A Cognitive Strategies Approach to Reading and Writing Instruction for English Language Learners in Secondary School

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This study was conducted by members of a site of the California Writing Project in partnership with a large, urban, low-SES school district where 93% of the students speak English as a second language and 69% are designated Limited English Proficient. Over an eight-year period, a relatively stable group of 55 secondary teachers engaged in ongoing professional development implemented a cognitive strategies approach to reading and writing instruction, making visible for approximately 2000 students per year the thinking tools experienced readers and writers access in the process of meaning construction. The purpose of the study was to assess the impact of this approach on the reading and writing abilities of English language learners (ELLs) in all 13 secondary schools in the district. Students receiving cognitive strategies instruction significantly out-gained peers on holistically scored assessments of academic writing for seven consecutive years. Treatment-group students also performed significantly better than control-group students on GPA, standardized tests, and high-stakes writing assessments. Findings reinforce the importance of having high expectations for ELLs; exposing them to a rigorous language arts curriculum; explicitly teaching, modeling and providing guided practice in a variety of strategies to help students read and write about challenging texts; and involving students as partners in a community of learners. What distinguishes the project is its integrity with respect to its fidelity to three core dimensions: Teachers and students were exposed to an extensive set of cognitive strategies and a wide array of curricular approaches to strategy use (comprehensiveness) in a manner designed to cultivate deep knowledge and application of those strategies in reading and writing (density) over an extended period of time (duration). The consistency of positive outcomes on multiple measures strongly points to the efficacy of using this approach with ELLs.
Inside Charlie’s Classroom

Outside, the sun beats down upon the concrete as the Santa Ana winds lift up a lone lunch bag and send it sailing across the school yard until the wall of one of the low, nondescript buildings brings its journey to a halt. Inside, the room is dark as students observe the rain-soaked skyline of Seattle through the massive floor-to-ceiling windows in the penthouse that serves as the set of the sitcom Frasier. As students survey the plush interior of Frasier’s living room—the beige suede couch, the imposing baby-grand piano, the black vase holding a delicate sprig of orchid, the collection of art—they are recording details on their facts and inferences chart.

After her 8th grade students watch the videotape for the second time, Charlie, the teacher, begins a discussion:

**CHARLIE:** Ok, guys. You’re going to raise your hands and share what you saw in Frasier’s living room. And I’m going to record these details on our facts and inferences chart on the board. You be sure to add your classmates’ ideas to your individual charts, too. So, who wants to volunteer? Um . . . Stacy.

**STACY:** A piano.

**CHARLIE:** Ok. So you saw a piano. What kind of piano was it, Stacy? Do you know?

**STACY:** A grand piano.

**CHARLIE:** Good. So what does that adjective “grand” tell you about this object? [SEVERAL KIDS CHIME IN SIMULTANEOUSLY]: Fancy. Expensive. Showy.

**CHARLIE:** Great. Let’s put those ideas on the inferences side of our chart. What else does someone see? . . . Carlos.

**CARLOS:** Fancy paintings. Not like the kind those guys sell when you’re crossing the border but paintings like in an art museum.

**CHARLIE:** So, what might that tell us about Frasier?

**MARISA:** He likes to decorate, and he’s wealthy.

**CHARLIE:** What do all the items that you see in the setting say to you about the character who lives there?

**KAREN** [WAVING HER HAND WILDLY]: I know! It’s like a symbol!

**CHARLIE:** A symbol of what, Karen?

**KAREN:** It represents his lifestyle. He’s rich and he likes nice things.

**CARLOS:** What about the recliner? It doesn’t match the rest of his stuff. [Carlos is referring to the green- and gold-striped Barcalounger, patched with electrician’s tape, sitting smack dab in the middle of the room, facing the TV.]

**CHARLIE:** Good observation, Carlos. What do the rest of you think?
SUZANNE: He might have saved it to remind him of his old lifestyle when he was younger and maybe poor . . . like in his old house.

ANDY: Nah, I’ve seen the show. It belongs to his dad. Frasier is way too stuck up to have a dumpy old chair like that.

Charlie AuBuchon is a veteran 8th grade teacher at McFadden Intermediate School in the Santa Ana Unified School District (SAUSD), where 93% of the students speak English as a second language and face a number of educational challenges. Many teachers of struggling students and English language learners (ELLs) avoid teaching strategic reading and analytical writing to their secondary students because they feel the skills required (analyzing text and forming interpretations, development of a meaningful thesis, control of organization, effective use of evidence and supporting details, sentence variety, and control of the conventions of written English) are too sophisticated for the population they serve. Yet these are the very abilities assessed on new high-stakes high school exit exams. In the scenario above, Charlie is using a cognitive strategies approach to enhance students’ analytical reading and writing abilities designed in the Pathway Project, a collaborative venture between the UCI Writing Project (UCIWP) and the SAUSD. This article describes the long-term professional development that Charlie participated in along with over 50 of her colleagues in grades 6-12. It delineates the cognitive strategies approach to the delivery of literacy instruction and the curricular intervention implemented by these teachers, and highlights the longitudinal research study conducted to assess the impact of this approach on the reading and writing ability of ELLs in all 13 secondary schools in the district.

The Educational Challenges Faced by California’s Teachers

The SAUSD epitomizes the opening statement in Crossing the School House Border (Olsen, 1988): “California’s changing face is visible in the workplaces, streets, and communities of the state. But nowhere is California’s changed population more prevalent than in the schools—and nowhere is the need to acknowledge the changes more critical” (p. 5). The fifth-largest district in California, and the largest district in Orange County, the SAUSD serves one of the highest percentages of Limited English Proficient (LEP) students in the state (69% / 39,800 students). It also has the greatest number of minority students in the 32 Orange County districts. Of all SAUSD students, 98.5% are from ethnically diverse populations: 88.9% Hispanic, 5.6% Asian/Pacific Islander, and 1.3% Black. Further, changing demographics and growing numbers of English language learners are placing increased demands on the resources of schools and the expertise of administrators and teachers in the SAUSD. These demands are compounded by three facts: 75% of its students are classified as being at the poverty level, California schools have the
largest class sizes in the nation, and the district has a 50% secondary attrition rate. It is not surprising, given these statistics, that SAUSD students lag far behind their counterparts in other school districts state-wide in terms of standardized test scores. Based on the SAUSD’s state Academic Performance Index (API) scores, the University of California Office of the President has designated 40 of the SAUSD’s 46 schools as low-performing target schools.

The situation Charlie and her colleagues face is not unique. In their report *English Learners in California Schools: Unequal Resources, Unequal Outcomes*, Gándara, Rumberger, Maxwell-Jolly, and Callahan (2003) note,

More than 18% of California’s secondary students are English learners. Proportionately, the percentage of English learners has been growing at a faster rate than the number in elementary schools. The increase in the population of these secondary level English learners presents a particular challenge for both the students and the schools that serve them. This is principally because older children have less time to acquire English and academic skills in order to get ready for high school graduation and to prepare for postsecondary options. Unfortunately, the unique needs of these older EL students are even more overlooked than those of their younger peers. (p. 3)

California teachers are not alone in their need to develop a repertoire of strategies to meet the needs of their culturally and linguistically diverse students. Although the general school-age population in the United States is only 12% greater than it was in 1991, the ELL population nationwide has skyrocketed, increasing by 105% (Kindler, 2002).

For this growing number of ELLs, the complexity of academic English is an obstacle as they struggle to develop higher-level reading and writing skills (Scarcella, 2002). Some studies have shown that ELLs require six to ten years to acquire grade-appropriate reading and writing proficiency in English (Hakuta, Goto, Butler, & Witt, 2000). As mentioned previously, many teachers of struggling students and English learners avoid teaching and requiring students to write analytical essays because they feel the skills required are too sophisticated for the population they serve. Yet, 20 states have established high-stakes exams that assess higher-level reading and writing abilities. A recent study of prototype test items for high school exit exams across the nation (Wong Fillmore & Snow, 2003) reveals the degree of academic literacy expected of all secondary students, including ELLs, who are assessed on their ability to perform a range of complex tasks (including summarizing texts; using linguistic cues to interpret and infer the writer’s intentions and messages; assessing the writer’s use of language for rhetorical and aesthetic purposes; evaluating evidence and arguments presented in texts and critiquing the logic of arguments made in them; and composing and writing extended, reasoned texts that are well-developed and supported with evidence and details). As defined by Scarcella (2003), academic literacy not only involves the ability to use
academic English, a variety or register of English used in professional books and characterized by the specific linguistic features associated with academic disciplines, but also higher-order thinking, including conceptualizing, inferring, inventing, and testing (pp. 18-19).

Numerous researchers (Gándara et al., 2003; Moll, 1988; Wong Fillmore, 1986) have noted that districts do a disservice to ELLs when they offer a reductionist curriculum focusing primarily on skill and drill. Kong and Pearson (2003) observe that in classrooms with American students who speak a language other than English at home, “Comparatively little time is typically spent on comprehension, and, especially meaning construction and authentic communication . . . through complex thinking and critical response” (p. 86). How ironic, then, that a panel of distinguished researchers convened by the Educational Alliance at Brown University to explore promising practices for ELLs concurred that ELLs are most successful when teachers have high expectations and do not deny access to challenging academic content; when teachers explicitly teach and model the academic skills and the thinking, learning, reading, writing, and studying strategies ELLs need to know to function effectively in academic environments; when teachers employ a variety of strategies to help students understand challenging texts and concepts; when students read and write texts in a variety of genres with guided practice activities scaffolded by the teacher; when students have opportunities to interact with teachers and classmates; and when teachers have sustained, high-quality professional development (Coady, Hamann, Harrington, Pachaco, Samboeum, & Yedlin, 2003).

