The Effect of Strategy Instruction on Bilingual Students' Cognitive Strategy Use in Reading

Yolanda N. Padrón
Associate Professor
University of Houston-Clear Lake

Abstract

There has been a great deal of emphasis on the teaching of thinking skills. For many second language learners, however, instruction in the use of cognitive strategy is almost nonexistent. Research identifying cognitive reading strategies used by second language learners has revealed a variety of strategies that students use to comprehend text. The identification of cognitive reading strategies has contributed to the development of instructional programs which teach students to use these strategies.

The present study investigated the extent to which two instructional approaches (i.e., Question-Answer Relationships and Reciprocal Teaching) enhance Hispanic bilingual students use of cognitive reading strategies. The results indicated differences in the use of cognitive reading strategies by grade and treatment group.

Introduction

The identification of cognitive reading strategies has contributed to the development of instructional programs that teach students how to use these strategies in order to increase reading comprehension (Palinscar & Brown, 1984, 1985; Wittrock, 1991). In reading, for example, training approaches have helped readers become more aware of the strategies they use so that they can develop greater self-control while reading (Brown, Campione & Day, 1981; Haller, Child & Walberg, 1988; Paris, Wixson & Palinscar, 1986; Weinstein & Mayer, 1986). Strategy training has included: (a) skills training in using specific strategies, (b) training about the significance of those strategies and their usefulness, and (c) self-regulating the use of strategies (Baker & Brown, 1984; Brown, Campione & Day, 1981). For instruction, the teaching of comprehension-fostering skills suggests that reading comprehension may be enhanced through instruction of strategies (Forrest-Pressley & Gillies, 1983; Heller & Gordon, 1992; Palinscar & Brown, 1984,

1985) by providing students with better awareness and self-control of the reading task (Paris, Wixson & Palinscar, 1986).

Studies on strategy training have found that when strategies are modeled for students and when students have an opportunity to practice the strategy, their reading comprehension improves (Palinscar & Brown, 1984, 1985; Saracho, 1983; Wittrock, 1991). Research in this area has also found that there are individual differences on the use of cognitive reading strategies. Mature readers (Palinscar & Brown, 1984) and female students (Knight & Padrón, 1986), for example, are more likely to use a variety of cognitive strategies. Furthermore, some research has been conducted in examining the strategies used in reading by bilingual students while reading in their second language (Block, 1986; Padrón, Knight & Waxman, 1986; Padrón & Waxman, 1988). Padrón, Knight, and Waxman (1986) found that bilingual students use fewer strategies and different types of reading strategies than English-monolingual students. Little research, however, has been conducted that examines the effects of cognitive strategy instruction on the strategies that bilingual students use in reading text that is written in their second language.

A possible explanation for differences in the academic achievement between high- and low-achieving students may be that lower-achieving students are often being denied the opportunity to learn higher-level thinking skills (Coley & Hoffman, 1990; Farr, 1986; Foster, 1989; Moll, 1986; Waxman, Padrón & Knight, 1991; Stein, Leinhardt & Bickel, 1989). Reading instruction for at-risk middle- and upper-grade students, for example, has been found not to focus on comprehension (Brown, Palinscar & Purcell, 1986). The lack of exposure to higher-level thinking skills may be due to the assumption that students must demonstrate the ability to learn the basic or lower levels of knowledge before they can be taught higher-level skills (Foster, 1989; Stein, Leinhardt & Bickell, 1989). In the case of limited English proficient (LEP) students, higher-level thinking skills are generally not taught until the student has mastered English fully because many teachers assume that students are not able to comprehend until they can speak the language well (Garcia & Pearson, 1991). This explanation may account for the reason why LEP Hispanic students have been found not to use the same type of reading strategies nor as many reading strategies as other higher-achieving Hispanic students (Padrón, Knight & Waxman, 1986).

