Promising Instructional Practices for Secondary English Language Learners (7-12)
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Dear Colleague:

The Promising Instructional Practices for Secondary English Language Learners (Grade 7 to 12) project was developed as a resource for teachers and administrators. It provides educators with a list of research-based instructional strategies and practices which have been found to be effective as tools for the development of proficiency in Native Language Arts and English as a Second Language. The principal objective is to enable teachers to better understand and meet the linguistic needs (and requirements) of English language learners in public schools.

This guide should enable schoolteachers and administrators to develop programs which address both the native language, second language and content area needs of Secondary School ELLs, in a manner that is consistent with State and federal regulations.

The staff of New York State Bronx Regional BETAC at Fordham University composed this document with input from researchers, educators and practitioners in the field of first and second language acquisition.

As more districts adopt and implement these strategies, all ideas, insights and perspectives should be documented and shared. We invite your comments on this resource guide and appreciate your input relevant to the education of our students.

Please direct your comments to:

Office of Bilingual Education and Foreign Language Studies
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Sincerely,

Dr. Pedro Ruiz
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FOREWORD

This document, researched and compiled by the New York State Education Department’s Bronx Bilingual Education Technical Assistance Center (BETAC), is an attempt to review the literature on promising instructional strategies for secondary English Language Learners (ELLs). As it is known, scientific literature on this topic is very scarce or not conclusive. For example, in 1998, the National Reading Panel reviewed 309 studies and found that only 10% focused on instructional practices in grades 6-12 (Short and Fitzsimmons, 2007). To overcome this challenge, most of the literature listed is of a research-based nature although the report adds a few strong theoretical documents.

As we mentioned before, this is the first attempt by the Bronx BETAC to begin to outline the attributes or characteristics of those instructional strategies or approaches that have been identified in the literature as effective/successful in teaching secondary English language learners. There is a need to continue identifying and analyzing the existing literature. This is an ongoing process that will help educators, especially administrators and teachers, to initiate research-based instructional reform. It is a starting point for better addressing the needs of secondary ELLs in New York State. This project was possible, thanks to funding and encouragement from the New York State Office of Bilingual Education and Foreign Language Studies.

Eva Garcia, Director
New York State Bronx BETAC
This document identifies scientific and theoretical research on promising instructional practices for secondary English language learners (ELLs). This document provides studies and articles on two main areas: teaching literacy (reading and writing) and the teaching of content (i.e. Mathematics, Social Studies or Science). In the area of literacy, reading and writing are joined together due to the scarcity of scientifically-based research documents on writing.

Most Pressing Issues Facing New York State Schools in the Teaching of Secondary English Language Learners

The United States school system is facing many challenges in providing culturally responsive and appropriate program alternatives for students with linguistically and culturally diverse backgrounds. These students, frequently referred to as English Language Learners (ELLs), come to school with many attributes that contribute to their academic development and English language proficiency. These attributes include age, cognitive ability, native language literacy, personality, personal confidence, motivation, and educational experience (Cummins, 1994; Menken, 2007; Short & Fitzsimmons, 2007). In addition, factors that promote literacy achievement, content academic development and skills include the following:

- quality of instruction,
- time spent on task,
- length of time the students have been in the school system, and
- opportunities for interaction with peers.

In New York State, English language learners are required to learn content area curriculum, meet the mandated learning standards and, subsequently, pass five Regents exams (i.e., English Regents, American or Global History, Mathematics, Science and Foreign Language). These tests present a big challenge to ELLs and require great effort from teachers and administrators in providing excellent programs and effective instruction and school experiences. English language learners need to receive optimum learning opportunities to experience success. It is imperative that we ensure that all educators of ELLs, including school principals and teachers, are knowledgeable concerning second language acquisition and understand the value of promising instructional strategies (to be implemented in their schools and classrooms) that are supported by scientific research.

Meeting the Academic Needs of the Grade Level and Test Driven Curriculum

The literature on effective instruction (August & Hakuta, 1997; Calderon, 2007; Carrasquillo & Rodriguez, 2002; Chamot & O’Malley, 1997; Collier, 1995; Cummins, 1981; Menken, 2007; Florida Center for Reading Research, 2007; Herrell
& Jordan, 2008; Hill & Björk, 2008; Rea & Mercury, 2006; Short & Fitzsimmons, 2007; Slavin, 1981; Smiley & Salsberry, 2007) indicates that secondary schools will
meet the needs of their ELL population by adopting the following effective instructional and programmatic practices:

#1: Native language instruction plays an important role in ELLs’ acquisition of knowledge, content, concepts and skills included in the secondary school curriculum.

