The Integrative Model

The room was silent. If truth be told, Ralph would love to have heard that sound 30 minutes earlier when he was transitioning from science centers to this math lesson. However, it was not welcome now, two minutes after he had asked his class, “Can anyone read this graph we have just made and tell me what conclusions we can draw from it?” It was not uncommon for him to receive silent, blank stares in response to a question that required deep thinking. In fact, it happened often in his second-grade classroom and, without bias, across all subject areas. However common they were, Ralph refused to get accustomed to them. He would get his students thinking for themselves if he had to work at it all year!

In the lunchroom later that morning, Ralph commiserated with Anju, an experienced kindergarten teacher. “Do your students have trouble thinking independently and answering analysis-type questions?”

“What do you mean?” Anju asked.
Ralph replied, “My students are having trouble thinking for themselves. They especially seem to have difficulty interpreting data, analyzing what they learn, and drawing conclusions. This is a consistent problem in all subject areas—today it was in math. We made a bar graph together based on information they shared with me about media viewing from a survey we designed and had their family members complete. When I asked them to form conclusions and generalizations about it, they looked at me with blank stares. They have no problem comprehending simple facts and answering basic questions about their learning, but when it comes to deeper analysis and learning independently—you know, generating new ideas and understandings from information they experience themselves—they struggle. They seem incapable of taking learning to the higher level.”

“Well Ralph,” Anju replied, “I think I know just what you mean. Yesterday we made a ‘real graph’ of what drinks we had at snack time. I had students stick their milk cartons, juice boxes, and water cups on chart paper; tallied each one; and asked them to tell me which drink was most popular. They could tell me what drinks everyone had and knew that each container represented one drink, but they could not interpret the graph to answer which drink was most popular or tell me what I would need to buy if I wanted to buy everyone their ‘typical’ drinks for a picnic. They do have trouble analyzing data, seeing patterns, thinking for themselves, and verbalizing their ideas.”

“That is exactly what I mean, Anju, and I am not sure what to do about it. I am planning a unit on American Indians. I love history and thought I could get students thinking like historians—but they cannot be historians if they do not think and learn from data independently. After all, historians make a practice of using the very skills my students lack—they look at information presented through historical resources, examine it to find patterns and anomalies, interpret materials based on prior knowledge, and draw conclusions.”

Shayla Roberts, the school mentor teacher listening from the other end of the table, shook her head with a grimace and interjected, “Welcome to Thomas Jefferson Elementary School. I hope you do not mind my listening to your conversation.” Ralph and Anju shook their heads. “What you are experiencing is not unusual—at least here at TJ. Based on last year’s proficiency test results, the whole school scored poorly on items that were related to data analysis and interpretation, specifically finding patterns, making generalizations, and drawing conclusions.”

Ralph and Anju listened intently, not at all surprised. “Maybe you two would be willing to be my guinea pigs? I am planning a schoolwide in-service on approaches for scaffolding students’ ability to learn from and synthesize information. Maybe you have seen the notice in our staff newsletter? The workshop is called, ‘Drowning in Data: Scaffolding Students’ Learning through the Integrative Model.’ At any rate, I am looking for some teachers to work with me. Together we will develop some ‘model’ lessons using the Integrative model
to share with the faculty during the workshop. Are you up for it? I think your plans to help your students think and act like historians are perfect. They need to develop, practice, and apply these skills—especially in the 21st century! Are you game?"

Ralph responded eagerly, “Yes, but what is the Integrative model?”

Shayla responded, “It is a model that capitalizes on teaching units that cover a lot of material, what we might call ‘organized bodies of information.’ It is also very useful for scaffolding students’ understanding, analysis, and synthesis of organized bodies of information—and it will definitely help your students analyze material more critically and form generalizations and conclusions.”

Shayla continued to explain how the model worked, and then she asked, “So, are you willing?” Both Ralph and Anju nodded enthusiastically. The Integrative model might be just what they and their students needed!

CHAPTER OBJECTIVES

After reading this chapter, you will be able to:

• Describe the Integrative model, including its history and steps.
• Communicate the applications and benefits of the Integrative model and learn what it might look like in a classroom.
• Explain how to implement and plan for teaching with the Integrative model.
• Articulate how the Integrative model might enable differentiated instruction and support diverse learners.
• Describe how technology can enhance teaching with the Integrative model.

Introduction

People from previous generations needed to know how to use machines to live well. People living in the 21st century need to know how to understand and use information to live well. Being able to find, collect, organize, compare, analyze, and synthesize information about innumerable topics in many media formats is essential 21st century skills. Today’s citizens also need to be able to make connections, understand relationships, and develop inferences based on content. Ironically, these skills are as challenging to develop as they are important for successful living. New modes of teaching are required to teach these essential skills for learning. As the opening scenario illustrates, Ralph’s second-grade students (and Anju’s kindergarteners) have difficulty thinking independently and gaining new insights from information with which they are presented. They do not innately know how to analyze and synthesize information—they must be taught how.

One model of teaching that is well suited for guiding students as they work to learn from “organized [bodies] of knowledge . . . a combination of facts, concepts, generalizations,
principles and rules, integrated with one another” (Kauchak & Eggen, 2012, p. 283) is the Integrative model. The Integrative model provides a structure that helps teachers guide students in a process of describing, comparing, categorizing, analyzing, examining relationships, and making generalizations about organized bodies of knowledge. It also scaffolds student learning through a series of four different phases during which students analyze the content-based materials presented in text and other formats.

This chapter provides an overview of the history of the Integrative model and its different phases. It also provides suggestions for when teachers should use the model, how they might plan to implement it, and what it looks like in practice. Later, the chapter discusses which technologies might be used for implementing the model and how teachers might effectively support diverse learners through the use of differentiation techniques. The chapter concludes with an Integrative Model Lesson.

**What Is the Integrative Model?**

The Integrative model is a purpose-driven instructional model that supports students as they work to develop the ability to learn independently using various thinking skills. In this model, the teacher facilitates students’ analysis of information about a topic communicated in an organized collection of materials. Successful implementation of the model results in students processing information and ideas from rich content materials into new ideas and understandings. In the process, students grow in their ability to think, analyze, and draw conclusions independently. This model relies on formal strategies that teach students how to analyze and interpret information they might encounter in school and beyond. Through engagement in the Integrative model, students acquire and develop skills they can use regularly to make meaning from experiences in school and daily living. The model supports students’ learning across the academic subject areas while also empowering them to become independent learners.

The Integrative model provides a practical structure for teaching learners to explore organized bodies of knowledge, which is content that consists of a combination of facts, concepts, generalizations, and their relationships. The phrase “organized body of knowledge” is one that varies depending on context, but we use the phrase to refer to a collection of information that is (1) so large that it cannot be easily understood without intentional analysis, (2) presented in some type of structured or ordered manner, and (3) not already analyzed, processed, or understood by a learner. Some sources that are typically considered organized bodies of knowledge include textbooks, databases, and spreadsheets. Students in Scenario 13-2 use a typical organized body of knowledge when they explore a government database about drugs. Nontypical organized bodies of knowledge can also be used, as is noted in Scenarios 13-2 and 13-3. In Scenario 13-2, students refer to their knowledge of three different works of literature. In Scenario 13-3, the organized body of knowledge is assembled by art students using graphic organizers.

Note that a great deal of the content that students learn in schools might be considered organized bodies of knowledge. Students must do more than just comprehend information presented in organized bodies of knowledge. They must also be able to make connections between this knowledge and other understandings and be able to formulate broad generalizations based on the content learned and examined.

During the Integrative model, students are guided by teachers as they (1) learn to explore, analyze, and interpret information in these materials; (2) process what the materials
communicate; and (3) draw their own conclusions to generate new understandings and ideas. Examples of topics within the different academic content areas that might be taught using the Integrative model are outlined in Figure 13-1.

The Integrative model consists of four phases. Each phase purposefully focuses students in different cognitive processes that progress to drawing meaningful conclusions about information explored. In the first phase, students describe, compare, and search for patterns in the content that represents an organized body of knowledge. In the second phase, students explain the identified similarities and differences by examining the content more closely. That is, students must go beyond simple identification to explain why similarities and differences exist. During the third phase, students form hypotheses based on their examination of the content. Finally, in the fourth phase, students make broad generalizations about the content. They form conclusions that synthesize their understanding and also demonstrate how their understanding might be considered in a larger context.

The duration of lessons using the Integrative model varies. Their implementation may take one class period (as in Scenario 13-3), or it might take a longer period of time, ranging from days (as in Scenario 13-2, which takes several class periods) to even months (as in Scenario 13-1, which describes a lesson that occurs over the course of an entire quarter).

The Integrative model is timely for contemporary learners because it focuses on building skills for processing information resources (Partnership for 21st Century Skills, 2004). Students engage in comparing, categorizing, analyzing, organizing, and synthesizing. It also requires students to organize their ideas visually using graphic organizers to categorize information and see relationships (see Figures 13-4, 13-6, and 13-7 for examples of graphic organizers). These materials are developed by the teacher, by the students, or by the teacher together with the students. Graphic organizers help students to integrate their comprehension of the content being learned and later to substantiate their generalizations. For instance, in Scenario 13-3, students use graphic organizers (see Figure 13-7) to document facts learned about some of the major modern art movements (e.g., Cubism, Dadaism, and Impressionism).

