



The Reading Matrix
Vol. 7, No. 3, December 2007

COGNITIVE AND METACOGNITIVE READING STRATEGIES REVISITED: IMPLICATIONS FOR INSTRUCTION

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Abstract

The following article discusses cognitive and metacognitive reading strategies and the use of them particularly among bilingual students. It distinguishes between the two types of strategies. Strategy use among monolingual and bilingual students are described and compared. The article focuses on the need for strategy instruction, particularly among bilingual learners. The need for strategy instruction, focusing on prior knowledge and vocabulary is great for these students. Additional support in these areas is often necessary in academic content areas. The article further describes how students need to be aware of their own strategy use. Teachers can implement strategy surveys. They can use think-alouds as a modeling technique and evaluate students strategy use through them. Four main reading approaches that focus on strategy instruction are discussed: Experience-Text-Relationship (ETR), Reciprocal Teaching Approach (RTA), Cognitive Academic Language Learning Approach (CALLA) and Sheltered Instruction Observation Protocol (SIOP).

Introduction

While the literature has definitively concluded that effective readers are strategic meaning-makers, what this means to students, especially bilingual students and their teachers has not been as clearly articulated. Several studies have demonstrated that the need for strategy instruction is great, since little reading comprehension strategies are being taught within the classrooms even today (Durkin, 1978; Beck, McKeown, & Gromoll, 1989; Pressley, Wharton-McDonald, Mistretta-Hampston, & Echevarria, 1998). The National Reading Panel's report (2000) found three important themes within the field of reading: First, reading is a complex cognitive process in which vocabulary development and instruction play a key role. Second, comprehension is an active thoughtful process often involving prior knowledge, and third, teachers need to better equip students with strategies that are linked to reading success. While the development of vocabulary and activation of prior knowledge or schema are necessary ingredients for all students in becoming successful readers, they are particularly significant for bilingual students who need additional teaching support in these areas (Anderson, 1999; Huckin, Haynes, & Coady, 1993). In fact the Alliance for Excellent Education (2002) determined that strategy instruction, including activating prior knowledge, is critical in increasing students'

motivation and self-efficacy as early as the elementary level. The main purpose in this article is to present the research outlining strategy instruction and the benefits of it, in particular to bilingual students. In order to present research in strategy instruction, initially it's necessary to differentiate cognitive and metacognitive reading strategies and to examine strategy use within monolingual and bilingual students. The necessary parts of strategy instruction will be examined as will the specific approaches.

Cognitive and Metacognitive Reading Strategies

Chamot and O'Malley (1996) distinguish between cognitive and metacognitive reading strategies. Cognitive reading strategies are those strategies that enable students to accomplish the reading task. Oxford (1990) further describes them as strategies such as note taking, summarizing, inferencing, using prior knowledge; predicting, analyzing and using context clues. Metacognitive strategies are those strategies which involve self-reflection and thinking about reading and learning. The three aspects of metacognition include: Declarative knowledge, such as knowing what the strategy is; procedural knowledge, such as knowing how the strategy works and conditional knowledge; knowing why the strategy is used (Paris, Cross, & Lipson, 1984). The reader in turn makes self-corrections and alterations in plans in order to proceed. Strategy use often differs among students. Block (1992) found that there was a difference in cognitive and metacognitive strategy use between both readers of varying reading levels, and monolinguals and bilinguals in terms of frequency of use and type.

