Same Content, Different Outcome

Using a Different Teaching Model to Promote Higher-Order Thinking in Students

BY ALISON WENHART

A s a teacher educator, I am always looking for different ways to engage students and to help them get the most out of each individual lesson that I teach. I find that much of this process happens while I am in the planning stages of the lesson. I try to meet pre-service teachers' individual learning styles; vary assessment strategies; as well as deliver the content in multiple ways, depending on the students in the particular class. Modeling this behavior for students is important as they move forward to be the leaders in their own classrooms. As the old adage goes, "You teach how you have been taught."

I frequently speak to pre-service teachers about what lesson models they are observing while out doing their fieldwork in the local public schools, and their response is almost always direct instruction and /or lecture. While these models of instruction are excellent for the delivery of some types of content, such as lessons that focus on procedural understanding, there are other delivery models that can be utilized when working with a standard and an objective that require higher-order thinking. One of my main areas of focus as a teacher educator is to have pre-service teachers emphasize higher-order thinking skills when creating their lesson plans. I am supported in this thinking by the Common Core State Standards document that is so present in our New Hampshire public schools today: "include rigorous content and application of knowledge through high-order skills" (National Governor's Association, 2010).

I recently had the opportunity to present at a regional conference, and I decided to share with the participants, who were certified teachers from around the state, a model of teaching and learning that I find to be highly effective when focusing on higher-order thinking. The teaching model is called the *integrative model*, and it was created from the work and research done by Hilda Taba between 1965 and 1967. The model was designed to help students develop a deep understanding of an organized body of knowledge while simultaneously developing their critical thinking skills. The model can be used to process information in any number of ways, such as comparing two maps or two primary documents, but most often you see the model used with the information presented in a matrix format. The teacher guides the students through a series of questions, starting with simple lower-level questions and building to more complex questions. Students are asked to find similarities and differences between the information in the different cells in the matrix. The ultimate goal is to have students make generalizations about the information they are reading, connecting it with prior knowledge they may have on the subject. My objective was to share with these current educators a model that they may not have been utilizing within their classrooms in hopes that they may see how the model can guide students towards utilizing higher-order thinking skills.

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The integrative model is distinctly different from the direct instruction model that is frequently referred to as the "I do," "we do," "you do" model. Direct instruction guides learners to the understanding of a task beginning with the teacher modeling a specific skill or fact. The second step in the process is to have the students complete the skill as a group, with support and guidance from the educator. Finally, the student is asked to complete the task on his/her own. This path to understanding is linear and highly influenced by the teacher's desired outcome.

While presenting at the conference, I decided to introduce the integrative model after presenting the information in a more traditional way so that the conference participants could compare and contrast the two styles. I began the presentation by sharing a great deal of content about the immigration patterns of several groups who came to the United States. I used PowerPoint as a way to deliver the material to the participants, focusing on one of four cultural groups at a time until I completed discussing each group—a very linear approach, one that could be consid-

ered direct instruction or a lecture-based model. I included oral questions about the information shown on each slide and even attempted to guide the participants to connect the information they were learning about to the slides previously covered. The first set of slides outlined the reasons why the Italian people immigrated to the United States. The focus of the lecture was to discuss the characteristics of the population, their reasons for immigrating, and what kinds of assimilation patterns they followed. The process continued until all of the cultural groups had been discussed. At the completion of the lesson, as a way to gauge the participants, I asked each of them to respond to a questionnaire that consisted of seven questions that utilized a three-point Likert scale (see Table 1).

After reviewing the data from the collected responses, it was apparent that the participants felt very dissatisfied. As a whole, they commented that they were unable to respond to the questions with much depth or interest. None of the participants indicated that they could meet the highest standard set forth: the ability to list five or more responses to any given question regarding immigration to the United States. As expected, over 50 percent of the participants self-reported that they were only "slightly" engaged in the material being presented. The remainder of the respondents reported being "moderately" engaged in the discussion of cultural groups immigrating to the United States. When the participants were asked to identify similarities and differences between cultural groups, none were able to.

Directly following the written evaluation of the PowerPoint presentation, I began to introduce the lesson on immigration using the integrative model. All of the data were identical to the information presented via PowerPoint, merely presented in the matrix format. As prescribed by the integrative model, I guided the conference participants to analyze the presented facts by looking for similarities and differences between the cultural groups, one column at a time. For example, we focused our attention by looking at all of the cultural groups and what each group's assimilation process had looked like (see Table 2).

Among the initial responses were, "The Puerto Rican community and the Cuban community both 'Americanized' by the second generation." Another comment made about the assimilation process early in the discussion was, "I see that several of the cultural groups form their own communities within the United States when they arrive." However, after several responses and prompting questions, participants were offering generalizations and making inferences about the specific cultural groups. One response shared during the latter portion of the presentation included, "I think that the people from China may have

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Table 1. Questions on survey about the PowerPoint and the integrative model

I was engaged by the PowerPoint (integrative model) on immigration

I am able to list similarities between the cultural groups after viewing the PowerPoint (integrative model).

I am able to list differences between the cultural groups after viewing the PowerPoint (integrative model).

I can make generalizations about the cultural groups after viewing the PowerPoint (integrative model).

I can list reasons why different cultural groups wanted to leave their country of origin after viewing the PowerPoint (integrative model).

I can list reasons why different cultural groups were able to assimilate to the United States after viewing the PowerPoint (integrative model).

I can list characteristics of people from the different countries discussed after viewing the PowerPoint (integrative model).

