Students enrolled in a college developmental reading class used critical literacy techniques to improve reading and writing skills.

A small but significant number of U.S. first-year college students commence their studies with less than adequate reading comprehension strategies and enter developmental reading classes or attend assistance labs. This number may be as high as 20% of the student body at a public 2-year college, 8% at a public 4-year college, and from 5-10% at private colleges (U.S. Department of Education, 1995). These students come unprepared for the academic literacy requirements that typically characterize college coursework (Pugh, Pawan, & Antommarchi, 2000) and that may very well be a part of their upcoming job responsibilities. Assuming that there are multiple factors responsible for these difficulties, such as linguistic or cultural differences and inadequate or inappropriate educational preparation, educators are pressed to determine answers to the following questions: How can we approach these students' problems with effective instruction and academic support that allows for meaningful and appropriate comprehension strategy development? How do we, as professors and facilitators, motivate self-direction and personal literacy strategy development? These questions directed the development of a new syllabus for two college reading classes that I taught at a private 4-year institution.

The educational benefit of following college students' progression through a series of reading and writing assignments lies in discovering relevant and meaningful ways to connect marginalized students with literacy skills and strategies that they have not previously learned or adopted. Assignments that activate and promote students' thoughtful interaction with textual material for various purposes, such as for story, procedural knowledge, or resource information, gain importance as educators encounter students who challenge traditional literacy instruction. Identifying teaching methods that support students' interests, prior understandings, and choice in directing applications for new knowledge is key to developing a new literacy (Willinsky, 1990). In this study, three areas of students' progress are considered: reading and writing connections, language and vocabulary, and purposes for reading.

**Theoretical perspective**

The theoretical perspective that supported the development of strategies for four students in this course was a social-constructivist view of learning, which posits that cognitive development follows immersion in language and experiences in which members can construct knowledge together (Wells & Chang-Wells, 1992). More specifically, this perspective of reading focuses on the social interaction between reader and text, and on reflection among teacher and students as they help one another construct meaning about the process and product (Kucan & Beck, 1997). Educators are seen as facilitators for students as they construct lessons and modify instruction to suit the needs of individual class members. Problem-based learning using strategies such as inquiry, reflection, and discussion can support and heighten learning (Blumenfeld et al., 1991).

This perspective underlies the movement toward a more "connected" literacy, referred to as the
New Literacy (Willinsky, 1990). The New Literacy encourages development of an authentic reason to read text, that is, to answer a question or solve a problem, and imposes a need for effective ways to read. In essence, the New Literacy is a school of thought in which students are seen as authors and meaning makers. That is, reading and writing become a realization and connection of self (Willinsky, 1990). Willinsky defined the New Literacy as consisting of “those strategies in the teaching of reading and writing which attempt to shift the control of literacy from the teacher to the students; literacy is promoted in such programs as a social process with language that can from the very beginning extend the students' range of meaning and connection” (1990, p. 8). Willinsky's New Literacy is supported by the models presented by other theorists who share his premise that reading must be meaningful and useful to students. Freire and Macedo (1987) explained that students' literacy competencies—that is, their ability to read the word—are built on their ability to read the world around them. Rosenblatt (1994) characterized the reading process as a transaction between the reader and the text, strengthening the importance of the reader's prior knowledge and goals.

As previous studies have indicated the need for strong reading-writing connections (Shanahan, 1997) and reading-writing-research connections (Many, Fyfe, Lewis, & Mitchell, 1996), it follows that the nature of reading comprehension strategy instruction in college classes must be relevant and applicable as the students immerse themselves in a highly literate environment (Applebee, 1984). And yet, according to Allen, Swearingen, and Kostelnik (1993), many college-level developmental reading courses and tutoring clinics are still primarily skills-based. These studies support the need for development of reading comprehension strategies using the I-Search paper (Macrorie, 1988). It consists of free writing on a topic that is uniquely important to the student. Macrorie explained the differentiating quality of what he and other researchers call I-Searches—not Researches, in which the job is to search again what someone has already searched—but original searches in which persons scratch an itch they feel, one so marvelouslyitchy that they begin rubbing a finger tip against it and the rubbing feels so good that they dig in with a finger nail. A search is to fulfill a need, not that the teacher has imagined for them, but one they feel themselves. (Macrorie, 1988, p. 14)