### Figure 13-1  Examples of Topics That Can Be Taught with the Integrative Model

<table>
<thead>
<tr>
<th>Subject</th>
<th>Topics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art</td>
<td>Influence of politics on art Different art movements</td>
</tr>
<tr>
<td>Language Arts</td>
<td>Literary genres Themes in works about surviving life’s challenges</td>
</tr>
<tr>
<td>Mathematics</td>
<td>Mathematics of art Geometry postulates and theorems</td>
</tr>
<tr>
<td>Music</td>
<td>Families of instruments Beat and rhythm in different types of music</td>
</tr>
<tr>
<td>Health/Physical Education</td>
<td>Human body systems Food groups</td>
</tr>
<tr>
<td>Social Studies</td>
<td>Population changes Revolutions</td>
</tr>
<tr>
<td>Science</td>
<td>Habitats Animal classification</td>
</tr>
</tbody>
</table>
What Are the History and Origins of the Integrative Model?

The Integrative model, developed by teacher educators Don Kauchak and Paul Eggen (Kauchak & Eggen, 2012), builds on the important work of Hilda Taba. Taba, a highly influential teacher and scholar in the field of education, authored the Taba Curriculum Development Project and several teaching models addressed previously in this text, including the Concept Attainment model (see Chapter 6), the Concept Development model (see Chapter 7), and the Inductive model (see Chapter 8). All of these models are designed to promote students’ ability to think and reason—a major goal for all of Taba’s work. In the Integrative model, as in the Taba models, the teacher plays a crucial role in supporting students’ thinking. He or she acts as a facilitator whose questions assist students as they examine evidence, analyze patterns, make sense of relationships, and draw conclusions from an organized body of knowledge. The Integrative model complements the existing Taba models by promoting students’ ability to think and make generalizations about data from organized bodies of knowledge.

The learning theory undergirding all of these models is that of constructivism. Constructivism asserts that learning is an active process in which the learner uses sensory input to construct meaning out of experiences. Important principles in constructivism reflected in the Integrative model are that (1) learners need to “do” something or engage in what is called “active learning” (Dewey, 1916), (2) people learn to learn as they learn (Resnick, 1987), (3) the crucial action of constructing meaning is mental (Vygotsky, 1962), (4) learning involves language (Vygotsky, 1962), and (5) learning is social (Vygotsky, 1962). For more on constructivism, refer to the resources at the end of this chapter.

When Should the Integrative Model Be Applied and Why?

First and foremost, the Integrative model is best utilized when teaching organized bodies of knowledge. It can be used with any grade level, but primary-grade teachers will need to provide considerable scaffolding through guided questioning, collection and analysis of data, and categorization of information. The model is also best applied for teaching units of instruction that incorporate conceptual knowledge, foster critical thinking, and involve making connections between information learned. The following sections discuss what teachers should use the Integrative model to do.

Teach about Organized Bodies of Knowledge

A great deal of content taught at all academic levels involves learning about organized bodies of knowledge. Organized bodies of knowledge represent a combination of facts, concepts, generalizations, and their relationships. Note that organized bodies of knowledge are not just concepts, although concepts are building blocks that support them and even form the basis for their organized structure. Figure 13-1 provides several examples of topics that would be considered organized bodies of knowledge in different content areas. Another example of an organized body of knowledge is in Scenario 13-2, where a group of
eighth-graders are studying the different types of drugs and their effects on the body. The study of drug types involves learning about numerous facts, concepts, and ways in which these relate to one another. The Integrative model provides teachers with an effective method for teaching students how to analyze and learn from large amounts of related content and make connections between the content explored.

**Support Students’ Development of Conceptual Knowledge**

The Integrative model is one of the best models for teaching conceptual knowledge—the interrelationship of facts, concepts, and generalizations that is at the heart of the model. It is an ideal model for teaching conceptual knowledge because the purpose of the model is to foster students’ conceptual understanding of the content being learned based on facts, concepts, and generalizations. Students start by learning factual knowledge and then continue to use that knowledge to make larger connections between facts and concepts and, ultimately, to make informed inferences about the content studied. Scenario 13-3 provides an example of how the Integrative model promotes conceptual knowledge through a study of the smaller movements that make up modern art. Clearly, understanding of modern art requires comprehension of many facts, but it also entails tying together many ideas and concepts (e.g., see Figure 13-7).

**Develop Critical-Thinking Skills**

Teachers should use the Integrative model to promote critical-thinking skills, which involve thinking at the higher cognitive process levels of the revised Bloom’s taxonomy (Anderson et al., 2001). In the first two phases of the Integrative model, students work at the lower stages of the revised Bloom’s taxonomy, which emphasize factual knowledge, and then, in the last two phases, teachers gradually lead students in the application of higher-level cognitive process skills. For example, in the first phase of the model as illustrated in Scenario 13-2, students examine the similarities and differences between different types of drugs (see Figure 13-4 for an example). In the second phase, they examine the data collected to explain the identified similarities and differences between the different types of drugs (e.g., certain drugs are classified as hallucinogens because they can make people hallucinate, and certain drugs are more addictive than others). This involves scrutiny of the data by students to compare the facts they are learning. Students would then explain why particular similarities and differences might exist. Then, in the third phase, students are asked to form hypotheses based on the content reviewed. Students might hypothesize why certain drugs are more addictive than others or at which age one might become more addicted to a drug. Finally, in the fourth phase, students form broad generalizations about the content. Another example of how to support students’ gradual progress through more difficult thinking skills is presented in the Integrative Model Lesson at the end of this chapter.

**Make Connections between Content That Is Learned**

One of the purposes of the Integrative model is for students to synthesize the content they are learning to make connections and inferences based on their analysis. (This occurs in the fourth and final stage of the model.) Finding relationships between content materials and the ideas presented in them is a 21st century problem-solving and critical-thinking skill. It involves analyzing how discrete parts of information (e.g., facts) make
up a whole (e.g., concepts or principles), how these might relate, and what this means (i.e., what conclusions might be made from the content). The Integrative model allows students to learn, develop, and practice this lifelong learning competence in a school environment, and use it to enhance their content area learning and general academic performance. For example, in the Integrative Model Lesson at the end of this chapter, second-graders enter data in a graphic organizer to record some of the characteristics of different American Indian tribes. They analyze this information by comparing the different categories, making connections between them, and drawing broad conclusions about them.

What Are the Steps in the Integrative Model?

The Integrative model consists of four major phases: (1) Describe, compare, and search for patterns, (2) explain similarities and differences, (3) hypothesize outcomes for different conditions, and (4) generalize to form broad relationships. These phases are described below. Figure 13-2 provides a description of the teacher’s and students’ roles in this model; essentially, the teacher is a facilitator of students’ analysis of the content.

**Figure 13-2  Teacher and Student Roles in the Integrative Model**

<table>
<thead>
<tr>
<th>Integrative Model Phases</th>
<th>Teacher Role</th>
<th>Student Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Describe, compare, and search for patterns</td>
<td>Teacher asks students to describe, compare, and search for patterns in the content examined by students.</td>
<td>Students analyze the content by describing, comparing, and searching for patterns in the content studied. They (or the teacher) enter data/information into graphic organizers developed by the teacher or students, or co-developed by the teacher and students. (Note: Either the teacher or students record data in graphic organizer.)</td>
</tr>
<tr>
<td>Explain similarities and differences</td>
<td>Teacher asks students to explain similarities and differences.</td>
<td>Students explain similarities and differences in the content studied and substantiate their ideas using data from the graphic organizer.</td>
</tr>
<tr>
<td>Hypothesize outcomes for different conditions</td>
<td>Teacher asks students to hypothesize outcomes based on different conditions.</td>
<td>Students form hypotheses of possible outcomes related to the content studied and based on different conditions.</td>
</tr>
<tr>
<td>Generalize to form broad relationships</td>
<td>Teacher asks students to generalize their conclusions.</td>
<td>Students generalize their understanding to demonstrate understanding of the broad relationship between content studied.</td>
</tr>
</tbody>
</table>
Phase One—Describe, Compare, and Search for Patterns

The goal of the first phase of the Integrative model is multifaceted. It challenges learners to (1) conduct a preliminary exploration of an organized body of knowledge, (2) develop a basic understanding of what information is contained within, (3) gain an appreciation of how all of the “pieces” of the organized body of knowledge relate to one another and (if applicable) to other previously explored bodies of knowledge, and (4) consider connections to students’ existing mental schema. Initial encounters with organized bodies of knowledge can be overwhelming for students because the information is often new, voluminous, and organized by structures students may not yet comprehend.

To help students manage information overload during this phase, the teacher can introduce students to the information in the body of knowledge gradually. Varying approaches for providing guidance are possible. Teachers can work with students in the classroom setting to provide real-time guidance, or teachers might provide guidance through instructions communicated in written (e.g., worksheets, multimedia presentations, or websites) or other formats (e.g., audio, visual, or multimedia materials). Teachers can also ask many questions to guide students’ learning.

Regardless of the approach to guidance, the teacher should first ask students to describe their basic observations and impressions of the information they are exploring. Depending on the format of the information, students might click or scroll through an electronic database (e.g., see Scenario 13-2), flip through the pages in a collection of books (e.g., see Scenario 13-1), walk around the classroom examining photographs or paintings, listen to an audio collage of sounds, or view a collection of three-dimensional shapes. Teachers are encouraged to present the large bodies of knowledge in creative, nontext formats, so they should provide appropriate support for helping students make sense of them. Teachers must guide initial explorations of information in the body of knowledge with general and open-ended questions. For example, in Scenario 13-1 the teacher asks her fifth-grade students, “What did you record in your graphic organizers about the books you read by Beverly Cleary?” In Scenario 13-2, the teacher asks his eighth-graders, “Can you describe what you are looking at in the database provided?”