This study not only reinforces the Brown University Educational Alliance’s assertions about successful teaching strategies for ELLs, but also finds that a broad range of academic advancements are possible for ELLs year after year when such strategies are implemented.

**Conceptual Framework**

**A Cognitive Strategies Approach**

The cognitive strategies intervention developed by the UCI Writing Project that is the focus of this study is grounded in a wide body of research on what experienced readers and writers do when they construct meaning from and with texts.

Reading and writing have traditionally been thought of as distinctly separate processes, as flip sides of a coin, with reading regarded as receptive and writing as productive (Tompkins, 1997). However, researchers have increasingly noted the connections between reading and writing, identifying them as essentially similar processes of meaning construction (Paris, Wasik, & Turner, 1991; Tierney & Pearson, 1983). Experienced readers and writers purposefully select and orchestrate cognitive strategies that are appropriate for the literacy task at hand (Flower.
& Hayes, 1981a; Paris et al., 1991; Pressley, 1991.) As Langer (1991) notes, “As children learn to engage in literate behaviors to serve the functions and reach the ends they see modeled around them, they become literate—in a culturally appropriate way; they use certain cognitive strategies to structure their thoughts and complete their tasks, and not others” (p. 17). In order to help students develop confidence and competence, research suggests that teachers need to provide systematic and explicit instruction in strategies used by mature readers and writers and help students develop declarative, procedural, and conditional knowledge of these cognitive strategies, thereby building students’ metacognitive control of specific strategies (Baker & Brown, 1984; Paris, Lipson, & Wixon, 1983; Pressley, 2000).

It is the teacher’s responsibility to make visible for students what it is that experienced readers and writers do when they compose; to introduce the cognitive strategies that underlie reading and writing in meaningful contexts; and to provide enough sustained, guided practice that students can internalize these strategies and perform complex tasks independently (Langer & Applebee, 1986).

In their analysis of over 20 years of research on comprehension instruction, Block and Pressley (2002) note widespread agreement among scholars that students should be taught cognitive and metacognitive processes and that, regardless of the program used, instruction should include modeling, scaffolding, guided practice, and independent use of strategies so that students develop the ability to select and implement appropriate strategies independently and to monitor and regulate their use. Furthermore, research also suggests that when reading and writing are taught together, they engage students in a greater use and variety of cognitive strategies than do reading and writing taught separately (Tierney & Shanahan, 1991).

**Cognitive Strategies for ELLs**

Despite the “plethora of research establishing the efficacy” of cognitive strategies instruction, very little of this type of instruction occurs in school (Block & Pressley, 2002, p. 385)—especially for ELLs (Vaughn & Klinger, 2004). Two National Research Council (NRC) reports (August & Hakuta, 1997; Snow, Burns, & Griffin, 1998) point out the paucity of research on how best to teach English to ELLs, particularly in secondary schools. The NRC committee identified the following attributes of effective schools and classrooms that benefit all learners, especially ELLs: curriculum that balances basic and higher-order skills, explicit skills instruction for certain tasks (particularly in acquiring learning strategies), instructional approaches to enhance comprehension, and articulation and coordination of programs and practices within and between schools. Like the NCR reports, Fitzgerald (1995), in her analysis of effective reading instruction for ELLs, argues that both native and non-native English-speaking children benefit from the same types of balanced reading approaches—approaches that include explicit
strategy instruction. She states that there is “virtually no evidence that ESL learners need notably divergent forms of instruction to guide or develop their cognitive reading process” (p. 184), and advises that “… at least with regard to the cognitive aspects of reading, U.S. teachers of ESL students should follow sound principles of reading instruction based on current cognitive research done with native English speakers” (p. 184). In a similar vein, in their Office of Educational Research and Improvement (OERI) study of what teachers need to know about language, Wong Fillmore and Snow (2003) argue that all children need to learn cognitive strategies. Jiménez, García, and Pearson (1994), who studied the reading strategies of bilingual Latino/a students who are successful readers, concur that cognitive strategies might help ELLs develop academic literacy, as do Vaughn and Klinger (2004). Exploring promising practices for ELLs and the link between literacy instruction and language development, other researchers, such as Wong Fillmore (1986), Anderson and Roit (1994), and the members of The Education Alliance (Coady et al., 2003), emphasize a cognitive strategies approach to integrating reading and writing instruction. What is needed are carefully designed studies of the efficacy of cognitive strategies approaches, particularly with secondary, urban ELLs.

The Pathway Project

Using a cognitive strategies approach to reinforce the reading/writing connection for ELLs was the focus of the Pathway Project, an intensive professional-development program sustained over an eight-year period (1996-2004). Although the seed project in 1996-1997 began with 14 teachers in two middle and two high schools, the Office of English Language Acquisition (OELA) Pathway Project rapidly expanded to involve a relatively stable group of 55 teachers and approximately 2000 students per year in all 13 secondary schools in the SAUSD. Students entered the Pathway in 6th grade when they were in Transitional English Language Development (a course that prepares ELLs for mainstream English/language arts) and progressed as a cadre up the grade levels from the class of one Pathway teacher participating in the project to the next.

The aim of the project was to help students develop the academic literacy necessary to succeed in advanced educational settings. The vision underlying the project was that if ELLs are treated from the early grades as if they are college-bound, if they receive exemplary curriculum and explicit strategies instruction, and if there are consistent, coherent, and progressively rigorous expectations among the teachers from grades 6 through 12, students will attain the necessary literacy skills to succeed in college, and their college-acceptance rates will be substantially improved. We exposed teachers and students to an extensive set of cognitive strategies and a wide array of curricular approaches to cognitive strategy use (compre-
hensiveness) in a manner designed to cultivate deep knowledge and application of those strategies in reading and writing (density) over an extended period of time (duration).

Underwood and Pearson (2004) have identified the Pathway Project as a Level 3 adolescent literacy intervention because it is designed to stimulate the higher-order cognitive behaviors of expert readers, takes into account the relationship between the social context and these cognitive behaviors, and extends beyond declarative and procedural knowledge into conditional knowledge. According to Paris et al. (1983), in order to be strategic learners, students need to demonstrate these three kinds of knowledge—declarative knowledge of what the cognitive strategies are, procedural knowledge of how to use cognitive strategies, and conditional knowledge of when and why to use cognitive strategies—which together comprise the emphasis of the Pathway Project.

Throughout the eight years of the Pathway Project, Olson served as the principal investigator, the professional-development trainer, and the designer of many of the curriculum materials. A former research methodologist from UCLA’s Center for the Study of Evaluation, Land served as a research consultant and outside evaluator. Together, we generated the following question as the focus of the research:

To what extent will providing English Language Learners in secondary school with declarative, procedural, and conditional knowledge of and practice with cognitive strategies improve their reading and writing ability, as measured by a holistically scored, timed writing assessment, language arts GPA, performance on the reading and total language portions of standardized tests, and performance on statewide high-stakes, on-demand reading and writing assessments?

Context of the Intervention

Curricular Approaches to Cognitive Strategy Use

Drawing on the strong research base in studies of both native speakers and ELLs for taking a cognitive strategies approach to reading and writing instruction, Olson designed a model of the cognitive strategies that make up a reader’s and writer’s mental tool kit (Flower & Hayes, 1981) that is depicted in Figure 1. Because experienced readers and writers go back to go forward and have the knowledge and motivation to access their tool kit of cognitive strategies without being constrained by any fixed order (Flower & Hayes, 1981b; Paris et al., 1997; Perl, 1990), we emphasized that this model, which served as the basis for Pathway curriculum, was fluid and recursive rather than linear.