The focus students

Participants were four students at an urban, inner-city university, primarily focused on pursuing careers in the fine arts. All students were voluntarily enrolled in a class entitled College Reading, although the four in this case study had been alerted to the need for inclusion in such a class following their performances on a reading test (Test of Adult Basic Education, or TABE) required for entrance into the university. Eight students were enrolled in the class, but only the four focal students described here attended 80% of the classes and completed the final assignment. These students were reading below an eighth-grade level with additional difficulties in reading comprehension. The four focal students differed in their educational and ethnic backgrounds, gender, and age, but all expressed a need to become better readers and to understand course material as their motivation to enroll in the class. All were first-generation college attendees. Their ages ranged from 18 to 22. All students have been given pseudonyms. Each student initially completed an informal survey of personal reading strategies compiled from several formal sources (e.g., Schumm & Post, 1997).

Robert was 19 years old and of Polish ancestry. He was a first-year student at the college and was attending full time. He was bilingual, fluent in both English and Polish. He commented that he didn't pay much attention to classwork in high school, mostly due to disinterest in the lectures but also due to a lack of confidence in his abilities. He lived with his family, who supported his decision to attend college but were unable to help him with content material. He stated that he was aware that he needed to read and write more proficiently in order to reach his goal of becoming a playwright.
Rose was 18 and also a first-year student. She was Mongolian in ethnicity, and was able to converse fluently in Mongolian, English, Russian, and French. Her family lived in the city where the college was located but she shared an apartment with a friend. Rose admitted to having problems with the reading comprehension questions on the entrance reading test, but felt that this hadn’t been a problem for her in completing assignments in her high school classes. Rose had chosen to major in filmmaking, although she knew very little about the topic and had no past experience in this area.

Susan was 22 and was a returning first-year student. She had completed a few courses during the previous school year, but left so she could work full time. She was African American, had medical problems that interfered with her full-time status at school, and lived in an apartment with her mother. She was qualified for special education supportive services, which she received in addition to attending classes. Her only fluent language was English. Susan felt confident about her reading and writing abilities, and was interested in broadcasting and media presentation careers.

Raymond was 21 years old, African American, and a junior. He was a full-time student, and had a full-time job as well. As a result, he was slightly disorganized and often distracted during our conversations. Raymond felt that the reading comprehension test was difficult, and that he struggled to find the appropriate answers among the choices. He spoke using the dialect referred to as African American Vernacular English (AAVE), which was strongly reflected in his writing samples. He had not decided upon a major focus in his college studies and chose coursework that interested him each semester.

Course content

Three main teaching and learning assignments helped develop reading comprehension for these students. These were not presented in chronological order; instead there was overlap in the introduction of parts of each component. The syllabus was constructed to include teaching and learning activities to improve reading comprehension in a classroom context in which the reading-writing-research connections were clear. The assignments included inquiry-based research (the I-Search project), independent and shared reading events, and direct instruction of reading comprehension strategies. The I-Search project applied reading and writing strategies and new insights gained from the other two activities.

I-Search paper. The inquiry paper was introduced as the central, critical project and culminating assignment for the class. During the third week of classes, each student chose a topic of inquiry relevant to his or her interest, in most cases directly related to his or her college major. These topics were discussed among the class members in order to help the writer further shape, narrow, and focus the questions that would drive the inquiry. Consistent with the scope of Macrorie's (1988) self-developed information search, the students were provided with opportunities to gather data through varied experiences. Students were directed toward resources that would inform their inquiry from a list provided in class and from classroom members' suggestions. These resources included, but were not limited to, interviews with college professors using guided questions concerning reading and writing advice, Internet searches using university computer systems, online discussions among students and experts, journal references taken from library sources, and expository and narrative text chosen from varied sources. Instructions for using these sources and comprehending the content were provided through introduction and hands-on experience with the genre, guiding questions for first contacts, ongoing reference, and monitoring of independent completion. Weekly conferences between students and professor monitored the papers' progress toward completion, through development of the topic and three successive drafts.