At this stage, teachers should also ask students to compare the information they are exploring. Although students may be ready to make other observations, the teacher should try to focus students only on these two cognitive activities. In Scenario 13-1, the teacher focuses discussion by providing a handout listing discussion questions such as “Can you tell me how the books you read are similar? Can you tell me how they are different?”

Finally, the teacher asks students to search for patterns in the information they are exploring. Students are encouraged to make observations that identify the recognition of repetition, recurrence with variations, larger trends, and internal connections. For example, in Scenario 13-1, a teacher might ask, “Students, can you identify some patterns in the works you read by Beverly Cleary?” Students might respond, “The author’s main characters are all under the age of 12” or “The books are written in third person.” In Scenario 13-2, the teacher might ask, “Can you identify some patterns about drugs from the database you explored?” Students might respond, “Some drugs are man-made.” During this exploration for patterns, students might uncover the organizational structure beneath the information being explored. For example, students might identify that drugs are categorized into stimulants and depressants or natural, semisynthetic, synthetic, and designer drugs.
Students who record their learning in some manner as they progress through this phase find that it supports their mental processing of information while enabling them to record their thinking for future reference. Graphic organizers can be particularly useful in this first phase. Because students build their understanding of concepts and ideas of the organized body of knowledge gradually during this model, a graphic organizer can provide helpful insights to both the teacher and learners about the process involved in creating meaning and understanding. The content being explored and the learning goals requiring this exploration will determine what type of graphic organizer is most appropriate to use. Graphic organizers might be generic and come from a professional source (e.g., researchers, other teachers, and so on), or they might be created by the teacher from scratch specifically for the lesson. In some cases, it is beneficial to encourage students to create an appropriate graphic organizer for their exploration in the Integrative model. For instance, in Scenario 13-3, the teacher introduces students to a variety of resources and information representing some of modern art’s major art movements. As the introduction of the lesson shows, the teacher notes that students will be learning many factual details about modern art movements and recording what they learn in a graphic organizer (see Figure 13-7).

Although the teacher asks students to enter information in the graphic organizer, the teacher also needs to scaffold students’ learning by asking them general questions, such as “What do you see here?” or “What do you notice in these works of art?” or “Compare the characteristics recorded in our graphic organizer.” In many cases, the teacher will need to ask more specific questions, such as “What similarities and differences are there among the art movements of this period? Be specific—tell me how Dadaism is the same or different from Impressionism?” and so on. Students become familiar with the information more easily when they have to describe it, search for patterns within it, and compare the facts, concepts, and details presented within it.

**Phase Two—Explain Similarities and Differences**

The goal of the second phase of the model is to explain similarities and differences in the organized body of knowledge being explored. That means students must first identify similarities and differences. The teacher may need to prompt students to examine the content being studied more closely.

Often, contributions shared in the first phase are revisited. For example, in Scenario 13-1, students might be asked to consider the fact that Beverly Cleary wrote books with main characters under the age of 12. The teacher might challenge students to consider how the main characters in the three different books are similar and different. As much as a graphic organizer helps students see what is common and uncommon among the content being studied, students should also be able to explain in words these commonalities and differences. For example, in the Integrative Model Lesson at the end of this chapter, students might explain that the geographic location of where different American Indians lived greatly influenced their way of living, the crops they grew, and more. Teachers may need to craft questions that elicit specific explanations of the similarities and differences. The Integrative Model Lesson provides a series of questions as examples.

**Phase Three—Hypothesize Outcomes for Different Conditions**

In this phase, the goal is to generate additional and different insights about the information being explored. During this phase of the Integrative model, students make
hypotheses about the information presented in the body of knowledge as a means of stimulating deeper thought about the ideas contained within it. Some teachers describe this phase as one that catalyzes the mind to manipulate data playfully and view it from different angles.

Regardless of the explanation, in this phase, students use existing knowledge constructed in the first two phases to hypothesize outcomes for different conditions related to the data and achieve deeper meaning and understanding. In this phase, teachers ask students to examine the similarities and differences noted and then consider what the outcomes might have been if circumstances (e.g., history) had been different. Teachers will likely need to help students form hypotheses through questioning and sharing of example hypotheses. One way to have students form hypotheses is to ask them to brainstorm explanations for what they are studying under different conditions—in many cases, teachers will need to provide hypothetical conditions for them to form their educated guesses. Teachers can ask questions such as “What if the English had not settled in America in Jamestown or later Plymouth Rock?” or “Where might different American Indians have settled if there was no river?” Asking questions like these encourages a flexibility of thinking that is critical to the overall success of the model.

**Phase Four—Generalize to Form Broad Relationships**

The goal of the fourth phase is to help students synthesize their understanding by forming a broad generalization about the organized body of knowledge being studied. During this phase, the teacher may need to define what a generalization is and model how to develop one with students. When the teacher introduces the concept it is not as important as the students’ full comprehension of what it means.

The purpose of students’ generalizations is for them to demonstrate their learning and comprehension of the organized body of knowledge. By making such inferences, students show they completely grasp the content at higher cognitive process levels, such as the “evaluate” level of the revised Bloom’s taxonomy. Their conceptual knowledge is evident not only through the generalization(s) developed but also by their substantiation of the inference. When students can substantiate an inference, they are demonstrating their understanding at a conceptual—not just factual—level.

As with previous phases, it might be necessary for the teacher to ask questions to help students formulate these inferences. For instance, the teacher in Scenario 13-1 might ask, “What were some of the things that have made Beverly Cleary’s books so popular with young readers of yesterday and today?” The teacher in Scenario 13-2 might ask, “What is an essential understanding about drugs you gained from exploring this database?” The teacher using the Integrative Model Lesson at the end of the chapter might ask, “What ‘big’ conclusion can you make about American Indians based on your exploration of this content.”

Some examples of generalizations based on these questions might be “Beverly Cleary’s books explore themes, feelings, and experiences that are important to children growing up in America” (Scenario 13-1), “The way of life of American Indians was largely influenced by the geography of where they lived” (see the Integrative Model Lesson at the end of the chapter), or “Different types of drugs are more addictive than others, depending on their pharmacological composition” (Scenario 13-2).
What Does the Integrative Model Look Like in the Classroom?

The Integrative model can have a significant amount of variation in its implementation, as there are many ways one might teach organized bodies of knowledge. For instance, specific phases can be implemented (with their intended cognitive activities supported) using real-time direction or recorded directions from the teacher. Variation also occurs because organized bodies of knowledge that might be explored using the Integrative model may vary extensively in format, size, and organization. The time required for an Integrative model lesson (or unit) can also vary significantly. If organized bodies of knowledge need to be created by students to implement the model, academic learning time will be required. In these instances it is best to view the Integrative model as a series of lessons or a unit of instruction rather than one lesson.

The scenarios in this chapter illustrate three different audiences and just a few ways in which the Integrative model might be implemented. The Integrative model, like others in this textbook, is flexible and can be modified in numerous ways to work better within various teaching and learning contexts provided the four basic phases are carried out in order.

Scenario 13-1

Claire Meyers’ fifth-grade reading groups have been working on author studies this quarter. Claire is hoping her students will explore the work of popular, contemporary writers and gain a better understanding of their individual books, writing techniques, common themes, and the reasons for their perennial popularity. Each of her reading groups will be asked to focus on the works of a different author—Beverly Cleary, Andrew Clements, Roald Dahl, Kate DiCamillo, or Lois Lowry—and read three books by this author over the 10-week term.

Before starting the author study, Claire explains the model’s major phases and her implementation plan. She explains that students will first read the books and create an organized body of knowledge about their author. Then they will use this information to understand each book, their assigned author, and all the authors. She further explains that, because students will work in numerous small groups, she will not be able to support them all at the same time.

To adjust for this, she has done some advanced planning and put together numerous documents to share with students, all available for download on the course website, explaining the process and guiding them gradually through it. This advanced planning will free Claire up to float around the room during author study time and respond to students’ needs as they emerge. The documents on the website include the following:

a) The Project Description and Instructions—A handout explaining learning goals, the rationale for the author study, and specific
activities students will perform during the two class periods they will devote to the author study each week over the 10-week term

b) Book Discussion Questions—A handout with questions to be used to discuss the book and combine individual Book Matrices in each author group after individual books are completed,

c) Book Matrix Forms (Figure 13-3)—A handout to be completed with specific information about each book and then combined across the groups

d) An Author Study Synthesis—A four-page handout (one page of questions/activities for each phase of the model) to guide students as they analyze their completed Book Matrix forms

e) A Venn Diagram—Useful when comparing and contrasting main characters during the Integrative model phase 1

f) An Author Study Comparison Chart—Helpful in the second phase of the Integrative model, looking for patterns in the information

Over the next few weeks, students will be divided into groups, read, and record important information about their chosen books. They will collect information about each of their three books and organize it into a knowledge base. This work will take them through the four Integrative model phases. They will use a Venn diagram in the first phase (Figure 13-4) to compare prompts for the Author Study Comparison Chart (Figure 13-5) and then again in the second phase to explain the similarities and differences. Students will form hypotheses about the authors during the third phase. Finally, they use the Author Study Synthesis forms in the fourth phase to devise generalizations they will discuss as a class at the end of the unit.