We introduced Pathway teachers to the idea of a tool kit and to a variety of curricular approaches to strategy use during six full-day professional-development workshops conducted throughout each school year to help them foster their
Planning and Goal Setting
- Developing procedural and substantive plans
- Creating and setting goals
- Establishing a purpose
- Determining priorities

Tapping Prior Knowledge
- Mobilizing knowledge
- Searching existing schemata

Asking Questions and Making Predictions
- Generating questions re: topic, genre, author/audience, purpose, etc.
- Finding a focus/directing attention
- Predicting what will happen next
- Fostering forward momentum
- Establishing focal points for confirming or revising meaning

Constructing the Gist
- Visualizing
- Making connections
- Forming preliminary interpretations
- Identifying main ideas
- Organizing information
- Expanding schemata
- Adopting an alignment

Monitoring
- Directing the cognitive process
- Regulating the kind and duration of activities
- Confirming reader/writer is on track
- Signaling the need for fix up strategies

Revising Meaning: Reconstructing the Draft
- Backtracking
- Revising meaning
- Seeking validation for interpretations
- Analyzing text closely/digging deeper
- Analyzing author’s craft

Reflecting and Relating
- Stepping back
- Taking stock
- Rethinking what one knows
- Formulating guidelines for personal ways of living

Evaluating
- Reviewing
- Asking questions
- Evaluating/assessing quality
- Forming criticisms


**Figure 1. Cognitive Strategies: A Reader’s and Writer’s Tool Kit**

students’ declarative, procedural, and conditional knowledge of cognitive strategies. It is important to differentiate between a “curriculum” and curricular approaches here because the intervention materials we designed (often in collaboration with the teachers) were intended only as models and were based on an analysis of student work and needs assessments conducted and articulated by teachers as they met in cross-school grade-level groups, school-based teams, and vertical feeder middle-high school teams. In essence, our goal in scaffolding professional development for the teachers was the same as their goal for their students—the gradual release of responsibility (Duke & Pearson, 2002; Pearson & Gallagher, 1983) as teachers/students internalized the cognitive strategy intervention and applied it independently on their own. To that end, we provided incentives for teachers to collaborate within and across schools to take ownership of the project and develop materials to contribute to the intervention, and, over time, to become teacher-researchers who participated in enriching and investigating their own classroom practices. For example, teachers at MacArthur and McFadden Intermediate Schools adapted the Think-Aloud workshop (to be described shortly) to be used with the
informational texts in their language arts textbook, and teachers at Valley High downloaded practice test excerpts from the California Department of Education Web site and applied a color-coding strategy, which we have used successfully with interpretive writing to create a California High School Exit Exam (CAHSEE) preparation workshop.

Because the purpose of our research was to determine the impact of these curricular approaches to strategy use on students’ performance in reading and writing, several of these interventions, and the ways teachers used them in their classrooms, are described in detail below.

**Cognitive Strategies Tutorial**
The Reader's and Writer's Tool Kit model in Figure 1 helped Pathway teachers grasp the role of strategy use in meaning construction, but it did not communicate well to their students. To help students, we designed a more accessible graphic illustrating the tool kit, shown in Figure 2. To make this analogy more concrete, some Pathway teachers actually brought real tool kits into their classrooms to demonstrate the three kinds of knowledge that are necessary to strategic literacy (Paris et al., 1983). For example, to demonstrate that students had *declarative* knowledge, they searched through the tool kit to find the appropriate tool to nail two boards together and asked students why a screwdriver or a wrench wouldn’t

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**Figure 2. Cognitive Strategies: A Reader’s and Writer’s Tool Kit**
work; to illustrate *procedural* knowledge, they asked for instructions as to how to use a hammer to nail the boards together; and to exemplify *conditional* knowledge, they asked the class to tell them how long to keep hammering in order to get the job done properly. Pathway teachers then furthered the analogy by connecting back to literacy: “So, as you think of yourself as a reader and writer in language arts class, imagine yourself as a craftsman, except instead of constructing an object with wood, you’re constructing meaning from or with words.”

To introduce each of the thinking tools, Pathway teachers conducted a guided reading through a short story, stopping at key points in the text to describe a specific cognitive strategy, model what goes on in the mind of a reader, and enable students to practice strategy use. For example, in teaching Toni Cade Bambara’s short story “The War of the Wall” (1996), the teacher might say the following:

The title of the story we’re about to read is “The War of the Wall.” Rather than just diving into a story, effective readers begin by seeing if the title will give them any clues about what they are about to read. My experience as a reader gives me the conditional knowledge that a good strategy to use here is *tapping prior knowledge*. Inside our heads we have a storehouse of knowledge. Think of prior knowledge as being stored in file cabinets in our heads. We have knowledge based on our own experiences, knowledge we’ve gained from watching TV and reading books or going to school, knowledge based on where we live, and lots more. If we’ve read a lot of a certain kind of books, like detective stories, we may have knowledge about what to expect in the story. Or if we’ve read many books by a certain author, we have knowledge about what the author usually writes about. For example, who has read a Harry Potter novel? Tell the class what you know even before you start a second Harry Potter book.

Now, let’s look at the title of this story. When readers tap prior knowledge, they might say to themselves inside their heads, “I already know that...,” “This reminds me of...,” or “This makes me think about....” What word or words jump out to you and what thoughts do you have about those words? Talk to a partner regarding what you know about those words.

The teacher might then create clusters for the words “war” and “wall” based upon students’ contributions and, from there, go on to introduce the cognitive strategy of making predictions, followed by students’ predictions regarding the story they were about to read. Pathway teachers periodically interrupted their reading of the story to introduce a new strategy and solicit students’ input and responses.

**Cognitive Strategies Sentence Starters**

In addition to declarative knowledge, students need also to develop the procedural knowledge of how to implement the strategies on their own as well as the conditional knowledge of when, why, and for how long to access the strategies in their tool kits as independent readers and writers. To foster such knowledge and to
provide students with practice in using the cognitive strategies during teacher-assigned and, especially, student-selected reading, Pathway teachers also supplied students with the sentence openers shown in Figure 3 to use in dialectical journals and in marginal notes in response to texts.

These sentence starters later became guidelines for students as they met in writing groups to comment upon each other’s writing. Unlike some interventions, such as Reciprocal Teaching (Palinscar & Brown, 1985), which focus on a more limited number of cognitive strategies, ours exposed students to a comprehensive array of strategies. Further, rather than teaching students to implement these strategies one-at-a-time, we took a repertoire-building approach that is closer to

<table>
<thead>
<tr>
<th>Cognitive Strategies Sentence Starters</th>
<th></th>
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<tbody>
<tr>
<td><strong>Planning and Goal Setting</strong></td>
<td><em>What my purpose is...</em></td>
</tr>
<tr>
<td>• My purpose is...</td>
<td><em>My top priority is...</em></td>
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<tr>
<td>• My top priority is...</td>
<td><em>To accomplish my goal, I plan to...</em></td>
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<tr>
<td><strong>Tapping Prior Knowledge</strong></td>
<td><em>The idea I’m getting is...</em></td>
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<tr>
<td>• I already know that...</td>
<td><em>I got lost here because...</em></td>
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<td>• This reminds me of...</td>
<td><em>I need to reread the part where...</em></td>
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<td>• This relates to...</td>
<td><em>I know I’m on the right track because...</em></td>
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<tr>
<td><strong>Asking Questions</strong></td>
<td><em>To understand better, I need to know more about...</em></td>
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<tr>
<td>• I wonder why...</td>
<td><em>Something that is still not clear is...</em></td>
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<tr>
<td>• What if...</td>
<td><em>I’m guessing that this means, but I need to...</em></td>
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<tr>
<td>• How come...</td>
<td><em>What this means to me is...</em></td>
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<tr>
<td><strong>Predicting</strong></td>
<td><em>At first I thought ____, but now I...</em></td>
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<td>• I’ll bet that...</td>
<td><em>My latest thought about this is...</em></td>
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<td>• I think...</td>
<td><em>I’m getting a different picture here because...</em></td>
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<td>• If _____, then...</td>
<td><em>A golden line for me is...</em></td>
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<tr>
<td><strong>Visualizing</strong></td>
<td><em>This word/phrase stands out for me because...</em></td>
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<tr>
<td>• I can picture...</td>
<td><em>I like how the author uses... to show...</em></td>
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<td>• In my mind I see...</td>
<td><em>So, the big idea is...</em></td>
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<tr>
<td>• If this were a movie...</td>
<td><em>A conclusion I’m drawing is...</em></td>
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<tr>
<td><strong>Making Connections</strong></td>
<td><em>This is relevant to my life because...</em></td>
</tr>
<tr>
<td>• This reminds me of...</td>
<td><em>The most important message is...</em></td>
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<tr>
<td>• I experienced this once when...</td>
<td><em>I like/don’t like ____ because...</em></td>
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<tr>
<td>• I can relate to this because...</td>
<td><em>This could be more effective if...</em></td>
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<tr>
<td><strong>Summarizing</strong></td>
<td><em>The character I most identify with is...</em></td>
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<tr>
<td>• The basic gist...</td>
<td><em>I really got into the story when...</em></td>
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<tr>
<td>• The key information is...</td>
<td><em>I can relate to this author because...</em></td>
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<tr>
<td><strong>Adopting an Alignment</strong></td>
<td><em>I like/don’t like ____ because...</em></td>
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<tr>
<td>• The character I most identify with is...</td>
<td><em>This could be more effective if...</em></td>
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<tr>
<td><strong>Forming Interpretations</strong></td>
<td><em>The most important message is...</em></td>
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<tr>
<td>• What this means to me is...</td>
<td><em>This could be more effective if...</em></td>
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<td>• I think this represents...</td>
<td><em>The most important message is...</em></td>
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<tr>
<td>• The idea I’m getting is...</td>
<td><em>This could be more effective if...</em></td>
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<tr>
<td><strong>Monitoring</strong></td>
<td><em>The most important message is...</em></td>
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<tr>
<td>• I got lost here because...</td>
<td><em>This could be more effective if...</em></td>
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<tr>
<td>• I need to reread the part where...</td>
<td><em>The most important message is...</em></td>
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<tr>
<td>• I know I’m on the right track because...</td>
<td><em>This could be more effective if...</em></td>
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<tr>
<td><strong>Clarifying</strong></td>
<td><em>The most important message is...</em></td>
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<tr>
<td>• To understand better, I need to know more about...</td>
<td><em>This could be more effective if...</em></td>
</tr>
<tr>
<td>• Something that is still not clear is...</td>
<td><em>The most important message is...</em></td>
</tr>
<tr>
<td>• I’m guessing that this means, but I need to...</td>
<td><em>This could be more effective if...</em></td>
</tr>
<tr>
<td><strong>Revising Meaning</strong></td>
<td><em>The most important message is...</em></td>
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<tr>
<td>• At first I thought ____, but now I...</td>
<td><em>This could be more effective if...</em></td>
</tr>
<tr>
<td>• My latest thought about this is...</td>
<td><em>The most important message is...</em></td>
</tr>
<tr>
<td>• I’m getting a different picture here because...</td>
<td><em>This could be more effective if...</em></td>
</tr>
<tr>
<td><strong>Analyzing the Author’s Craft</strong></td>
<td><em>The most important message is...</em></td>
</tr>
<tr>
<td>• A golden line for me is...</td>
<td><em>This could be more effective if...</em></td>
</tr>
<tr>
<td>• This word/phrase stands out for me because...</td>
<td><em>The most important message is...</em></td>
</tr>
<tr>
<td>• I like how the author uses____ to show...</td>
<td><em>This could be more effective if...</em></td>
</tr>
<tr>
<td><strong>Reflecting and Relating</strong></td>
<td><em>The most important message is...</em></td>
</tr>
<tr>
<td>• So, the big idea is...</td>
<td><em>This could be more effective if...</em></td>
</tr>
<tr>
<td>• A conclusion I’m drawing is...</td>
<td><em>The most important message is...</em></td>
</tr>
<tr>
<td>• This is relevant to my life because...</td>
<td><em>This could be more effective if...</em></td>
</tr>
<tr>
<td><strong>Evaluating</strong></td>
<td><em>The most important message is...</em></td>
</tr>
<tr>
<td>• I like/don’t like ____ because...</td>
<td><em>This could be more effective if...</em></td>
</tr>
<tr>
<td>• This could be more effective if...</td>
<td><em>The most important message is...</em></td>
</tr>
<tr>
<td>• The most important message is...</td>
<td><em>This could be more effective if...</em></td>
</tr>
</tbody>
</table>