Table 2. Content about the cultural groups discussed

	REASONS FOR COMING	CHARACTERISTICS	ASSIMILATION
Italians	• Small farms couldn't support families • Population increases • Poor land, little irrigation • Few factories, little industry • Heavy taxes • Stories of wealth in America	• Many from low-income backgrounds • Catholic • Large families • Tight family structure • Most could not read or write English	• First generation did not mix • Church schools • Second generation moved away from home • "Little Italy" in NYC • Second generation was "Americanized"
Chinese	• Large population • Land controlled by warlords • High taxes • Crop failure • Famine • Promise of high wages in America	• Many initially brought to US as laborers • Confucianism • Most could not read or write English • Tight family structure • Slow to learn English language	• Eager to retain customs • Men as job hunters initially lived together • "Chinatowns" established in many large towns • Major influx from 1818 to 1890 • Large populations in the western US
Puerto Ricans	• Large population increases • Few factories • Little land • Close to the US • Description of the "good life" in the US • Became US citizens in 1917	• Many had low- income backgrounds • Catholic • Large families • Most could not read or write English • English learned quickly by second generation • Tight family structure	• Major influx in 1940–1950 • "Spanish Harlem" in New York • Many of them stayed in the northeastern US • Initially church, then public schools • Second generation "Americanized"
Cubans	• Batista overthrown • Castro into power • Promises of opportunity to return to Cuba	• Many had upper- income backgrounds • Catholic • Tight family structure • Many could not read or write English • Politically/ economically powerful in south Florida	• English language learned quickly by second generation • Adapted quickly to American politics and business practices

had a more difficult time assimilating into our culture than the other groups for several reasons. First, their religion is so different than the ones they were encountering when they got to the United States. Also, if you think about them trying to learn to read and write in English, their alphabet is made up of symbols, not the letters that we see in our alphabet." The participants also built on the previous responses and added detail to the initial thoughts that had been presented: "I see that most of the groups stayed together once they g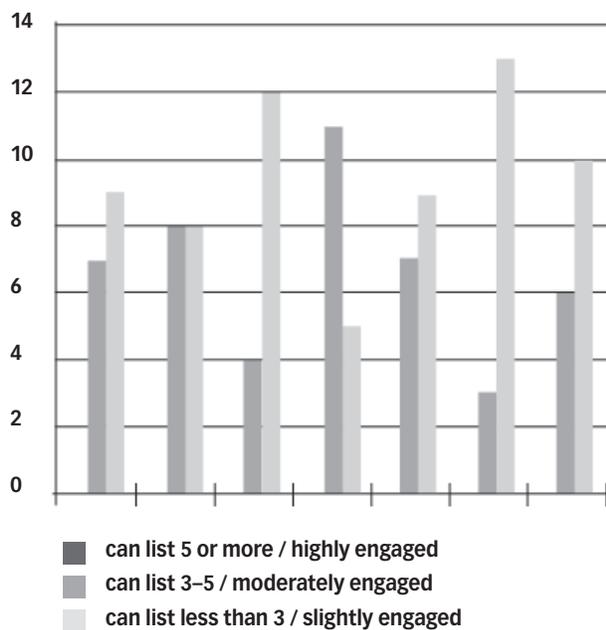ot to the United States; do you think that they did that because of language issues or religion?" In addition to making inferences and asking deeper questions on the topic, the participants began to tie the information to their previous knowledge. In one case, the participant noticed a pattern and tied it to her knowledge of immigration locations: "If you look where each of the cultural groups settled, you can see that they stayed close to where they probably immigrated from. The Cubans stayed in Florida, the Italians stayed in New York."

Throughout this portion of the presentation, the participants were sharing responses with me and discussing ideas with table-mates. The conversation was rich and engaging. Although the data discussed in this article is focused on the self-reporting by the participants, an outside observer would have looked at the group and commented that they were highly engaged and interested in their learning.

As I had done following the portion of the lesson that was guided by PowerPoint in the more linear discussion/direct instruction method, I again invited the participants to complete the questionnaire using the same Likert scale previously utilized, only focusing on the integrative model experience instead (see Table 1).

The participants reported very differently the second time. They reported being engaged and also that they were better able to respond to the information in a much deeper way. They stated that they were able to make generalizations and found themselves inferring about the materials that were being discussed. The results are very different when compared to the results from the data collected about the PowerPoint, direct instruction model (see Chart 2). The participants felt more engaged and were able to successfully produce more factual data. In addition, they interacted differently with the material. They self-reported that they were able to make more connections between the cultural groups and produce generalizations about the information being discussed. All of these statements imply that the participants had an experience that allowed them to interact with the material utilizing higher-order thinking skills.

Following the mini-lessons and a debriefing of the experiences that we had been through together, I challenged each participant to spent some time trying to integrate some of the teaching material into the integrative model. The participants were all able to brainstorm ways that they could use the model with curriculum that they were required to teach for their grade levels. I am excited to say that four of them unofficially reported that they would be using the model in their classrooms as soon as they returned back to their own campuses that week, and several more replied that they would utilize the model in the future if and when the material was appropriate.

The integrative model is only one way to engage students in the learning process; there are a number of teaching models, learning strategies, and activities that can support higher-order thinking. The participants in this conference session reported finding the integrative model one that they enjoyed utilizing and stated that they would use it as an alternative way to engage their students in higher-order thinking lessons in the future.

References

National Governors Association Center For Best Practices, Council Of Chief State School Officers. (2010). Common core state standards. Retrieved from Common Core State Standards website: http://www.corestandards.org/.

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Chart 1. Data results from PowerPoint lesson

- ■ can list 5 or more / highly engaged
- ■ can list 3–5 / moderately engaged
- ■ can list less than 3 / slightly engaged

Chart 2. Data results from the Integrative Model lesson

- ■ can list 5 or more / highly engaged
- ■ can list 3–5 / moderately engaged
- ■ can list less than 3 / slightly engaged