Monolingual and Bilingual Strategy Use

Differences in strategy use were further found between monolingual and bilingual students (Block, 1992; Padron, Knight, & Waxman, 1986; Padron & Waxman, 2001; Moreno & Di Vesta, 1991). The reading strategies of 11 monolingual English speaking university students and 14 Chinese and Spanish bilingual students were examined (Block, 1992). The eight proficient bilingual readers were found to use cognitive and metacognitive reading strategies more often than their less proficient peers, but not as often as the monolingual students. In general, the bilingual readers verbalized their strategies less often. The reading strategies of elementary age monolingual English speaking students and bilingual Spanish-English speaking students were examined in two separate studies (Padron, Knight, & Waxman, 1986; Padron & Waxman, 2001). The reading strategies were compared between 23 bilingual and 15 monolingual third and fifth grade students within the first study. The bilingual students were found to use fewer metacognitive strategies and used cognitive strategies less frequently than their peers. Three hundred seventeen third, fourth and fifth grade monolingual and bilingual students were administered the Reading Strategy Questionnaire (Waxman & Padron, 1987) within the second study. Bilingual students reported using more of the strategies that are found to be negatively related to students' reading success. They were found to read words over and over again and skip large sections of the reading passages. Clearly, strategy instruction with bilingual students at an early age is necessary before students begin to develop negative reading habits.

The responses on the Cognitive Skills Inventory were compared among 348 monolingual English-speaking college students, bilingual Puerto Rican students and monolingual Spanish-speaking students (Moreno & Di Vesta, 1991). While the inventory addresses five main skill areas- integration, repetition, monitoring and coping- many of the areas can be broken down into strategies. For example, the integration skill is divided into strategies such as applying prior knowledge by looking for analogies within the text to ideas already known; organizing the text

into related topics; summarizing, forming mental images, paraphrasing and organizing related ideas and topics. The repetition skill area is broken down into strategies such as note taking, organizing notes, making lists and defining words and terms. The monitoring skill is divided into several metacognitive strategies such as being able to tell when information is comprehended within a text or test. If the comprehension process does falter, the reader knows how to find information that will facilitate understanding. The bilingual students were found to have higher scores in integration, repetition and monitoring. The difference in strategy use could be due to the fact that the bilingual students were instructed in study skill topics within courses that they were required to take within the Department of Educational Sciences. This further demonstrates the benefits of strategy instruction with bilingual students.

Bilingual Students: Strategy Use and Instruction

While bilingual students use both cognitive and metacognitive strategies to varying degrees, the instruction of strategies keenly affects their use. Bilingual students use strategies in one or both languages. Students are often able to transfer strategic reading behaviors from their primary language to the target language.

Strategy instruction was found to positively affect both reading performance and strategy use of language learners of varying abilities (Anderson, 1991; Muniz-Swicegood, 1994; Jimenez, 1997). Anderson (1991) found that after strategy instruction in varying contexts, adult second language learners of varying abilities used similar strategies. Students were found to use similar strategies in a standardized reading test and an academic test. He reported teaching a wide array of strategies, concluding that successful readers knew which strategies to use in given contexts and how to use them successfully with other strategies. Muniz-Swicegood (1994) found that instruction in strategy use also positively affected both the transference of cognitive and metacognitive reading strategies from students' primary language to the target language as well as students' overall achievement. The bilingual third grade students receiving instruction outperformed the control group in reading on the La Prueba reading test and on the Iowa Test of Basic Skills. Emphasizing reading fluency, word recognition, vocabulary strategies, question asking and making inferences, Jimenez (1997) also found that instruction positively impacted the use of cognitive strategies in seventh grade Latina students of a lower proficiency level. He reported that instruction aided their inferencing and produced further discussion about the text. Clearly, strategy instruction positively benefits bilingual reading.

The think-aloud procedure has been used both as a way to understand students' reading strategies and as an instructional modeling tool (Hosenfeld, 1977; Hardin, 2001; Salataci & Aykel, 2002; Lavadenz, 2003; Tang, 1986). Hosenfeld (1977) used a think-aloud procedure with over 200 bilingual English-French speakers, English-German speakers and English-Spanish speakers of varying abilities. The strategies of successful and unsuccessful readers were compared, and the successful reader was found to keep "the meaning of the passage in mind as he reads" (p.120). In addition, the successful reader was found to skip words that did not affect the overall meaning of the passage. In general, he had a positive self-image of himself as a reader. Hardin (2001) found that bilingual Spanish-English fourth graders of four levels of proficiency, who were exposed to think-aloud procedures, transferred strategic behaviors from one language to the other regardless of their proficiency level. Differences however were found in strategy use between groups. The most proficient group saw reading as a meaning-making activity, while the lowest group focused on mechanical aspects. The highest group also used rereading, imaging and paraphrasing in both languages. All groups however used prior