Although studies continue to find that strategy instruction has beneficial effects on student outcomes (e.g., Padrón, 1992; Pressley, 1990), few studies have investigated the use of this procedure with culturally and linguistically different students (Padrón, 1990; Waxman, Padrón & Knight, 1991). The present study examines the extent to which instruction in cognitive reading strategies enhances Hispanic bilingual students' use of cognitive reading strategies. More specifically, this study investigates the effect of two types of strategy instructional approaches on bilingual students' cognitive strategy use in reading English as a second language. The two strategy approaches used in the present study are: (a) Reciprocal Teaching (Palinscar & Brown, 1984) and (b) Question-Answer Relationships (Raphael, Winograd & Pearson, 1980). Both of these instructional approaches have been found to be effective in improving students' reading comprehension, but they have been rarely used with LEP students.

Reciprocal Teaching is one of the most frequently cited approaches to cognitive strategy instruction. The procedure takes place in a cooperative instructional environment in which the teacher and students engage in a dialogue. The students are instructed in four specific comprehension monitoring strategies: (1) summarizing, (2) self-questioning, (3) clarifying, and (4) predicting. Studies using reciprocal teaching have found that strategies can successfully be taught to low-achieving students and that once these are learned, use of these strategies increases reading achievement (Palinscar & Brown, 1984; Padrón, 1985; Pressley & Harris, 1990).

Question-Answer Relationships (QAR) is a procedure that is based on Pearson and Johnson's (1978) taxonomy of questions. Students are taught that answers to questions could be: (1) text-explicit when the answer was stated in the sentence of the text; (2) text-implicit when the response to the question must be drawn from different places in the text; and (3) script-implicit when the answer to the questions depends on the readers prior knowledge. This procedure has been used to examine student's knowledge and use of question-answering strategies and has been found to have some empirical support (Bartlett, 1979; Raphael & Pearson, 1985; Raphael, Winograd & Pearson, 1980). Overall, this procedure provides instruction in locating and identifying origins of information. In addition, it teaches students to realize when inferential reasoning is needed.

Method

Subjects. The subjects in the present study were 89 third, fourth, and fifth grade Hispanic bilingual students ranging from eight to twelve years of age. They attended a school in a small suburban school district in the southwest part of the United States. The school was located in a low income area of a small industrial town near a major metropolitan city. There were: 23 third graders, 35 fourth graders, and 31 fifth graders.

Materials. Students were administered the Reading Strategy Questionnaire (RSQ) (Waxman & Padrón, 1987) which was adapted from Hahn (1984) and Paris & Myers (1981). This is a Liken-type instrument consisting of 14 strategies. Seven of the strategies included in the RSQ have been found to be negatively related to students' reading achievement: (a) Thinking About Something Else While Reading, (b) Writing Down Every Word, (c) Skipping the Parts You Don't Understand in the Story, (d) Reading as Fast as You Can, (e) Saying Every Word Over and Over again, (f) Looking Up Words in the Dictionary, and (g) Saying the Main Idea Over and Over (Hahn, 1984; Padrón, 1985; Padrón & Waxman, 1988). The other seven strategies have been found to be positively related to students' achievement: (a) Summarizing in Writing, (b) Underlining Important Parts of the Story, (c) Self-generated Questions, (d) Checking Through the Story to See If You Remember All of It, (e) Asking Questions About the Parts of the Story You Don't Understand, (f) Taking Notes, (g) Imaging or Picturing the Story in Your Mind (Hahn, 1984; Padrón, 1985; Padrón & Waxman, 1988). The success or failure of strategies has been related to the type and depth of processing that they require. Strategies that are positively related to reading achievement include strategies that ensure deep processing of text and enable students to organize their knowledge of storage and retrieval in a personally meaningful way (Waxman, Padrón & Knight, 1991). The RSQ was administered as a pre- and post-assessment to determine students' perceptions of the strategies that they use most often while reading text. The RSQ has been found to be reliable and valid in other studies and the internal consistency of the questionnaire is .80 (Padrón, Knight & Waxman, 1988).