**Figure 13-3** Book Matrix Form—Story Map for One Book

<table>
<thead>
<tr>
<th><strong>Book One Title:</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description of the main character:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Important characters and brief descriptions:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Other characters:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Setting:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Point of view (first person, third person, and so on):</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Literary techniques used by the author that are noteworthy (foreshadowing, story within a story, imagery, plot twist, side story, symbolism, humor, anthropomorphism, irony, flashback, dialogue):</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Problems the main character experiences:</strong></td>
<td></td>
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<tr>
<td><strong>Lessons learned in the book:</strong></td>
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<tr>
<td><strong>What I thought about the book:</strong></td>
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</tbody>
</table>
Figure 13-4  Venn Diagram of Main Characters

Figure 13-5  Author Study Comparison Chart

<table>
<thead>
<tr>
<th>Book Title</th>
<th>Setting (when and where)</th>
<th>Main Characters (who)</th>
<th>Secondary Characters (who else)</th>
<th>Problem (what)</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
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<td>2.</td>
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<td>3.</td>
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Scenario 13-2

One of the most important units the students in Stanley Cerevelli’s eighth-grade health and wellness class studied was about drugs and drug abuse. Although Stanley’s sister and two of his students had already lost their lives to drugs, he did not want to use scare tactics to teach his students about their dangers. In the past, this unit had helped his students learn a lot of factual information about drugs. Based on his students’ responses at the end of the unit, however, he realized that, without a conceptual understanding about the problems associated with drug abuse, factual knowledge about drugs might actually facilitate his students’ drug use rather than function as a deterrent.

This year, Stanley was hoping students would attain three critical understandings in the unit. These were that (1) regardless of where a drug came from (organic or man-made) or what type it was (whether it was prescription, a “street drug,” or an ordinary product like spray paint which was misused), its abuse could cause negative, irreversible, and far-reaching effects; (2) the negative effects of drugs extended beyond the drug abuser to those he or she cared about; and (3) knowledge of drugs might help students more effectively avoid the dangers of drugs and persuade peers and family members of their dangers. Even though Stanley knew that effecting change in his students’ behaviors challenged the odds in the surrounding community, he had confidence he could save some lives by getting students to gain the critical understanding of concepts presented in this year’s drug unit.

Stanley knew his new approach to the drug unit would take time, so he decided to save significant time by using a database that students in last year’s classes had created by compiling information from individual drugs reports. He would use the database as the organized body of knowledge for his lesson. It included information about 66 commonly abused drugs. The information on each drug included (1) the name of drug, (2) nicknames, (3) intended use, (4) source (where it comes from), (5) method of administration, (6) cost, (7) “typical” abuser profile, (8) abuse culture surrounding the drug, (9) level of addiction, (10) health risks, (11) negative effects of use, (12) legal penalties for taking/selling the drug, and (13) two URLs containing a testimonial about a story of personal experience related to this drug. With help from the technology teacher, Stanley created a Web-based version of the database so that this year’s students could gradually add more information over a two-week period.

Stanley reserved the school’s laptop cart for three class periods so that students could access the drug database for the lesson. Because Stanley did not want to leave his students’ critical understandings to chance, he directed students through these resources very carefully with thoughtfully crafted questions. After explaining the procedure for the lesson, he asked students to look at the database he shared with them. Students were intrigued by the presentation of data and the various views the database let them have while examining the data. They could examine it through individual entries (showing information about just one drug at a time) or in a table view to see different categories of information. Students comfortable with advanced database features could query the data and also sort it by the various categories or fields. Using the different views, students were able to manipulate and describe the data more accurately. There was not a bored student in the room.

Once students described the data, Stanley told them where the database came from and asked them to search for patterns in it. As they worked, Stanley guided students through this phase by encouraging them to create (and in some cases helping students co-create) graphic organizers that would scaffold their understanding and recording of information (see Figure 13-6 for an example). He asked them, “What patterns do you see about where
drugs come from, how they are abused, and what are their effects?" Next, he asked students to explain the similarities and differences in the drugs. He asked many questions, including "How are the different types of drugs similar and different in their cost? In their patterns of abuse? In their different effects?" After students had thoroughly examined the similarities and differences, Stanley asked them to hypothesize about the different individuals in general and people they know in particular who might be more likely to abuse certain types of drugs. He challenged them to make assertions about (and then discuss in a group) the effects of certain drugs, the possible succession of problems, and effects arising from the abuse of individual drugs in particular and drugs in general. Finally, he challenged students to make some broad generalizations about drugs and drug abuse—based on the data—and then summarize those generalizations in the form of a short three-minute video, multimedia presentation, song, or paper about what they learned about drugs. In reviewing his students’ work, Stanley was thrilled to discover that they had arrived at the critical understandings he had anticipated and even gone beyond his expectations. At the end of the drug unit, he knew he had figured out a better way to teach his students this critical and potentially lifesaving understanding of the topic.

**Scenario 13-3**

Rudolfo’s high school advanced placement (AP) art history course consisted of students in grades 10 through 12 from all over the state. His was one of several AP courses students could
take 100% online through the state's virtual online high school. Pre-assessment data gathered using the virtual high school's course management system indicated that Rudolfo’s students had little understanding of modern art. Based on this information, Rudolfo decided his best use of instructional time would be to conduct a shorter unit on 19th century art movements and spend more time on the study of the modern period. Students would need to understand 19th century art, however, before they could understand what trends and forces the modern artists were responding to. However, because they were already basically familiar with major artists and works, coverage of the 19th century could be shorter in duration. Rudolfo designed this unit overview using the Integrative model because he knew it would be an effective way to refresh and supplement students' existing knowledge about this period in art while also building the thinking skills required for the AP exam.

In the 19th Century Art Movements Unit, Rudolfo would first help students build an organized body of knowledge about the movements of Neo-Classicism, Romanticism, Realism, Impressionism, Neo-Impressionism, Post-Impressionism, Symbolism, and Art Nouveau and introduce students to the characteristics of those periods and their representative artists and works. Then students would work in groups to explore this information to gain a deeper understanding of it.

First, students were asked to watch, listen, or download and read a screencast lecture Rudolfo prepared on each of the individual movements. While doing so, they were to complete a graphic organizer that Rudolfo designed and shared online. The graphic organizer had a threefold purpose. First, it would help students pay better attention to the lecture content. Second, it would help them organize their knowledge into a conceptual understanding of the period. Third, it would help students to record important information that would become an organized body of knowledge about 19th century art movements.

Students posted their draft graphic organizers in Google Docs after listening to and reading the lectures with the other members of their learning group. Using this online tool, students could freely collaborate and revise their graphic organizers (see Figure 13-7 for an example of an incomplete graphic organizer). Next, Rudolfo reviewed the graphic organizers for accuracy, making sure that the collective knowledge pooled together by

<table>
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<tr>
<td>Symbolism</td>
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<tr>
<td>Art Nouveau</td>
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his students would generate correct understandings. Then students were asked to work together in groups to tackle the different phases of the Integrative model: One group would need to post a short video, audio, or text-based presentation describing the similarities and differences among the movements; another group would need to create and post a multimedia presentation explaining the noted similarities and differences; and a third group would work on a multimedia presentation titled “What if, then,” which was a series of hypotheses about what might have transpired under different conditions. Finally, Rudolfo would bring the students together in the online discussion asking each group to review all of the presentations to form a generalization about 19th century art movements. They would need to post their inferences as the culminating activity for their study.

**What Do These Scenarios Illustrate?**

These three scenarios present the implementation of the Integrative model at different grade levels by different teachers and within different time spans. Each teacher has unique learning goals, methods for facilitation, and use of grouping, timing, and pacing, yet all of the teachers challenge students to develop critical-thinking skills while also learning about important content area standards at the same time.

**REFLECT:** Consider your own content area and some of the organized bodies of knowledge you have to teach. How might you use the Integrative model for teaching your students this content? Would you break it out over a long period of time as in Scenarios 13-1 and 13-2, or would you use it to introduce an entire unit, as in Scenario 13-3? Explain your decisions.

**Planning for Teaching with the Integrative Model**

As the scenarios show, there are many different ways to implement the Integrative model. Certain steps should be taken by teachers in the planning stages to ensure the best odds for success. These are (1) ensuring learning goals are compatible with the Integrative model, (2) identifying critical understandings that students should acquire in the lesson, (3) developing graphic organizers that scaffold students’ comprehension and analysis, (4) creating questions to promote thinking at all levels of the revised Bloom’s taxonomy, and (5) selecting resources for analysis. The following sections discuss what educational designers do when teaching with the Integrative model.

**Ensure Compatibility of Learning Goals with the Integrative Model**

As mentioned previously, the Integrative model is highly effective when addressing learning goals that are related to students’ development of conceptual understanding of ideas presented within organized bodies of knowledge—these learning goals are considered “critical understandings.” Critical understandings might be concepts (e.g., prescription drugs) or generalizations (e.g., 19th century art movements occurred simultaneously and influenced one another)—they are the most important ideas that must be learned.
The model is equally effective addressing learning goals related to students' development of critical-thinking skills required to understand information presented in organized bodies of knowledge. Therefore, when teaching with the Integrative model, teachers must first engage in reflection and self-questioning to determine if the learning goals they have identified can be addressed through use of the Integrative model. For example, in Scenario 13-2, Stanley might ask, "Can my students really learn the potential impact of drug abuse on themselves and those they care about by exploring the resources about drugs I have directed them to? Can students draw appropriate understandings about the impact of drug abuse through the phases of the Integrative model lesson I have planned?" In Scenario 13-3, Rudolfo might ask himself, "Will using the Integrative model familiarize students with the major characteristics, artists, and works of the 19th century art movements?" and "Will students' completion of this Integrative model lesson support their development of the foundational knowledge necessary for understanding the characteristics of modern art we will study in our next unit?"

