Think-Aloud Strategy: Metacognitive development and monitoring comprehension in the middle school second-language classroom

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Teachers should not make the mistake of considering all strategies as “good teaching” and applying them equally to all levels of English learners.

Given the large number of U.S. federal and state accountability mandates associated with English learners, K–12 teachers are struggling to find effective, research-based strategies to help these students improve their learning, especially their reading comprehension skills. Second-language learners (English is not their primary language) are exposed to unfamiliar idiom and cultural references while reading in a second language (L2) and, as a result, are required to repair more gaps in the strategies they use to derive meaning from text as they read (Block, 1992).

Reading is a covert process actively controlled by readers to create meaning from text, and the practice of readers “thinking about their thinking” while engaged in the reading process is known as metacognition. One promising approach for activating metacognition and thereby improving reading comprehension among second-language learners is known as the Think-Aloud Strategy.

The purpose of think-aloud is to help second-language learners develop the ability to monitor their reading comprehension and employ strategies to facilitate understanding of text (Baumann, Jones, & Seifert-Kessell, 1993). It permits these students to self-regulate the reading process and improve comprehension by employing “fix-up strategies” where needed (Cassanave, 1988). Think-aloud also activates metacognitive monitoring in those students for whom self-regulation has not yet become automatized (Ward & Traweek, 1993).

The open-ended nature of the Think-Aloud Strategy is a benefit for second-language learners because this nondirective approach requires readers to stop and explore the text—a simple prescription for the reader to engage (Loxterman, Beck, & McKeown, 1994). Think-aloud also makes sense conceptually because many interpretive reactions are conscious (Pressley et al., 1992) and can be made overt through the use of this strategy (Baumann et al., 1993).

Background

Afflerbach and Johnston (1984) set the groundwork for the development of the Think-Aloud Strategy, first as a method of measuring the cognitive reading process, then as an application in the metacognitive realm in which readers use the tool to monitor comprehension. Pressley et al.
(1992) cited think-aloud as one of the “transactional strategies” because it is a joint process of teachers and students working together to construct understandings of text as they interact with it. Whereas readers independently derive meaning from text by using background knowledge, interests, motivations, and purposes for reading, group reading using think-aloud allows a small interpretive community to explore other viewpoints and to negotiate understandings.

Kucan and Beck (1997) noted that think-aloud achieves three goals: (1) It provides a method of inquiry to understand cognitive processing related to reading research; (2) it serves as a method of instruction; and (3) it is an aspect of social interaction. Think-aloud has evolved, as discussed in Pressley et al. (1992), to incorporate an expanded representation of reading due to what Kucan and Beck deemed “the potential influence of social interaction in constructing meaning” (p. 272).

**Second-language studies**

Fitzgerald (1995) addressed the impact of think-aloud as a metacognitive strategy on English-language learners in her extensive review of reading research in the United States. This analysis was conducted to determine how readers approached texts and the ways in which they tried to repair miscomprehension. Of the metacognitive studies reviewed by Fitzgerald, 10 used various forms of think-aloud.

The following were two main themes that emerged from Fitzgerald’s research: (1) Second-language learners in the United States tend to monitor their comprehension, and (2) these students employ a variety of metacognitive strategies to accomplish this. Fitzgerald’s work is cited here because it confirms that second-language learners actively employ comprehension-monitoring tools such as think-aloud, and it challenges researchers and teachers to identify the most useful think-aloud strategies for these readers.

Cassanave (1988) defined comprehension monitoring as “any behaviors that allow readers to judge whether comprehension is taking place and that help them decide whether and how to take compensatory action when necessary” (p. 288). She suggested that reading researchers explore how second-language students can be helped to monitor their reading comprehension, focusing on the importance of their ability to access schema or background knowledge and their ability to take necessary strategic action to correct comprehension deficiencies as needed (cf. August, Flavell, & Clift, 1984; Block, 1992; Carrell, 1989; Carrell & Eisterhold, 1983; Craine-Thoreson, Lippman, & McClendon-Magnuson, 1997; Jiménez, 1997; Wade, 1990). Cassanave found that students who used the Think-Aloud Strategy were able to improve the quality of dialogues, generate summaries of the main points that were no longer verbatim, and ask questions related to the main ideas of the text rather than less important details.