Independent and shared reading. Ella Price's Journal (Bryant, 1972), a fictional narrative, was
read as a group activity to situate and practice new reading comprehension strategies and initiate discussion. The book is about a young woman returning to college, immersing herself in classes within a social environment that is confusing and unsettling. Her need to acclimate to new study patterns and the college environment was similar to the needs of the students in the class. In the text, significant events are shared with the reader through Ella's personal journal entries for her English class. There were several themes that the students identified throughout the text, such as racial and cultural discrimination, feminist concerns of "double standards" and sexual relationships, moral issues of honesty and truth, and educational relevance and independent thought.

Weekly group discussions for reading response used text examples for support and independent experiences for further connections. Representative text selections were read in pairs or individually, followed by completion of book reviews. In most cases, these texts were the same ones used in the I-Search project.

**Direct instruction of reading comprehension strategies.** In order to enhance the content and guide the completion of the I-Search paper, review and instruction in reading preparation and comprehension strategies accompanied the classroom discussions. First, students were instructed to identify purposes and foci for college reading, that is, whether they were reading for factual information, for basic ideas and connections, or as resource material for an application or project. Second, students learned to identify and compare various genres of text in terms of organization and content, using this information as a preassessment strategy for reading in the college classes for which they were enrolled. Third, the prereading strategy of skimming for essential chapter material was explained, modeled, and practiced using excerpts from texts they were using in our class and others. Fourth, we discussed the specifics of morphemic analysis, that is, looking for meaningful or recognizable parts or roots of difficult vocabulary words in order to better understand the statements in reading passages. Fifth, we experimented with various forms of notetaking strategies (Pressley & Woloshyn, 1995; Schumm & Post, 1997) in order to support each student's preferential form of (re)collecting information from text. Last, formats for summary statements were reviewed as midreading and postreading strategies to aid comprehension and self-monitoring. In all cases, college texts were used for application of comprehension activities in class. These were all monitored through writing activities such as journal entries, application exercises, and drafts of students' I-Search papers.

**Procedures.**

Approximately half of each class, about 1 hour, was devoted to an in-depth investigation of the genres of the resource materials. This was a core element in our reading class because even though they were aware of the nature of these resources from previous exposure, students were unfamiliar with how to independently use or comprehend the content. For example, in order to introduce students to e-mail and Internet use, we visited the computer laboratory to register each student for Internet access. To learn the necessary technical vocabulary and strategies for e-mail use, we discussed and practiced exchanging e-mail as a class. Students were assisted in their use of online discussions among peers, Internet browsing for content information from experts, and e-mail communication. At the library, these students acquired a library card, reviewed information access, and discussed journals as a genre. Names of cooperative college professors were provided for interviews, and a set of guided questions concerning reading and writing advice was compiled with student input. Expository and narrative text were chosen from varied sources, including the students' own content-area textbooks.

Each week, at least 1 or 2 hours of class time were devoted to the development of progressive aspects of the I-Search paper through small-group discussions and paper comparisons. We methodically discussed strategies for improving reading comprehension through prior knowledge, fluency, rate, accuracy, word identification, vocabulary analysis, notetaking, and test taking. We
discussed the importance of understanding the author's perspective and tone and of becoming critical readers. Each week, we used text passages to complete exercises in specific areas of reading comprehension, discussing and sharing experiences along with introductions to new strategies for reading comprehension. The ongoing writing process, a series of continually modified drafts, was explained. For the vocabulary sections, we reviewed root words and their meanings. To increase comprehension we reviewed before, during, and after strategies for reading. To increase rate, we discussed the importance of highlighted information and the beginning of most paragraphs, skimming other parts for information, and rereading parts that may have been confusing. For test taking, we decided to look at the questions first to identify foci and develop a purpose for reading. We applied each of these strategies to reading for the I-Search paper, as well.

The progression of the I-Search paper's component parts was cumulative, building on each week's lessons. Individual writing and conferences followed class discussions, similar to a reading or writing workshop approach (Atwell, 1987; Reutzel & Cooter, 1991). As a culmination of the semester's studies of the many components of reading comprehension, we used part of the last four class sessions to talk through the completion of reading comprehension exercises. When necessary, the anticipated progression of classroom events was changed to respond to students' questions and help with the papers. (See Figure 1.)

**Data collection and analysis**

The data sources for this study consisted of field notes of class events, participant observations, audiotapes of class members' discussions (concerning reading comprehension strategy use and paper comparisons), and literacy artifacts consisting of students’ journal entries with reflective comments and photocopies of students’ work. Field notes were added following each class. Artifacts were photocopied before and after grading and conferences. The sources were varied in order to compare information and to provide for triangulation in results.