Review of content standards can certainly help in determining these critical understandings. Teachers using the Integrative model often teach above and beyond the standards because wording of standards is often too narrowly focused on facts or concepts and not generalizations.

Identify Critical Understandings about the Organized Bodies of Knowledge

Identification of critical understandings about the organized bodies of knowledge will improve teachers' ability to plan the Integrative model lesson, scaffold student learning, and select appropriate resources. Of course, as with most inductive curricula, students will likely determine additional understandings, but it is important for teachers to have some ideas of the most critical understandings students should attain during the Integrative model lesson(s).

According to Wiggins and McTighe (2005), understanding has the following characteristics:

1. An understanding is an important inference, drawn from the experience of experts, stated as a specific and useful generalization.
2. An understanding refers to transferable, big ideas having enduring value beyond a specific topic.
3. An understanding involves abstract, counterintuitive, and easily misunderstood ideas.
4. An understanding is best acquired by “uncovering” (i.e., it must be developed inductively, co-constructed by learners) and “doing” the subject (i.e., using the ideas in realistic settings and with real-world problems).
5. An understanding summarizes important strategic principles in skill areas. (pp. 128–129).

These ideas about the characteristics of understanding apply to generalizations as well. Teachers should strive to devise generalizations that incorporate the characteristics of Wiggins and McTighe's notion of understanding. See Chapter 7 for more about generalizations.

Develop Graphic Organizers to Scaffold Students' Learning

The Integrative model works so well because it scaffolds students' learning of organized bodies of knowledge. One effective way for teachers to support students' learning
throughout all of the phases of the model, is by requiring students to record their learning using graphic organizers (see Chapter 5 for a lesson on graphic organizers).

Graphic organizers can be useful as tools to support studying a large body of knowledge (e.g., Scenario 13-1 when students record information about books they have read), as tools supporting the analysis of a body of knowledge (e.g., Scenario 13-1 when students use a Venn diagram to compare characters in books they have read), or for both purposes (e.g., in Scenario 13-3, students use Rudolfo’s organizer to record their learning about 19th century art movements). In these scenarios, graphic organizers are tools for prompting certain types of thinking, such as comparison and pattern recognition. They are practical because they allow students to record information in a way that facilitates information processing. Such organizers also fill a role in communicating student thinking and documenting their learning. This information can assist teachers in correcting misunderstandings and directing intervention in their efforts to ensure all students understand the content. Finally, graphic organizers can be used to communicate accountability and assessment information.

Although graphic organizers are not necessary when using the Integrative model, they support and promote its success. Because the scope of some organized bodies of knowledge is so great, teachers may need to review carefully student-created graphic organizers to ensure that they address the major concepts students will need to comprehend to form generalizations. There are several examples of graphic organizers throughout this text and several in this chapter (e.g., see Figures 13-3, 13-4, 13-5, 13-6, and 13-7).

Create Questions Based on the Revised Bloom’s Taxonomy

The advanced formulation of questions based on the revised Bloom’s taxonomy (see Chapter 1, Figure 1-2) can contribute to increased success with the Integrative model when the questions foster students’ critical-thinking skills related to their analysis of the organized body of knowledge being studied. The revised Bloom’s taxonomy serves as an appropriate schema for developing the questions because the phases in the Integrative model require students to examine material on a continuum of increasing difficulty and challenge with regard to cognitive processes (see Figure 13-8 for sample questions teachers might ask aligned with the phases of the Integrative model and revised Bloom’s taxonomy cognitive process skills levels).

Select Resources for Analysis

Although the quality of instruction is associated with its design (see Chapter 2 for more about instructional design), what students learn during instruction also has a lot to do with the quality of resources and materials they encounter while learning. Poor resource choices often lead to misconceptions and rudimentary or tangential learning. Low-quality resources can also promote the formation of stereotypes, inaccuracies, and/or biases, as would likely be the case if inappropriate resources were chosen for a unit like the one in the opening scenario on American Indians. It is, therefore, imperative that teachers choose resources that will best enhance their students’ learning and analysis of the organized body of knowledge they will study—or that they guide students in this process if they are selecting resources themselves.

Clearly, there are many types of resources teachers (or students) might choose. Selected resources must help students attain the ultimate goal of the Integrative model: forming
generalizations about the content. To that end, the resources chosen should be age and developmentally appropriate and have enough depth and breadth for students to be able to describe, compare, hypothesize, and develop generalizations. Moreover, teachers should provide or guide students in finding resources that provide multiple ways to learn about the organized body of knowledge—from books, magazines, primary sources, secondary sources, video, audio, and so on. In Integrative model lessons where students develop the organized body of knowledge, such as in Scenarios 13-1 and 13-3, the teacher should examine the information for accuracy, validity, and overall quality throughout the Integrative model lesson.

**Differentiating Instruction with the Integrative Model**

As the scenarios in this chapter illustrate, there are a variety of ways in which the Integrative model might be implemented and differentiated. Although phases in this model are clearly outlined, what teachers plan for students to do during each of these phases may be differentiated in a variety of ways. Whereas younger students and those with less experience applying cognitive process skills, especially critical-thinking skills, will require more teacher direction and support, older students accustomed to rigorous analysis of material may need less. As educational designers, teachers need to design instruction using the Integrative model in ways that best fit students’ needs, interests, and developmental level.

**Content**

Teachers have a great deal of leeway in differentiating the content (the organized body of knowledge) studied in the Integrative model. The teacher might consider the group composition...
as a whole or look at individual students’ readiness, learning style or profile, and interest. Alternatively, the teacher might consider the content to be the source of the organized body of knowledge (i.e., who creates this body of knowledge and where it comes from) or the nature of the organized body of knowledge (i.e., the content presented and its level of difficulty).

The source of the organized body of knowledge used in the Integrative model lesson is the first consideration teachers must make when differentiating content. Teachers must decide whether to challenge students to create their own organized body of knowledge, use one that is already constructed, or co-construct one with students. In some cases, it will be a better fit for students to explore a body of knowledge they have created independently, such as in Scenarios 13-1 and 13-3. In some cases, the process of finding and organizing information benefits students who need this intellectual challenge. In other cases, students will need to explore an organized body of knowledge provided by their teacher. This option is often easier for students, especially for those without the independence to collect and organize new knowledge. An option that supports learners of multiple levels is the co-creation of an organized body of knowledge with their teacher’s assistance. In the Integrative Model Lesson at the end of this chapter, the teacher models how to organize ideas and information in a teacher-created graphic organizer and then supports some students in its completion by working with them while others work independently.

The nature of the information in the collective body of knowledge might also be differentiated. For example, groups of learners who are proficient readers might be asked to explore an online database during an Integrative model lesson while another group composed of students with less proficiency are asked to examine a simpler interpretation, prepared by their teacher, of the information in the database.

In some instances, teachers can allow students to select for themselves the materials presenting the body of knowledge based on their own unique interests and readiness level. Such is the case in Scenario 13-1, in which the teacher allows students to choose which books to read by the author their group will study. Use of materials presented in alternative formats (e.g., multimedia, video, or audio formats) can also allow students to select the resources that support differentiation. For example, in Scenario 13-2, the teacher invites learners to explore a body of knowledge created by the previous year’s students containing access to information in multimedia formats. In this Web-based resource, students whose needs might be better met experiencing information in nontextual formats can do so.

**Process**

The most important consideration for teachers who hope to differentiate the process of the Integrative model is to consider carefully how they will scaffold students’ learning during the model’s four phases. This involves carefully designing in each of the phases learning experiences that help students describe, compare, hypothesize, and generalize about the organized body of knowledge. Knowing the needs of the different learners will help teachers gauge what types of supports students will need and when. For instance, teachers can differentiate the degree of support students receive when completing the graphic organizers documenting their learning. In the Integrative Model Lesson at the end of this chapter, the teacher records information on the graphic organizer rather than having the students enter their own information.

Another method of differentiating the learning process is to vary the types of questions used during the implementation of the model. Teachers can use the revised Bloom’s
taxonomy as a structure for developing questions that support differentiating and increasing degrees of challenge throughout the lesson. Choices made about grouping and consideration paid to students’ readiness, interest, and/or learning style can also support efforts to differentiate in the Integrative model.

Product
Differentiation of the learning product will allow students to use the most effective method for demonstrating their attainment of learning goals. Learning goals for an Integrative model lesson will include (1) critical understandings about the organized body of knowledge and (2) the ability to engage in thinking skills required for comprehension of information resources. There are many possible products students might create to demonstrate that learning goals have been met. Some products include graphic organizers developed before, during, or after the Integrative model lesson (as in Scenarios 13-1 and 13-2) or multimedia presentations documenting and explaining their understanding in the different phases of the Integrative model (as in Scenario 13-3). In some cases, support for differentiation can be offered by allowing students to choose the best product that demonstrates their learning. In other cases, differentiation occurs by using tools students select (as in Scenario 13-2, where students can choose to create a video, multimedia presentation, song, or paper that summarizes their generalizations about what they have learned about drugs).

What Are the Benefits of Applying the Integrative Model?

The most obvious benefit of the Integrative model is that it supports students’ development of critical understanding of content. The model also promotes development of critical-thinking skills, supports awareness of relationships between concepts, and develops students’ ability to synthesize information from various resources. The following sections discuss what the Integrative model does.