Bereiter and Bird (1985) studied seventh- and eighth-grade average readers as they learned to monitor their comprehension using think-aloud. They found that students whose teachers modeled think-aloud strategies for recognizing comprehension problems and selecting repair stratagems scored significantly higher on tests of comprehension than those whose teachers did not. The authors stressed the importance of following an instructional pattern that included (in this sequence) teacher modeling, direct instruction and explanation, and individual practice. Cassanave’s (1988) findings supported this claim by confirming the need for teacher modeling and, as with Fitzgerald’s (1995) study, demonstrated the need to identify the monitoring and repair strategies successful second-language readers use.

Carrell (1989) examined metacognitive awareness in second-language readers and provided a useful overview of successful reading strategies for these students. She explored what Hosenfeld (1977) and Block (1986) described as successful and unsuccessful strategies used by second-language readers. Successful strategies included keeping the meaning of the text in mind during reading, integrating ideas, reading in
“broad phrases” (top-down versus bottom-up), recognizing aspects of text structure, skipping words that are unimportant to the total meaning of the phrase, and using personal and general knowledge and associations. Block (1986) noted that unsuccessful strategies were often reflexive in nature because readers directed their attention away from the text and focused on their own thoughts and feelings rather than on the information presented in the reading.

**Additional studies**

Think-aloud has been examined in several studies to obtain data on the schema-theoretic model and, within this model, to determine how exactly second-language learners approach text. In reference to top-down versus bottom-up processing, Block’s 1992 study claimed, “Most people now accept that the two processes interact” (p. 319). Davis and Bistodeau (1993) confirmed these findings by further detailing how the two hypotheses interact. The “short circuit” hypothesis by Clarke (1980) asserted that students who are skilled top-down processors in their native language are forced to “short circuit” into a bottom-up orientation when attempting to make meaning from second-language text.

In contrast, the “bi-orientation” hypothesis by Lee (1991) claimed that “beginning language learners who are sophisticated readers are oriented neither from bottom-up nor from top-down; they are bi-oriented” (p. 200). Davis and Bistodeau confirmed both hypotheses in their study stating that “low linguistic proficiency results in much greater attention to bottom-up components of comprehension, but it also provided evidence that top-down components exert a powerful influence upon the strategies used by novice L2 readers,” thereby strengthening Block’s assertion that the two processes interact (p. 468).

Chamot and El-Dinary, in their 1999 think-aloud study, also confirmed that “less effective learners focus too much on the details, whereas more effective learners focus on the task as a whole” (p. 332). Both Clarke’s (1980) study and Cummins’s (1979) study hold that there is a threshold of linguistic competence necessary for successful second-language learning. Those who lack this competence in both the native language and at least the oral level in the second language will not be successful in reading and other learning. In a similar manner, students in Chamot and El-Dinary’s (1999) study focused on the bottom-up type processes of phonetic decoding, whereas more proficient readers used background knowledge and inferencing to understand text.

Many second-language studies employing the Think-Aloud Strategy also confirmed the powerful impact of second-language vocabulary on second-language processing. Jiménez, in his 1997 study employing think-aloud, recommended that “students appreciate and take advantage of our Latino/a cognate vocabulary, as this also capitalizes on their Spanish-language proficiency” (p. 241). Jiménez’s study also included a recommendation that for low-literacy students in particular, educators should use “a strategic approach to interacting with text” that makes use of culturally relevant children’s literature” (p. 240).

In contrast, Block’s 1992 study claimed that we should not “chew up the text” or attempt to “predigest” the printed material for students because this does not prepare them to “eat on their own”; comprehension does not depend on understanding every feature of the text (p. 337). The proficient readers in Block’s study did not have to understand all the words to achieve comprehension, and she stressed that comprehension is not a smooth process, furthering the notion that top-down readers can discern which aspects of the text are important and which can be ignored.

Developing strategic reading skills is critical to English-learner (and, arguably, all student) success in the English/language arts classroom and in all content area learning. The California Department of Education’s Strategic Teaching and Learning report (Pritchard & Breneman, 2000) identified a strategic reader as one who coordinates successfully up to eight key comprehension strate-
gies, knowing when and how to use them. These students are actively involved in the reading; have a running dialogue with the text (the internalized think-aloud); visualize, predict, and relate new topics to prior knowledge; read with a specific purpose, accept ambiguity, and monitor their own comprehension; and apply the proper fix-up strategies when needed (i.e., metacognitive awareness).