Instructional materials used for all instructional groups were the Turman Publishing Company series of *Famous People*, Levels 2.5,

3.5, 4, and 5. These stories are about famous people in the past and present and are intended to be of high interest level. Each story is approximately 100 words in length. Students read approximately two stories during each session.

Procedures. Students were randomly assigned at each grade level to four groups: (a) Experimental Group 1 (n=25), (b) Experimental Group 2 (n=24). (c) Control Group 1 (n=21). and (d) Control Group 2 (n=19). Two control groups were used in the study to assess whether or not it was the extra tutoring rather than specific tutoring on cognitive strategies that affected students' strategy use.

Both experimental groups and Control Group 1 were taught twice a week for 30 minutes for a period of a month. Students were pulled from their class during the regular school day to participate in the training program. They were instructed in groups of 6 to 10 students from the same grade and ability level. Instruction was conducted by the researcher during a class period other than reading.

Students were administered the RSQ (Waxman & Padrón, 1987) at the end of the strategy training session. The survey administrators read the items aloud to the students so that reading ability would not interfere with the students' ability to respond to the items. Students were to indicate on the questionnaire to what extent they used the strategy described. They could indicate (a) Always, (b) Sometimes, and (c) Never. A mean score of three indicated that the student perceived using the strategy all of the time, whereas a score of 1 indicates that the students perceived using the strategy none of the time.

Instruction for Experimental Group 1. The reciprocal teaching approach was used with this group. Based upon the research by Palinscar and Brown (1984, 1985), the following four activities were included for this group: (1) question generating, (2) summarizing, (3) predicting, and (4) clarifying.

At the beginning session, a discussion was conducted about why sometimes readers experience difficulties in understanding text. Students were then told that they would learn four activities that would help them to understand what they read. Students were encouraged to use these activities in reading other materials in their classroom (Palinscar & Brown, 1984, 1985).

In the following sessions, the teacher modeled the four activities of questioning generating, summarizing, predicting and clarifying. Students were asked to look at the title and pictures in the story and think of the kinds of questions that might be asked by the teacher. Next, students made predictions of what the story might be about. These predictions were referenced during the session.

Students were asked next to read the passage silently. After reading the story, they were instructed to summarize the story. In addition, anything that was confusing was clarified for the student, for example, definitions of words. At the conclusion of these activities, students answered the comprehension questions independently.

On the fourth day of instruction the teacher took the role of reinforcing, providing feedback, and monitoring of performance (Palinscar & Brown, 1984; 1985). Students were assigned to play the role of the teacher and model the four activities practiced during the previous three sessions. The same procedure was followed until the conclusion of the study. Corrective feedback was given by the teacher throughout the session.

Instruction for Experimental Group 2. In this group, students were taught to classify various types of comprehension questions according to how they can be answered. Students were taught that answers to questions could be: (a) text-explicit (i.e., "right there"), when the answer was stated in a sentence in the text; (b) text-implicit (i.e., "putting it together"), when the response to the question must be drawn from different places in the text; and (c) script-implicit (i.e., "in my head"), when the answer to the question depends on the readers' prior knowledge. Correct responses from students were always praised. When an incorrect response occurred, the students were guided back to the text to locate the answer and they underlined where the answer could be found. Prompts were also given to help students find the answer. In cases when the answers were not directly written in the story, students were shown how to draw the answer from various sections of the passage by using prior knowledge.

At the initial session, students were given a passage with questions providing the question-answer relationships. Students, in the following sessions were given passages, questions, and responses. They were then asked to match the answers with the questions. Teacher guidance was gradually decreased. On the

fourth day, students were able to read passages and identify the question-answer relationships.

Instruction for Control Group 1. This group was given an introduction to the passage and then students read it silently. After reading the passage, students independently answered comprehension questions. Students were also asked to note any difficult words and these were discussed with the group as a whole.