Develops Students’ Critical Understanding of Content
The four phases of the Integrative model lead to students’ formulation of broad generalizations about the organized body of knowledge studied. The thinking processes involved in these phases foster students’ understanding of the big picture, the “So what?” of learning, because the model requires students to synthesize all of the information they have studied to make inferences. The model requires students to evaluate their understanding by describing the essential understandings gleaned from the study of the organized body of knowledge. In Scenario 13-1, for example, students need to reflect on their learning after reading three books by the same author and share what they think is the big idea—the major inference that applies about the three books.

Promotes Development of Critical-Thinking Skills
Generally, the Integrative model promotes students’ development of 21st century skills—particularly critical-thinking skills—by engaging students in four phases of analysis,
starting with the first phase, where students describe and compare their learning, and then finishing in the fourth phase, during which they develop inferences about the organized body of knowledge studied. Comparing parts of organized bodies of knowledge and their whole, as well as hypothesizing and synthesizing learning into inferences, are all critical-thinking skills. Each of the scenarios in this chapter and the Integrative Model Lesson at the end of this chapter demonstrate ways in which the Integrative model cultivates students’ application of critical-thinking skills.

Supports Awareness of Relationships between Concepts
Students required to examine the “big picture” of the organized body of knowledge must also examine the smaller parts that make up the larger concept (body of knowledge) and how the smaller parts relate or not. For instance, in the Integrative Model Lesson, students are asked to examine the characteristics of the different American Indian tribes studied to determine their relationships and differences. The use of graphic organizers and questioning based on the revised Bloom’s taxonomy help students analyze the relationships that exist between facts and concepts that make up the organized body of knowledge and also analyze any generalizations that emerge.

Synthesizes Learning from a Variety of Resources
The nature of the Integrative model involves selecting the best materials from a variety of resources—relying only on a text, for instance, to learn about American Indians (as in the Integrative Model Lesson at the end of the chapter) or the types of drugs and their effects (see Scenario 13-2) would limit students’ understanding of the organized body of knowledge. Students can have multiple, rich opportunities to cull their understanding of the organized body of knowledge through analysis of a myriad of resources, including text, audio, video, photos, drawings, and more.

What Value Does Technology Add to the Integrative Model?
Teachers can capitalize on the use of technology for the planning, implementation, and assessment of learning when teaching with the Integrative model. Although some tools can be used in all three areas (e.g., use of survey tools), technology provides teachers with some unique ways for planning, implementing, and assessing students’ learning when using the Integrative model. Figure 13-9 provides a list of the technology tools introduced in this section.

Planning
Both teachers and students can locate resources using various technology tools such as online databases (e.g., library databases), collections/repositories (e.g., Library of Congress American Memory), search engines (e.g., Google), or directories. Resource materials should include a variety of sources ranging from print—textbooks, fiction, nonfiction books, and magazines—to multimedia sources that incorporate video, graphics, and audio. Moreover, resources can also be people. Teachers might wish to connect students with individuals in other parts of the
### Figure 13-9  Technology Tools for the Integrative Model

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<th>Technology Tools</th>
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*continued*
world involved in some way with the organized body of knowledge under study. For example, a teacher might invite and schedule a videoconference interview with a scientist who studies addiction.

Many useful technology tools are available for the development of graphic organizers by both teachers and students. Several are available for free online, such as Bubbl, Gliffy, Popplet, and Spicynodes. Inspiration and Kidspiration software programs are not free, but they do not require an Internet connection. Teachers might also want students to develop timelines to further their understanding of the organized body of knowledge. Some useful tools for creating timelines are Timetoast and TimeLiner software. Timelines can also be created using word-processing tools (e.g., Microsoft Word or OpenOffice) or any of the graphic organizer tools shared previously. Many course management systems, such as Blackboard or Moodle, and collaborative tools, such as Google docs, allow students to create and share files, which can include graphic organizers that their peers can also access.

Technology tools are also a great support for questioning and creating materials for questioning. Word-processing software is an obvious tool for this purpose, but other tools can be used for creating questions and then collecting and evaluating students’ answers to them. For instance, online survey tools such as SurveyMonkey offer free access, albeit with limited features (more features are available with a paid subscription), to tools that teachers and students can use to develop questions in many styles, including multiple-choice, ranked, and open-ended short-answer and essay questions. Other tools teachers might use for creation of questions to show and share with students are: Keynote, Notebook, PowerPoint, or Prezi, among many other options. Audience response systems can be utilized for this same purpose.

**Implementation**

Technology is a powerful ally for teachers needing to organize the numerous materials required to make teaching using the Integrative model a success. Teachers can use technology tools to organize, document, and share resources in a variety of ways ranging from developing a bibliography or reference list (e.g., EasyBib) to creating a resource list in Word to using an online tool (e.g., Delicious or Diigo) to keep track of and share links. Also, teachers might use research tools (e.g., Zotero) and website creation tools (like Weebly) to organize different resources to be examined both in print and online.
Assessment

As with other models, technology tools can be used in the Integrative model to conduct pre-assessment, formative assessment, and summative assessment. Online survey and test creation tools allow teachers to assess students’ understanding at all stages of the assessment continuum. Teachers can use online surveys, test creation tools, or graphic organizers to pre-assess students’ prior knowledge, to assess their learning as they progress (formatively), or as they form broad generalizations (summatively). Some tools, such as Quibblo and QuizStar, are designed specifically for creating tests and quizzes. If teachers have access to a course management system, they should also be able to develop quizzes and tests using those tools. Tools such as VoiceThread and Glogster can be used for assessment purposes as well (e.g., requiring students to create an interactive poster). Audience response systems can also help students compare aspects of the organized body of knowledge being learned by examining their factual knowledge about them.

Digital audio and video recorders can capture students’ understandings during any phase of the Integrative model. In fact, many teachers might want students to record or at least document their learning during each stage and especially at the fourth phase, when students develop broad generalizations about the organized body of knowledge studied.

How Is the Integrative Model Implemented?

The following is a lesson plan that incorporates the Integrative model. Figure 13-10 provides an outline of the lesson’s different steps.

<table>
<thead>
<tr>
<th>Integrative Model Steps</th>
<th>Integrative Model Lesson</th>
</tr>
</thead>
<tbody>
<tr>
<td>Describe, compare, and search for patterns</td>
<td>After engaging with a variety of materials to learn about various American Indian tribes and recording their learning in a graphic organizer, students describe, compare, and search for patterns among all of the data in the graphic organizer that was co-developed by the class and teacher.</td>
</tr>
<tr>
<td>Explain similarities and differences</td>
<td>The teacher asks students to work with partners and then the whole class to explain the similarities and differences identified.</td>
</tr>
<tr>
<td>Hypothesize outcomes for different conditions</td>
<td>The teacher asks students to make educated guesses about how things might have been different under different conditions. Tip: The teacher should craft questions before the lesson in the event that students have a tough time formulating hypotheses.</td>
</tr>
<tr>
<td>Generalize to form broad relationships</td>
<td>The teacher asks students to share their big ideas about American Indians. Students share their inferences regarding American Indians first with their partners and then with the class as a whole. They work together to do a radio show about American Indians.</td>
</tr>
</tbody>
</table>
Integrative Model Lesson Plan  
Example  

LESSON CONTEXT  
GRADE LEVEL(S): Second  
CONTENT AREA: Social Studies  
PHYSICAL TEACHING ENVIRONMENT: This lesson will be taught in a regular classroom.  
APPLICATION OF REVISED BLOOM’S TAXONOMY: Students move from the lower levels of the revised Bloom’s taxonomy (i.e., remember, by describing the different characteristics of the American Indian tribes studied) to the higher levels (i.e., evaluate, by forming generalizations about American Indians).

Lesson Plan  

GOAL(S): Students will gain an understanding of American Indian tribes and culture in the United States.  

Standard(s) Addressed:  

National Curriculum Standards for Social Studies:  
Learners will understand the following:  
• Culture: “Culture” refers to the behaviors, beliefs, values, traditions, institutions, and ways of living together of a group of people. (p. 27)  
• Culture: Concepts such as: similarities, differences, beliefs, values, cohesion, diversity. (p. 27)  
• Time, Continuity, and Change: The study of the past is the story of communities, nations, and the world. (p. 31)  
• Time, Continuity, and Change: That historical events occurred in times that differed from our own but often have lasting consequences for the present and future. (p. 31)  
• People, Places, and Environments: The theme of people, places, and environments involves the study of location, place, and the interactions of people with their surroundings. (p. 35)  
• People, Places, and Environments: Factors that contribute to similarities and differences among peoples locally and in places across the world, including ethnicity, language, and religious beliefs. (p. 35)  
• Individuals, Groups, and Institutions: The theme helps us know that people belong to groups and institutions that influence them and by which they are influenced. (p. 42)  

ISTE NETS for Students 2007 #3 and #4.  

OBJECTIVE(S):  
1. Students will describe and compare at least four American Indian tribes from different regions of the United States by completing a graphic organizer. (See Worksheet 13-1 in Appendix C.)  
2. Students will explain the identified similarities and differences between American Indians from different regions of the United States.
3. Students will hypothesize and substantiate outcomes about American Indians from different regions of the United States.
4. Students will make generalizations about American Indians from different regions of the United States.

**ESTIMATED TIME:** Three to five class periods

**MATERIALS NEEDED:**
- Books about American Indians for research
- Graphic organizer handout (Worksheet 13-1 in Appendix C)
- Computer and projector

**PREREQUISITE SKILLS:** Students should be able to read and comprehend text at the second-grade level as well as understand major vocabulary, know how to read a basic map, understand directions on a map, and comprehend how to form hypotheses and generalizations.