Other strategies more specific to second-language learners include discerning important from nonimportant details, applying cognate vocabulary, making extensive versus reflexive responses to text, and focusing on the text as a whole (top-down processing). These studies resoundingly confirm the need to first identify reading strategies that are most effective with English learners with varying degrees of literacy in their L1 and L2, and then to heighten the metacognitive awareness of these strategies within students so that they use them appropriately and strategically.

As informative as they are, however, these studies leave two unanswered questions: (1) What is the extent of metacognitive awareness, specifically in the form of reading strategies, that second-language learners possess? (2) Which comprehension strategies are the most effective in helping these students repair “gaps” in their meaning-making strategies? It is to the second of these two questions we now turn our attention.

Method

Due to the wide range of reading abilities in the English-language development classroom and the increasing pressure to hold teachers and students accountable for mastering English/language arts standards, it is important for educators to be taught empirically tested methods for diagnosing individual needs and planning effective reading instruction for this population of students.

This study examined how the Think-Aloud Strategy affects content area reading comprehension of middle school English learners by attempting to answer the question, Will middle school English learners who employ the think-aloud reading strategy demonstrate greater content area comprehension as measured by the High Point Selection Comprehension Assessment than those who do not employ the strategy?

Subjects

Purposeful sampling provided information-rich data regarding the usefulness of the strategy and its value as a monitoring device for reading comprehension in second-language learner metacognition. It also enabled us to determine if the strategy is more useful with English-language learners who possess certain levels of language proficiency. Twenty-seven English learners with a reading proficiency level of Early Intermediate (Level 2) or higher were included in the study. Five Early Intermediate students (Level 2), 11 Intermediate students (Level 3), and 11 Early Advanced students (Level 4) were included in the sample (see Table 1).

All five Level 2 students had been enrolled in K–12 schools in the United States for an

<table>
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<tr>
<th>Table 1</th>
<th>Characteristics of the study sample (N = 27)</th>
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<tr>
<td>English-learner level</td>
<td>Female (N = 10)</td>
</tr>
<tr>
<td>Level 2 (N = 5)</td>
<td>2</td>
</tr>
<tr>
<td>Level 3 (N = 11)</td>
<td>4</td>
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<tr>
<td>Level 4 (N = 11)</td>
<td>4</td>
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average of two years and had an average instructional reading level of 2.5 as measured on the STAR Reading Assessment. In addition, all had an overall proficiency-level scaled score of Early Intermediate (Level 2) on the California English Language Development Test (CELDT). This state-mandated assessment includes listening and speaking (50% of the scaled score), reading, and writing (25% each of the scaled score).

The Level 3 students were a mixed group; four had arrived in the United States just two years prior, three had been U.S. residents for four years, and the remaining four were born in the United States but had not been able to make satisfactory progress in school to exit the English-learner program. All had an average instructional reading level of 3.5, and all were in the Intermediate range on the CELDT (Level 3).

Nine of the 11 Early Advanced group (Level 4) were at or above grade level in their native language, had supportive families who made school a priority, did their homework, and had a positive attitude about school. Two of these 11 had climbed four levels of English proficiency in one year and were scheduled to exit the English-learner program into regular ninth-grade English the following year. The average reading level for this group was 4.5. Ten of the 11 received an Early Advanced score on the CELDT (Level 4), with one student receiving an Intermediate score (Level 3). In addition, four language backgrounds were represented in the study (see Table 2).

Design and procedure

A pretest and posttest of related samples were used to test the hypothesis that there would be a statistically significant positive difference between mean scores of pre- and posttests of the sample groups, signifying that the use of the Think-Aloud Strategy is an effective intervention for improving reading comprehension among the English-learner population. Although use of a control and experimental group design was initially considered as part of the pre- and posttest approach, we decided against it for two reasons. First, we refused to deny half the students the possible benefits of learning and applying the Think-Aloud Strategy as quickly as possible. Although Regina (first author) could have taught some students the strategy if the study had proven it effective, she decided to include all students in the treatment because time is critical when attempting to recoup academic deficits. Second, the sample groups were small, ranging from 5 to 11 students, and to divide them in half for treatment and control purposes would have further limited the significance of any findings due to the smaller number of each group.