Instruction for Control Group 2. These students took the RSQ (pre- and posttest), but received no intervention. They remained in their classroom and received instruction from their teacher on a subject other than reading.

The present study employed a 3 (grade) X 4 (group) experimental design. The 14 strategies were used as the dependent variables in a multivariate analysis of variance (MANOVA) with grade, group, and their interaction as factors. One-tailed tests were used since the directional hypotheses indicated that those students in higher grades and those in the experimental groups would do significantly better than students in the lower grades and control group students.

Results

Table 1 reports the overall means and standard deviations of the reading strategies. Students most frequently cited using the strategies of: (a) Asking Questions about Parts of the Story Not Understood ($\underline{M}$= 2.29; $\underline{SD}$= .63), (b) Checking Through the Story to see if you remember all of it ($\underline{M}$= 2.29; $\underline{SD}$= .66), and (c) Imaging (M= 2.28; $\underline{SD}$= .69). Students' strategies that were least cited included: (a) Reading Fast ($\underline{M}$= 1.31; $\underline{SD}$= .57), (b) Thinking About Something Else While Reading ($\underline{M}$= 1.49; $\underline{SD}$= .61), and (c) Writing Down Every Word ($\underline{M}$= 1.56; $\underline{SD}$= .74). It should be pointed out that the mean values for the most part, indicate that students reporting using the strategies only some of the time. On the other hand, the standard deviations are quite large indicating a great deal of variance in the ways students responded.

The MANOVA results revealed an overall significant multivariate effect for grade ($\underline{F}$= 2.58, df=28/128, $\underline{p}$<. 001) and one that approached significance for group ($\underline{F}$= 1.29, df=42/198, $\underline{p}$<.10). There was no significant interaction. Subsequent post hoc

Table 1
Means and Standard Deviations for
Bilingual Students' Strategies (n= 89)

Strategies	M	S D
Asking Questions About Parts Not Understood	2.29	.63
Checking Through the Story	2.29	.66
Imaging	2.28	.69
Looking Up Words in the Dictionary	2.24	.71
Self-generated Questions	2.09	.73
Taking Notes	2.02	.63
Underlining the Important Parts of the Story	1.95	.75
Saying the Main Idea Over and Over	1.94	.77
Saying Every Word Over and Over	1.89	.75
Summarizing in Writing	1.86	.70
Skipping the Parts You Don't Understand	1.68	.67
Writing Down Every Word	1.56	.74
Thinking About Something Else While Reading	1.49	.61
Reading Fast	1.31	.57

univariate F-tests revealed where there were significant differences among grade and instructional groups.

The results for grade indicate that there were significant main effects for seven of the items on the questionnaire: (a) Thinking About Something Else While Reading ($F= 2.73$, $p<.05$); (b) Underlining the Important Parts of the Story (E= 7.53, ~< .001); (c) Reading Fast ($F= 2.44$, $p<.05$); (d) Asking Questions About Parts of the Story Not Understood $F= 3.65$, $p<.05$); (e) Looking Up Words in the Dictionary ($F= 7.29$, $p<.001$); (f) Saying the Main Idea Over and Over ($F= 1.74$, $p<.10$); and (g) Imaging ($F= 3.11$, $p<.05$). Further examination of the significant main effects by Duncan Multiple Range Post Hoc tests indicated that students in the third grade cited using the weak strategy, Thinking About Something Else While Reading significantly more often than students in the fourth grade. Third graders also reported using the weak strategy of Writing Down Every Word in the story

significantly more often than fourth and fifth graders. In both cases fifth graders reported using these strategies less often than fourth and third grade students. Third graders also had higher mean values than fourth and fifth grade students for two other weak strategies: Reading Fast (M= 1.48) and Saying the Main Idea Over and Over (M= 2.17). For the strategy, Reading Fast, fifth graders had a mean of 1.56; while fourth graders reported using this weak strategy less (M= 1.23). For the strategy of Saying the Main Idea Over and Over, the results were similar. Fifth graders used the strategy more often (M= 1.90) than fourth graders (M= 1.83).

