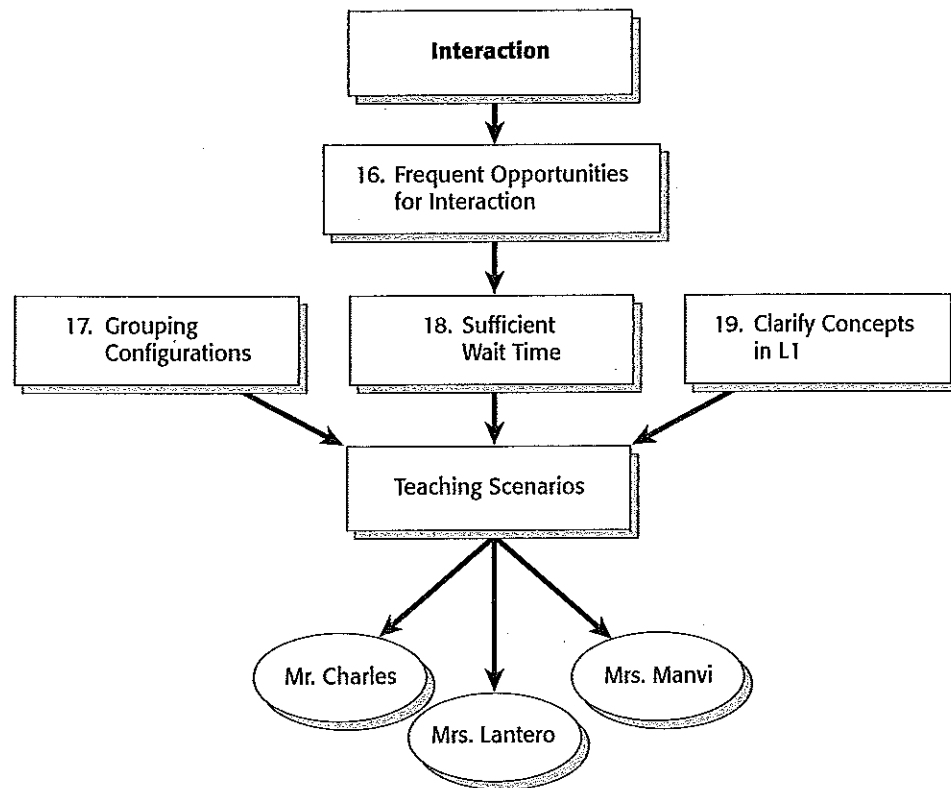


Interaction



Objectives

After reading, discussing, and engaging in activities related to this chapter, you will be able to meet the following content and language objectives.

Content Objectives

Select from a variety of activities that promote interaction and incorporate into lesson plans

Design grouping patterns that support lesson content and language objectives

Identify techniques to increase wait time

Identify resources to support student clarification in the native language

Language Objectives

Explain in writing the purpose of student-student interaction for language development

Describe techniques to reduce the amount of teacher talk in a lesson

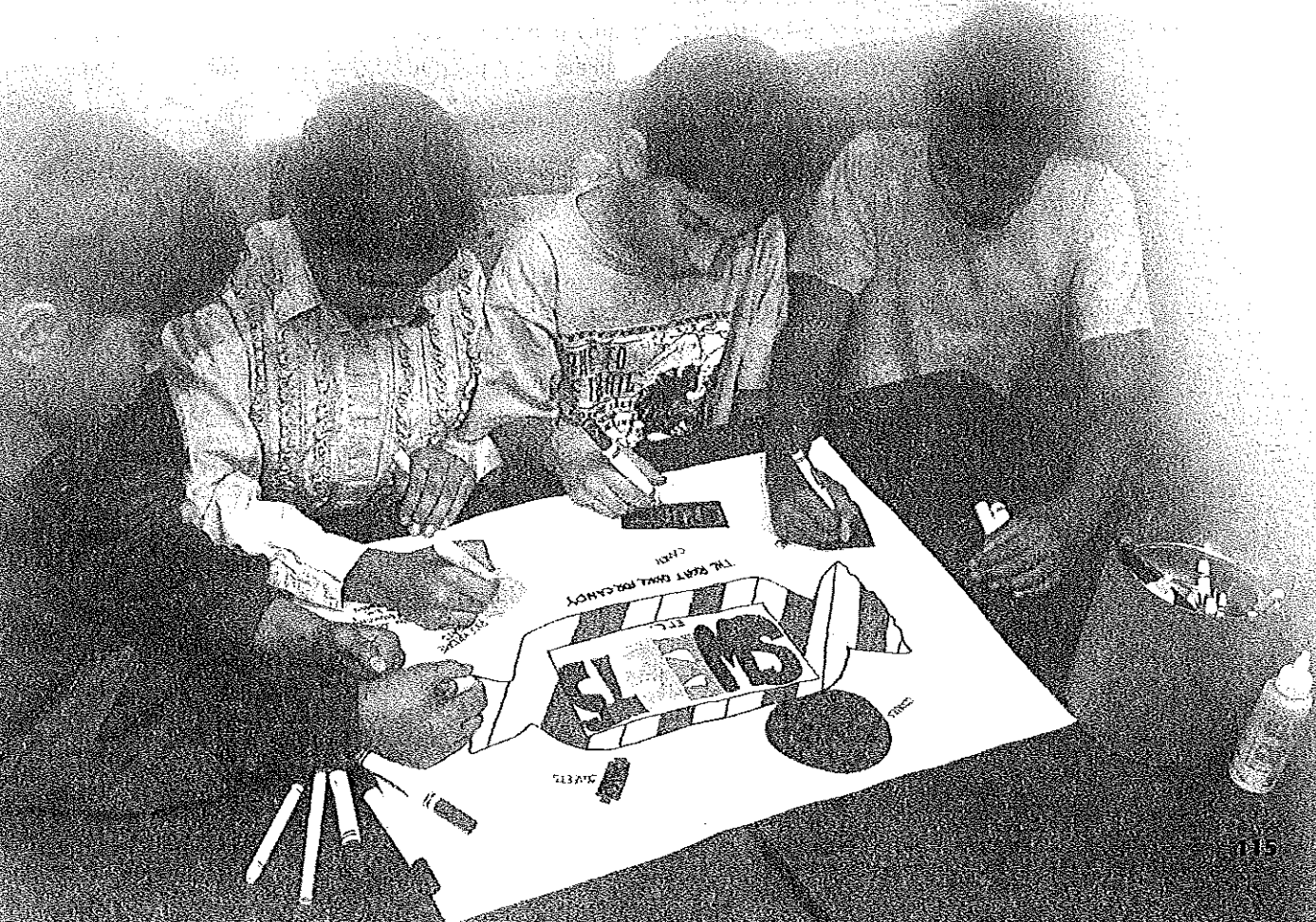
Practice asking questions that promote student elaboration of responses

For English learners to become fluent in academic English, we need to provide structured opportunities in all subject areas to practice using the language. Because of the large number of English learners in schools today, *all* teachers are teachers of English, even if their content specialization is science, math, or social studies. For students learning English, teachers must create ample opportunities to practice using *academic* language, not simply social uses of language. And the language must be meaningful to students; it is not just the quantity of exposures to English that affects learning, but it is the quality as well (Wong-Fillmore & Valadez, 1986).