#2: English Language Arts must be taught using second language methodologies and instructional practices to meet the needs of these students. (August & Hakuta, 1997; Biancarosa & Snow, 2004; Short & Fitzsimmons, 2007; Calderon, 2007; Carrasquillo & Rodriguez, 2002; Cochran, 1989; Collier, 1995; Echevarria, Short & Powers, 2006; Freeman & Freeman, 2002; Meltzer, 2002; Slavin, 1981).

#3: Content courses such as history, science and math should be taught using the approach of integrating language and content (August & Hakuta, 1997; Carolino & Amen, 2004; Cummins, 1981; Fillmore & Snow, 2002; Spalding, Carrasquillo & Rodriguez, 2002; Krashen, 1982; Menken, 2007; Meltzer, 2002;).

#4: Foreign languages should be taught using a “sheltered approach” including effective second language strategies (Calderon, 2007; Dupuy & Krashen, 1993).

#5: Content, especially in subjects such as mathematics, science or social studies, is better taught through language and themes (Chamot & O’Malley, 1997; Echevarria, Vogt & Short 2004; Freeman & Freeman, 2002; Short & Fitzsimmons, 2007).

#6: ELLs’ instruction and academic development is enhanced by the use of technology.

#7: Secondary school content needs to be culturally relevant to students.

THEORETICAL FOUNDATIONS

Adolescent English language learners (ELLs) are still developing proficiency in academic English. However, they bring to the classroom their powerful native languages (i.e. Spanish, Bengali, Chinese, Haitian Creole, etc.). At the same time, they are expected to meet all of the New York State learning standards, as are their native-English-speaking peers. The literature has identified effective programmatic and instructional strategies for making sure that these students receive appropriate and effective instruction. Rea and Mercury (2006) list and recommend appropriate and effective practices such as: a) teaching language through content, b) contextualizing meaning, c) building background knowledge and d) reframing information. Smiley and Salisbury (2007) state that although there are no single approaches to fit all student needs and background experiences, there are commonalities in effective instruction for ELLs. Effective instruction encompasses the following attributes: a) a customized learning environment, b) some use of the native language and culture,
c) a curriculum that incorporates basic and higher order skills instruction, d) enhancement of understanding and e) opportunities for practice.

Hill & Flynn (2006), in identifying classroom instruction that works for ELLs, state that accommodating instruction to meet ELLs’ needs is the greatest challenge educators face today. They said that the different levels of fluency shown by ELLs require different instructional approaches. These authors discussed strategies, such as homework and practice, summarization and note-taking as well as the use of nonlinguistic representations which are critical in accommodating the needs of English language learners.

Herrell and Jordan (2008) grouped strategies for teaching ELLs in four broad areas:

**Planning:** Scaffolding, providing support in comprehension, advanced organizers, building vocabulary, concept building, grouping for instruction and individualizing when necessary.

**Student involvement:** Questioning strategies, verbal interaction, hands-on practice, and support for understanding concepts.

**Building vocabulary and fluency:** Teaching comprehension and verbal interactions.

**Building comprehension:** Teaching comprehension strategies, process reading and writing, building background knowledge.

Moreover, Hill and Bjork (2008), in identifying classroom instruction that works, listed strategies such as providing feedback, summarizing, advance organizers and note-taking. Calderon (2007) provides a framework for improving achievement in the content areas for secondary ELL students. She recommends strategies such as: a) planning lessons using a research-based design, and b) vocabulary development, reading comprehension and context.

The above strategies are recommended in teaching all subject areas, but especially in the area of literacy and content.

**LITERACY STRATEGIES AND APPROACHES**

The following articles/studies recommend a variety of strategies in teaching literacy to secondary ELL students.

*a. English Word Recognition and Word Integration Skills of Native Arabic and Japanese-speaking Learners of English as a Second Language.* (Fender, 2003) This article addressed how L1 affected word recognition and integration skills of Arabic and Japanese students learning English as a Second language. There were
twenty native Japanese and nineteen Arabic speaking ESL participants in the study. The participating students were intermediate and low-advanced level ESL from two intensive English language programs. The findings of this study indicated that Arabic and Japanese speakers experienced different word recognition and integration processing difficulties in learning English as a Second language because of how their L1 affects word recognition skills in ESL. In Experiment 1 the students were required to use word recognition skills to read words or non-words. The Arabic students had difficulty with word recognition at a prelexical stage in reading words while the Japanese did not. In Experiment 2, participants read 60 sentences placed randomly in a reading task. The Japanese experienced problems in the word integration process when they had to integrate words into larger units of meaning and comprehension. These results indicate that each group has specific learning needs which have implications for the development of instructional interventions that are designed to increase students’ reading proficiency in English.

