>
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<tr>
<td>Assign homework that has no connection to the lesson or unit plan</td>
<td>Correct and remark on all homework assignments (a student's value for homework is closely associated with your value of it)</td>
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<tr>
<td>Use cooperative learning for any other reason than promoting the goals of the lesson</td>
<td>Use cooperative learning to promote comprehension of the material and greater engagement in the learning process</td>
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<td>Settle on one teaching strategy for every topic or lesson</td>
<td>Vary your teaching techniques in accordance with the needs of your students, the topic being taught, and the environment in which you teach</td>
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**WEB SITES OF INTEREST**

http://www.humboldt.edu/~tha1/hunter-eei.html
This Web site provides a clear and functional example of the components of a direct instruction lesson.

http://www.adihome.org
This Association for Direct Instruction site provides clear and comprehensive information about the foundations of direct instruction and is a great resource for materials.

This link, on the official site for the Association for Direct Instruction, provides a host of answers to typical questions about direct instruction.

http://www.teach-nology.com/teachers/methods/models/direct
This site provides clear definitions of direct instruction as well as links to various other instructional resources.
Part 2 Learning the Teaching Process

http://www.teach-nology.com/currenttrends/cooperative_learning
This site provides links to sites that reflect a host of cooperative learning formats.

http://edtech.kennesaw.edu/intech/cooperativelearning.htm
A great in-depth resource for functional cooperative learning, this site provides clear, step-by-step procedures.

http://www.wilsonmar.com/1movies.htm#ReviewSites
This excellent site provides a complete list of movies that are appropriate for students in all grades. The movies are also categorized by ideology, movie types, themes, and reviews.

http://www.frsd.k12.nj.us/rfmslibrarylab/di/differentiated_instruction.htm
This site is a springboard to a large number of sites on differentiated instruction, including brain-based, cooperative, and inquiry-based learning, as well as on constructivism and performance assessment.

For Your Briefcase

To Do

• Review your curriculum to determine which type of instruction you will use (e.g., direct, indirect, project).
• Align your curriculum with a variety of teaching techniques.
• Gather materials for each unit.
• Create a time line for your instructional units.

Resources on Your Briefcase CD

Samples
• Sample Document-Based Question Lesson
• Sample Problem-Based Lesson

Templates
• Direct Instruction Procedure Checklist
• Lesson Plan Template for the Universal Model
• Lesson Plan Template for the Hunter Model
• Hunter Model Lesson Plan Checklist
• Socratic Method Procedure Checklist
• Discovery Learning Procedure Checklist
• Project-Based or Problem-Based Learning Procedure Checklist
• Cooperative Learning Procedure Checklist
• Cooperative Learning Team Evaluation Sheet
• Concept Teaching Procedure Checklist
• Types of Cooperative Learning
• Carousel Feedback Technique

REFERENCES

Chapter 6  Teaching for Success: Methods and Models