**FIGURE 3. Cognitive Strategies Sentence Starters**
Pressley’s (2004; Block & Pressley, 2002) transactional comprehension strategies instruction.

**Metacognitive Reflections**

As students became increasingly familiar with and adept at strategy use, we enhanced their conditional knowledge of how to orchestrate cognitive strategies by focusing on metacognition. As Paris et al. (1983) note, “Thinking about one’s thinking is the core of strategic behavior” (p. 295). Pathway teachers introduced their students to metacognition through a tutorial, adapted with permission from the Strategic Literacy Interactive (Schoenbach, Greenleaf, Cziko, & Hurwitz, 1999), that begins with the creation of a Play-Doh animal in which the teacher engages in a Think-Aloud (Kucan & Beck, 1997) while constructing his/her artifact as a student records his/her remarks on a transparency. Subsequently, the teacher labels the cognitive strategies recorded on the transparency that he/she has accessed to make visible the kind of thinking in which he/she has engaged. For example, the teacher might say, “Hmm. I think I’ll make an elephant that looks like Dumbo” and later label this as **Planning and Goal Setting** and **Visualizing**, or in the process of shaping the Play-Doh say, “Whoops! That looks more like a mouse than an elephant. Back to the drawing board,” and later label this **Visualizing, Evaluating, and Revising Meaning**. After this concrete example of “constructing meaning,” the teacher demonstrates the Think-Aloud process while interpreting a complex text and then writes a brief reflection of his/her meaning-making process. The teacher then provides time and guidance for students to work in pairs and experience the same process. This introductory workshop sets the stage for ongoing invitations for students to metacognitively reflect upon their reading, thinking, and writing throughout the year.

**Scaffolding Strategy Instruction**

In the interest of teaching not through transmission but transaction, the teachers in the Pathway Project were taught to scaffold the curricular approaches to strategy
instruction in order to link reading and writing and facilitate student learning. Langer and Applebee (1986) discuss instructional scaffolding as an especially effective model for planning and analyzing instruction in reading and writing. Building on Vygotsky’s (1986) and Bruner’s (1978) theories of learning and development, Applebee and Langer (1983) propose a model in which “the novice reader or writer learns new skills in contexts where more skilled language users provide support necessary to carry through unfamiliar tasks” (p. 168). The interchange presented at the beginning of this article between Charlie Aubuchon and her 8th graders at McFadden Intermediate about the items in Frasier’s penthouse is an example of how Pathway teachers scaffolded instruction on a task that a formative assessment had indicated was beyond the students’ reach. Specifically, students were given a pre-test essay in response to a prompt (see Appendix A) administered in October about an excerpt from *Great Expectations* focusing on Pip’s encounter with the eccentric Miss Havisham. Students at all grade levels (6-12) demonstrated that they understood what was literally happening in the excerpt, and they were able to identify items in Miss Havisham’s environment that they felt were indicative of her character. However, they could not grasp the symbolism inherent in the objects, and they had difficulty analyzing, interpreting, and commenting upon the relationship of setting to character. It was clear that Charlie and her colleagues would need to provide “tutorial assistance” (Bruner, 1978, p. 54) to help their students engage in the cognitive strategies of visualizing, analyzing the author’s craft, making inferences, and forming interpretations in order for them to grow as readers and writers.

An illustration of a lesson scaffold for the *Great Expectations* excerpt is the facts and inferences chart that students constructed to analyze the relationship of the items in Frasier’s living room to his character—the first step in teaching students to analyze and interpret. Following this activity, Charlie and other Pathway teachers taught a mini-lesson on symbolism and brought four objects to school from their homes that they felt symbolized something about their personalities or characters. For example, Charlie brought in a stuffed bulldog sporting a British flag to signify both her British heritage and her stubborn and tenacious personality. As the teacher modeled, students discussed what they thought those items symbolized about the teacher and later compared their speculations with what the teacher had written down about what she thought they represented. Students then went home to select four items that they felt might symbolize something about their characters. What followed was a folding activity in which students described their items and student partners analyzed and interpreted them. Charlie and her colleagues used this exercise to teach students the difference between facts and inferences and literally comprehending what the text says versus interpreting what it means.
After this activity, Charlie’s students were ready to work together to negotiate the meaning of the excerpt from Dickens on Miss Havisham. Charlie deliberately guided them through activities to move them from interpreting more concrete to more abstract texts. Snow (2002) points out that “the power of strategy instruction is the extent to which strategies are taught in the service of interpreting text, not as ends in and of themselves” (p. 46). In learning scaffolding techniques and applying them in class, Charlie and her colleagues were focused on this goal. Further, to reinforce the reading/writing connection, they built bridges from the reading scaffold to the writing scaffold.

**Color-Coding: Helping Students to Distinguish Plot Summary, Supporting Detail, and Commentary in Analytical Essays**

One of the most powerful curricular approaches to analytical writing in Pathway is a color-coding strategy to make visible for students how to include interpretation and commentary in their essays. It is our contention that many struggling readers and writers, especially ELLs who have had little practice, think that the point of writing a literary response-based, analytical essay is to prove that they understood what they had read by retelling the story—and yet this type of response will only merit a 1 on the 4-point scale on the STAR Grade 7 and 10 California High School Exit (CAHSEE) direct writing assessment rubrics. For example, each year, students were given two sample papers (one strong and one marginal) written by Pathway students from the previous year, such as the two essays reprinted in Appendix B (which were written in response to the prompt in Figure 5 on Liliana Heker’s short story “The Stolen Party”); students studied these papers as they revised their pre-test from the current year (on Miss Havisham, for instance) into a multiple-draft essay as practice before they took a timed post-test at the end of the school year.

The teachers asked the class to vote on which of the papers was stronger and generated a class rubric based on the characteristics of the strong paper. Students usually came up with any or all of the following (although, depending upon their

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**In the story “The Stolen Party,” Liliana Heker describes a birthday party that makes a strong impression on the main character, Rosaura. Think about what happens to Rosaura and how she feels about the incident. How does it affect the way she feels about herself?**

Write an essay in which you explain how you think Rosaura views herself at the party. Consider why she sees herself as she does, what affected her view, and if her feelings about herself change as a result of her experience. How does the author show us Rosaura’s feelings and how do we know if those feelings change? Be sure to use specific details from the text to show why you think the way you do. While writing your paper, remember to use standard written English.

**FIGURE 5. Prompt: The Stolen Party**
exposure to analytical/expository writing and their level of English language development, they may have lacked the vocabulary to point out the paper’s strengths using these exact terms: well organized (introduction, main body, conclusion, interesting opening (i.e., hook), clear thesis, good use of quotes, ample use of transition words, use of figurative language, insights and interpretation (goes far beyond plot summary), strong conclusion, mature vocabulary, and sentence variety. Then, they compared their list with the STAR Grade 7 and CAHSEE Response to Literature rubrics so students could see how well their own analysis of what makes an effective essay matched up with the state standards.