b. *Improving High School English Language Learners’ Second Language Listening Skills Through Strategy Instruction*. (Carrier, 2003). In this study, instructional interventions were provided to high school English Language Learners through the use of listening by means of structured strategy lessons. Seven high school students from an intermediate ESL class participated in this study. Six of the students were native speakers of Spanish and one was an Albanian native speaker. At the beginning of the research all the students were administered two listening and pronunciation pre-tests. This instrument calculated their ability to differentiate graphemes, syllable count and stress, contractions, pronunciations, sentence content and structure. The project participants then received 15 listening strategy instructional interventions during their ESL class for a period of 20-30 minutes during a total of six weeks. At the end of the six weeks interval, the students were post-tested and the data was analyzed. The results of the study indicated significant gains in listening and pronunciation. Strategy instruction is effective in the development of listening and pronunciation.

c. *Supporting the Development of English Literacy in English Language Learners: Key Issues and Promising Practices* (August, 2003). This document summarizes the research on the role of English oral proficiency in acquiring English literacy in both L1 and L2. The document also describes the literacy issues that English-language learners encounter because of their developing English oral proficiency. Finally, the report summarizes best practices in supporting English language development for English Language learners.

The research reviewed addresses both the relationship between first language oral proficiency and first language reading, as well as the relationship between second language oral proficiency and second language reading. The research clearly indicates a relationship between second language oral proficiency and second language reading, yet many questions arise regarding this relationship.
The studies cited in the document suggest that it is important to clearly define “the component skills of oral proficiency and of literacy” when examining oral proficiency/literacy relationships.

Issues which English language learners encounter due to their developing English oral proficiency are categorized as follow: different phonemes in L1 and L2; sound made by graphemes in L1 different from the sound made by the same grapheme in L2; less opportunities for ELLs to read aloud therefore less fluency; limited vocabulary in L2; and limited word knowledge in L2 which impedes comprehension.

Finally, the document identifies and links promising practices and subsequent educational implications to the issues encountered by English Language learners; some educational implications are as follows: Explicit instruction is more effective than implicit types; Vocabulary retention occurs when students are actively involved in the application of new words within their own writing; Comprehensible input from caption television is more effective than the traditional television viewing; Scaffolding through discourse, resolving meanings of unknown words, asking questions, making inferences, searching for cognates, translating, and transferring information assist in the development of language and literacy. In addition, theme-based literacy activities, reader’s theatre, oral presentation of the text in drama format, and computer assisted approaches assist in the development of oral language and literacy.

d. Enabling Academic Success for Secondary Students with Limited Formal Schooling: A study of the Haitian Literacy Program at Hyde Park High School Boston (Walsh, 1999). This ethnographic study examined a Newcomers Program (Haitian Literacy Program) for students with limited formal schooling at Hyde Park High School in Boston. Students who entered the program did so with up to a fourth grade reading level. The purpose of the study was to identify the strengths and weaknesses of the program with emphasis on students’ linguistic, academic and cognitive development. The number of students who graduated from high school determined a measure of success. It was also determined that students were over 20 years old upon graduation. In this study, 39% of the participants graduated with the maximum age range and went on to some form of higher education, or college. The success of the program was identified by the program elements, which were: a) commitment and dedication by the literacy teacher, b) first and second language relationships, c) thematically based/interdisciplinary, and d) students’ self-determination and/motivation.

e. Elicitation of Awareness for Teachability of Metacognitive Strategies for Transfer from L1 to L2 in Students’ Reading Comprehension. (Ben-Dov 1998). Ben-Dov studied for seven weeks how seven fifth grade students in a dual English and Hebrew language program transferred metacognitive strategies from L1 to L2.
The seven participants: three boys and four girls, were representative of low, medium and high achievement levels on the reading comprehension of the California Achievement Test (Form E, Level 14, May 1996). The participating students’ high order thinking strategies were obtained by taking the Metacognitive Comprehension Index (MCI) and Inventory of Reading Awareness (IRA) twice each, a multiple choice survey on strategies and an informal interview. All the students were required to do two concurrent think-aloud exercises, in English and Hebrew, in one-on-one settings. The results of the study indicated that: 1) Students used similar patterns of metacognitive strategies in L1 and L2; 2) Low proficiency students in L2 experienced lots of difficulty when thinking aloud in L2; 3) Most students experienced difficulty when thinking aloud in Hebrew as a second language; 4) The more the students practiced the thinking aloud strategy the better they became at using it when presented with a new task in reading English; 5) Average and moderate leveled students in reading comprehension showed improvement in their use of strategies when using think-aloud protocols; 6) Monitoring was the strategy most utilized by the students in both languages.