Background

“Use it or lose it” is a saying that conveys what we know from our own experience in learning a second language. If one doesn’t practice using the language, it is difficult to maintain it. But what about learning a language in the first place—does speaking it help to develop the language? The answer is a resounding “Yes!” The role that conversation plays in the process of second language teaching and learning is clear (Day, 1998). But discussion also offers important benefits for learning in general. As Gerald Graff puts it, “Talk—about books and subjects—is as important educationally as are the books and subjects themselves” (2003, p. 9).

The issue is, why are there so few opportunities for students to interact in typical classrooms? Studies indicate that, in most classrooms, teachers dominate the linguistic aspect of the lesson, leaving students severely limited in terms of opportunities to use language in a



variety of ways (Goodlad, 1984; Marshall, 2000). In a study of programs for ELs (Ramirez, Yuen, Ramey, & Pasta, 1991), it was found that the classes were characterized by excessive teacher talk. When students were given an opportunity to respond, it usually involved only simple information-recall statements, restricting students' chance to produce language and develop complex language and thinking skills. In our own work, we observe teachers doing a significant amount of talking at students rather than providing the impetus for a discussion or sharing, then allowing students to talk to one another.

There are many benefits to having students actively engaged in interaction around subject matter. Some include:

- **Brain stimulation.** Interesting, engaging activities, including discussions, play an important role in learning. When students are engaged, and are activated, more of the pleasure structures in the brain than when students are simply asked to memorize information (Poldrack, Clark, Pare-Blagoev, Shohamy, Crespo Moyano, Myers, & Gluck, 2001).
- **Increased motivation.** Interaction with others is an important component of reading instruction that increases motivation and comprehension (Guthrie & Ozgungor, 2002).
- **Reduced risk.** The typical question-answer sessions where teachers call on students may be threatening to students, particularly those unprepared to respond. Some students cannot focus on the content in this setting because it triggers the brain's "threat response" (Jensen, 2005). Students talking in pairs or small groups minimizes the risk and allows ideas to flow more easily.
- **More processing time.** Students need time to process after learning. Direct instruction should be limited to short increments followed by time for discussion.
- **Increased attention.** Use of pairs or teams can heighten attention levels. Students may be asked to work together to compare/contrast material learned, group and regroup the material, resequence it, or retell it from another point of view (Marzano, Pickering, & Pollock 2001).

Unfortunately, these practices tend not to be prevalent in classrooms with English learners.


We find that it is both interesting and helpful to analyze actual transcripts from lessons to demonstrate the kind of teacher dominance that is so prevalent in classrooms. The following transcripts are from a pilot SIOP[®] study (Echevarria, Greene, & Goldenberg, 1996) in middle school social studies classes. The teachers were videotaped teaching the same content about consumerism to English learners, the first using a typical approach found in mainstream classes and the other using the SIOP[®] Model approach. Both classes had approximately twenty-five students, and in this lesson students were learning how to read labels on clothing and on a bottle of antiseptic.

Mainstream Lesson

TEACHER: Look at the piece of clothing at the bottom. It says (*he reads*), "This shirt is flame-resistant," which means what?

STUDENT: Could not burn.

STUDENT: Won't catch fire.



To see an example of eliciting interaction, please view the corresponding video clip (Chapter 6, Module 1) on the accompanying CD.

TEACHER: It will not burn, won't catch fire. Right (*continues reading*). "To retain the flame-resistant properties"—what does "to retain" mean?

STUDENT: (*unintelligible*)

TEACHER: To keep it. All right. (*He reads*), "In order to keep this shirt flame-resistant wash with detergent only." All right (*he reads*). "Do not use soap or bleach. Tumble dry. One hundred percent polyester." Now, why does it say, "Do not use soap or bleach"?

STUDENT: 'Cause it'll take off the . . .

TEACHER: It'll take off the what?

STUDENTS: (*fragmented responses*)

TEACHER: It'll take off the flame-resistant quality. If you wash it with soap or bleach, then the shirt's just gonna be like any old shirt, any regular shirt, so when you put a match to it, will it catch fire?

STUDENT: No.

TEACHER: Yes. 'Cause you've ruined it then. It's no longer flame-resistant. So the government says you gotta tell the consumer what kind of shirt it is, and how to take care of it. If you look at any piece of clothing: shirt, pants, your shirts, um, your skirts, anything. There's always going to be a tag on these that says what it is made of and how you're going to take care of it. Okay. And that's for your protection so that you won't buy something and then treat it wrong. So labeling is important. All right. Let's review. I'll go back to the antiseptic. What did we say indications meant? Indications? Raise your hands, raise your hands. Robert?

STUDENT: What's it for.

TEACHER: What is it for, when do you use this? Okay. What do directions, what is that for, Victor?

STUDENT: How to use . . .

TEACHER: How to use. Okay, so indications is when you use it (*holds one finger up*), directions is how you use it (*holds another finger up*), and warnings is what?

STUDENTS: (*various mumbled responses*)

TEACHER: How you don't use it. This is what you don't do.

The teacher in this case tended to finish sentences for the students and accept any form of student comment without encouraging elaborated responses. In examining the exchanges, what did the teacher do when students gave partial or incorrect answers? He answered the question himself. Students learn that they can disengage because the teacher will continue with the "discussion."

SIOP® Model

TEACHER: Most clothing must have labels that tell what kind of cloth was used in it right? Look at the material in the picture down there (*points to picture in text*).¹ What does it say, the tag right there?

¹The teacher explained then that they would be doing an activity in which they would read labels for information.