After Pathway teachers reviewed a strong paper (in this case, the one that begins, “It’s a rich people’s party . . .”) with their class, they turned students’ attention to a marginal paper such as the one that begins “I think that Rosaura feels excited about . . .” and asked the class to indicate why it is a much weaker paper. Students noted that in this paper the writer simply retells the story, whereas the strong paper includes the writer’s interpretation of the events. The next step in this training, built on Schaffer’s (1995) work, helps students to understand what commentary is and to add more commentary to their writing. Teachers designated colors for three types of assertions that make up an analytical essay. For example, they might say, “Plot summary reiterates what is obvious and known in a text. It is yellow because it’s kind of superficial and lightweight. We sometimes need some plot summary to orient our reader to the facts, but we want to keep plot summary to a minimum. Commentary is blue because it goes beneath the surface of things to look at the deeper meaning. Commentary occurs when we move from what the text says to what it means. It’s your opinion, interpretations, insights, and ‘Ahas.’ Commentary goes beyond summary to interpret the significance of something. Supporting detail is green because it’s what glues together plot summary and commentary. It’s your evidence to support your claims. In writing a successful essay, it is especially important to quote from the text to provide evidence for your ideas.”

Next, students were given colored pencils and, starting with the weak paper, they went through the paper, sentence by sentence, color-coding as a class. In the case of 22115, students had the most trouble with the opening sentence, “I think Rosaura feels excited about going to the party,” which most students identified as commentary. Pathway teachers asked the class if it is obvious and known to us that Rosaura is excited about going to the party. Most agreed that it, indeed, is obvious. Teachers probed, “How do we know this?” Students noted that Rosaura announces, “It will be the most lovely party in the whole world” and goes so far as to say, “I’ll die if I don’t go.” Once students color-coded the sentence in yellow, the teachers explained that just because a student puts “I think” in front of a sentence doesn’t make it commentary. The remainder of the essay is primarily yellow with a little green until the writer says, “Rosaura felt sad because she though(t) she was
going to the party because she was a friend not because she was going like a slave.”
Here is a genuine piece of commentary that could very well be brought up to the
introduction of the essay as its thesis. As students color-coded the “It’s a rich people’s
party . . .” essay, they acknowledged the vast difference in sophistication between
the strong and marginal paper. Particularly as they neared the conclusion, stu-
dents were color-coding almost exclusively in blue. They could visually see how
the writer skillfully builds to an insightful and powerful conclusion.

Students then applied the color-coding strategy to their own pre-tests, work-
ing with a partner to determine if they had simply retold the plot or had included
some interpretation and comment as well as textual evidence. Subsequently, they
revised their pre-test essays into a multiple draft essay as practice for the timed
eassy they would take towards the end of the semester.

We repeated this making-visible revision strategy (analyzing sample student
papers and color-coding) each year, and over the multiple years that students were
in the program. Figure 6 includes a 6th-grade ELD (English Language Develop-
ment) student’s timed pre-test essay on the excerpt from Great Expectations, writ-
ten in October, and this student’s post-test essay on Tennyson’s poem “Mariana,”
written in May, after being guided through the reading-lesson scaffold initially
focused on making inferences about the setting in “Frasier” (described in the dis-
cussion of Charlie AuBuchon’s classroom instruction) and then the pre-test revi-
sion strategies (described above) that comprise the writing scaffold. These papers
are coded to demonstrate growth in the student’s ability to interpret instead of
just summarizing and to present his/her analysis in an organized fashion around
images from the literary work.

The Study

As was mentioned previously, the study was conducted in nine middle schools and
four high schools in the SAUSD over an eight-year period (1996-2004).

Method

This study sought to determine to what extent providing ELLs in secondary school
with declarative, procedural, and conditional knowledge of and practice with
cognitive strategies would improve their reading and writing ability as based on
commonly used measures and as sustained over time. We used a quasi-
experimental research design (Campbell & Stanley, 1963) involving both quanti-
tative and qualitative measures.

Data

Quantitative data included a project-designed, pre-/post-timed analytical writing
assessment, which was the basic unit of measurement. Additionally, we collected
standardized measures of students’ reading and total language abilities, scores on
Pre-test Essay—Written in October
6th-Grade ELD Student, Scored 2 and 2

He was half afraid, the other half was curious. He was curious because they had told him that he was supposed to “play.” He went into the house, it was a big room lighted by candles. He could tell it was a dressing room.

In an arm chair there was the weredest lady that probably ever lived. She was old and she was wearing a wedding dress. He could tell she was old because her hair was whiter than the dress. The dress didn’t really seem like it was made for her. It was whiter then the dress. The dress didn’t seem to have her heart. She was touching. He said her heart and asked him what it was doing. She screamed, “Broken” . She said that she was touching. He said her heart and asked him what it was doing. She screamed, “Broken” . She said that she was touching. He said her heart and asked him what it was doing.

She called him and he introduced himself. She told him to come closer. When he walked to her he saw that the clocks had stopped at 8:40. She told him to look at her. She took him to a large room and he entered everything was dusty and dirty. There was a table in the room. He saw lots of spider webs, spiders, and beard the rats. Whith a cruch in her hand she pointed to a table and said, “That is were I will be put when I die, in my wedding dress. She pointed to spider webs and asked him what they were, He didn’t know. She said it was the bride cake.

THE END

No line = Plot summary _ _ _ _ _ _ Supporting detail __________Commentary

FIGURE 6. Pre- and Post-Test Essays
high-stakes, on-demand direct writing assessments, and English placement rates at the local community college. Qualitative data included participating teachers’ and their students’ written discussions of the quality of their experience in Pathway in the form of reflective learning logs analyzing their growth over time. We also gathered written reflections from 700 students: In the spirit of a community of learners, 20 Pathway teachers devoted a class period during the fall of 2003 to sharing the Pathway and control group results from 2002-2003 with these students and engaged them as partners in a class discussion followed by written reflections regarding why they felt Pathway classes out-scored the control classes.

Setting and Participants
Over the eight years, 94 teachers and approximately 2000 students per year participated in the treatment. In 2003-2004, the year the project funding terminated, three teachers from the original 14 teachers in the 1996-1997 seed project remained. Three more remained active as District Literacy Consultants, and two were serving as full-time Literary Coaches at school sites. In 2003-2004, of the teachers who participated starting in 1997-1998 when the OELA Project commenced, three were in Year 7, five were in Year 6, nine were in Year 5, eight were in Year 4, six were in Year 3, 12 were in Year 2, and nine were in Year 1. These teachers, in turn, served approximately 2000 students per year. The vast majority of students (90%) were Chicano/Latino, low-SES, English language learners at the intermediate level of fluency or above as measured by the California English Language Development Test (CELDT), and enrolled in transition English language development and/or standard language arts classes. (Note: Only 7% of SAUSD students are in English-only programs.)

In its early years, a small core of UCI Writing Project Teacher/Consultants like Charlie (who became an eight-year veteran of the project) played a vital role in creating its vision, providing leadership, generating teacher buy-in, and fostering administrative support. But even with well-respected role models like Charlie serving as cheerleaders, not all of the teachers in Pathway initially embraced the project with open arms. Guskey (2000) postulates that “significant change in the beliefs and attitudes of teachers is contingent on their gaining evidence of change in the learning outcomes of their students” (p. 7). We needed to convince the teachers that the rigorous literature-based, on-demand writing assessments we were asking them to administer in their classrooms as a pre-and post-test measure of the project were within their students’ grasp and could be a beneficial learning tool. We met with some resistance until teachers saw the results of their own classroom instruction first-hand. To minimize competition, all results were shared in sealed envelopes, and we refrained from comparing individual teachers’ or specific schools’ scores.
Data Collection and Analysis

**QUANTITATIVE MEASURES**

As described above, the primary instrument we used to measure student growth in reading and writing was a pre- and post-test timed direct writing assessment calling for literary interpretation in a well-structured essay. These assessments were administered in October and again in April/May. In each of the eight years, we piloted two thematically similar, literature-based interpretive writing prompts in grades 7, 8, and 11 to determine the range of scores the test would elicit and to assure the comparability of the two tasks. Pilot prompts were scored by a trained reader, and a t-test to determine comparability was calculated. To control for the threats to validity of testing by treatment interaction, the two prompts were systematically administered so that half the students took one pre-test and half took the other.

For the purpose of assessing the project impact and creating a fair comparison of outcomes, each Pathway teacher was also paired with a control teacher at the same school with a class at the same ability level whose students were not in the Pathway Project. These students also completed the pre- and post-assessments. Of all complete pre- and post-test pairs of assessments, 14 were selected at random from each teacher’s class so that each group would be evenly weighted and so the overall load of paper-scoring would be reduced. To ensure that there would be no bias toward experimental versus control or post-test essays over pre-test essays, all selected papers were coded to disguise all information identifying the writer, age, school, grade level, and time of testing. Pathway leaders then reviewed and selected “anchor papers” to use in training scorers, following University of California System “Subject A” placement essay scoring procedures with a few modifications. Scoring rubrics were aligned with the STAR and CAHSEE rubrics, which include the following: quality and depth of the interpretation of text presented, clarity of thesis, organization of ideas, appropriateness and adequacy of textual evidence, sentence variety, precise/descriptive language, and correctness of English language conventions.