Consistent with the methodology of action research through teacher inquiry, cycles or spirals of observation, reflection, and action (Pappas, Kiefer, & Levstik, 1999) characterized the analysis of data collected during class activities. Ongoing formative analyses of discourse samples and descriptive field notes using a constant comparative method (Strauss & Corbin, 1990) provided a determination of major patterns in changes in the students’ reading comprehension. Evaluative judgments were made at several levels of intervention and analysis in order to identify, support, and monitor changes in students' literacy competence. During the study, those problems that seemed to initially limit or interfere with progress in a particular curricular activity became the target for observation or instruction in my subsequent classroom visits. An analysis was then made of new attempts at reading effectively, and new instruction would follow over the course of the semester.

Direct participant observation during classroom activities allowed for "on-the-spot" decision making about the appropriateness of responses to text, allowing for immediate (re)introduction of literacy skills when necessary. Indications for intervention included increased signs of frustration as students struggled to express an idea or interpret a sample of text. Feedback relating to the effectiveness of the strategy was both immediate, in that the change allowed or interfered with students' competent participation, and delayed, as we also discussed the changes at a later date.

The second level of analysis was through consideration and coding of transcribed discourse samples and the situational notes that accompanied them. Review of students’ reading strategies and of the teacher's and students' antecedent and consequent comments provided further insight on the areas where students required support or clarification. Interpretations and goal setting that followed this analysis were done with occasional input of another reading comprehension professor. This collegial collaboration allowed for extended discussion and strategy
recommendations.

A third level of analysis derived from informal conversations with students in locations other than the classroom, such as in hallways or in my office. These important interactions were initiated by members of the study. These meetings were unscheduled and not audiotaped, but were alluded to in the field notes.

These patterns, grounded in field experiences within a one-semester course, evolved through discussion and reflection. This set of forms of analysis was well matched to the study because it provided a way for me to reflect upon the nature of students' progress with reading comprehension strategies. Explanations of the nature and occurrence of specific patterns are offered throughout the text. Examples of narratives from classroom discourse are included for illustration and explanation. Comparative data were also available from the pre- and posttest forms of the TABE reading comprehension test results and the reading survey form developed for this class.

**Improvements to students’ comprehension**

Changes in several areas of development occurred in the four students’ reading comprehension strategies and their application of newly learned information. Their reading became more focused, more critical, and more productive. These changes were noticeable in their individual contributions through classroom discourse participation, in small-group meetings, and in paper and assignment completions.

**Discussions and critical thinking.** Throughout the semester, the students' comfort in sharing ideas and frustrations with one another increased. Students revealed that they had not commented on peers' assignments, progress, or problems in previous classes, and that this process was instructive for (re)constructing their own understandings. These conversations helped each of them to consider prior knowledge of their topics and to integrate new information with their own previous constructions.

The students did not choose to read one another's early drafts of inquiry papers because they were struggling to compose their own constructions and preferred to learn from specific suggestions and problem-solving models. Issues of process and organization were resolved for individual students. Eventually, however, students began to share questions about their own papers. For example, Robert wanted suggestions for finding core ideas and usable information in the resources he chose so he could formulate a plan for devising a play of his own. Rose needed language and vocabulary support as she read expository information and developed her paper. Susan requested help with organization of information as she struggled to transfer the new information she learned into her own words. Raymond required guidance with finding the main ideas in expository text, as was obvious from his early writing samples.

Critical thinking and interpretive response were used more frequently. Students collaboratively used higher level forms of information analysis, such as critiquing text for deeper meaning and usefulness. For example, Rose observed that Robert had integrated a lot of new information concerning other people's experiences with filmmaking, but needed to apply the information to his own efforts. She suggested that he refer to a computer disk that might provide him with explicit information for his paper. Susan questioned the formal nature of the information she was reading and how she could clearly articulate her own "voice" in her interpretation. Raymond argued that the use of his own dialectical grammar made his arguments more powerful as he discussed text and his own opinions. These practices helped them to trust one another and to mitigate the competitive nature of discussing text.
Reading and writing connections.