knowledge less often. Clearly, instruction needs to focus on building prior knowledge in bilingual students and building a knowledge base before reading so that connections can be made. In fact, instruction focusing on students' prior knowledge positively affected the strategy use and performance of bilingual Turkish-English college students on English reading tests (Salataci & Aykel, 2002). Prior knowledge was used to build an experience-text-relationship (Au, 1979) in order to build conversations related to the texts.

The think-aloud procedure was used as an instructional tool with first through third grade bilingual students (Lavadenz, 2003). Half of the participants were native English-speakers and half were native Spanish-speakers. The students were introduced to the think-aloud procedure with an explanation and chart of appropriate actions; the teacher modeled the procedures. Children were encouraged to think, speak and read in the language they felt most comfortable. Within the think-aloud process, students were found to use context clues in developing vocabulary; text structure in building comprehension; self-questioning and rereading in deepening and extending comprehension. While the younger and less proficient students were found to use more assistance in verbalizing their reading strategies, they were able to successfully discuss their thinking and adjust their reading.

Language strategies were further found to be transferred from the primary language to the target language (Tang, 1996). Bilingual proficient adult students used a think-aloud procedure in order to describe the reading strategies used with English and Chinese texts. The results showed that the number and type of strategy use in both languages were similar and frequently identical. Strategies were observed in both readings and classified into broad categories including text-based strategies, text structure-based strategies, text and prior knowledge combined strategies and self-corrective strategies. In turn, text-based strategies included vocabulary strategies, summarizing and questioning. Text structure-based strategies included identifying main idea, evaluating text organization and recognizing the structure of the text. Text and prior knowledge combined strategies were those that required connecting prior knowledge to text. Self-corrective strategies included metacognitive ones such as planning, monitoring and evaluating comprehension. The main finding of the study suggested that the most effective strategy training consists of encouraging readers to become more cognizant of their own strategy use (Tang, 1996,).

While the think-aloud process is one way students and teachers become aware of strategy use, the Survey of Reading Strategies (SORS, 2002) also enables both teachers and bilingual students to become more reflective. Originally adapted from Mokhtari and Reichard's Metacognitive Awareness of Reading Strategies Inventory (MARS, 2002) of monolingual students, the SORS, designed by Mokhtari and Sheorey, is used with an ESL high school, college or adult student population. The main impetus for the development of this survey was the strong research supporting the positive link between students' awareness of their own reading processes and strategies and their reading performance (Alderson, 1984; Carrell, 1991). In fact, there is strong evidence that by increasing student awareness of reading strategies, their own and those linked to reading success, less proficient students can distinguish strategies, learn more strategies, use beneficial ones more often and as a result improve comprehension (Carrell, Pharis, & Liberto, 1989). Teachers can then provide individual strategy instruction. The second reason for developing the SORS was that this is the first tool designed for bilingual students, who have differing strategy use than monolingual students. The SORS is divided into three categories: Global Reading Strategies, Problem Solving Strategies and Support Strategies. Global Reading Strategies are planned ways by which learners monitor their reading, such as having a purpose in

mind and previewing the text. Problem Solving Strategies include the ways that students solve reading problems, such as adjusting reading speed, rereading and defining vocabulary. Support Strategies include support mechanisms to help the reader such as underlining, taking notes and highlighting.