Fourth and fifth grade students cited using the strong strategy of Imaging significantly more often (p<.05) than third graders. Furthermore, fifth graders reported using the strong strategy, Asking Questions About Parts of the Story Not Understood, significantly more often than third graders. Nonetheless, fifth graders also reported using the weak strategy of Looking Up Words in the Dictionary significantly more than the third graders.

In terms of instructional groups, there were four items with significant main effects. These included: (a) Thinking About Something Else While Reading (F= 1.72, p<.10); (b) Self-generated Questions (F= 1.80, p<.10); (c) Writing Down Every Word (F= 3.00, p<.05); and (d) Summarizing (F= 3.00, p<.05). Students in the reciprocal teaching group reported using the strategy of summarizing significantly more often than students in any of the other three groups. Also, students in the reciprocal teaching group (M= 2.36) reported using the strong strategy of Self-generated Questions more often than students in Control Group 2 (M= 2.09), Experimental Group 2 (M= 2.00), and students in Control Group 1 (M= 1.89). Students in both experimental groups reported using the weak strategies, Thinking About Something Else While Reading and Writing Down Every Word in the story, less often than students in the control groups. For the strategy, Thinking About Something Else While Reading, Control Group 1 (M= 1.63) reported using this strategy most often followed by Control Group 2 (M= 1.57), Experimental Group 1 (M= 1.48) and Experimental Group 2 (M= 1.29). Results were similar for the strategy Writing Down Every Word in the Story. Control Group 2 (M= 1.81) reported using the strategy most often, followed by Control Group 1 (M= 1.63), Experimental Group 1 (M= 1.52), and Experimental Group 2 (M= 1.38).

Discussion

The results of the present study indicate that the most often reported strategies by bilingual students are strong strategies; while those that are reported being used less often are weak strategies. This finding is important in that results from a previous study indicated that English as a second language (ESL) students' perceptions of the cognitive strategies that they use have predictive validity with students' reading comprehension (Padrón & Waxman, 1988). Also, the findings of the present study, support previous metacognitive research conducted with English-monolingual students. That is, research has found that students in lower grades use less-sophisticated and inappropriate cognitive reading strategies during reading (Alvermann & Phelps, 1983; Padrón, 1985). In the present study, students in the higher grades are using more of the strong strategies while students in the lower grades are using weaker or less sophisticated strategies.

There were also several significant differences between the experimental and control groups in terms of strategy instruction. The results suggest that bilingual students can benefit from instruction in cognitive strategy use. Several differences in students' perceptions of strategy use were found for students participating in the instructional groups. Students who participated in the reciprocal teaching groups did better on the two strategies that are emphasized within the instruction: (a) Self-generated Questions and (b) Summarizing. Students in the Question-Answer Relationship group reported using the weak strategies of Underlining Important Parts of the Story and Asking Questions About Parts of the Story Not Understood more often than students in the other groups; however, these differences were not statistically significant. In addition, students participating in the control groups used more of the weaker strategies (i.e., Thinking About Something Else While Reading and Writing Down Every Word in the story) than students in the experimental groups. Thus, it appears that participating in the instructional group may have decreased the use of weaker strategies. This is an important finding in support of strategy training for bilingual students since previous research has found that the use of weaker strategies is negatively related to students' gain in reading comprehension (Padrón & Waxman, 1988).

The present investigation indicated that the instruction in the use of cognitive reading strategies for Hispanic bilingual students is

more beneficial than having additional instruction in reading. This suggests that LEP students should receive, not only reading instruction, but also need instruction m the use of cognitive reading strategies. Training studies need to be replicated with different groups. Cultural and linguistic differences should similarly be considered since, the successful use of some strategies appears to exhibit not only age and ability differences, but also cultural differences (Waxman, Padrón & Knight, 1991). In an experimental study by Chamot and O'Malley (1984), Hispanics benefitted from strategy training, while Asians performed less well than their counterparts in the control group.

