

18

Teaching Specialized Content

INTASC Standard #7: Planning for Instruction
Standard #8: Instructional Strategies

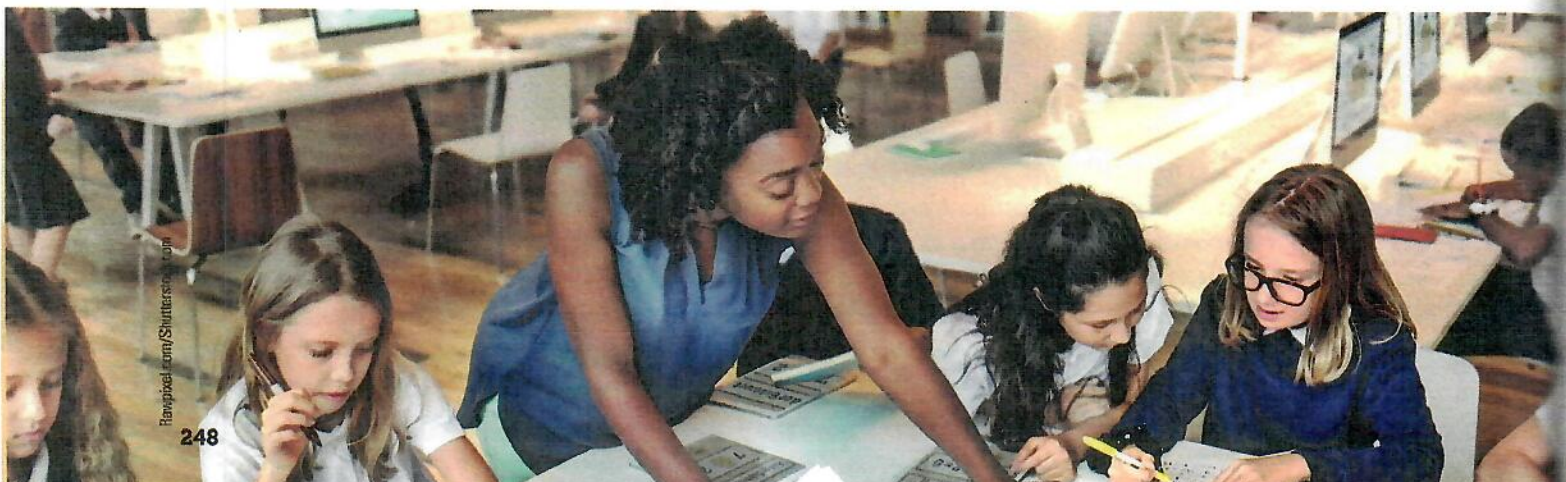
LEARNING OBJECTIVES

After reading this chapter, you should be able to:

- 18-1** Define, describe, and give examples of concepts.
- 18-2** Describe and give examples of key planning considerations for teaching concepts.
- 18-3** Define, describe, and give examples of behavioral skills.
- 18-4** Describe and give examples of key planning considerations for teaching behavioral skills.
- 18-5** Describe various types of learning and study strategies and the rationale for teaching them.
- 18-6** Describe and give examples of key planning considerations for teaching learning and study strategies.

CHAPTER OUTLINE

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| <p>18-1 TEACHING CONCEPTS</p> <ul style="list-style-type: none"> 18-1a Concepts Defined 18-1b Effective Models for Teaching Concepts <p>18-2 KEY PLANNING CONSIDERATIONS FOR TEACHING CONCEPTS</p> <ul style="list-style-type: none"> 18-2a Concept Analysis 18-2b Objective 18-2c Opening 18-2d Closing <p>18-3 TEACHING BEHAVIORAL SKILLS</p> <ul style="list-style-type: none"> 18-3a What Are Behavioral Skills? 18-3b Why Teach Behavior Skills? 18-3c Choosing the Lesson Model to Use <p>18-4 KEY PLANNING CONSIDERATIONS FOR TEACHING BEHAVIORAL SKILLS</p> <ul style="list-style-type: none"> 18-4a Content Analysis 18-4b Explanation | <ul style="list-style-type: none"> 18-4c Demonstration 18-4d Supervised Practice 18-4e Extended Practice <p>18-5 TEACHING LEARNING AND STUDY STRATEGIES</p> <ul style="list-style-type: none"> 18-5a What Are Strategies? 18-5b Why Teach Learning and Study Strategies? 18-5c What Are Different Types of Strategies? 18-5d Selecting Strategies to Teach 18-6e Choosing the Lesson Model to Use <p>18-6 KEY PLANNING CONSIDERATIONS FOR TEACHING LEARNING AND STUDY STRATEGIES</p> <ul style="list-style-type: none"> 18-6a Content Analysis 18-6b Opening 18-6c Explanation 18-6d Demonstration 18-6e Extended Practice |
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Introduction

This chapter explains how to teach concepts, behavioral skills, and learning and study strategies. We have included this information in a separate chapter because this content requires somewhat specialized planning (see Figure 18.1). Effective instruction for concepts, behavioral skills, and learning and study strategies is not qualitatively different from teaching other content. It is really more of a difference

in instructional emphasis. For example, when planning to teach about concepts, you emphasize using examples and nonexamples; when planning behavioral skill and strategy lessons, you emphasize demonstrating processes and using think-alouds. We have included basic information about each type of content as well as key planning considerations for each.