Five Necessary Parts of Instruction

While the SORS enables teachers to become more aware of individual student strategy use, there are five necessary parts of all strategy instruction (Winograd & Hare, 1988 as described by Carrell, Gajdusek, & Wise, 1998). The five elements in fact are related to the three kinds of metacognitive knowledge: Declarative knowledge, procedural knowledge and conditional knowledge. First, teachers describe the strategy by defining it or explaining the features of it. Secondly, they need to explain to their students why they are learning the strategy and thus the benefits of the strategy. These two procedures are related to declarative knowledge. Next, teachers need to show how the strategy is used, by breaking it down into various components and showing how these components are related. Teachers need to provide explicit examples through their own think-alouds. Procedural knowledge is addressed through this action. Teachers then describe when and where the strategy should be used. Finally, teachers need to show students how to evaluate the effectiveness of the strategy use, and they need to provide additional suggestions to fix strategy problems. The last two steps address conditional knowledge.

Instructional Approaches

Although teachers are able to individualize student strategy instruction while keeping in mind the necessary parts of instruction, there are four approaches which focus on essential strategies for all bilingual students. Although there are numerous approaches to teaching reading, there are fewer that teach bilingual students to be strategic meaning-makers. The four approaches which have been successfully used preliminarily with bilingual students are the Experience-Text-Relationship (ETR), the Reciprocal Teaching Approach (RTA), Cognitive Academic Language Learning Approach (CALLA) and the Sheltered Instruction Observation Protocol (SIOP). It's important to remember that bilingual students are often reading in the content areas, and these approaches are meant for all reading. While some of the approaches, especially SIOP, are very detailed, the aspects of the approaches focusing on strategies will be discussed only.

Experience-Text-Relationship

The ETR method, which at its core builds upon prior knowledge and experiences, was originally associated with Kathryn Au. The students exposed to the ETR approach improved their comprehension of TOEFL passages the most and were able to create semantic maps without scaffolding (Carrell, Pharis, & Liberto, 1989). Clearly, instructing students to activate and build upon their prior knowledge facilitates both reading motivation and comprehension. Building prior knowledge needs to be a focus of strategy instruction for all bilingual students. The ETR approach has three basic steps: Experience, text and relationship. In the experience part of the approach, the teacher prompts the children to discuss the experiences or prior knowledge they have regarding some aspect related to the story. The teacher continuously adds to the discussion by questioning the children. This helps to create a motivating reading environment. After the experience part of the approach, the teacher instructs the children to read short parts of the text, frequently monitoring comprehension by questioning them. In the final section of the sequence,

the teacher relates what was discussed during the text sequence with their prior knowledge. The ETR method was found to be most effective with young Hawaiian children (Au, 1977). Hawaiian children who had been instructed with the ETR approach were found to comprehend better than those children who had not.

Although the approach is often used with young, less proficient language learners, it has been found to be successful with older, more proficient students (Carrell, Pharis, & Liberto, 1989). Bilingual university students, ranging in age from 19-43 of various cultural and linguistic backgrounds such as Greek, Arabic, Japanese, Malaysian, Chinese, Spanish and African participated in the study. One group participated in semantic mapping; another group participated in the ETR, and two groups served as controls. The students exposed to the ETR approach improved their comprehension of TOEFL passages the most and were able to create semantic maps without scaffolding (Carrell, Pharis, & Liberto, 1989).

Reciprocal Teaching Approach

The RTA, originally developed by Annemarie Palinscar and Ann Brown, (1984, 1986) is based upon a cognitive-constructivist philosophy of reading. While originally used with monolingual students (Palinscar & Brown, 1984), the approach has been successful with bilingual students (Salataci & Akyel, 2002; Song, 1998; Padron, 1992). Reading is seen as a meaning-making process in which the reader uses his prior knowledge to gain understanding. Scaffolding is at the heart of the RTA and generally the teacher models four reading strategies including: Generating questions, clarifying issues, summarizing and making predictions. While the teacher initially instructs the students about the strategies, gradually the responsibility is transferred to the students. The students are often divided into groups, and the text is read silently and orally by one of the students or the teacher, depending on the language level of the group. The leader of the group initiates the discussion by summarizing the text, asking questions, clarifying misunderstandings and generating predictions. Both the instruction of strategies through ETR and RTM were found to positively affect the use of reading strategies of Turkish students in reading English and Turkish as well as their reading comprehension scores in English on the Preliminary English Test (Salataci & Aykel, 2002). Students, receiving both the ETR and the RTA, were found to use cognitive strategies such as activating prior knowledge and summarizing more frequently and finding the main idea more often. The students also were found to use more metacognitive strategies such as monitoring their comprehension and alternating plans.