**f. The Relationship between Oral Proficiency and Reading Comprehension of High School Students Studying Spanish as a Second Language.** (Gomez, 2002). This research paper addressed the speaking and reading comprehension of high school participants learning Spanish as a second language. The 24 students that participated in the study were native English speakers from two classes in a suburban high school. The students were registered in a level III Spanish class. The students were all pre and post tested in Spanish oral proficiency, using the Simulated Oral Proficiency Interview Spanish Speaking Test (SOPI). They were also pre and post tested in Spanish reading comprehension, utilizing the reading comprehension sections of the New York State Regents Comprehensive Examination in Spanish. Participants received instruction in Spanish via 24 lessons, developed by specifically employing the Cognitive Academic Language Learning Approach (CALLA) and Dimension of Learning Models methodologies. The results of the study showed that: 1) Competency in English had an effect on Spanish reading comprehension. 2) Spanish oral fluency didn’t impact on Spanish reading comprehension; 3) Strategies used to learn Spanish comprehension had no impact on Spanish reading comprehension; 4) Reading comprehension learning strategies affected Spanish oral fluency; 5) Spanish oral fluency had no correlation to Spanish reading comprehension.

**g. From the Secondary Section: Can English Language Learners Acquire Academic English?** (Cruz, 2004). Cruz implemented a collaborative approach to literacy and language development in a high school English classroom. ELLs were guided from basic interpersonal skills to more cognitively demanding tasks in order to achieve cognitive academic competence.
To provide a context-rich language experience, a controversial topic of students’ interest, from current events selected from different sources, was introduced. Next, students posed questions to each other, (i.e., What would you do in this situation?). After that, each student responded to the question. Then, students worked in pairs to resolve the dilemma. In order for the teacher to raise the discussion to the next level of academic literacy, he/she poses successive questions. Based on the information gathered, ELLs conducted advanced research in preparation for their debate. They were provided with opportunities to utilize their prior knowledge and time to process the information while acquiring language during group activities.

**h. A Synthesis of Research of Language of Reading Instruction for English Language Learners** (Slavin and Cheung 2005). Slavin and Cheung analyzed data on the language of instruction in reading programs for English language learners to ascertain the amount of scientific sources which exists for rival arguments about the effects of bilingual as opposed to English immersion programs. The study comprehensively analyzed seventeen studies that focused on comparing Bilingual and English immersion reading programs for ELLs, utilizing the “best-evidence synthesis” technique (Slavin, 1986). The “best evidence synthesis” technique involves using clear and consistent standards in selecting unprejudiced and significant data from experimental studies, then discussing and describing each qualifying study extensively by effect size, context, design and findings. From the 17 studies reviewed, 13 delved into elementary reading for native Spanish speakers, 9 supported bilingual methodology for English reading and 4 found no differences. One of two Heritage language programs that were reviewed (French and Choctaw) supported a bilingual approach. Only two studies dealt with secondary school students who were low achievers. Their findings were also favorable to bilingual programs. The results of this investigation indicate that although the amount of studies carried out on bilingual approaches is small, the data supports it.

**i. Reciprocal Teaching of Reading Comprehension Strategies for Students with Learning Disabilities Who Use English as a Second Language** (Klingner & Vaughn, 1996). The authors conducted a study that investigated the efficacy of reciprocal teaching on the reading and language development of twenty-six seventh and eighth grade ELLs of Hispanic background with learning disabilities (LD). The study examined the effects of two approaches for providing reading comprehension strategies instruction to ELLs with LD on comprehension of English text: (1) reciprocal teaching with cross-age tutoring, (2) reciprocal teaching in combination with cooperative learning groups. During reading, participants were taught and focused on the major features of reciprocal teaching: (1) question generation, (2) summary, (3) prediction, and (4) clarification. The overall reading comprehension of the participants improved and reciprocal teaching dialogue improved in questioning and verbal interaction as teachers served as facilitators toward the end of the study (via the use of prompts and modeling) and provided feedback on the use of cognitive dialogues during the dialogue interaction phase.
j. The Reading and Writing Self-Efficacy Beliefs of Students with Discrepant Reading and Writing Performance (Shaw, 2007). Shaw (2007) examined the role of reading and writing self-efficacy beliefs in the reading and writing performance of 619 high school students. A goal of this study was to describe the differences between students identified as stronger at reading than writing, and as stronger at writing than reading. The findings indicated that reading self-efficacy beliefs significantly mediated the effects of high school English GPA. A comparison of the two discrepant groups showed that weaker readers/stronger writers had more English language development experience and were more likely to request help. The request for help is to raise their performance, and in so doing, raise their self-efficacy. A suggested self-efficacy intervention would include modeling, goal setting and progress feedback.