**LESSON PROCEDURES** (Text in italics is suggested teacher dialogue.)

**Anticipatory Set (Introduction):** [4 minutes]

**Motivation:** Ask students to draw (individually) what they believe American Indians look like and the type of home they might live in. Ensure that they do not share their drawings with anyone until after they are done.

**Information:** Inform students that for several class periods they will be learning about American Indians, often also called Native Americans. They will be doing a special lesson that helps them organize all the information they will learn so that they can compare the different tribes, explain the similarities and differences, make guesses about how things might have been different, and, finally, make some conclusions about American Indians.

**Connection:** Ask students to share and discuss their drawings. Ask them to explain why they depicted the American Indians as they did. Tell students that they will be studying several American Indian tribes and learning about how interesting and different they were. Each student will receive a notebook for keeping track of their learning and reflections on it.

**A. Phase 1: Describe, compare, and search for patterns**

Together with students, the teacher examines a variety of resources—books, websites, videos, and journal transcriptions—to gather information about different Indian tribes. As students engage with these materials, the teacher asks them to complete a graphic organizer (see Worksheet 13-1) about American Indian tribes that he also completes on a computer and simultaneously projects for all to see.

As a class, the teacher models how to complete the graphic organizer. Some students fill out sections on their own, and others need help by seeing the teacher model it.

The teacher hands out a sheet with several questions. Students are asked to describe and compare the information collected in the graphic organizer by answering the following questions in pairs:

1. What are some of the major American Indian tribes that reside in the United States?
2. Where do or did they live?
3. From which language family did their language originate?
4. What was their lifestyle?
As students discuss their answers, the teacher asks them to refer back to the graphic organizer they created together. As they answer, he records their ideas under each question using multimedia presentation slides. On each slide, the teacher types the details of their answers while also noting who answered the question.

**Phase 2: Explain similarities and differences**

The teacher asks students to examine the matrix and verbalize some comparisons and patterns between the different American Indian tribes, such as where they lived in the United States, what type of home they had, and so on. Then, the teacher asks students to explain the similarities and differences by asking questions like “How can you explain their lifestyle (e.g., of hunting and gathering)? In what ways are they different? Alike? Explain.”

**Phase 3: Hypothesize outcomes for different conditions**

After this discussion, the teacher asks the students to devise hypotheses of what might have been different if conditions were different. For instance, the teacher might ask students to think about their way of life: “How would a Chinook’s way of life be different if he or she lived in the Southeast or the Plains? Explain.” (Ask students to provide support for their hypotheses by writing them down.) As students reply, the teacher should type students’ responses on the computer (or overhead).

**Phase 4: Generalize to form broad relationships**

Ask students to form broad generalizations or big ideas that summarize their learning about American Indians. Be sure to ask them to substantiate their inferences by referring back to the graphic organizer they completed together as a class. Examples of possible student responses are the following: Not all American Indians are the same, and American Indians’ lives depended on where they lived—if they lived near the water, they were usually fishermen.

**Closure:** The teacher asks students to summarize in small groups what they have learned about American Indians by (1) discussing what they have learned, (2) writing a short summary of their learning about American Indians, and (3) sharing with the class the group summary.

**ASSESSMENT**

**Formative assessment** Teachers could check students’ understanding of the concepts about American Indians as they study the unit. The creation of a graphic organizer on their own with certain facts is a low-key way to conduct formative assessment of students’ comprehension.

**Summative assessment** Students could create a recorded podcast educational segment to teach their families (and possibly also students in other grades) about what they learned about American Indians.

**LESSON EXTENSIONS**

1. American Indians of the Chesapeake: www.smithtrail.net/native-americans
3. John Smith’s Journal: www.johnsmith400.org/journal.htm
4. Virginia’s First People: http://virginiaindians.pwnet.org
5. National Museum of the American Indian: www.nmai.si.edu
6. Native Americans resource list for teaching to or about Native Americans: http://comminfo.rutgers.edu/professional-development/childlit/ChildrenLit/nalist.html
7. NOVA: Pocahontas Revealed: www.pbs.org/wgbh/nova/pocahontas
9. Visit your library and locate as many fiction and nonfiction books as possible about American Indians. Ask students to create other charts for other American Indian tribes.

**Differentiation Strategies for the Integrative Model Lesson Plan**

In the sections that follow are some suggestions one might apply to differentiate instruction in the Integrative Model Lesson.

**Content**

Content might be differentiated by presenting or asking students to choose/vote on the American Indian tribes to study. Moreover, reading materials of different levels of complexity could be chosen. For instance, a beginning reader series might be selected for struggling readers and an encyclopedia for advanced ones. The teacher might include photos of the different types of dress, homes, and geographic location and textual firsthand accounts by Europeans of their encounters with American Indians (e.g., Lewis and Clark expedition journal: www.pbs.org/lewisandclark/archive/idx_jou.html).

**Process**

One way to differentiate the process for this lesson is to have different groups of students work on only one American Indian tribe, then all of the groups “teach” one another. Another possibility involves grouping students into pairs or individually for the different phases of the Integrative model.

**Product**

The final phase of the Integrative model requires students to develop a broad generalization about the organized body of knowledge studied—in this case, it is American Indians. Teachers could ask students simply to devise a general conclusion about American Indians based on the information studied. This might be in the form of a short essay, video or audio recording explanation, or a radio show where students share their conclusions.

**Chapter Summary**

In this chapter, you learned about the Integrative model. This model is a purpose-driven instructional model that supports students as they work to develop the ability to learn independently using various thinking skills. In this model, the teacher facilitates students’ analysis of information about a topic communicated in an organized body of knowledge. Successful implementation of the model results in students processing information and ideas from rich content materials into new ideas and understandings. Some sources that are typically considered organized bodies of knowledge...
include textbooks, databases, and spreadsheets. The Integrative model consists of four phases. Each purposefully focuses students in different cognitive processes that progress to drawing meaningful conclusions about information explored. First, students describe, compare, and search for patterns in the content that represents an organized body of knowledge. Then students explain the identified similarities and differences by examining the content more closely. Next, students form hypotheses based on their examination of the content. Finally, in the fourth phase, students make broad generalizations about the content by forming conclusions that synthesize their understanding and demonstrate how it might be considered in a larger context.

The Integrative model was developed by teacher educators Don Kauchak and Paul Eggen (Kauchak & Eggen, 2012) and builds on the important work of Hilda Taba. When participating in lessons designed with the model, students learn and practice critical-thinking skills when analyzing and using data for subjectarea learning. The model can be used with any grade level, but primary-grade teachers will need to provide considerable scaffolding through guided questioning, collection and analysis of data, and categorization of information. The model is also best applied for teaching units of instruction that incorporate conceptual knowledge, foster critical thinking, and involve making connections between information learned.

Review Questions

1. What is the history of the Integrative model?
2. What are the steps in the Integrative model?
3. What type of content is best to teach when applying the Integrative model? Provide and explain examples of content that would be appropriate and inappropriate.
4. What are the benefits of applying the Integrative model? What are some of its challenges?
5. How can the Integrative model be used to differentiate instruction and support diverse learners’ needs?
6. How can technology be used to implement the Integrative model?

Application Exercises

To promote your ability to apply the learning you gained in studying this chapter, complete the following exercises that challenge you to analyze a lesson plan you have written using the Integrative model or using the lesson plan example included in this chapter.

TECHNOLOGY INTEGRATION ACTIVITY

1. Consider the following questions and discuss with a partner or reflect independently:
   a) In the lesson plan you are analyzing, how does (or could) the integration of technology tools make learning more efficient, effective, and engaging? Can you explain and indicate how you will measure the impact on student learning?
   b) Will all learners be aided through the integration of technology? Are there some who might need special support to gain full benefit from technology tools? How might you support this? Is there a way to build on strengths students bring to this lesson related to technology? How?
   c) What plans could you put in place to promote a more successful use of technology and minimize (or eliminate) risk of failure? What proactive plan could a teacher put in place ahead of lesson implementation to ensure that technology works smoothly and for all learners? What reactive approach could you take to ensure that desired learning still occurs even if technology malfunctions during the lesson?
TEACHER PERFORMANCE ACTIVITIES

2. Academic Vocabulary and Language Demands: Academic vocabulary is the vocabulary that students must be able to understand to be successful performing content area learning. Language demands involve the ways language is used in speaking, writing, listening, and reading in the learning tasks of a lesson and in the expressions of student learning. For the lesson plan you are working with (your own or the one provided in the chapter), consider the following questions and discuss them with a partner or reflect on them alone:

a) What academic vocabulary and language demands exist related to the organized body of knowledge which is the focus of the Integrative model lesson? Make a list of the academic vocabulary that students must comprehend and language demands to participate successfully in the Integrative model lesson.

b) How would you determine whether and which students have mastery of the academic language before, during, and after the lesson?

c) How might students be supported in developing proficiency with academic language throughout the entire Integrative model lesson?

3. Planning: In the context of the lesson plan that you are analyzing, discuss the following with a partner or reflect independently:

a) Explain how the steps of the Integrative model build on each other to lead students to make clear and meaningful connections among identified learning goals or objectives.

b) Consider how you have addressed or how you might develop a variety of questions to address different learning needs at multiple levels of the revised Bloom's taxonomy.

c) What research or theory supports the use of the Integrative model for instruction in your learning context?