Bilingual Korean-English speaking university students of three reading ability groups participated in a study involving strategy training through RTA (Song, 1998). Students had a pre-test, and post-test fourteen weeks later. After 42 hours of strategy training within RTA, students were required to read six passages, slightly beyond their reading levels, and complete a comprehension test with multiple choice questions involving main idea, factual information, and inference. Although students within all three reading groups improved on their comprehension test, the lowest reading group improved the most, benefiting the most from the instruction.

Padron (1992) investigated the effects of reciprocal teaching and question-answer relationships on the cognitive strategy use of Hispanic bilingual third, fourth and fifth grade students. In the RTA, the teacher initially modeled the four activities. By the fourth day, students were assigned to play the role of the teacher and were required to answer comprehension questions independently. In the question-answer relationships approach, students were taught to classify answers to questions according to whether they were text-explicit, which meant that the

answer was clearly stated within the sentence; implicit, which meant that the answer could be taken from different places within the text, or script-implicit, which meant the answer to the question depended on prior knowledge. Students in this group were also required to answer comprehension questions independently. Both groups used more strategies positively associated to reading than the two control groups within the study. The group who participated in RTA was found to use two positive strategies which were taught in the approach more often: Self-generated questions and summarizing.

The students completed a questionnaire on fourteen cognitive strategies, seven of which were shown to be positively correlated to reading achievement, and seven of which were shown to be negatively correlated to reading. The results showed that the students overall used more sophisticated, positively correlated strategies. Positively correlated strategies included: Summarizing, underlining important story parts, self-generated questions; rereading, story questioning, note taking and imaging. The results showed that students in the higher grades more often used more sophisticated strategies such as imaging. Students in the lower grades were found to more often choose strategies found to be negatively related to reading achievement. These included thinking about something else while reading, reading every word, skipping large parts; saying words repeatedly, constantly looking up words in the dictionary, constantly repeating the main idea and reading as fast as possible. Students within the reciprocal teaching group were found to use strategies related positively to reading achievement. In particular, they used self-generating skills. Bilingual students do benefit from instruction in strategy use (Padron, 1992).

Cognitive Academic Language Learning Approach

CALLA, originally developed by Anna Chamot and Michael O'Malley in 1987, is based upon cognitive learning in which bilingual learners apply prior knowledge and other strategies, such as making inferences and monitoring comprehension to content area subjects. CALLA is based on the notion that active learners are productive learners, strategies can be learned; academic content learning is more effective with strategy use, and learning strategies can transfer to new learning. In CALLA, strategies are broken down into cognitive ones, metacognitive ones and social/affective strategies. It is recommended that a small number of strategies be introduced and taught so that students can feel successful with them. Some strategies such as activating prior knowledge and inferencing are so interrelated that they can be introduced together. The teacher both instructs and supports students with the process since not all students will feel at ease with the strategies.

CALLA was developed in response to three areas of bilingual research: Academic language, content area vocabulary and strategy use. Because academic language is often reduced in terms of its context and is often cognitively demanding, students need more time to acquire it (Cummins, 1981, 1994). The second area of research focused on the notion that further instruction is necessary in order for students to develop the necessary vocabulary and language structures within content area subjects (Mohan, 1979, 1986). The third line of research affecting the development of CALLA related to strategy use and the notion that more effective language learners are able to use more positive strategies appropriately (Abraham & Vann, 1987; Chamot & Kupper, 1989). CALLA, originally implemented with secondary language learners in content areas such as math and science in the public schools of Arlington Virginia, was found to be very successful. Although students who were instructed in CALLA used metacognitive strategies more often, Chamot and O'Malley (1996) describe the need for further research.