Although the emphasis of the class was on reading strategies for comprehension, we discussed and used writing activities as well. Initially, students were not comfortable with the number of journal entries that accompanied the readings. Some students were able to reflect orally but were at a disadvantage when they first tried to keep journals. They were not used to formalizing their reactions to reading or to responding in a critical and personalized manner. In addition to difficulties with reading comprehension, several students in the class had problems with writing organization, quality, and quantity. As a result, they were still having trouble writing their thoughts about how they approached reading assignments as the semester ended. I did, however, notice progress in their thinking about reading and in their critical stances.

For their I-Search projects, the students chose topics in which they had vested interests. Raymond chose to write about the use of nonstandard English in educational settings. Susan researched the educational resources available on our campus and others for assistance with students' chronic medical problems. Robert investigated the process of scriptwriting and offered his own first draft of a play. Rose chose to study the opportunities and experiences of women as filmmakers.

Two examples provide illustrations of the reading and writing connections made by the students in the assigned reading, which stretched their writing abilities during the final I-Search drafts. Rose wrote brief summaries of the chapters with a short added comment such as "This made me feel sad," in her journal entries focused on assigned reading. In her final book report she wrote,

At the beginning I felt the same way like Ella, how she thought that she might not be able to write journal everyday. Then at the end she said that she has filled a whole notebook, and she admits that it's getting easier. I'm thinking to myself if I really try hard I can do it. I mean, I can write journals in all of my classes.

Raymond, whose summaries of initial reading assignments varied greatly from those of the other members of the class, was able to more accurately pinpoint his difficulties and solutions by the end of the class when he wrote, "Be more focus when I read and start looking up words that I don't understand. Also, try not to hide my potential. And the most important, stop taking my time and [instead] ask question." In all cases, journal entries focused on responses to text and on analysis of the students’ reading progress.

In addition, information in early drafts of the I-Search paper was reworded and regrouped into meaningful and individual thought organizations, not merely borrowed from the text. For example, Rose rewrote the component parts of the paper with a different focus than in the previous submissions. The original draft of her explanation of the two interviews that she conducted as she collected information consisted of two organizations. The first interview was in a question-answer format; the second was a two-paragraph narrative with the quoted material included in the text of the paragraph. She organized the final draft around three focal points gained from the interviews, explained in her own words.

Raymond's paper was originally simple reviews of the two texts he chose to read as resources. Both reviews originally included 4-5 short paragraphs, each containing a fact or event and a limited response to it. In the final paper, following class discussion of text organization and comprehension, he discussed three main points that he extracted from each text, and provided examples for support. These changes were clear indications of an expansion in his approach to reading and reflection with regard to text.

Language and vocabulary. Rose and Raymond, among other students in the class,
experienced difficulties with standard English. Positive changes in their understanding and use of Standard English occurred with the amount of reading they did each week. They were not originally aware of the differences between their language and Standard English. Following feedback from classroom members concerning Raymond's consistent use of the African American vernacular, he chose the subject for his I-Search paper. He questioned and reasoned in his paper, "If Standard English is considered the official language, why are some people who were born in America still having a hard time communicating with the English Language? Part of the reason is that we never talk Standard English.... The answer is to adapt to what [people] are saying in order to communicate with each other."

Rose was unfamiliar with the vocabulary of language and textual analysis, such as resources, metaphors, and connotation. She didn't remember being exposed to these terms in her high school writing classes. For her, textbook vocabulary had slowly become uncomfortably varied and sophisticated, creating frustration. Rose admitted in discussion and in writing that she wanted to have a larger vocabulary. She had difficulty as a second-language learner attempting to write in an acceptable way. Rose found our discussions of root words and morphemic analysis helpful in developing vocabulary.

Susan had problems with word retrieval, which interfered with her reading and writing fluency. Vocabulary suggestions from other class members were beneficial to all, initiating discussions of word connotation and use. Both she and Robert struggled with finding vocabulary that appropriately articulated their ideas.

**Purposeful reading.** Robert and Susan were pleased to have developed clearer foci for their inquiry topics and explained that they had chosen topics in other classes more carefully, instead of detaching from assignments as was their usual approach. Robert commented, "This is really a great idea. This is really what I needed to do. We will use this information now. I should be doing this all the time." Susan wrote that she had begun to "surf the Internet for information on subjects, gather as much information from books as I can, and speak to other instructors" as sources of purposeful learning. These students, who admitted to rarely taking notes or forming summary statements during lectures or reading assignments, had developed notetaking strategies to recall information in text for classroom questions and discussion. With the added effort and knowledge, their use of critical thinking and response were more obvious. These students were making connections with the information rather than simply recalling facts.