Strategies that enable students to link new information to prior knowledge may exhibit age and cultural-related differences. Prior knowledge plays a powerful role in comprehension and learning. Students who participate in reciprocal teaching, for example, are asked to make predictions to activate their prior knowledge. Differences in this knowledge base are likely to affect the susceptibility to instruction (Stein, Leinhardt & Bickel, 1989). Expert comprehenders, in general, try to relate new material to personal experience (Campione & Armbruster, 1985). Differences in background knowledge or experience due to cultural differences, may be an important sources of variation for strategy use and outcomes (Steffenson, Joag-Dev & Anderson, 1979). If a student has no prior knowledge about a particular topic being discussed, then the students may not be able to apply to strategy (Stein, Leinhardt & Bickel, 1989). In QAR, it may be particularly difficult for students to answer script-implicit questions. In a classroom where students are not only of low ability, but also have a culturally different background, strategy instruction becomes extremely complex. Not only do the teachers have to deal with knowledge-base differences, but also in interpretation of issues presented in a text from a cultural perspective different from that of the student. Therefore, students from certain populations, especially young, low ability, or culturally different students, may not be able to tap into prerequisite prior knowledge without help and may need more teacher-directed activity to help them accomplish the linkage.

Another factor to consider in strategy instruction emerges from students' previous lack of success in school which may cause them to develop a "learned helplessness." That is, low-achieving students often have a low self-concept and therefore believe that they are not capable of learning. Consequently, strategy instruction needs to

include techniques that address students' affective needs (Coley & Hoffman, 1990). If students view themselves negatively, this may interfere with their ability to learn strategies. A strategy instruction program, therefore, that does not address the students' self-concept may no be suitable for second language learners who are culturally and linguistically different.

To summarize, research has provided a great deal of information about how to teach strategies. There are, however, several considerations that should be addressed in planning such instruction. First, a decision must be made on the task that must be performed and the level of strategy specificity (Dansereau, 1985). Once the strategies that are to be taught are chosen, a decision must be made about the number and sequence of strategies to be taught. It has been suggested that perhaps teaching one or two strategies over several weeks is most beneficial (Pressley & Harris, 1990). Furthermore, the motivational levels of students should be assessed. That is, whether students involved in the training were intrinsically or extrinsically motivated. Strategy instruction must also match students' ability levels and provide students with an understanding of how and when to use the strategies (Pressley & Harris, 1990). Essential to this instruction, however, is teacher modeling of strategies (Danserreau, 1985; Pressley & Harris, 1990). Instruction should not only include what strategies to employ, but it needs to also include when and why to use strategies (Paris, Lipson & Wixsom, 1983). This type of strategy instruction transfers control to the students and decreases the dependence on teacher-provided cues for strategy use (Johnston, 1985). The results from the present study suggest that approaches such as Question-Answer Relationships and Reciprocal Teaching which provide scaffolding may be important instructional strategies that should be considered for second language students.

References

Alvermann, D. 1984. Second graders' strategic preferences while reading basal stories. *Journal of Educational Research, 77*, 184-189.

Alvermann, D. & Phelps, S. 1983. Elementary readers' strategic activity in processing story-length material. In J. Niles (Ed.), *Searches for reading/language processing and instruction. Thirty-*

second Yearbook of the National Reading Conference (pp. 182-186). Rochester, NY: National Reading Conference.

Baker, L. & Brown, A. 1984. Metacognitive skills and reading. In P. D. Pearson (Ed.), *Handbook of reading research* (pp. 353-394). New York: Longman.

Bartlett, E. J. 1979. Curriculum concepts of literacy and social class. In L. Resnick & P. Weaver (Eds.), *Theory and practice of early reading* (Vol. 2, pp. 229-242). Hillsdale, NJ: Lawrence Erlbaum.