Papers were each scored by two scorers, trained veteran UCIWP teachers (not from the SAUSD). Pathway leaders, who served as expert scorers and scoring leaders, retrained any scorer who seemed to exhibit a problematic response set, and served as third scorers, resolving all discrepancies (two-point or greater difference on the six-point scale). Data were kept to assess inter-rater reliability. Typically, the correlation between first and second raters’ scores exceeded .7. Exact agreement typically approached 50%, and agreement within one point typically exceeded 90%.

Data were analyzed by the outside evaluator (Land) using a repeated measures ANOVA. Each year we piloted and used a different pair of writing assess-
ments. Validity of the writing assessment is suggested by moderate correlations (.3-.5) with norm-referenced assessments of vocabulary and language ability.

We also collected data on other variables, including GPA, absences, standardized language arts test scores, performance on high-stakes state writing assessments (STAR-grade 7 and CAHSEE-grade 10), and English placement rates at Santa Ana College. For those variables where treatment versus control comparisons were possible across grade levels, data were analyzed using ANOVA. On STAR and CAHSEE assessments, t tests were used.

**Qualitative Measures**
Qualitative measures included assessments of students’ metacognitive logs, which addressed how they had grown as readers and writers after they looked closely at their own pre-test and post-test writing samples and noted the indicators of their growth as learners. Qualitative measures also included assessments of teachers’ metacognitive reflections written after they had read all of their students’ remarks, highlighted the most representative responses they saw, reflected upon what strategies worked best and why, and considered how they had grown as professionals. We looked for salient themes in students’ and teachers’ reflections about the impact of the project.

**Results**

**Quantitative Study**

**Overall Gains from Pre-to Post-Test**
Table 1 shows growth in student gain scores in writing from the pilot project in 1996-1997 and for the seven years for the OELA Project (1997-2004). The pre/post differences in gain scores between Pathway and control students were statistically significant for seven consecutive years. The average standardized mean differences in gain scores between treatment and control groups was 40 standard deviations, favoring Pathway students over controls over seven years. The average effect size, $\Delta$ (Glass, McGaw, & Smith, 1981) for these seven years was .34, ranging as high as .64. Following Rosenthal’s (1991) suggested application of the binomial effect size display (BESD), the Pathway students averaged over 32% greater success in gain scores on writing assessments over seven years. In the best year, Pathway students had an 86% greater success rate than control group students.

**Comparison of Post-Test Scores**
Pathway students not only grew more from pre- to post-test, but also wrote better essays on the post-test and received higher scores than their counterparts in the control classes. Across the eight years of the Pathway Project, the control group students’ average post-test score was 5.51, as compared with the treatment students’ average post-test score of 6.7 (see Table 2).
It is important to look at the percentage of Pathway and control students who scored a 4 or above from at least one reader on their post-test on a 6-point scale. California has recently moved to implementing a direct writing assessment in grades 4, 7, and 10, in which papers are scored as either failing—1 or 2—or passing—3 or 4 on a 4-point scale. With our 6-point scale, a score of 1, 2, or 3 could be considered a lower-half, unsatisfactory, paper and a score of 4, 5, or 6 an upper-half paper. By 9th grade, over 50% of the Pathway students received at least one upper-half score; the control group’s highest percentage of upper-half scores has ranged from 17% to 35%, never exceeding 50% at any grade level (see Table 3).

**Table 1: Overall Gains from Pre- to Post-Test**

<table>
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<tbody>
<tr>
<td><strong>Pathway</strong></td>
<td>+.96 (SD 2.62)</td>
<td>+1.65 (SD 2.03)</td>
<td>+.54 (SD 2.26)</td>
<td>+.95 (SD 2.66)</td>
<td>+1.0 (SD 1.96)</td>
<td>+.74 (SD 1.64)</td>
<td>+.71 (SD 1.8)</td>
<td>+1.4 (SD 1.97)</td>
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<tr>
<td></td>
<td>n=196</td>
<td>n=308</td>
<td>n=434</td>
<td>n=598</td>
<td>n=656</td>
<td>n=814</td>
<td>n=761</td>
<td>n=811</td>
</tr>
<tr>
<td><strong>Control</strong></td>
<td>+.80 (SD 2.72)</td>
<td>+1.10 (SD 1.99)</td>
<td>+.17 (SD 2.18)</td>
<td>+.41 (SD 2.25)</td>
<td>+.10 (SD 1.80)</td>
<td>+.47 (SD 1.71)</td>
<td>+.40 (SD 1.98)</td>
<td>+.70 (SD 1.79)</td>
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<tr>
<td></td>
<td>n=196</td>
<td>n=296</td>
<td>n=462</td>
<td>n=633</td>
<td>n=673</td>
<td>n=644</td>
<td>n=637</td>
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<tr>
<td><strong>Difference</strong></td>
<td>+.153</td>
<td>+.528</td>
<td>+.387</td>
<td>+.551</td>
<td>+.553</td>
<td>+.268</td>
<td>+.316</td>
<td>+.741</td>
</tr>
<tr>
<td>Favoring</td>
<td>Pathway</td>
<td>Δ=.27</td>
<td>Δ=.64</td>
<td>Δ=.24</td>
<td>Δ=.47</td>
<td>Δ=.16</td>
<td>Δ=.16</td>
<td>Δ=.41</td>
</tr>
</tbody>
</table>

Note:
* Because papers are scored by two readers on a 6-point scale, students can receive as low as a 2 (1+1) or as high as a 12 (6+6). An 11-point scale (2 to 12) roughly translates into A, A-, B+, B-, C+, and so forth. Hence, a 1-point gain is equivalent to one-half a letter grade (from a C to a B-, for example).
** 1996-1997 was a pilot year.

**Table 2: Comparison of Post-Test Scores**

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<tbody>
<tr>
<td><strong>Control</strong></td>
<td>6.4</td>
<td>5.6</td>
<td>5.4</td>
<td>5.4</td>
<td>4.8</td>
<td>5.6</td>
<td>5.6</td>
<td>5.3</td>
</tr>
<tr>
<td><strong>Pathway</strong></td>
<td>7.0</td>
<td>6.7</td>
<td>6.6</td>
<td>6.2</td>
<td>6.7</td>
<td>6.8</td>
<td>6.6</td>
<td>7.0</td>
</tr>
</tbody>
</table>

Note: Pre- and post-test scores reflect the combined scores of two readers as described on the gain score chart.

**Percentage of Students Receiving at Least One Upper-Half Score**

It is important to look at the percentage of Pathway and control students who scored a 4 or above from at least one reader on their post-test on a 6-point scale. California has recently moved to implementing a direct writing assessment in grades 4, 7, and 10, in which papers are scored as either failing—1 or 2—or passing—3 or 4 on a 4-point scale. With our 6-point scale, a score of 1, 2, or 3 could be considered a lower-half, unsatisfactory, paper and a score of 4, 5, or 6 an upper-half paper. By 9th grade, over 50% of the Pathway students received at least one upper-half score; the control group’s highest percentage of upper-half scores has ranged from 17% to 35%, never exceeding 50% at any grade level (see Table 3).
We have questioned whether or not the training in academic reading and writing students received while participating in our project assessment and the other curricular approaches to our cognitive strategies intervention would also be reflected in improved pass rates on the CAHSEE which, effective Spring 2002, is a requirement for receiving a high school diploma. Pathway students passed the CAHSEE at notably high rates as compared with the state, district, and control group averages.

### TABLE 3: Percentage of Students Receiving at Least One Upper-Half Score on the Assessment of Literary Analysis Post-Test

<table>
<thead>
<tr>
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<tbody>
<tr>
<td></td>
<td>PATHWAY</td>
<td>CONTROL</td>
<td>PATHWAY</td>
<td>CONTROL</td>
<td>PATHWAY</td>
</tr>
<tr>
<td>6</td>
<td>19%</td>
<td>7%</td>
<td>19%</td>
<td>5%</td>
<td>24%</td>
</tr>
<tr>
<td>7</td>
<td>26%</td>
<td>23%</td>
<td>41%</td>
<td>4%</td>
<td>49%</td>
</tr>
<tr>
<td>8</td>
<td>35%</td>
<td>19%</td>
<td>46%</td>
<td>13%</td>
<td>51%</td>
</tr>
<tr>
<td>9</td>
<td>52%</td>
<td>29%</td>
<td>64%</td>
<td>25%</td>
<td>64%</td>
</tr>
<tr>
<td>10</td>
<td>74%</td>
<td>58%</td>
<td>68%</td>
<td>30%</td>
<td>87%</td>
</tr>
<tr>
<td>11</td>
<td>82%</td>
<td>52%</td>
<td>83%</td>
<td>19%</td>
<td>82%</td>
</tr>
<tr>
<td>12</td>
<td>61%</td>
<td>56%</td>
<td>80%</td>
<td>21%</td>
<td>71%</td>
</tr>
<tr>
<td>Overall</td>
<td>50%</td>
<td>35%</td>
<td>57%</td>
<td>17%</td>
<td>59%</td>
</tr>
</tbody>
</table>