Sheltered Instruction Observation Protocol

The SIOP, originally developed by Deborah Short and Jane Echevarria in 1999, is similar to CALLA in that its purpose is to enable students to develop their language skills within content area subjects while implementing effective strategies. SIOP is based on the notion that effective content teaching of second language students needs to incorporate both content and language objectives, provide strategy instruction and practice; provide opportunities for interaction and assessment. Like CALLA, SIOP is often implemented with secondary language learners. As in CALLA, the purpose of SIOP is to make content comprehensible by activating students' prior knowledge. Key vocabulary is introduced, written, repeated and highlighted within the reading. After the reading and lesson, students further review the vocabulary. Students are also given many opportunities to use strategies such as predicting, organizing, summarizing, categorizing, evaluating and self-monitoring; they are given times to self-evaluate their strategy use. The Center for Research on Education, Diversity & Excellence (CREDE), funded by the federal government, is completing a seven year study (1996-2003) to see the effects of SIOP. Preliminary reports in 1999 showed that bilingual students receiving SIOP outperformed those students not receiving the approach on a writing prompt from the Illinois Measure of Annual Growth. Students were found to focus better on the writing prompt; they stayed on the reading topic and supported and elaborated on their responses. Their responses were organized and better written in terms of grammar and mechanics. Obviously much more research is needed to determine the effects of SIOP.

Thoughts on Instructional Approaches

Although research is still needed in order to determine the full effects of these four instructional approaches: Experience-Text-Approach, Reciprocal Teaching Approach, Cognitive Academic Language Learning Approach and Sheltered Instruction Observation Protocol, some common, solid premises about what we know about language learners seem to underlie them. Bilingual students need more strategy instruction and support in academic content areas than monolinguals since context is often reduced and vocabulary is more difficult for them and most significantly, their prior knowledge and vocabulary strategies are inadequate in comprehending many texts independently. ETR, RTA, CALLA and SIOP in fact all stress the importance of activating and supporting students' prior knowledge in an effort to make text connections and facilitate greater and deeper comprehension. The approaches, especially SIOP, also focus on vocabulary strategy instruction.

Final Thoughts

One of the first steps in cognitive and metacognitive strategy instruction with bilingual students is to enable students to become more aware of strategy use. Teachers need to do this often in think-aloud formats where they can define strategies; tell students why they are using the strategies, tell them how they are using the strategies and how they are evaluating the strategies. Teachers need to give students ample opportunities to practice their own think-alouds with teacher monitoring. The SORS and modified surveys enable teachers and students to be more aware of strategy use. This enables teachers to adapt instruction to individual student needs. Clearly, the strategy instruction of all bilingual students needs to focus on prior knowledge and vocabulary development. These are two critical elements of a successful reading program for all bilingual students. Strategies in these areas, initially with teacher instruction and guidance, enable students to become successful, motivated, independent meaning-makers. (Table

1 is a summary of significant studies. Table 2 is a list of teaching activities for different strategies.)

Table 1 Summary of significant studies

Study	Population	Findings
Block (1992)	Monolingual/bilingual university students	Bilingual readers report using strategies less often
Padron, Knight & Waxman (1986)	Monolingual/bilingual 3 rd , 5 th graders	Bilingual students use strategies less often
Padron & Waxman (2001)	Monolingual/bilingual 3 rd , 4 th and 5 th graders	Bilingual students use more negatively related reading strategies
Moreno & Di Vesta (1991)	Monolingual/bilingual university students	Bilingual students who had strategy instruction used strategies more often
Anderson (1991)	Bilingual adults	Instruction positively affects strategy use and test performance
Muniz-Swicegood (1994)	Bilingual 3 rd graders	Instruction positively affects transference of strategies and achievement
Jimenez (1997)	Bilingual 7 th graders	Instruction positively affects strategy use
Hosenfeld (1977)	Bilingual students of varying levels of proficiency	Think-alouds showed varying strategy use
Hardin (2001)	Bilingual 4 th graders of 4 levels	Think-alouds showed highest group are meaning makers, prior knowledge not used much in all groups
Salataci & Aykel (2002)	Bilingual university students	Prior knowledge strategies positively affect strategy use- RTA & ETR
Lavadenz (2003)	Bilingual 1 st -3 rd graders	Think-alouds as instruction- even young children use strategies
Tang (1996)	Bilingual adult students	Think-alouds- students need to be more aware of strategy use
Au (1977)	Bilingual elementary age	ETR improved comprehension prior knowledge is key
Carrell, Pharis, & Liberto, (1989)	Bilingual university students	ETR improved reading comprehension
Song (1998)	Bilingual university students	RTA positively affected reading scores
Padron (1992)	Bilingual 3 rd , 4 th , 5 th graders	RTA positively affected strategy use