Instrumentation and classroom procedures

We chose to employ the High Point Comprehension Assessment (Schifini, Short, & Tinajero, 2002) for this study because it was already embedded in the school’s instructional pro-

<table>
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<th>Native language</th>
<th>Female (N = 10)</th>
<th>Male (N = 17)</th>
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<tbody>
<tr>
<td>Spanish (N = 24)</td>
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<td>15</td>
</tr>
<tr>
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<td>1</td>
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<td>0</td>
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<tr>
<td>Tagalog (N = 1)</td>
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<td>1</td>
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gram. This obviated any disruption of instructional routines and consequent loss of instructional time. In addition to its usefulness for providing formative assessments to guide instruction throughout the year, the High Point Language, Literacy, and Content series was the only curriculum adopted by the State of California as both a systematic English-language development program and reading intervention program. Furthermore, High Point provides English proficiency-level placement in one of four levels of difficulty. Finally, we chose High Point due to a wide selection of expository articles within the series.

Selections from the same form of High Point were used to pre- and posttest the three groups of English learners. The assessments included six multiple-choice questions, and the publisher provided a scoring guide, thereby eliminating scorer subjectivity. Each group was assessed using an expository article appropriate for the students’ level of language proficiency. All articles were examined using Fry’s (1977) readability index, and all fell within the middle school range for readability (sixth to eighth grades) as well as reading age (11–13). The only significant difference among the articles was their length (see Table 3).

During the pretests, group members silently read the expository selection and then completed the High Point Reading Comprehension Assessment. Regina then applied the treatment by teaching students to use the Think-Aloud Strategy following Bereiter and Bird’s (1985) approach for teacher modeling of desired learning strategies. This explicit teacher modeling occurred over a period of two weeks during the 50-minute reading class and lasted from 20 to 30 minutes, three days each week. Regina used social science texts as well as the novel *The Outsiders* by S.E. Hinton (2007, Puffin), which she read aloud to the whole group. After every two or three lines of text, she stopped and restated what she thought was happening, asked herself a question, clarified, or made a prediction, thus modeling her own meaning-making strategies for the students.

During the third and fourth week of the study, students began applying the Think-Aloud Strategy to their daily reading assignments in social studies, or they used an Accelerated Reader novel to practice strategic application of the strategy. Regina monitored students as they read aloud, prompting them to respond aloud about “what was going on in their heads” and encouraged them to think aloud in whatever language was more comfortable.

Regina also used an instructional model based on the work of Baumann et al. (1993). The model stressed that good readers ask questions, determine if the information they receive constitutes new or prior knowledge, predict, clarify, and

<table>
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<tr>
<th>Text selection</th>
<th>Student level</th>
<th>Subject</th>
<th>High Point level</th>
<th>Word count</th>
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</thead>
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<tr>
<td>“Grandfather’s Nose” (pretest)</td>
<td>2</td>
<td>Science</td>
<td>Level A</td>
<td>372</td>
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<tr>
<td>“When Disaster Strikes” (posttest)</td>
<td>2</td>
<td>News</td>
<td>Level A</td>
<td>1,114</td>
</tr>
<tr>
<td>“Talking Walls” (pretest)</td>
<td>3</td>
<td>Photo essay</td>
<td>Level B</td>
<td>824</td>
</tr>
<tr>
<td>“Teammates” (posttest)</td>
<td>3</td>
<td>Biography</td>
<td>Level B</td>
<td>1,180</td>
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<tr>
<td>“Home, Sweet Home Page”</td>
<td>4</td>
<td>How-to Article</td>
<td>Level C</td>
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<tr>
<td>(pretest)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>“Space Exploration” (posttest)</td>
<td>4</td>
<td>Science</td>
<td>Level C</td>
<td>1,740</td>
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</table>
reread or retell stories. If, after using this model, the text still did not make sense, students were taught to employ additional metacognitive fix-up strategies taken from Bereiter and Bird’s (1985) approach for using the think-aloud. This model stressed substituting another word for an unknown word, using pictures and graphs to clarify the meaning of surrounding text, and ignoring confusing portions of the text that could be clarified later with Regina’s help or that of a peer. These fix-up strategies were laminated and posted in the classroom, and Regina reviewed the fix-up strategies before each reading session over a period of two weeks to reinforce their effectiveness as comprehension tools. Students practiced the strategies both independently and in pairs.