### TABLE 4: Percentages of Students Passing the English Portion of the California High School Exit Exam (CAHSEE)

<table>
<thead>
<tr>
<th></th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment Group</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students’ Pass Rate</td>
<td>74% N 147</td>
<td>91% N 181</td>
<td>93% N 179</td>
</tr>
<tr>
<td>Control Students’</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pass Rate</td>
<td>54% N 174</td>
<td>75% N 119</td>
<td>66% N 184</td>
</tr>
<tr>
<td>Overall School</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>District Pass Rate</td>
<td>40%</td>
<td>66%</td>
<td>62%</td>
</tr>
<tr>
<td>Overall State</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic Pass Rate</td>
<td>46%</td>
<td>66%</td>
<td>62%</td>
</tr>
<tr>
<td>Overall State</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ELL Pass Rate</td>
<td>28%</td>
<td>42%</td>
<td>39%</td>
</tr>
<tr>
<td>Overall State</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pass Rate</td>
<td>54%</td>
<td>78%</td>
<td>75%</td>
</tr>
</tbody>
</table>
Comparison of 2000-2001 Pathway and Control Groups on Six Variables, Including Stanford 9 Scores

Regarding the variables of GPA, absences, SAT-9 Reading and Total Language scores, and fluency (word gain), in 2000-2001, the most recent year for which we have a complete data set, Pathway students out-performed control group students on all variables. The difference favoring Pathway was statistically significant (N=1614, p>.001) except for absences, where differences favored Pathway but were statistically significant only at the high school level (N=587, p=.0304). We also examined the percentage of students who scored at or above the 40th percentile on SAT-9 Reading and SAT-9 Total Language. The 40th percentile is a critical cut-off level that triggers individual intervention in some California districts. For SAT-Reading and SAT-9 Total Language, respectively, 46% and 62% of the Pathway students scored above the 40th percentile. For control group students the rates were 27% and 45%.

Placement in Composition Courses Based on the Santa Ana College English Composition Test

As of this writing, the SAUSD students comprise 73% of the incoming first-year students enrolled in credit courses at Santa Ana College (SAC). Research at SAC shows that students’ persistence toward the AA degree is influenced by their placement in English composition. Those placed in lower levels of English are less likely to complete the AA degree. Those placed in the transfer-level composition course (English 101) or the course just preceding 101 (English 061) are more likely to attain the AA degree as well as to transfer to a four-year institution. As a matter of course, students intending to enroll in SAC take the English Composition Test in their 12th grade classes in the SAUSD. Table 5 (below) shows the placement rates for Pathway Project students from 2002-2003. The Pathway Project students’ placements were significantly higher than those of other SAUSD students. Particularly noteworthy is the average placement rate in English 101 of 25% as opposed to all other SAUSD students’ placement rate of 13%.

Qualitative Study

When we reviewed the 700 student logs, and the twenty teachers’ written reflections, three themes emerged, illustrating a continuum of growth and linking teacher competence and confidence to student competence and confidence.

| Table 5: SAUSD Placement Rates Based on the SAC English Composition Test |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|                 | N50 Treatment   | N50 Control     | N60 Treatment   | N60 Control     | 061 Treatment   | 061 Control     | 101 Treatment   | 101 Control     |
| 02               | 4%              | 18%             | 27%             | 33%             | 46%             | 30%             | 23%             | 19%             |
| 03               | 1%              | 16%             | 24%             | 43%             | 48%             | 33%             | 27%             | 8%              |
| 04               | 3%              | 14%             | 16%             | 34%             | 56%             | 39%             | 25%             | 13%             |
The Students
First, students’ comments showed that they recognized and appreciated that they were being exposed to a rigorous curriculum by trained teachers and were being held to high expectations:

- I think Pathway students did better than control group students because we are pushed harder. People have high expectations for us. They expect the best.
- Actually, it did not surprise me that Pathway students did better than control students. I’ve been in the Pathway Program since the 6th grade, and I’ve been taught a more advanced way to write than the rest of my peers. I also see that in the control group teachers tend not to focus on students’ weak areas as they do in Pathway.
- I think we are doing better because we read more, write more, and our teachers are getting more skills on how they should teach us.

Second, students recognized their growing command of the specific strategies they were introduced to and practiced to enhance their analytical reading and writing ability, and they were able to cite evidence of their improvement:

- I have improved as a reader by reading more, making predictions, visualizing and using a lot of other strategies to read between the lines. As a writer I have improved by doing a cluster, color-coding my essay, doing multiple drafts, exchanging papers and proofing them.
- I think the greatest thing that helped me as a writer was color-coding my essays. When we wrote essays and we color-coded them, we had lots of yellow on it which was summary, we had a little bit of green which were quotes and examples from the story, and we had a little bit of blue which was commentary. We needed to work on that and then we rewrote using more blue which was what we needed and we did better.

Finally, growth in students’ competence as readers and writers appeared to build their confidence, spark their ambition to succeed, and expand their sense of what is possible to achieve academically:

- I no longer hate reading and writing. I feel like I can read and write anything I want. No book intimidates me anymore. I feel like I can accomplish any of my reading and writing goals. I can write essays without stopping. I have improved tremendously while in this project.
- When I go back and read essays that I have written in past years, it is obvious to me how much the Pathway Project helped me grow as a writer.
Now when I read my own essays I can tell that I don’t just summarize what I read. I go deeper than that and put my own opinions about the topic. I truly believe the program has helped me grow into someone better.

- I think that Pathway, being a program from UCI, makes us realize that we need to go to college and become someone.

Catherine Snow (2002) points out that the motivation of adolescents to read and their engagement in subject matter depends upon a number of factors. “Chief among these,” she says, “is the adolescent’s perception of how competent he or she is as a reader.” (And, we would add, as a writer). “It is the belief in the self (or lack of such belief) that makes a difference in how competent the individual feels” (p. 87). It was our hope that our cognitive strategies intervention would help students to construct an identity of themselves as capable, literate individuals who, ultimately, could “fend for themselves” (Underwood & Pearson, 2004, p.135). The following poem written by 8th-grader Irene Ramirez from Lathrop Intermediate, and presented before 500 parents and students at our celebration of literacy night at Santa Ana College, captures the link between competence and confidence, demonstrating the cognitive and affective impact of the project:

What Pathway Means to Me

What Pathway means to me
Is hard to say succinctly
Construct the gist as I speak
I’ll give some hints as to what I think

My reading isn’t what it was
I ask more questions and make predictions
I try to visualize what I read
I make connections, I do concede

Imagery, symbolism
I know what they are
Before this year
They were really hard

When I write, I know what to do
I plan ahead, and so should you
I form a thesis, I think of a hook
I form opinions on what’s in the book

Concrete details are important too
They help support
What you think
And they prove!
Image Grammar is also cool
I write a sentence with participles
I paint a picture
With my pen in my hand
The final result is oh so grand

In literature circles
We sit ‘round in a ring
Discussing our books
It’s fun and interesting

So Pathway had taught me to read and to write
I knew how before
But now I am tight

I’ll leave you tonight
With one thought before I go
Pathway helps students
Off to college I go!

The Teachers
Analyzing their students’ self-assessments along with their written products enabled the teachers to see the impressive command students had of the indicators of strategic reading and analytical writing. They concurred that their students were motivated by the fact that they were in a special program, benefited from the cognitive strategies approach to reading and writing about challenging texts, and especially demonstrated significant progress from analyzing and revising their own essays using scaffolded revision activities and the color-coding strategy. As the following statements suggest, teachers were also able to step back, see the bigger picture, and articulate what they were doing in taking a cognitive strategies approach to reading and writing instruction for ELLs and why:

My seven years of participation in the Pathway Project have provided me with vital strategies, methodologies and materials in the fields of teaching reading and writing. I think what has been the most inspirational to me as an educator is that these strategies emphasize teaching our students what good readers and writers do naturally that make them effective interpreters in reading and communicators in writing. To quote another Pathway colleague, we strive to make the “invisible visible” to our students. My participation as a teacher in the Pathway Project has been a pleasure, a privilege and has provided this twenty-year veteran of teaching with a renewed enthusiasm and pride in my role as an educator.

Jamie Salafia-Bellomo
6th-Grade Teacher, Villa Fundamental Intermediate
Because my Pathway students have been in the project since 6th grade, there is a noticeable difference in my Pathway class and my other language arts classes. These students are more serious, more self-confident, and more able to analyze and interpret. Each year, I implement new approaches I’m learning in the Pathway Project to add to my students’ repertoires and engage students in guided practice as they move toward becoming strategic, autonomous learners. It’s so rewarding to have them come back to see me when they get to high school and to hear how well they’re doing. Through Pathway, I have also been able to create the same kind of learning community with colleagues in my district that I have in the UCI Writing Project.

Charlie AuBuchon
8th-Grade Teacher, McFadden Intermediate

The methods that I have gleaned from the Pathway Project make up a large portion of my teaching strategies. These teaching strategies cater to all types of learners and, throughout my years of using them, I have noticed a significant improvement in student reading and writing achievement. Students who, at the beginning of the year, could hardly fuse together a coherent paragraph, write insightful and more fluent pieces because of the instructional scaffolding I use to present lessons to them. Compared with students in my other language arts classes, these students can peer into the depth of literature with more insight and, moreover, they can express this insight in writing. On a daily basis, the project has given me and my students focus, insight, and the confidence that every student can achieve higher standards if effective methods are employed.