Chamot & O'Malley (1987)	Bilingual secondary students	CALLA positively affected metacognitive strategy use
Rasekh & Ranjbary (2003)	Bilingual university students	CALLA positively affected vocabulary scores

** Short & Echevarria (preliminary report, 1999 of longitudinal study) Bilingual secondary students, SIOP positively affected writing prompt

Table 2 Teaching Activities for Strategies

Strategies	Activities
Activating background knowledge, making predictions	<ol style="list-style-type: none"> 1. Students read a select amount. Ask students to picture the scene within the story in mind & draw it. Then discuss the different pictures, referring back to the text for further clarification & discussion. The students' reading level & book level should be kept in mind in determining the length of reading. 2. DRTA (Directed Reading Thinking Activity) Students read the title of the text and skim. They brainstorm what they know about the topic and headings, subheadings, if applicable. These ideas are written on the board. Students then read a fixed amount to confirm or revise predictions. 3. KWL charts can be used to determine what children know about a topic, what they want to know and ultimately what they learned or predict what they will learn. For language learners, much time should be spent on what they already know about a topic. <p>*** If students know little about a topic, the teacher needs to provide additional support through pictures, realia and objects.</p>
Vocabulary study	<ol style="list-style-type: none"> 1. Students study frequency lists, particularly for grade levels. Students should be automatically able to recite words. They should use words in sentences and spell them. 2. After some study, students pick words out of a hat, say the words, spell them and use them in sentences. The rest of

	<p>the class guesses the meaning of the words from the context.</p> <ol style="list-style-type: none"> 3. Word walls are created by the students for academic subjects. A few minutes daily of the reading block, or other content area, are devoted to studying the words. 4. Students keep their own vocabulary journals with pictures, definitions and sentences with words. 5. For more advanced students and some beginners, word families, prefixes, suffixes, synonyms, antonyms and homophones are studied. Semantic webs are used. Store bought puzzles and games are available, and students can make their own.
Monitoring comprehension, summarizing, paraphrasing, inferencing, inferring author's point of view, message, metacognitive skills	<ol style="list-style-type: none"> 1. On sticky notes, students write down difficult words. These words are then discussed and learned after reading. 2. Students are able to summarize the reading in their own words or they put the author's message into their own words. Primary students are given pictures to discuss or put in order. 3. With teacher support, students fill in various graphic organizers in order to summarize and sequence events, compare and contrast different characters. 4. On sticky notes, students make text to text connections, text to self connections and text to world connections. 5. On sticky notes, students put page numbers and a check mark where information confirms what they already know. They put minus marks, with page numbers, by information that contradicts what they thought and question marks, with page numbers, by information that is confusing. Plus signs, with page numbers, are used for information that is new. 6. Students answer a variety of questions, by categorizing the answers as right there within the text or implied within the text, or entirely in the students' minds. (QAR- Question/Answer Relationship)

<p>Capturing main idea, key concepts or details, author's point of view or elements of style through annotating a text</p>	<ol style="list-style-type: none">1. Students are guided through the highlighting process initially. There is a purpose for the skill. For example, it might be identifying main ideas or details or the author's point of view or different elements of style used by the author, etc. Manageable sections are chosen for highlighting. Unnecessary words are not highlighted.
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