- STUDENT: The, the, the . . .
- TEACHER: The tag right there.
- STUDENT: (*Reading*) "Flame-resis . . ."
- TEACHER: Resistant.
- STUDENT: "Flame-resistant. To retain the flame-resistant properties, wash with detergent only. Do not use soap or bleach. Use warm water. Tumble dry."
- TEACHER: "One hundred percent . . ."
- STUDENT: "Polyester."
- TEACHER: Now, most clothes carry labels, right? (*pointing to the neck of her sweater*). They explain how to take care of it, like dry clean, machine wash, right? It tells you how to clean it. Why does this product have to be washed with a detergent and no soap or bleach?
- STUDENT: Because clothes . . .
- TEACHER: Why can't you use something else?
- STUDENTS: (*several students mumble answers*)
- STUDENT: (*says in Spanish*) Because it will make it small.
- TEACHER: It may shrink, or (*gestures to a student*) it may not be . . . what does it say?
- STUDENT: It's not going to be able to be resistant to fire.
- TEACHER: Exactly. It's flame-resistant, right? So, if you use something else, it won't be flame-resistant anymore. How about the, uh, look at the *antiseptic* (*holds hands up to form a container*)—the picture above the shirt, the antiseptic?
- STUDENT: Read it?
- TEACHER: Antiseptic (*Teacher reads*) and other health products you buy without a prescription often have usage and warning labels. So what can you learn from this label? Read this label quietly please, and tell me what you can learn from the label. Read the label on that antiseptic. (*Students read silently.*)
- TEACHER: What can you learn from this label?
- STUDENT: It kills, oh I know.
- TEACHER: Steve?
- STUDENT: It kills germs.
- STUDENT: Yeah, it kills germs.
- TEACHER: It kills germs. You use it for wounds, right? What else?
- STUDENTS: (*various enthusiastic responses*)
- TEACHER: One person at a time. Okay, hold on. Veronica was saying something.
- STUDENT: It tells you in the directions that, you could use it, that like that, 'cause if you use it in another thing, it could hurt you.
- TEACHER: It could hurt you. Okay, what else? Ricardo?
- STUDENT: If you put it in your mouth, don't put it in your mouth or your ears or your eyes.

TEACHER: Very good. Don't put it in your mouth, ears, and eyes. Okay, for how many days should you use it? No more than what?

STUDENT: No more than ten days.

STUDENT: Ten days.

TEACHER: So don't use it—you have to follow what it says so don't use it more than ten days. Now, the next activity you're going to do . . .

The SIOP® teacher allowed for a balance of teacher-to-student talk and encouraged student participation. She asked questions, waited for students' responses, and restated or elaborated on the responses. In this case, what did the teacher do to elicit answers to the question? She scaffolded the answer by encouraging the students to think about it, prompting them to give their responses.

The features of the SIOP® Model within the Interaction component are designed to provide teachers with concrete ways of increasing student participation and developing English language proficiency.



SIOP® FEATURE 16:

Frequent Opportunities for Interaction and Discussion

Oral Language Development

This SIOP® feature emphasizes the importance of balancing linguistic turn-taking between the teacher and students, and among students. It also highlights the practice of encouraging students to elaborate their responses rather than accepting yes/no and one-word answers.

The findings of the National Literacy Panel on Language Minority Children and Youth (August & Shanahan, 2006) revealed the important relationship between oral proficiency in English and reading and writing proficiency. Specifically, reading comprehension skills and writing skills are positively correlated with oral language proficiency in English (Geva, 2006), two areas that are particularly challenging for English learners. Solid reading comprehension is the foundation for achievement in nearly every subject area in school, and writing proficiency in English is an essential skill as well. Increased effort is needed to offer students opportunities to develop these important oral language skills.

As mentioned previously, we have clear evidence that teachers tend to do most of the talking in class. While teachers certainly have knowledge to share and discuss with students, learning is more effective when students have an opportunity to participate fully in lessons by discussing ideas and information. Students benefit from using and practicing English as a means of expressing their ideas, opinions, and answers. Effective SIOP® teachers structure their lessons in ways that promote student discussion, and they strive to provide a more balanced linguistic exchange between themselves and their students. It can be particularly tempting for teachers to do most of the talking when students are not completely proficient in their use of English, but these students are precisely the ones who need opportunities to practice using English the most.

Effective SIOP® teachers also encourage elaborated responses from students when discussing the lesson's concepts. The teacher elicits more extended student contributions by using a variety of techniques that will take students beyond simple yes or no answers and short phrases (Echevarria, 1995b; Goldenberg, 1992–1993). Some of these techniques include asking students to expand on their answers by saying, "Tell me more about that"; and by asking direct questions to prompt more language use such as, "What do you mean by . . ." or "What else. . ." Another technique is to provide further information through questions such as "How do you know?" "Why is that important?" "What does that remind you of?" Other techniques include offering restatements such as "In other words . . . is that accurate?" and by frequently pausing to let students process the language and formulate their responses. Some teachers often call on other students to extend a classmate's response.

It takes time and practice for these techniques to become a natural part of a teacher's repertoire. The teachers with whom we've worked report that they had to consciously practice overcoming the temptation to speak for students or to complete a student's short phrase. The preceding transcript showed how the first teacher spoke for students instead of encouraging students to complete their thoughts. The following segment from the transcript provides another example:

TEACHER: What do "directions" what is that for, Victor?

STUDENT: How to use . . .

TEACHER: How to use. Okay, so "indications" is when you use it, "directions" is how you use it, and "warnings" is what?

STUDENTS: *(various mumbled responses)*

TEACHER: How you don't use it. This is what you don't do.

In this segment, the mainstream teacher could have encouraged a more balanced exchange between himself and the students. First, he did not encourage students to completely express their thoughts; he accepted partial and mumbled answers. Secondly, he answered for the students, dominating the discussion. It is easy to imagine how students could become disinterested, passive learners in a class in which the teacher accepts minimal participation and does the majority of the talking.

The SIOP® teacher approached students-teacher interaction differently:

TEACHER: What can you learn from this label?

STUDENT: It kills, oh I know.

TEACHER: Steve?

STUDENT: It kills germs.

STUDENT: Yeah, it kills germs.

TEACHER: It kills germs. You use it for wounds, right? What else?

STUDENTS: *(various enthusiastic responses)*

TEACHER: One person at a time. Okay, hold on. Veronica was saying something.

STUDENT: It tells you in the directions that, you could use it, that like that, 'cause if you use it in another thing, it could hurt you.

TEACHER: It could hurt you. Okay, what else? Ricardo?

STUDENT: If you put it in your mouth, don't put it in your mouth or your ears or your eyes.

TEACHER: Very good. Don't put it in your mouth, ears, and eyes. Okay, for how many days should you use it? No more than what?

STUDENT: No more than ten days.

STUDENT: Ten days.

TEACHER: So don't use it—you have to follow what it says, so don't use it more than ten days. Now, the next activity you're going to do . . .

The SIOP® teacher let the students have time to express their thoughts (e.g., student says, "It kills . . . It kills germs."). The teacher could have completed the sentence for the student, but she waited for him to complete his answer. Also, the SIOP® teacher encouraged and challenged the students more than the mainstream teacher did by asking twice, "What else?" Finally, the teacher nominated students who volunteered to talk and repeated what they said so that the class could hear a full response (e.g., Veronica).

Effective SIOP® teachers plan instruction so that students have opportunities to work with one another on academic tasks, using English to communicate. Through meaningful interaction, students can practice speaking and making themselves understood. That implies asking and answering questions, negotiating meaning, clarifying ideas, giving and justifying opinions, and more. Students may interact in pairs, triads, and small groups. Literature circles, think-pair-share, Jigsaw readings, debates, and science experiments are only a sample of the types of activities teachers can include in lessons to foster student-student interaction.