Block, E. 1986. The comprehension strategies of second language readers. *TESOL Quarterly, 20,* (3) 463-494.

Brown, A., Campione, J. & Day, J. 1981. Learning to learn: On training students to learn from texts. *Educational Researcher, 10,* 14-21.

Campione, J. & Armbruster, B. 1985. Acquiring information from texts: An analysis of four approaches. In J. Segal, S. Chipman & R. Glaser (Eds.), *Thinking and learning skills: Relating instruction to research* (Vol. 1, pp. 317-359). Hillsdale, NJ: Lawrence Erlbaum.

Chamot, A. & O'Malley, J. 1984. Using learning strategies to develop skills in English as a second language. *Focus*, Rosslyn, VA: National Clearinghouse for Bilingual Education.

Chou Hare, V. & Smith, D. 1982. Reading to remember: Studies of metacognitive reading skills in elementary school-aged children. *Journal of Educational Research, 75,* 157-164.

Coley, J. D. & Hoffman, D. M. 1990. Overcoming learned helplessness in at risk readers. *Journal of Reading, 33,* 497-502.

Dansereau, D. F. 1985. Learning strategy research. In J. W. Segal, S. F. Chipman & R. Glaser (Eds.), *Thinking and learning skills: Relating instruction to research* (Vol. 1, pp. 209-239). Hillsdale, NJ: Lawrence Erlbaum.

Farr, M. 1986. Language, culture and writing: Sociolinguistic foundations of research on writing. In E.R. Rothkopf (Ed.), *Review of research in education* (Vol. 13, pp. 195-223). Washington, DC: American Educational Research Association.

Forrest-Pressley, D. & Gillies, L. 1983. Children's flexible use of strategies during reading. In M. Pressley & J. Levin (Eds.), *Cognitive strategy research: Educational applications* (pp. 133-156). New York: Springer-Verlag.

Foster, G.E. 1989. Cultivating the thinking skills of low achievers: A matter of equity. *Journal of Negro Education, 58,* 461-467.

Garcia, E. & Pearson, P. D. 1991. Modifying reading instruction to maximize its effectiveness for "all" students. In M. S. Knapp & P. M. Shields (Eds.), *Better schooling for the children of poverty: Alternatives to conventional wisdom*. (pp. 31-60). Berkeley, CA: McCutchan.

Hahn, A. L. 1984. Assessing and extending comprehension: Monitoring strategies in the classroom. *Reading Horizons, 24,* 231-237.

Haller, E. P., Child, D. A. & Walberg, H. J. 1988. Can comprehension be taught? A quantitative synthesis of "metacognitive" studies. *Educational Researcher, 17,* 5-8.

Heller, J. I. & Gordon, A. 1992. Lifelong learning: A unique school-university collaboration is preparing students for the future. *Educator, 6* (1), 4-19.

Johnston, P. 1985. Teaching students to apply strategies that improve reading comprehension. *Elementary School Journal, 85,* 635-645.

Knight, S. L. & Padrón, Y. N. 1986. Investigating gender differences. *Journal of Educational Equity and Leadership, 6,* 340-341.

Moll, L.C. 1986. Writing as communication: Creating strategic learning environments for students. *Theory into Practice, 25* (2), 102-107.

Padrón, Y. N. 1985. *Utilizing cognitive reading strategies to improve English reading comprehension of Spanish-speaking bilingual students*. Unpublished doctoral dissertation, University of Houston.

Padrón, Y. N. 1990. Examining the cognitive reading strategies used by Hispanic elementary students while reading Spanish. In L. M. Malave (Ed.), *NABE '88- '89: Annual Conference Journal* (pp. 138-150). Washington, DC: National Association for Bilingual Education.