4. Implementation: In the context of the lesson plan that you are analyzing, discuss the following with a partner or consider independently:

a) Explain how the phases of the Integrative model lesson will result in sustained student engagement throughout lesson. What indicators would you look for during the implementation of your lesson to measure who is engaged and how much? What questioning and supports will be necessary to help students learn about the organized body of knowledge studied in the Integrative model lesson?

b) How well does the lesson overall challenge learners to develop hypotheses for different, hypothetical outcomes and to form a broad generalization regarding the organized body of knowledge? Explain.

5. Assessment: Consider the following questions and discuss them with a partner or reflect independently:

a) How does the plan you are reviewing make use of information gained through pre-assessment to inform the design of the Integrative model lesson? Would consideration of students’ backgrounds, prior learning, and experiences as they relate to learning goals/objectives help you design a more effective lesson? How?

b) How does or could the lesson plan you are reviewing use formative assessment to improve the delivery of the lesson?

c) How does the plan you are reviewing support students’ expression of and reflection on their learning? Are there multiple forms of evidence of student learning? How might students learn through an analysis of their performance and reflection on their learning (metacognition)?

6. Analyzing Teaching: Consider the following and discuss with a partner or reflect independently:

a) Now that you have created and/or analyzed a lesson plan using Integrative model, consider how the model supports effective teaching, questioning, and comprehension of the organized body of knowledge. Can you cite specific evidence or references that support your claim? Be specific in expressing your ideas.
b) What did you learn from this activity that might inform your future practice?

Discussion Questions
Select an organized body of knowledge that you might teach. Discuss with a partner the different relationships you see in the content. What similarities and differences exist? Can you explain them? What if conditions were different? What is the “big idea” you would want students to “take home” regarding this organized body of knowledge? Explain.

Journal Entry
The Integrative model is best used for teaching organized bodies of knowledge. Consider those in your content area. Reflect on your own experiences as a student and consider how you learned to navigate the structure and ideas contained in these organized bodies of knowledge. Did you receive guidance from others or work independently? Explain. Consider the value of providing your own students guidance as they learn to identify patterns, observe details, and draw conclusions. Describe what you will do to guide them.

Resources
- Constructivism: www.thirteen.org/edonline/concept2class/constructivism/index.html
- Constructivism: http://carbon.ucdenver.edu/~mryder/itc/constructivism.html
- The Application of the Integrative Model to Teach the Formation of American Political Parties: www.societyforhistoryeducation.org/pdfs/Mitchell.pdf
### Instructional Model Matrix

<table>
<thead>
<tr>
<th>Chapter/Name of Model</th>
<th>Major Steps or Phases</th>
<th>Description</th>
<th>Origins of the Model</th>
<th>Types of Knowledge the Model Is Best Suited to Teach</th>
<th>Support for 21st Century Learning</th>
</tr>
</thead>
</table>
| **Chapter 5** Direct Instruction | 1. Introduction  
2. Presentation  
3. Guided practice  
4. Independent practice | A teacher-led instructional model that is useful for promoting understanding of procedures among students who gradually develop independence using new learning. | Emerged from behavioral approaches such as Skinner’s theory of operant conditioning and Vygotsky’s social development theory. | Procedural knowledge/ procedures or content that can be broken down into discrete segments | Fosters logical, organized thinking  
Fosters independent learning of procedures  
Provides practice in and application of existing knowledge |
| **Chapter 6** Concept Attainment | 1. Presentation of examples  
2. Formation and analysis of hypotheses  
3. Closure  
4. Application | A teacher-guided instructional model through which students develop an understanding of a concept by examining examples and nonexamples and by analyzing their critical and noncritical attributes. | Based on the work of Hilda Taba (1967), which advocated the importance of teaching students to develop, understand, and make generalizations about concepts. Also related to the work of cognitive psychologist Jerome Bruner, who espouses that learning is an active, social process in which students construct new ideas or concepts based on their current knowledge. | Conceptual knowledge/ especially concepts with clearly defined attributes | Promotes discrimination and generalization  
Fosters inquisitiveness |
| **Chapter 7** Concept Development | 1. Listing  
2. Grouping  
3. Labeling  
4. Regrouping  
5. Synthesizing | A student-centered model that promotes understanding of concepts through inductive reasoning about examples for the purpose of grouping and classifying them. | Created by Hilda Taba in 1971 to support students’ learning and practice of thinking skills. | Concepts and conceptual knowledge  
Also good for teaching facts related to the concept | Supports ability to classify, think flexibly, and make generalizations  
Fosters development of organizational skills  
Encourages recognition of relationships and understanding of concepts |
<table>
<thead>
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</tr>
</thead>
</table>
| **Chapter 8**  
Inductive Model | 1. Lesson introduction  
2. Divergent phase  
3. Convergent phase  
4. Closure  
5. Application | A teacher-guided model that challenges students to recognize patterns and details in content under investigation. | Directly influenced by Hilda Taba. The model promotes and requires inductive reasoning, which traces its roots to Sir Francis Bacon. | Factual Knowledge  
Conceptual Knowledge | • Promotes inductive reasoning, skills of observation, and recognition of patterns and details  
• Allows practice with convergent and divergent thinking  
• Fosters interaction with and skills for making sense of content materials  
• Cultivates strategies for deep learning of content |
| **Chapter 9**  
Vocabulary Acquisition Model | 1. Pretest knowledge of words critical to content  
2. Elaborate on and discuss invented spellings and hypothesized meanings  
3. Explore patterns of meaning  
4. Read and study  
5. Evaluate and posttest | A teacher-guided model for teaching vocabulary in a procedural and inductive manner. The model helps students develop their own understanding of the meaning of a word(s) through analysis of the parts of the word and their meanings. | Thomas Estes was the first to coin the model’s title and formalize its steps for exploring the meanings and patterns inherent in words. | Factual knowledge of vocabulary words  
Also supports development of conceptual knowledge of language and vocabulary | • Develops recognition of details, making of connections with prior knowledge, and creative thinking  
• Encourages development of skills for independent vocabulary learning |
<table>
<thead>
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</tr>
</thead>
</table>
| **Chapter 10** Inquiry Model | 1. Present/pose question  
2. Make hypothesis  
3. Gather data  
4. Assess hypothesis  
5. Generalize  
6. Analysis of inquiry process | A process-oriented instructional model that teaches students the skills, knowledge, and dispositions required for thinking systematically to answer important questions. | Stems from the idea of the use of the scientific method as a way of teaching “scientific ways of knowing.” The most recent variations of the model were developed in response to the modern need to teach students to effectively use and manage a multitude of informational sources. | Procedural knowledge  
Conceptual knowledge  
Metacognitive knowledge | • Promotes problem-solving skills  
• Introduces students to scientific ways of knowing  
• Fosters skills and dispositions for learning to learn |
| **Chapter 11** Problem-Based Learning | 1. Present or identify the problem  
2. Develop a plan for solving the problem  
3. Implement the plan for solving the problem  
4. Evaluate the implementation plan results | An active learning model that challenges students to learn and apply knowledge of content with problem-solving skills to meaningful problems in the academic disciplines. | Developed in medical education settings and first used in the 1950s to prepare doctors to apply professional skills and knowledge in real-world contexts. | Factual knowledge  
Procedural knowledge  
Conceptual knowledge  
Metacognitive knowledge | • Cultivates application of knowledge to real-world contexts  
• Encourages learning of useful processes to solve problems |
| **Chapter 12** Cooperative Learning (General Cooperative Learning Model) | 1. Introduce the task  
2. Name, teach, and practice targeted social skills | A model that capitalizes on students’ inclination to learn socially and promotes students’ development of social skills and understanding of content. | Developed in early 1970s by social scientists at John Hopkins University to help schools in Baltimore, Maryland, manage newly integrated classrooms. | Factual knowledge  
Procedural knowledge  
Conceptual Knowledge  
Metacognitive knowledge | • Promotes skills for productive collaboration and communication (listening, taking turns)  
• Teaches benefits of teamwork and cooperation |
<table>
<thead>
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<th>Chapter/Name of Model</th>
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<tbody>
<tr>
<td><strong>Chapter 13</strong></td>
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</tr>
<tr>
<td><strong>Integrative Model</strong></td>
<td>1. Describe, compare, and search for patterns</td>
<td>A teacher-guided model that supports students as they work to develop the ability to learn independently using various critical thinking skills. Students analyze an organized body of knowledge to develop new ideas and understandings while learning to think, analyze, and draw conclusions independently.</td>
<td>Developed by Hilda Taba as a part of the Taba Curriculum Development Project.</td>
<td>Factual knowledge Procedural knowledge Metacognitive knowledge</td>
<td>• Supports ability to draw conclusions and make connections and generalizations • Encourages ability to examine, analyze, and make sense of large amounts of materials</td>
</tr>
<tr>
<td></td>
<td>2. Explain similarities and differences</td>
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<td>3. Hypothesize outcomes for different conditions</td>
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<tr>
<td><strong>Chapter 14</strong></td>
<td>1. Introduce the Socratic Seminar model</td>
<td>A teacher-guided model that encourages development of thinking skills and exploration of ideas through the use of structured questioning with debate or dialogue.</td>
<td>Greek philosopher and teacher Socrates developed the general method of teaching through questioning.</td>
<td>Factual knowledge Procedural knowledge Metacognitive knowledge</td>
<td>• Fosters communication and collaboration skills (listening and questioning) • Develops thinking skills, including questioning, synthesis, and analysis</td>
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<tr>
<td><strong>Socratic Seminar</strong></td>
<td>2. Facilitate the Socratic Seminar dialogue</td>
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<td>3. Review and summarizing the dialogue</td>
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<td>4. Evaluate the dialogue</td>
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