Other Opportunities for Interaction



Interaction need not always be oral. Students can interact with teachers through dialogue journals, sharing ideas and learning from the teacher who models appropriate written text. In secondary classes, students may be partnered with one another. The teacher participates in the dialogue every so often to monitor students' writing and model correct writing.



Using technology, students can interact with each other through a class electronic list, shared research files on a school network, or a planned pen pal e-mail exchange with another class elsewhere in the world.



In a discussion of the importance of movement for learning at all ages, Jensen (2005) suggests a number of games such as rewriting lyrics to familiar songs in pairs or teams as a content review, then performing the song; playing Simon Says using content such as "Point to Rome. Point to the first country the Romans conquered," etc.; or role-plays, charades, or pantomime to review main ideas or key points.



Students may interact by sharing their expertise. For example, in an activity called Expert Stay Stray, students work on an assignment in small groups, such as completing a chart summarizing the key points from a unit of study. Students in the group number off. The teacher calls a number, e.g., #4, and student #4 takes his or her group's

chart and goes to another table and shares the information with the new group. Then the student remains with the new group as the teacher calls another number, e.g., #1. Student #1 takes the chart of the student who shared (#4)—which encourages students to listen carefully—and goes to a new group and shares the information from the chart. This activity provides students with an opportunity to discuss the information while completing the chart, then to share the information orally while others listen attentively, and to paraphrase someone else's explanation of the chart. It can be adapted to any content area or grade level.



Start the class each day with students in pairs and have them tell each other the day's content objective. Then they move to find another partner and tell them the language objective.



Dinner Party (or Birthday Party for K–2) is an activity appropriate for all levels and most content areas. For instance, in the English Literature course, students would respond to the prompt: "Suppose you could have a dinner party for British authors or poets that we have studied. Whom would you invite? Why would you select them? What would be the seating order of the guests at your table, and why would you place them in that order? What do you think the guests would talk about during dinner? Include specific references to the authors' lives and works in your response." The purpose is for students to act out the questions by assuming personas, such as characters in novels, scientists, historical figures, or artists. During each Dinner Party, specific content must be included and the characters must respond to each other as realistically and accurately as possible (Vogt & Echevarria, 2008).



A complete lesson that illustrates interaction is seen in Figure 6.1a. A technology teacher on the Arizona-Mexico border, Steve Young, uses an interactive SIOP® approach for making difficult concepts understandable. In this lesson, he uses a visual representation of the four functions of a computer (Figure 6.1b) tying the concepts to something students can relate to: eggs. Eggs are stored in the refrigerator as data are stored on the hard drive. Cooking eggs is like processing data. The output from a computer is information and for the eggs, it is the finished product—cooked eggs.

After students have been taught the four functions of a computer and the related terms, they complete a classification activity (Figure 6.1c) as practice/application.



SIOP® FEATURE 17:

Grouping Configurations Support Language and Content Objectives of the Lesson

To maximize achievement, a balance is necessary between active and passive learning in the classroom. Varying grouping configurations—by moving from whole to small group, whole group to partners, small group to individual assignments—provides students with opportunities to learn new information, discuss it, and process it. Organizing students into smaller groups for instructional purposes provides a context that whole-group, teacher-dominated instruction doesn't offer. Students can use groups to critique or analyze material, create graphic representations of vocabulary terms or concepts, or

FIGURE 6.1a *SIOP® Lesson Plan: Four Functions of a Computer***LESSON TOPIC:** *Four Functions of a Computer***OBJECTIVES****Content**

Identify the Four Functions of a computer (Storage, Input, Processing, and Output). Classify computer components according to their functions.

Language

*Discuss the difference between long-term and short-term storage.
Distinguish data from information.*

CONCEPTS

*Data is what the computer understands.
Information is what humans understand.
Data must be processed to become information.
In order for data to be processed it must be in short-term memory.*

MATERIALS

Old computer to remove parts from. Four boxes. Four Functions Graphic Organizer (Fig. 6.1b). Categorize This worksheets (Figure 6.1c). Cloze summary

STRATEGIES/ACTIVITIES

Think-Pair-Share, Categorize This (classifying), Cloze summary

VOCABULARY

*Prior Vocabulary: Keyboard, Monitor, Printer, Microphone, Speakers, CPU
Content Vocabulary: Storage, Input, Processing, Output, Data, Information, RAM, Hard Drive
Process Vocabulary: Identify, Function, Distinguish, Relate, Classify*

MOTIVATION *(Building background)*

*The teacher says: How many of you have a kitchen at home? Think right now about what you use your kitchen for, and when you've thought of at least one function, tell your neighbor. When you and your neighbor have thought of three functions, things you use your kitchen for, one of you stand up to share your ideas with the class. (When students stand, teacher calls on students to solicit the responses: keeping food, cooking, and eating. On the board or on the computer projection screen the words *food, keeping food, cooking, and eating* are displayed. Next to *food*, teacher writes "input"; next to "keeping," "storage"; next to "cooking," "processing"; next to "eating," "output.")*

How many of you have cooked eggs? I'm going to show you how the four functions of a computer are just like cooking eggs.

PRESENTATION

(Language and content objectives, comprehensible input, strategies, interaction, feedback)

Objectives are presented after background is built, and content words and process words are introduced. Previous vocabulary words, which consist of the basic parts of a computer system, are reviewed.

Teacher says the following:

Let's get back to the eggs. Tell your neighbor where you keep your eggs. The refrigerator? Good. Tell your neighbor what a refrigerator is for. Keeping things in? Good.

Another word for what you keep or put things in is "storage." Everyone say "storage." The refrigerator is for storage. What's the refrigerator for? Tell your neighbor one or two other things you use for storage in your kitchen.

The computer needs storage, too. Discuss with your neighbor why the computer needs storage. Where do you think the computer stores, or keeps, the things you save? Think about it and tell your neighbor what you think . . .

*(Teacher selects a pair to remove the hard drive from the parts computer and pass it around to everyone. Then he asks someone to classify the hard drive by placing it in one of the four boxes that are labeled *storage, input, processing, and output.*)*

Discuss with your neighbor which one of your vocabulary words is what is stored on the hard drive. Stand up when you think you know. Data, very good. You know what data is when we are talking about computers. It's ones and zeroes. That's all the computer understands. What's the only thing the computer understands? What do we call the ones and zeroes the computer understands?

Data is raw like the egg you are going to cook. Would you eat a raw, uncooked egg? No? Well, you won't be able to understand data either unless the computer cooks it for you.

(Continued)

FIGURE 6.1a Continued

Where do you put everything you get out of the refrigerator before you cook it? Tell your neighbor where you place the ingredients you are going to use as you cook . . . The counter? The table? Good. The refrigerator is long-term storage and the counter or table is short-term storage. We put things on the counter or table to use them but we don't leave them there.