To practice particular fix-up strategies or think-alouds during this timeframe, Regina would flip the light switch during reading sessions and say, “OK, stop reading. Tell your partner (or “say out loud” for independent work) what’s going on in the story right now,” or “What did this passage remind you of?” or “Is the story making sense?” or “Say what you think is going to happen next.” Partner work and guided independent practice kept students on task and helped them practice using the strategies independently. After two weeks of paired reading and independent practice, Regina administered the posttests to students in each group to measure the effect of the think-aloud treatment.

Data analysis

Mean differences between pre- and posttest scores for each group were calculated to determine the effect of the treatment. Two-tailed \( t \)-tests \((p < .05)\) of related samples (i.e., paired means) were used to determine if there was a statistically significant difference between the mean scores of pre- and posttest assessments. The difference between means was tested under the null hypothesis \( X_1 = X_2 \) (i.e., there would be no significant difference between the means at the .05 level of significance).

Results and discussion

Use of the Think-Aloud Strategy did not yield homogeneous results across the English-learner subgroups (i.e., Level 2, Level 3, and Level 4). A brief discussion of the effects of think-aloud on the difference between mean pre- and posttest scores of each group follows.

**Pre- and posttest findings, Early Intermediate students (Level 2)**

When the pre- and posttest scores for the Early Intermediate English learners \((n = 5)\) were tested using a two-tailed related samples \( t \)-test, the \( t \)-critical value for the paired means was 2.776 and the \( t \)-observed value was zero. For this group, the results show that use of the Think-Aloud Strategy did not help improve the English learners’ comprehension of expository text; individual scores were nearly identical on pre- and posttests (see Figure 1).

**Pre- and posttest findings, Intermediate students (Level 3)**

The \( t \)-observed value for paired means for this group of English learners \((n = 11)\) was -2.185 with a \( t \)-critical value of 2.228. Although the difference in pre- and posttest means was not statistically significant, the data suggest measurable growth in students’ reading comprehension between pre- and posttests. Seven of 11 students increased their posttest score, 2 remained the same, and 2 scored lower on the posttest than on the pretest (see Figure 2).

**Pre- and posttest findings, Early Advanced students (Level 4)**

The \( t \)-observed value of 2.951 for this group of readers \((n = 11)\) was -2.185 with a \( t \)-critical value of 2.228. For most of this subgroup of English learners, the think-aloud metacognitive strategy actually hindered reading comprehension (i.e., 8 of 11
Figure 1
Pre- and posttest scores of Level 2 students (N = 5)

Figure 2
Pre- and posttest scores of Level 3 students (N = 11)
had lower posttest scores, 2 had higher posttest scores, and 1 remained the same (see Figure 3).

The findings suggest that while English learners successfully use metacognitive strategies such as think-aloud, the efficacy of the strategies depends on the unique needs of each particular level of proficiency as they approach the text. For example, each subgroup in this study presented distinct and differing data: the Early Intermediate students showed no measurable difference in pre- and posttest mean scores, the difference in mean scores for Intermediate students presented strong (although not statistically significant) evidence of think-aloud’s usefulness as a comprehension strategy, and the statistically significant difference in means scores of the Early Advanced students contradicted the study’s hypothesis.

These heterogeneous outcomes appear to indicate that Early Intermediate English learners may focus on bottom-up processes of phonetic decoding, whereas more proficient readers may use background knowledge and inferencing to understand text. Clarke (1980) posited that students reading in a second language are often “short circuited” into becoming bottom-up readers, and students in the Early Intermediate sample group were clearly “stuck” at the word level due to decoding and vocabulary difficulties. Furthermore, Davis and Bistodeau (1993) stated that English learners with a low level of linguistic proficiency in English pay much greater attention to bottom-up components. Students in this sample group clearly followed this pattern.

The increase in the length of the second article may also be a reason for the lack of progress on the posttest. Given the findings from earlier studies, however, it makes sense that the subgroup with the lowest level of English proficiency might not benefit from think-aloud because they are “short circuited” into bottom-up reading strategies, attempting to decode and make sense of vocabulary and syntax while not able to implement a top-down metacognitive strategy such as think-aloud in their second language. As a conse-
The Think-Aloud Strategy may not be appropriate for beginning or Early Intermediate English learners. The instructional implications of these findings suggest that reading instruction for English learners should focus primarily on vocabulary development, reading fluency, and sentence structure.