18-1 Teaching Concepts

Regardless of the content area you teach, you will find yourself teaching concepts. For example, in math, students need to know how to divide numbers (procedural knowledge), but they also need to understand what division is—that is, the concept of division (declarative knowledge). Concepts such as states of matter, magnetism, and landforms are all part of science instruction. In language arts, students need to be taught the concepts *subject* and *verb* in order to write complete sentences. Orlich et al. (2018) suggests that concept teaching “encompasses a substantial portion of all instruction” and that “concept analysis is used in almost every subject and grade” (p 155). Sometimes, concepts are taught within another lesson or activity; other times, they are taught as separate lessons.

18-1a Concepts Defined

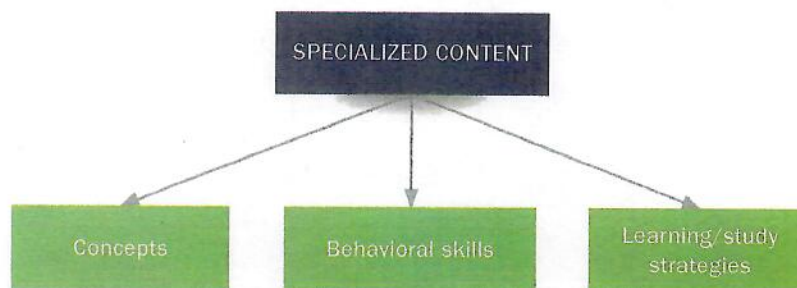
Concepts are categories of knowledge. For example, “island” is a concept. There are many specific examples of islands, such as Lopez Island,

Barbados, and Greenland. They all belong to the “island” category because they have certain attributes in common—that is, they are all land masses completely surrounded by water. Teaching concepts is much more efficient than solely teaching specific examples (Cummings 1990). A geography teacher does not need to teach every island in the world separately because teaching concepts allows students to generalize. If students understand the concept of “island,” they will recognize new places as being islands if they have the necessary traits.

To determine if something is a concept, see if you can think of more than one example of it. In other words, “lake” is a concept because there are many examples of it—Lake Michigan, Lake Samish, Lake Placid, Lake Como, Lake Victoria, and others. “Mars” is not a concept because there is only one Mars. Other examples of concepts are *fairness*, *matter*, *adverb*, *polygon*, *appropriate spectator behavior*, *on-task*, *tessellation*, *under*, and *over*.

To check your understanding of “concept,” look at Example 18.1.

Figure 18.1 Types of Specialized Content



EXAMPLE 18.1: EXAMPLES AND NONEXAMPLES OF CONCEPTS

Examples	Nonexamples
President	Harry Truman
Rocking chair	My grandma's black rocker
Impressionist art	Van Gogh's <i>Starry Night</i>
Planet	Mars

Concepts vary according to how concrete (such as planet, mammal) or abstract (emergency, bias) they are. The more concrete a concept is, the easier it is to teach and to learn; in fact, many concepts are learned informally (furniture, dog). Notice also that concepts vary according to how broad (living things) or narrow they are (birds of prey). When teaching a particular concept, it is helpful to fit it into a hierarchy of broader and narrower concepts. For example, "We have been learning about geometric shapes. Today, we are going to learn about one type of geometric shape—the triangle. In later lessons, we will learn about different kinds of triangles, such as equilateral triangles." See Table 18.1.

18-1b Effective Models for Teaching Concepts

There are two basic models that are typically used for teaching concepts. These are the *direct instruction model* and the *structured discovery model*. The direct instruction model uses a deductive approach, whereas the structured discovery model uses an inductive approach. Each model requires different steps initially. However, the last two steps are the same in both models.

Direct Instruction Model

The following steps illustrate how concepts are taught using the direct instruction model:

- Teacher names and defines the concept.
- Teacher states the critical and noncritical attributes of the concept while showing examples and nonexamples of the concept.
- Teacher provides new examples and nonexamples and asks students to discriminate between them.
- Teacher asks students to explain their answers—that is, to refer to critical attributes present or absent.