The computer has a counter or table too for short-term storage. It's called RAM, random access memory. When you open a document you want to work with, the computer moves it from the hard drive to RAM. (The RAM picture is now displayed on the graphic organizer.) This is what RAM looks like. Who wants to find the RAM in our parts computer and take it out for us to see? So look at the document you have opened right now on your computer. Is it in long-term or short-term storage? Is it in RAM or on the hard drive?

Let's talk about the eggs again. Tell your neighbor where you got them. Tell your neighbor where you placed them while you got the pan out and the butter or oil to cook them in.

Just like you took your eggs from the refrigerator, which is long-term storage (hold up the hard drive), and moved them to the counter or table, which is your short-term storage area (hold up the RAM), raw data has to be moved to RAM so it can be processed.

Before you can eat the eggs on your counter, you have to cook them. But we don't cook data, we process it. What do we do to data? The data you are looking at on your computer has been processed. That's why all those ones and zeroes appear to you as words. The data has been processed and now it's information. Discuss with your neighbor how processing is like cooking.

(The teacher continues with this approach with all four functions of the computer, relating the computer and its parts to the kitchen and cooking. The teacher uses realia (parts of the computer), a graphic organizer, Tell Your Neighbor, and choral response to keep the students engaged, to practice oral language, and to make the content comprehensible. There is plenty of meaningful interaction and feedback throughout. The teacher also spot checks along the way to make sure ELs comprehend.)

PRACTICE/APPLICATION

(Meaningful activities, interaction, strategies, practice/application, feedback)

After the presentation of concepts, students work with their partners to complete the classification activity (Figure 6.1c). The class brainstorms together words then identifies the categories. Students work to classify words into categories. After they finish, it is checked/reviewed on the big screen.

REVIEW/ASSESSMENT

(Review objectives and vocabulary, assess learning)

If there is time for the following cloze summary, students do it. If not, it is saved for review the following day.

The computer has _____ functions. Keeping data is the _____ function. Putting data into the computer is the _____ function. Changing raw data into information is the _____ function. Displaying or printing information is the _____ function.

The most common input devices are the k _____ and m _____. The monitor is an _____ device. D _____ is what the computer understands. I _____ is what humans understand. Data must be p _____ to be changed into Information.

The two places where data is stored are the h _____ d _____ and R _____. The hard drive is for I _____ t _____ storage and RAM is for sh _____ t _____ storage. Data must be moved from the hard drive to R _____ so it can be processed. When the processed data is saved it is moved from RAM to the h _____ d _____.

At the end of the period, someone in each row must tell the teacher something he/she learned. They can discuss it with their row (Four Heads Together) and when one student gives a response, the row is dismissed. The following day, students write three things they learned the day before in their learning log for focus/review activity.

summarize material. All these activities are more meaningful and increase learning. According to brain-based learning expert, Eric Jensen, "Given what the research shows, it should be apparent that presenting more content per minute or moving from one piece of learning to the next too rapidly, virtually guarantees that little will be learned or retained" (2005, p. 43). It is better to take the key points of a lesson and present them in a way that students will remember, including using grouping as a way to facilitate interaction around those key points.

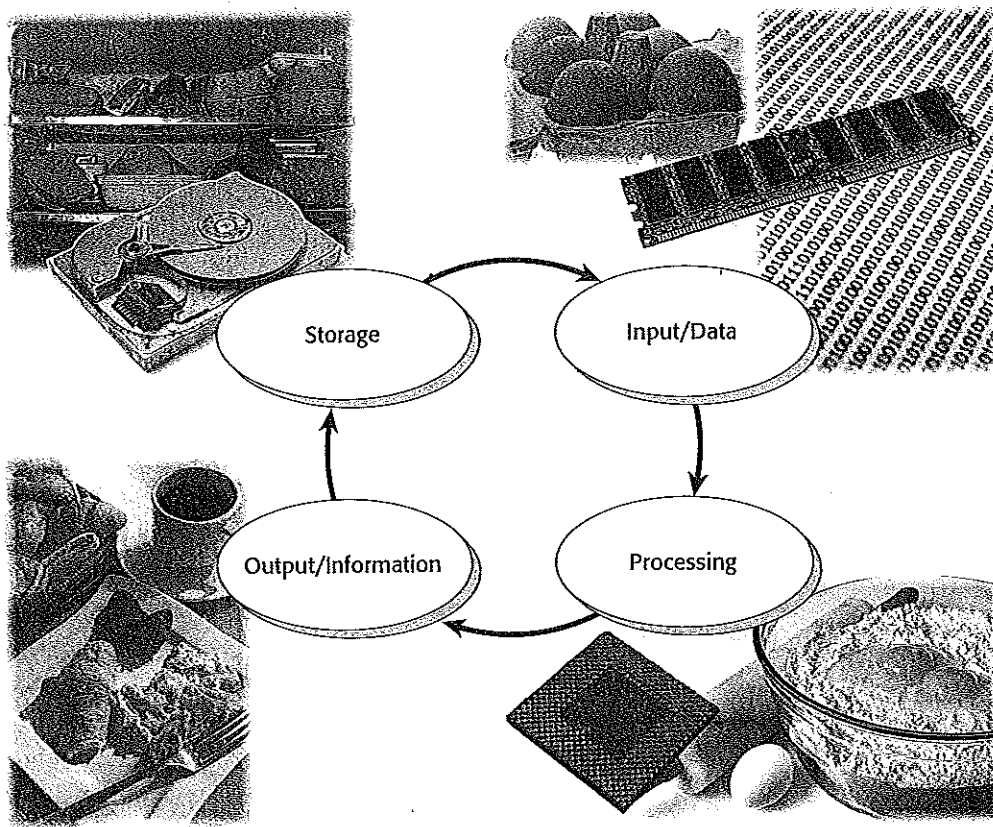


FIGURE 6.1b *Four Functions of a Computer*

FIGURE 6.1c

Categorize This

Directions: Brainstorm words related to your topic. Place these words in the Holding Cell. Then, pull your words out of the Holding Cell and put them into categories. Finally, assign your category labels and write a summary sentence (on the back) describing each category.