Jon Marino
11th-Grade Teacher, Saddleback High School

Discussion
In their review of the relevant research on adolescent students who are English language learners, Vaughn and Klinger (2004) state,

Despite the growth in culturally and linguistically diverse populations, and the obvious need to understand instructional practices for these groups better, the amount of research on English language learners is exceedingly sparse. Although research with elementary school students is very limited and often of poor quality, it is bountiful in comparison to research with adolescents. We crave a broader foundation of empirical studies to inform decision-making. (p. 201)

We see our research as adding much-needed substance to the foundation of empirical studies of effective literacy strategies for an under-researched but growing population—secondary ELLs in regular classrooms. Our work validates the promising practices for ELLs advocated by members of The Education Alliance (2003) who concurred that ELLs are most successful when their teachers engage in sustained, high-quality professional development, have high expectations for their
students, expose students to a rigorous curriculum, employ a variety of strategies and guided practice activities to help students read and write about challenging texts, and involve them in collaborating with each other and the teacher as members of a learning community. Further, it highlights the efficacy of implementing a cognitive strategies approach for ELLs using a range of pedagogical strategies to make visible for ELLs the thinking tools accessed by experienced readers and writers during the process of meaning construction. Our study results are also consistent with Taylor, Pearson, Peterson, and Rodriguez’s (2003) findings on the influence of teachers’ practices that encourage cognitive engagement in literacy learning at the elementary level and confirm Langer’s (2000) findings at the secondary level. In particular, our results affirm the belief that teachers can learn to engage students in higher level thinking and discussion about texts through direct strategy instruction, modeling of strategy use, and creating opportunities for students to practice and apply these skills through teacher coaching and feedback.

What distinguishes this study from earlier research is the comprehensiveness of the cognitive strategies intervention, the eight-year duration of the study, the scale of the study in terms of numbers of teachers and students served, and the density of the treatment as it deepened teachers’ and students’ knowledge—not only through multiple years of exposure, but also through weaving the intervention into the fabric of the curriculum as a vehicle for conceptualizing teaching and learning. It is also notable that we were able to achieve consistent, positive outcomes on multiple measures over time.

Next Steps

The current study used a quasi-experimental design with teachers who volunteered to be in the treatment group. One next step we have undertaken is to begin to replicate this quasi-experimental design over a three-year period in two additional districts with strikingly similar demographics and performance profiles, but which are outside our service area, to determine if the implications of the study will hold beyond the local context. Additionally, in 2007-2008, we will initiate a three-year efficacy replication field trial in the SAUSD with a random assignment of teachers to conditions. In the Pathway Project, although we coded teachers and students for the number of years they participated in the study, we did not control for teacher variables such as gender, age, years of teaching experience, training in ESL, qualification status with NCLB, California Subject Matter Project Evaluation (CSET) scores, and measures of self-efficacy. In the replication trial, we will control for these variables as well as collect classroom observational data to capture the fidelity of teachers’ implementation of the intervention and the quality of teacher practice and use of cognitive strategies in the classroom.
Conclusion

The Pathway Project was not just an abstract research study; it was a concrete attempt to level the playing field for specific ELL students in a large urban school district through sustained, ongoing collaboration with a dedicated and committed group of teachers for almost a decade. Although this study was eight years in duration, for the two of us, as university researchers, this line of inquiry has been ongoing for more than 20 years. Our experience has led us to believe that long-term, positive, professional relationships among teachers, researchers, and school administrators are necessary for successful school reform. Equally necessary, we believe, are the teachers’ regard for the identity of their students and the reformers’ regard for the professionalism of teachers. Indeed, the success of this particular intervention owes much to the teachers-teaching-teachers model of the National Writing Project, with its inherent respect for the capacity of practitioners to generate and use knowledge to improve their practice. Ultimately, the most meaningful aspect of the project has been to cultivate in students the confidence and competence as readers and writers to succeed in advanced educational settings as independent learners.

AUTHORS’ NOTE

We would like to thank the SAUSD Pathway teachers who collaborated with us on this study. Additionally, we are grateful to Paul LeMahieu (Research Director, National Writing Project), Ann DeVaney (Visiting Professor, UCI Department of Education), and to the RTE reviewers for their thoughtful comments on our manuscript.

NOTE

1. The Pathway Project received initial funding in 1996-97 from the University of California Regents Diversity Initiative. Thereafter, it received two three-year Program Enhancement grants, and two three-year Program Development and Implementation grants from the U.S. Department of Education Office of English Language Acquisition (OELA). Given the limited opportunities to obtain funding for research on adolescent literacy interventions (Underwood & Pearson, 2004), we are grateful to OELA for the four grants we received to expand and deepen our investigation.

REFERENCES


Olson and Land

A Cognitive Strategies Approach to Reading and Writing


**APPENDIX A: GREAT EXPECTATIONS WRITING PROMPT**

**Writing Prompt**

When we read a work of literature, the landscape the author describes (i.e. the setting) can sometimes give us clues about the thoughts, feelings and overall state of mind of a character whose story is unfolding.

Analyze what the text says in the excerpt from *Great Expectations*. Think about what it means to you, and present an interpretation of the text. Pay special attention to the relationship between the setting and the character who inhabits that setting. Refer to specific images and symbols in the house that reveal something to you about the character of Miss Havisham and about the way she is living her life. Be sure not to just list items in her house; interpret their significance. What overall impression, big idea, or message have you taken away from reading this excerpt that you would like to convey to the reader of your essay?

While writing your essay, remember to use standard written English.
Code: 22115

I think Rosaura feels excited about going to the party. Rosaura’s mom doesn’t really want Rosaura to go to the party because she thinks only rich people are going. Rosaura is very excited about seeing the monkeys. Rosaura’s mom thinks monkeys at a party is nonsense. Rosaura’s mom scratch her Christmas dress so she could wear it. Rosaura thought she looked terribly pretty with her white and glossy dress and glossy hair. When Rosaura got to the party Señora Ines also seemed to notice how pretty she looked. Señora Ines wanted Rosaura to serve the drinks because she was the only one who wasn’t boisterous at the party. I think Rosaura felt angry with Rosaura’s cousin because she was saying that she wasn’t Luciana’s friend. I also think Rosaura was feeling a little nervous because all the questions she was asking. When Rosaura was passing the cake out and she was giving big slices of cake and give Luciana a thin piece that you could see through. Rosaura feels a little nervous when the magician chose her to help him.

Rosaura feels happy when the magician tells her thank you. When Rosaura was going home Señora Ines wanted to give her money. Rosaura felt sad because she thought she was going to the party because she was a friend not because she was going like a slave. Rosauras feelings change a lot at the end because at the beginning she’s excited about going to the party and at the end she’s sad.

Code: 50142

“It’s a rich people’s party,” was what her mother told her, but Rosaura could not understand the differences between the rich and the non-rich. After all, she was invited by the family and was friend of their daughter, Luciana. So, despite her mother’s protest in the beginning, Rosaura attended the party with wonderful enthusiasm. She seemed proud to be able to help out with the drinks, the cake, and even magic act: for the first time in her life, she felt special. However, Rosaura’s view of herself was quickly, and callously, shattered by Señora Ines’s small token of thanks.

Rosaura considered herself a good friend of Luciana because “they would both finish their homework while Rosaura’s mother did the cleaning” everyday after school. They would have tea in the kitchen and even told each other secrets. It was only natural that Rosaura was beguiled by the nature of the invitation. “I’m going because it will be the most lovely party in the whole world,” she had said.

Indeed, it was a lovely party. Dressed up in her Christmas dress, Rosaura felt “terribly pretty.” She was even more proud by Señora Ines’s compliment, “How lovely you look today Rosaura.” As she stepped into the gala event she did not consider herself as “the maid’s daughter,” but as a guest. She felt uniquely special to be chosen to serve drinks and pass out cakes. She won the sack race, nobody caught her while playing tag, and her instant popularity while playing charades made her beam with happiness. Her proudest moment came when the magician picked her out of the crowd to assist him in his magic trick. She was fantastic and very brave. The heavy applause won her over and made her feel like she truely belong.

The only sour incident during the party occurred in the beginning when the girl with...
the bow grilled her about her identity, but Rosaura was prepared for it. However, she was not prepared for what occurred at the end of the party. Feeling as high as a kite, Rosaura greeted her mother at the front entrance. “I was the best behaved at the party,” she told her mother with pride. Then Señora Ines came over and bestowed a great compliment on her that made both her and her mother proud. Rosaura waited anxiously for her little gift, but instead, she was handed two bills by Señora Ines.

Rosaura’s ego was destroyed. She came to the party thinking she was a welcome guest, but discovered that she was used as a maid. Her view toward herself changed at this moment as well as her view toward rich people, especially Señora Ines. “Rosaura’s eyes had a cold, clear look that fixed itself on Señora Ines’s face.” She feels less important now, and not special at all. Señora Ines, someone whom she loved and respected, made her feel like a servant instead of a friend. After that incident, Rosaura didn’t feel great about herself or about Señora Ines. The last paragraph in the story described a sort of barrier between the rich and the non-rich. “An infinitely delicate balance” is the line that separates Rosaura from Señora Ines’s world. Rosaura finally realized that she could not, and would not be allowed, to cross that perfectly drawn line.