Structured Discovery Model

The following steps illustrate how instructors teach concepts using the structured discovery model:

- Teacher names (usually) the concept.
- Teacher shows examples and nonexamples.
- Teacher asks students to examine the examples and nonexamples and to identify critical and noncritical attributes.
- Teacher asks students to define the concept or explain the concept rule.
- Teacher provides new examples and nonexamples and asks students to discriminate between them.
- Teacher asks students to explain their answers—that is, to refer to critical attributes present or absent.

Teaching concepts using the direct instruction model provides less opportunity for confusion or misconceptions and is more time-efficient than

Table 18.1 Types of Concepts

Concept Type	Definition	Examples
Concrete	Can see it, hear it, touch it; real, tangible	tree, rock, reptile
Abstract	Does not have a physical referent; exists as an idea	wisdom, bigotry, hero
Relational	Defined in relation to or in comparison to something	low, over, before
Broad	Each includes many examples	landforms, friendship skills, adverbs
Narrow	Relatively fewer examples	parallelogram, songbirds of Washington state, islands of Hawaii

structured discovery. This model is useful when students have little prior knowledge of the concept. Teaching concepts using the structured discovery model may provide an approach that is more interesting or motivating to students and that provides practice in inductive thinking skills. The structured discovery model is useful in helping students refine their understanding of familiar concepts.

Students typically have some prior knowledge and experience of and with a concept before it is taught. It is helpful to assess and to build on each student's knowledge. Also, it is important to ascertain whether the student has formed inaccurate concepts because of limited experience, such as thinking that all people who speak Spanish are from Mexico, all fruits are edible, or all islands have people living on them. Taking time to determine prior knowledge and the accuracy of it is well worth the time it takes because that information helps with planning.

Both direct instruction and structured discovery models are effective for teaching concepts. Each model has advantages. Use the following sequence to help you determine the best model to use:

1. Determine the concept to teach.
2. Write the objective.
3. Weigh the advantages of both models.
4. Select the model that best meets the needs of your students.

You will also need to decide whether to use a **full lesson** or a **mini-lesson** to teach the concept. A full lesson includes all lesson components from a measurable objective to an evaluation. A mini-lesson leaves out components and is much briefer. To decide, think about how important the concept is to your students' learning at this time, its place in the curriculum, and its complexity. Consider that a mini-lesson may be taught within another lesson. For example, you could teach a mini-lesson on the concept "boycott" within a lesson on the life of Cesar Chavez. Teaching Plan 10 in the Appendix shows a *full concept lesson* on insects and how it would look when taught using the direct instruction model and the structured discovery model. Teaching Plan 14 shows a mini-lesson, using a direct instruction approach, for teaching the concepts *fact* and *opinion*. It might be taught as a stand-alone lesson or within

a critical thinking lesson on evaluating websites as sources of information, for example, or within a lesson on the scientific method.

18-2 Key Planning Considerations for Teaching Concepts

When you know which lesson model you will use for your concept lesson, you can find a summary of the key components to include in your lesson by referencing Figure 15.3 in Chapter 15 or Figure 17.3 in Chapter 17. Those are the models typically used to teach concepts. The following sections present some additional discussion of several components found in both models.

18-2a Concept Analysis

A careful **concept analysis** is essential for effective concept teaching. A concept analysis includes a definition, critical and noncritical attributes, and examples and nonexamples of the concept. See Example 18.2 for an example of a concept analysis and Chapter 1 for an additional example.

Developing a concept definition at an appropriate level for the students is an important part of a concept analysis. Dictionary definitions are not always the best to use. A better source may be the glossary of content-area textbooks. The language and complexity of the definition must be suitable for the students, or they will encounter difficulty from the start. For example, the definition of *mammal* or *square* would be stated differently for first-grade students than for tenth-grade students.

When analyzing a concept, list the critical and noncritical attributes that will be most helpful in distinguishing that concept from similar ones. Critical attributes are essential characteristics of a concept. For example, "four sides" is a critical attribute of a square. However, when defining a concept, any one critical attribute is necessary but not sufficient to defining the concept. A square must have four sides, but the sides must also be of equal length. Noncritical attributes of a concept are those that are not necessary. Whether the length of those equal sides is 3 miles or 3 inches is unimportant. Size is a noncritical attribute of a square. A square is a square whether it is big or small.

18-3b Why Teach Behavioral Skills?

Children come to school with a wide variety of experiences and opportunities. Some students come to school with experience sitting quietly, using materials, listening to instruction, and working independently. Others will need to be taught to do so. Some students come to school skilled at making friends, getting along with adults, expressing feelings, and understanding the feelings of others. Others need help in learning to work or play with others, to resolve conflicts, or to manage feelings. A few students may already be rejected by others, are dangerously aggressive or withdrawn, and are in desperate need of help in developing behavioral skills. Because social competence is essential for success in school and in life, many schools are beginning to take a proactive, universal approach by making behavioral skills instruction a regular part of the curriculum, as well as providing more intense, selected instruction for those individuals who need it (e.g., as a tier 2 intervention in a positive behavior support or a response to intervention approach). Gresham, Van, and Cook (2006) found that students with long-standing social skills deficits require more time on social skills instruction.