The Holding Cell

<i>Data, Information, RAM, Hard Drive, Identify, Function, Distinguish, Relate, Classify</i>
--

STORAGE	INPUT	PROCESSING
OUTPUT	PROCESS WORDS	

But not just any kind of grouping works well. Over the years, we have learned that relying exclusively on homogeneous grouping for instruction (low group, average group, high group) has serious academic and social effects for students who are not in the top group (Hiebert, 1983; Lucas, 1999; Callahan, 2005). Frequently referred to as “tracking,” the practice of providing instruction to students in instructional groups segregated by ability or performance level has been found to be inequitable because it often differentiates across socioeconomic and ethnic lines, and it promotes differentiated expectations for students’ success. A study of high school English learners revealed that the group—or track—students were in was as strong a predictor of academic achievement as was language proficiency (Callahan, 2005). So attaining English proficiency, while important, is not the only answer if students are shut out of classes with rigorous content-area coverage with its associated discourse and academic learning opportunities. When working with low-achieving groups, teachers have been found to talk more, use more structure, ask lower-level questions, cover less material, spend more time on skills and drills, provide fewer opportunities for leadership and independent research, encourage more oral than silent reading, teach less vocabulary, and allow less wait time during questioning, plus they spent twice as much time on behavior and management issues (Oakes, 1985; Vogt, 1989).

In many schools, it has become common practice to group English learners with low-achieving students regardless of academic ability and performance. However, all students, including ELs, benefit from instruction that frequently includes a variety of grouping configurations. Whole-class groups are beneficial for introducing new information and concepts, modeling processes, and review. Flexible small groups promote the development of multiple perspectives and encourage collaboration. Partnering encourages success because it provides practice opportunities, scaffolding, and assistance for classmates (Flood, Lapp, Flood, & Nagel, 1992; Nagel, 2001; Tompkins, 2006).

Effective SIOP[®] classes are characterized by a variety of grouping structures, including individual work, partners, triads, small groups of four or five, cooperative learning groups, and whole group. Groups also vary in that they may be homogeneous or heterogeneous by gender, language proficiency, language background, and/or ability. There are times that it may be most effective to have students grouped by language-proficiency level. For example, if a teacher’s goal is for students at beginning levels of English proficiency to practice using a particular language structure within the context of a social studies lesson, such as present progressive (*-ing* form), then it may be useful to have those students grouped together for that lesson. Likewise, when developing the skills of students with low levels of literacy, it makes sense to have those with similar ability grouped together for a particular lesson. Use of flexible instructional groups in high school is more challenging but essential for accommodating the various academic and linguistic levels of students. Assigning all ELs to the same group regularly is *not* good practice, especially when a bilingual aide teaches them almost exclusively. In SIOP[®] classes, ELs are given the same access to the curriculum and the teacher’s expertise as native English-speaking students.

Using a variety of grouping configurations also facilitates learning in a number of ways. The variety of groups helps to maintain students’ interest. It is difficult for some students to stay focused when the classroom is always set up the same way with the teacher talking to the whole class or having students work individually. Moving from a whole group to cooperative groups or partners adds variety to the learning situation and increases student involvement in the learning process.

Also, varying grouping structures increases the chance that a student's preferred mode of instruction will be matched. For instance, some students work best with a partner, getting somewhat distracted in a large group. Other students are stimulated by the many perspectives shared in a large group and do well in that setting. Another benefit of grouping is that it provides much-needed movement for learners. When students are active, their brains are provided with the oxygen-rich blood needed for highest performance. Movement may be especially important for special needs learners (Jensen, 2005).

It is recommended that at least two different grouping structures be used during a lesson, depending on the activity and objectives of the lesson.



SIOP® FEATURE 18: Sufficient Wait Time for Student Responses Consistently Provided

Wait time is the length of time between utterances during an interaction. In classroom settings, it refers to the length of time that teachers wait for students to respond before interrupting, answering a question themselves, or calling on someone else to participate. Wait time varies by culture; it is appropriate in some cultures to let seconds, even minutes, lag between utterances, while in other cultures utterances can even overlap one another. In U.S. classrooms, the average length of wait time is clearly *not* sufficient. Imagine the impact of wait time on ELs who are processing ideas in a new language and need additional time to formulate the phrasings of their thoughts. Research supports the idea of wait time and has found it to increase student discourse and more student-to-student interaction (Honea, 1982; Swift & Gooding, 1983; Tobin, 1987).

Effective SIOP® teachers consciously allow students to express their thoughts fully, without interruption. Many teachers in U.S. schools are uncomfortable with the silence that follows their questions or comments, and they immediately fill the void by talking themselves. This situation may be especially pertinent in SIOP® classes where ELs need extra time to process questions in English, think of an answer in their second language, and then formulate their responses in English. Although teachers may be tempted to fill the silence, ELs benefit from a patient approach to classroom participation, in which teachers wait for students to complete their verbal contributions.

While effective SIOP® teachers provide sufficient wait time for ELs, they also work to find a balance between wait time and moving a lesson along. Some students may become impatient if the pace of the class lags. One strategy for accommodating impatient students is to have them write down their responses while waiting, and then they check their answers against the final answer.



Another way to help ELs is to allow the techniques made popular by a television show: “50-50” and “phone a friend.” Students who are unsure of an answer or are unable to articulate it well might ask to choose between two possible responses provided by the teacher (50-50) or ask a classmate for help (phone a friend). However, to ensure practice with the language, the original student must give “the final answer” to the teacher.



SIOP® FEATURE 19: Ample Opportunity for Students to Clarify Key Concepts in L1

Best practice indicates that English learners benefit from opportunities to clarify concepts in their first language (L1). In fact, the National Literacy Panel on Language Minority Children and Youth found that academic skills such as reading taught in the first language transfer to the second language (August & Shanahan, 2006). Although SIOP® instruction involves teaching subject-matter material in English, students are given the opportunity to have a concept or assignment explained in their L1 as needed. Significant controversy surrounds the use of L1 for instructional purposes, but we believe that clarification of key concepts in students' L1 by a bilingual instructional aide, peer, or through the use of materials written in the students' L1 provides an important support for the academic learning of those students who are not yet fully proficient in English.

This feature on the SIOP® may have NA circled as a score because not all SIOP® classes need to use (especially for advanced ELs) students' L1 to clarify concepts for them.

However, with Web sites offering word translation capabilities, and the availability of bilingual dictionaries in book and computer program formats, all SIOP® classrooms should have some resources in most of the students' native languages.

The Lesson

UNIT: Addition and Subtraction (First Grade)

The first-grade teachers in this chapter, Mr. Charles, Mrs. Lantero, and Mrs. Manvi, work in a suburban school that has a 24 percent EL population. Their classes have an even distribution of English learners, each with approximately 10 percent ELs. Most of those students are at the intermediate to advanced-intermediate levels of English proficiency and still benefit from having teachers use SIOP® techniques to increase their understanding of lessons.

The teachers in this school plan math units around the district's content standards. The lessons described in the scenarios that follow are part of a unit on addition and subtraction sums to twelve. The standards in this lesson are related to number sense and mathematical reasoning. Students are to know the addition facts (sums to twenty) and the corresponding subtraction facts and commit them to memory. The teachers each have their own methods for teaching addition, as seen in the lessons that follow.