The Intermediate English learners’ success with the Think-Aloud Strategy indicates that they possess enough linguistic development in their native language to effectively develop metacognitive comprehension strategies. The findings of this study suggest that, like their Early Intermediate peers, Intermediate students initially become stuck at the word level; however, their knowledge of vocabulary and decoding ability (fluency) has progressed enough in their second language and their linguistic threshold is high enough to allow them to become top-down readers with proper modeling and practice of the strategy.

Cassanave (1988) stated that readers need to judge whether comprehension is taking place, and that they need to stop and “decide whether and how to take compensatory action when necessary” (p. 288). The Intermediate students, after applying this self-questioning technique to repair their comprehension using think-aloud, were able to negotiate meaning in the expository text more successfully and apply Hosenfeld’s (1977) and Block’s (1986) successful comprehension strategies such as keeping the meaning of the text in mind during the reading, integrating ideas, reading in “broad phrases,” and recognizing aspects of text structure. In addition, the Intermediate students may have been more successful in tapping prior knowledge (schema) without difficulties in decoding or vocabulary as experienced by Early Intermediate students. Although the length of the posttest article increased (as it did with the other two groups) students still achieved measurable gains in comprehension on the assessment.

Finally, Davis and Bistodeau (1993) related that specific to L2, restatement of content is useful in refreshing a reader’s memory because memory traces generally tend to be weaker in the nonnative language. Think-aloud may have provided the opportunity to strengthen memory traces in these second-language students’ memories.

The Early Advanced English learner findings suggest that the Think-Aloud Strategy actually disrupted the comprehension of this group of students. While somewhat surprising to us, extant literature does suggest this possibility. Afflerbach and Johnston (1984) warned, “All probes (e.g., think-aloud) can be considered disruptive to the reading task at hand” (p. 311). The findings for this subgroup confirm Afflerbach’s and Johnston’s assertion because use of think-aloud in this study appeared to force Early Advanced English learners to regress to bottom-up reading strategies. The increase in the length of the second article may be related to the decline in scores of the Early Advanced students; however, the findings suggest that these readers already possess metacognitive skills developed in their second language—they did not need to make metacognition covert through the use of think-aloud to increase comprehension.

Another possible explanation of think-aloud’s negative effect on this subgroup may lie in the fact that comprehending expository writing requires readers to focus on the author’s message and does not provide many opportunities for personal connections (reflexive associations) with the text. In fact, making such personal connections actually directs the reader’s attention away from the information. This is an important point: Pausing to make personal connections with the material, as the Early Advanced students were asked to do with think-aloud, may distract students from keeping the meaning of the text in mind during reading. Many of the Early Advanced students in this study complained during think-aloud practice and asked the teacher, “Why do I have to stop and say what’s going on if I already get it?” In fact, this group of English learners was already able to “read in broad phrases,” to judge whether comprehension was taking place, and to know how and when to stop and
clarify meaning. They were able to decide when to take the “compensatory action” to which Cassanave (1988) referred.

The degree of literacy in one’s native language has been shown to affect second-language learning (cf. Cummins, 1981); however, this study indicates that once a student becomes more dominant in the second language than in the first, other factors become influential in determining successful reading comprehension.

For example, Lee’s (1991) biorientation hypothesis posited that beginning second-language learners who are sophisticated native-language readers use both top-down and bottom-up processing and suggested that the degree of literacy in the native language is only a part of the whole process. According to Lee, readers who possess differing degrees of native-language proficiency employ unique comprehension strategies. However, many English learners come to our classrooms without the sophistication to which Lee referred in their L1, making it more necessary for teachers to model explicitly top-down strategies that come as new learning for second-language students.

The findings of this study suggest that we take into account the threshold of linguistic competence that needs to be present for students to acquire metacognitive reading devices as evidenced by the Early Intermediate students’ lack of success with this strategy. Intermediate English learners, however, may be ready to add L2 metacognition to their strategic reader tool belt. Another significant implication of the findings for reading instruction in the regular language arts classroom is that think-aloud may be counterproductive for Early Advanced English learners who have already developed self-monitoring comprehension skills.

Questions remain about best teaching practices for this population of English learners. Additional research is necessary to determine which metacognitive processing tools are most helpful at which levels of language proficiency, both for students literate in their native language and for students who are deficient in their native-language literacy.

The most important lesson drawn from this study is that teachers should not make the mistake of considering all strategies as “good teaching” and apply them equally to all levels of English learners. The very complex nature of second-language students requires teachers to consider the research carefully before selecting strategies that purport to be useful tools for improving all students’ reading development.

REFERENCES