Recommendation 3 in IES Practice Guide *Reducing Behavior Problems in the Elementary Classroom* is for teachers to “actively teach students socially- and behaviorally-appropriate skills to replace problem behaviors” (Epstein et al. 2008). The panel rated the level of evidence for this recommendation as strong.

Regardless of background, all students will need to be taught your classroom expectations, rules, routines, and the social skills specific to the methods you use. In Chapter 10, we explained that there are a variety of ways to teach behavioral skills, and we focused there on using precorrection and mini-lessons (see Teaching Plans 15, 16, and 17). In this chapter, we describe how to use full lessons to teach behavioral skills (see Teaching Plan 1 for an example).

18-3c Choosing the Lesson Model to Use

Teaching behavioral skills is very similar to teaching other principles, procedures, or how-to lessons. You begin with a principle statement or task analysis of the skill and then teach the components or steps using *explicit* or *direct instruction*. As in all direct

instruction lessons, you will include an explanation and examples for each part or step. You will demonstrate the use of the behavioral skill, and you will ask the students to practice the skill by performing it. You will evaluate whether each student has met the lesson objective by having the student perform the skill individually and independently.

Note that when teaching behavioral skills, it is critical to attend to generalization. For this reason, it is very important to follow initial direct instruction lessons with planned activities (see Chapter 14 for information on activity planning). This gives students the opportunity to apply the skill in a variety of contexts. For example, following an initial lesson on *dealing with losing*, a game activity could provide an opportunity to apply that skill. It is also critical to attend to cultural diversity when teaching behavioral skills (Lo et al. 2015; Robinson-Ervin 2016).

18-4 Key Planning Considerations for Teaching Behavioral Skills

Behavioral skills are most commonly taught using the direct instruction lesson model. Figure 15.3 in Chapter 15 provides you with a summary of the components that need to be included in your lesson. When you write your lesson, give special consideration to the following planning components.

18-4a Content Analysis

The content analysis for a behavioral skill lesson typically includes a **principle statement** or a **task analysis**. For example, you may be planning to teach students when to tell on someone and write the principle statement as, “If someone is doing something dangerous to him/herself or to others, then tell an adult.” Many behavioral skills take the form of procedures to follow. Task-analyze by listing the actions needed as steps for using the behavioral skill, including the steps that involve stopping to think and making decisions. For example, here is a task analysis for a behavioral skill:

Accepting No for an Answer

1. Stop and take a deep breath.
2. Look at the person.
3. Say *okay*.
4. Do not argue.

Summary

The direct instruction or structured discovery models are typically used to teach concepts, behavioral skills, and learning/study strategies. However, somewhat specialized planning is required when teaching these types of content. For example, when teaching concepts—which are categories of knowledge—teachers carefully select examples and nonexamples to bring out the critical attributes of the concept. When teaching behavioral

skills, teachers ask students to practice the skill by acting it out in a role-play or authentic situation. Students must be provided carefully selected extended practice opportunities to ensure they can apply and generalize the learning or study strategies they are taught. All of these—concepts, behavioral skills, learning/study strategies—are key to student success in school.

Key Terms & Definitions

Behavioral skills: A broad category of skills needed for success in school that includes social skills and skills needed to meet behavior expectations, interact with others, and participate in lessons.

Concepts: Categories of knowledge where all examples belong together because they have certain attributes in common.

Concept analysis: A type of content analysis used for analyzing concepts; includes a definition, critical and noncritical attributes, and examples and nonexamples of the concept.

Full lesson: A lesson that includes all lesson components from a measurable objective to evaluation.

Learning strategy: Sometimes called a cognitive strategy; facilitates the use of higher-level thinking behaviors, such as decision making,

self-motivation, and self-monitoring, in order to achieve a cognitive goal.

Mini-lesson: A brief lesson that does not include all components of a full lesson.

Principle statement: A type of content analysis sometimes used to analyze the content to be used in a behavioral skills lesson.

Study strategy: Sometimes called a study skill; similar to a standard procedure, where students work through an ordered series of steps and achieve a procedural goal.

Task analysis: A type of content analysis in which the knowledge/skill to be taught is broken down into steps; often used for planning the content for lessons intended to teach behavior skills and learning/study strategies.

Portfolio Pointers

- Include planning documents in which you demonstrate your knowledge of the key elements and structures of concepts, learning strategies, and behavioral skills. (InTASC Standard 7: Planning for Instruction)
- Use videos to demonstrate your use of appropriate instructional strategies for teaching concepts, learning strategies, and behavioral skills. (InTASC Standard 8: Instructional Strategies)