Teaching Scenarios

Mr. Charles

Mr. Charles began the lesson by explaining to the first-grade children that they were going to learn about different ways to do addition. He reviewed vocabulary that had been taught previously, such as addends and sums. He then engaged the children in a discussion about what information they knew about addition that had been learned previously, and he provided an adequate amount of time for the children to respond. He then asked

the children when they would use addition in their everyday lives. Some of the children volunteered information about going to the grocery store or the bank and how they might have to use addition to solve problems. Mr. Charles then showed the children an addition problem on the overhead and asked them to work with a partner to figure out how they might solve the problem. He picked a student to come up to the overhead to solve one of the problems. (He chose the student by picking a name that had been written on a tongue depressor to ensure that he would call on a variety of children—not just the ones who raised their hands.) He also asked the student to underline the addends and circle the sums in the problem. To engage the whole class, Mr. Charles asked the children to raise their hands if they thought the student had the correct answer.

Mr. Charles continued the lesson by asking a volunteer to give a number from one to eight. He then had the children write the number on their paper, then draw the same number of shapes as the number they had written, using the color blue. Mr. Charles checked to make sure the children understood the directions, and he stopped at each child's desk to see how each was doing. He then asked the children to draw two more shapes, using the color yellow. He checked all students' work by circulating around the room. He asked the children to count all the blue and yellow shapes and to write an addition problem to illustrate what they had done. Mr. Charles asked the children to check with a partner to see if their problem was done correctly. He then engaged the children in a discussion of how pictures can help you find the answer to "how many in all." The discussion was balanced between the teacher and the students, and Mr. Charles asked for some examples of the kinds of pictures that they might draw to help them solve addition problems. He reminded the children to check for the addends and the sums in their problems.

Mr. Charles then had the children work in pairs. He distributed a paper plate and clothespins to each pair of students. He told the children to clip four clothespins on the top edge of a paper plate and three on the bottom. He then instructed the students to write an addition sentence for the clothespins and solve it ($4 + 3 = 7$). Mr. Charles called on children to explain how they found the answer. He asked a child who understood the concept to model putting clothespins on the plate and writing a corresponding addition sentence. He then asked another child to answer the addition problem provided by the previous child.

Next, Mr. Charles told the children that they would be taking the clothespins off their plates and making up a new problem using a different number of clothespins. He explained that he would like one partner in the group to tell the other partner how many clothespins to place on the top and how many to place on the bottom, thus giving the children an opportunity to practice their English with each other. The children exchanged paper plates and one partner was responsible for writing the addition problem.

Mr. Charles finished the lesson with a review of what the students had learned about addition and asked for volunteers from the class to give some examples of addends and sums.

On the SIOP® form in Figure 6.2, rate Mr. Charles's lesson on each of the Interaction features.

Mrs. Lantero

Mrs. Lantero introduced the lesson on addition by giving an example of how she used addition to count and add the playground equipment that they had in their classroom. On an overhead projector transparency she drew a picture of five balls, three jump ropes, and three hula hoops. She called on students to come up to the overhead to solve the

FIGURE 6.2. *Interaction Component of the SIOP® Model: Mr. Charles's Lesson*

	4	3	2	1	0	NA
16. Frequent opportunities for interaction and discussion between teacher/student and among students, which encourage elaborated responses about lesson concepts			Interaction mostly teacher-dominated with some opportunities for students to talk about or question lesson concepts		Interaction teacher-dominated with no opportunities for students to discuss lesson concepts	
17. Grouping configurations support language and content objectives of the lesson			Grouping configurations unevenly support the language and content objectives		Grouping configurations do not support the language and content objectives	
18. Sufficient wait time for student responses consistently provided			Sufficient wait time for student responses occasionally provided		Sufficient wait time for student responses not provided	
19. Ample opportunities for students to clarify key concepts in L1 as needed with aide, peer, or L1 text			Some opportunities for students to clarify key concepts in L1		No opportunities for students to clarify key concepts in L1	

problem and demonstrate how they counted all the objects that she drew. She made an effort to call on a wide variety of students to respond and explain their answers. She asked students to explain how they answered the question "How many in all?" Several students raised their hands to volunteer. She then asked the students to give some examples of how they use addition in their everyday lives. She instructed individual students to come up to the overhead to write an addition problem using pictures to represent the numbers (e.g., four flowers + two trees). Mrs. Lantero then told the students that they were going to practice using addition to solve problems. She wrote an addition problem on the overhead ($3 + 4 = 7$). She asked the class if they could solve the problem and explain their work, then called on a volunteer to do so.

Mrs. Lantero gave a description of "counting on," a strategy that teaches what the next number is regardless of where the child starts counting. The children had previously learned this strategy. She asked the children, "How do you count on in the addition problem ($9 + 1 =$)?" She instructed the children to talk to the person next to them and

gave adequate time for the discussion. Mrs. Lantero wrote some additional problems on the overhead and showed the students how to solve the various problems. Mrs. Lantero then gave the class a brief review of some of the strategies that they had used previously to solve addition problems, such as counting on and using doubles. Mrs. Lantero spent the next five minutes solving various addition problems on the overhead and calling on individual students who raised their hands to give the answer. At times she encouraged the students to elaborate on their responses and to explain how they solved the problem. After Mrs. Lantero was sure that the students had a clear understanding of addition, she had the children get into groups of three to complete the workpage from their textbook, helping one another as needed. At the end of the lesson the teacher reviewed the concepts of addends and sums and asked students to explain their answers.

On the SIOP® form in Figure 6.3, rate Mrs. Lantero's lesson on each of the Interaction features.

FIGURE 6.3 Interaction Component of the SIOP® Model: Mrs. Lantero's Lesson

	4	3	2	1	0	NA
16. Frequent opportunities for interaction and discussion between teacher/student and among students, which encourage elaborated responses about lesson concepts			Interaction mostly teacher-dominated with some opportunities for students to talk about or question lesson concepts		Interaction teacher-dominated with no opportunities for students to discuss lesson concepts	
17. Grouping configurations support language and content objectives of the lesson			Grouping configurations unevenly support the language and content objectives		Grouping configurations do not support the language and content objectives	
18. Sufficient wait time for student responses consistently provided			Sufficient wait time for student responses occasionally provided		Sufficient wait time for student responses not provided	
19. Ample opportunities for students to clarify key concepts in L1 as needed with aide, peer, or L1 text			Some opportunities for students to clarify key concepts in L1		No opportunities for students to clarify key concepts in L1	

Mrs. Manvi

Mrs. Manvi introduced the lesson on addition by having the students open their math book to a specific page on addition. She reviewed with the class what they had learned in the previous day's lesson and picked a student in the class to tell what they had learned. She asked the students if they had any questions, and when none of the children raised their hand, she continued her lesson. Mrs. Manvi had the children count in unison from one to thirty. Then she asked the students to come up with some examples using addition facts to add numbers and called on two volunteers to provide examples. Next, Mrs. Manvi demonstrated some addition problems on the overhead. To engage the students in prior learning, she asked the students to provide descriptions of the word "addition." She reviewed the strategies of counting on and drawing pictures to help determine the correct answers to the problems. Mrs. Manvi tried to encourage the children to raise their hands if they did not understand how to do the addition problems. She continued the lesson, providing many examples to the children.