Padrón, Y. N. 1992. Instructional programs that improve the reading comprehension of students at risk. In H. C. Waxman, J. Walker de Felix, J. Anderson & H. P. Baptiste (Eds.), *Students at risk in at-risk schools: Improving environments for learning* (pp. 222-232). Newbury Park, CA: Sage.

Padrón, Y. N., Knight, S. L. & Waxman, H. C. 1986. Analyzing bilingual and monolingual students' perceptions of their reading strategies. *The Reading Teacher, 39,* 430-433.

Padrón, Y. N., Knight, S. L. & Waxman, H. C. 1988, November. *Male and female students' reported use of cognitive reading strategies*. Paper presented at the annual meeting of the National Reading Conference, Tucson, AZ.

Padrón, Y. N. & Waxman, H. C. 1988. The effect of ESL students' perceptions of their cognitive reading strategies on reading achievement. *TESOL Quarterly, 22,* (1) 146-150.

Palinscar, A. & Brown, A. 1984. Reciprocal teaching of comprehension-fostering and comprehension monitoring activities. *Cognition and Instruction, 1,* 117-175.

Palinscar, A. & Brown, A. 1985. Reciprocal teaching: A means to a meaningful end. In J. Osborn, P. Wilson & R. C. Anderson

(Eds.), *Reading education: Foundations for a literate America* (pp. 299-310). MA: Lexington.

Paris, S. G. & Myers, M. 1981. Comprehension monitoring, memory, and study strategies of good and poor readers. *Journal of Reading Behavior, 13,* 5-22.

Paris, S. G., Wixson, K. & Palinscar, A. 1986. Instructional approaches to reading comprehension. *Review of Research in Education, 13,* 91-128.

Pearson, D. P. & Johnson, D. 1978. *Teaching reading comprehension.* New York: Holt, Reinhart & Winston.

Pressley, M. & Harris, K. R. 1990. What we really know about strategy instruction. *Educational Leadership, 48* (1), 31-34.

Raphael, T. & Pearson, P. D. 1985. Increasing students' awareness of sources of information for answering questions. *American Educational Research Journal, 22,* 217-235.

Raphael, T., Winograd, P. & Pearson, P. D. 1980. Strategies children use when answering questions. In M. L. Kamil & A. J. Moe (Eds.), *Perspectives on reading research and instruction* (pp. 156-163). Washington, DC: National Reading Conference.

Saracho, O. N. 1983. Cognitive style and Mexican American children's perceptions of reading. In T. H. Escobedo (Ed.), *Early childhood bilingual education: A Hispanic perspective* (pp. 201-221). New York: Teachers College Press.

Steffenson, M., Joag-Dev, C. & Anderson, R. 1979. A cross-cultural perspective on reading comprehension. *Reading Research Quarterly, 15,* 10-29.

Stein, M., Leinhardt, G. & Bickell, W. 1989. Instructional issues for teaching students at risk. In R. E. Slavin, N. L. Karweit & N. A. Madden (Eds.), *Effective programs for students at risk* (pp. 145-194). Boston: Allyn & Bacon.

Waxman, H. C. & Padrón, Y. N. 1987, January. *The effect of students' perceptions of cognitive strategies on reading achievement*. Paper presented at the annual meeting of the Southwest Educational Research Association, Dallas.

Waxman, H. C., Padrón, Y. N. & Knight, S. L. 1991. Risks associated with students' limited cognitive mastery. In M. C. Wang, M. C. Reynolds & H. J. Walberg (Eds.), *Handbook of special education: Emerging programs* (Volume 4, pp. 235-254). Oxford, England: Pergamon.

Wittrock, M. C. 1991. Educational psychology, literacy, and reading comprehension. *Educational Psychologist, 26* (2), 109-116.

Weinstein, C. & Mayer, R. 1986. The teaching of learning strategies. In M. C. Wittrock (Ed.), *Handbook of research on teaching* (3rd ed., pp. 315-327). New York: Macmillan.