**Results of standardized tests (TABE).** The changes in reading comprehension were not only apparent in qualitative evaluation of the students' writing; results from formal testing revealed mild differences in reading comprehension measures between the pretest (Form 7) and posttest (Form 8) scores; that is, each of the four focal students gained the equivalent of at least three grade levels in reading achievement (see Figure 2). Although reading material was provided in the students' other classes, reading instruction was not emphasized in lieu of hands-on activities for procedural knowledge in the fine arts. Comparable pre- and posttest TABE scores for the other students in the class were not available, however, it is believed that the coursework promoted change over and above the college classes in which these four focal students were enrolled.

**Helping students construct useful literacy strategies**

The college-level developmental reading program I have discussed and my case studies provide further insight into the development of meaningful reading comprehension strategies that connect with the purposes and needs of struggling college readers. Although the study involved a small number of students in one program, it provides a depth of knowledge about complex phenomena (Hammersley, 1992) and responds to the need for an increased number of investigations of integrated approaches to literacy teaching and learning (Shanahan, 1997). The implications of this study relate to more effective instructional approaches for students' own construction of
useful literacy strategies for success in college classes and application in their chosen careers. The study also answers questions about the process and context of college developmental reading programs.

An important consideration is the integrated nature of the reading and writing assignments that seemed to be central to this developmental reading program. The focus was on the importance of integrating the specific elements that have been used at earlier educational levels and are still necessary for all reading activities. These include "before" reading strategies, such as identifying a purpose for reading and analyzing text structure and organization through language and writing activities; "during" reading activities, such as reviewing and clarifying ideas through questioning in oral and written forms; and "after" reading skills, such as summarizing and applying information in papers and journals (Valeri-Gold & Deming, 2000). Other studies have proposed similar integration of reading and writing activities for more critical reading and comprehension through workshop organization (Bartholomae & Petrosky, 1986), theme development (Segall, 1995), diverse literary selections (Valeri-Gold & Deming, 1994), and strategy planning (Stahl, Simpson, & Hayes, 1991). Students in college developmental reading classes need to be introduced to all of these strategies, and to have them explicitly modeled, practiced, and discussed in order to construct (and reconstruct) conceptual understandings. In addition to becoming familiar with these processes, they need to learn to use those that work for them in successive college classes.

Researchers have advocated the importance of content-area reading and writing using interdisciplinary approaches in middle and secondary school (Alvermann & Phelps, 1998; Lapp, Flood, & Farnan, 1996; Vacca & Vacca, 2002). Teacher education programs must include and stress the importance of introduction and mastery of these new literacy goals and critical thinking tasks prior to students' entrance into postsecondary programs (McKenna, 1998). New foci on the application of reading strategies for vocational and professional purposes must begin in earlier grades, especially for students from nonmainstream populations, to equally provide all students with choices for successful careers.

FIGURE 1 Overview of course assignments

Legend for Chart:

B - Activity description
C - Content materials
D - Theoretical rationale

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<tr>
<th>A</th>
<th>B</th>
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<tr>
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<td>I-Search (self-selected inquiry)</td>
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<td>A purposeful approach to reading through development of a free-writing assignment.</td>
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<td></td>
<td>Research inquiry deriving from a student's life and needs.</td>
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<td>Macrorie, 1988; Many, Fyfe, Lewis, &amp; Mitchell, 1996</td>
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Independent and shared reading

Portions of a narrative,
fictional text were assigned for home readings and for in-class read-alouds.

Ella Price's Journal
Bryant, 1972

**Direct instruction activities**

Several strategies were explicitly introduced to assist students with reading comprehension of narrative and expository text, in preparation for university content area reading and research assignments.

- Prereading assessment of text's organization.
- Skimming of essential chapter material.
- Forms of notetaking.
- Formats for summary statements using representative reading materials.

Fry, 1977; Schumm & Magrum, 1991
Schumm & Post, 1997
Palmatier, 1973
Applegate, Quinn, & Applegate, 1994

GRAPH: FIGURE 2; Pretest and posttest TABE results for focal students

**REFERENCES**


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