FIGURE 6.4 Interaction Component of the SIOP® Model: Mrs. Manvi's Lesson

	4	3	2	1	0	NA
16. Frequent opportunities for interaction and discussion between teacher/student and among students, which encourage elaborated responses about lesson concepts			Interaction mostly teacher-dominated with some opportunities for students to talk about or question lesson concepts		Interaction teacher-dominated with no opportunities for students to discuss lesson concepts	
17. Grouping configurations support language and content objectives of the lesson			Grouping configurations unevenly support the language and content objectives		Grouping configurations do not support the language and content objectives	
18. Sufficient wait time for student responses consistently provided			Sufficient wait time for student responses occasionally provided		Sufficient wait time for student responses never provided	
19. Ample opportunities for students to clarify key concepts in L1 as needed with aide, peer, or L1 text			Some opportunity for students to clarify key concepts in L1		No opportunity for students to clarify key concepts in L1	

Mrs. Manvi had the students take out their workbooks and told them to do two pages of addition. She walked around the room to make sure that the students were on task and to see if anyone needed extra support. Mrs. Manvi realized that the students were having difficulty, so she drew some examples on the board using pictures and asked the children if they had any questions. She again encouraged the children to raise their hands if they were having problems. Mrs. Manvi then worked through the problems one at a time on the overhead and had the children check their work. She noticed that one student in particular was coming up with incorrect responses so she focused her attention on that child and tried to help the child solve the problem correctly.

When she was confident that the students understood addition, Mrs. Manvi assigned homework that night so they could practice some more addition problems.

On the SIOP® form in Figure 6.4, rate Mrs. Manvi's lesson on each of the Interaction features.

Discussion of Lessons

16. *Frequent Opportunities for Interaction and Discussion between Teacher/Student and among Students*

Mr. Charles: 4

Mrs. Lantero: 2

Mrs. Manvi: 0

Although interaction among students is important for learning new concepts and practicing English, the teachers varied in the opportunities they provided to their students. Mr. Charles planned a lesson that had frequent opportunities for interaction so he received a "4" on the SIOP®. He used a variety of techniques that ensured participation from the whole class, such as calling on children by selecting their names on written sticks (tongue depressors); asking students to work with partners to solve problems; involving students in a discussion; and having students work in pairs for practice with addition sentences represented by clothespins, writing the sentence, and coming up with the sum.

Mrs. Lantero's lesson was heavily teacher controlled, although she did attempt to involve the children in discussion and did call on volunteers to come to the overhead. (Often it is the students who least need the practice using English that are called upon to participate in the lesson.) She also had students work in groups of three, although completing a workpage from the textbook isn't an optimal activity for interaction since it is basically an individual paper and pencil activity.

Mrs. Manvi used a traditional whole-group format for teaching her first graders. This format severely restricted opportunities for students to discuss the concepts and ask for clarification as needed. It is very difficult to determine the needs of students and gauge their understanding when teaching the way Mrs. Manvi did.

17. *Grouping Configurations Support Language and Content Objectives of the Lesson*

Mr. Charles: 4

Mrs. Lantero: 2

Mrs. Manvi: 0

Rather than having students in structured groups interact to solve problems, Mrs. Lantero and Mrs. Manvi solved problems on the overhead in front of the whole class. Whole group instruction has a role to play, but it should not be used extensively because it limits opportunities for students to ask questions, discuss ideas, and clarify information. English learners and students who struggle academically may find whole group instruction intimidating, as undoubtedly was the case with Mrs. Manvi's lesson. Although she asked several times if students had questions, nobody was willing to speak up in the whole group setting.

Mr. Charles, on the other hand, was aware of the importance of having students interact with the material (creating problems and solving them) and one another (practicing English). He had students work in pairs and small groups throughout the lesson, which provided optimal opportunity for interaction.

18. *Sufficient Wait Time for Student Responses Consistently Provided*

Mr. Charles: 4

Mrs. Lantero: 4

Mrs. Manvi: 0

Both Mr. Charles and Mrs. Lantero interacted with students in such a way as to allow them time to formulate their thoughts and express them in English. These teachers recognized English learners' need to have a little extra time when participating in class. Mrs. Manvi, on the other hand, had students count in unison so the pace was set by the more proficient speakers, leaving the others with no time to think about the next number. Also, when she did call on students, she was looking for specific answers to be given quickly to the whole class. Therefore, she received a "0" on the SIOP® for Wait Time.

19. *Ample Opportunities for Students to Clarify Key Concepts in L1*

Mr. Charles: N/A

Mrs. Lantero: 3

Mrs. Manvi: 0

The students in Mr. Charles' class had enough contextual clues throughout the lesson—coupled with intermediate English proficiency—so they did not need to use their primary language (L1). Therefore, Mr. Charles received an N/A on the SIOP®.

Mrs. Lantero permitted the students to complete the worksheet together, which provided the opportunity for discussing and clarifying concepts in the students' native language if necessary. However, since opportunities for interaction were limited, there may have been a need for students to use L1 more extensively, which is why Mrs. Lantero received a "3" on the SIOP®. Mrs. Manvi did not provide opportunities for students to interact with one another so their L1 could not be used even if it would have helped scaffold their understanding.

Summary

SIOP® teachers create ample opportunities for English learners to practice using academic English, among themselves and with teachers. Incorporating a number of grouping configurations into lessons often facilitates using English in ways that support the lessons' objectives.

The evidence is clear that for most teachers, it is challenging to balance the interchange between themselves and their students. Effective SIOP® teachers plan for and incorporate structured opportunities for students to use English in a variety of ways.

Discussion Questions

1. Think of a content concept that you might be teaching. Describe three different grouping configurations that could be used for teaching and learning this concept. How would you organize the members of each group? How would you monitor student learning? What would you want students to do while working in their groups? How would the grouping configurations facilitate learning for ELs?
2. Either videotape your own classroom while you're teaching a lesson or observe another teacher's classroom for a 15-minute segment. Estimate the proportion of teacher talk and student talk. Given the ratio of teacher-student talk, what are some possible ramifications for English learners in the class?
3. English learners are often reticent to contribute to class discussions. An important role for an SIOP® teacher is to encourage ELs to participate in nonthreatening ways. What are some specific techniques you can use to encourage students to elaborate on their responses and express their thoughts fully? What can you do to ensure sufficient wait time for students to formulate and express their thoughts?
4. Using the SIOP® lesson you have been developing, add activities and grouping configurations to enhance interaction.