k. Meta-cognitive Strategy Training for Reading: Developing Second Language Learners' Awareness of Expository Text Patterns (Talbot, D. C., 1996). Talbot conducted a study in which he investigated whether ESL readers would benefit from an explicit strategy training program to develop a meta-cognitive awareness of text structure in English. The participants were of Chinese background attending a Hong Kong Tertiary Institution. Two hundred and forty-four participants were assigned to treatment and control groups. A top-level structure was used because it was cognitively more salient. The researcher used the explicit teaching model to train in expository text structure awareness, focusing on comparison and contrast, cause-effect, and problem-solution. Participants received support during the study and were phased out as they achieved a competent level leading to more independent strategy use. The findings indicated that awareness of text structure, which forms part of a reader’s background knowledge, aids in second language reading comprehension.

l. QAR. Enhancing comprehension and test taking across grades and content areas (Raphael & Au, 2005). This article describes the potential of Question and Answer Relationship (QAR) in assisting teachers to guide all students to higher level thinking literacy. When reading, especially in the content areas, the tasks often require students to gain knowledge of text organization and identify important information/details from texts, graphs and photos. The QAR approach provides everyone with a common language and opportunities for inferential and evaluative critical thinking.

m. Developing Reading Comprehension Questions (Day, 2005). The authors contended that reading is not a passive process, but an active process where students ask questions to decipher the author’s intent. In order to encourage interactive readers, the authors clearly defined six types of comprehension questions (literal, reorganization, inference, prediction, evaluation, and personal response), and five
forms of questions (yes/no questions, alternative questions, true or false, “wh” questions, and multiple choice) to engage with the text. These questions are essential to reading comprehension, but in addition to the types of comprehension questions and the five forms, teachers must also include open-ended probes to generate a clear understanding of the text and clarify any misunderstanding.

n. Learning Language and Critical Literacy: Adolescent ESL Students (Alford, 2001). This article supports the notion that being literate involves active involvement with the text rather than solely relying on decoding and passively comprehending text. Strategies that promote the development of building background knowledge include: activating prior knowledge; building on the knowledge from a recent perspective, and adding new information during the reading process.

o. Effective Reading Programs for English Language Learners: A Best-Evidence Synthesis (Slavin & Cheung, 2003). This article reviewed experimental studies of reading programs for English language learners, focusing both on comparisons of bilingual and English-only programs and on specific models that have been evaluated with English language learners. The review concludes that while the number of high-quality studies is small, existing evidence favors bilingual approaches, especially paired bilingual strategies that teach reading in the native language and English at the same time. Whether taught in their native language or English, English language learners have been found to benefit from instruction in comprehensive reform programs using a) systematic phonics, b) one-to-one or small group tutoring programs, c) cooperative learning programs, and d) extensive reading.

p. Bilingualism as a future investment: The case of Japanese high school students at an international school in Japan (Wakabayashi, 2002). Forty-eight Japanese students attending an English medium international high school participated in an immersion program in content and language development in grades 9 to 12. They spoke Japanese as a first language when they participated in this study. Twenty-six students were educated in English since preschool and twenty-two students were initially educated in Japanese. The dual language program assisted students in developing a superior level of balanced bilingualism. Both groups were given a Metropolitan Achievement Test to measure their achievement in English. The findings indicated that the students initially educated in Japanese had competed in test scores with their English Japanese counterparts. The authors attributed the success of the students taught in Japanese to the teaching of first language acquisition in language, literacy and academic language development, which supports the successful development of second language acquisition in literacy and academic language proficiency.
The following articles/studies list recommended strategies to teach vocabulary to secondary school ELLs:

**a. Modeling the Role of Second Language Proficiency and Topic Familiarity in Second Language Incidental Vocabulary Acquisition through Reading** (Pulido, 2003). The author examined the implementation of incidental vocabulary learning and how L2 words are processed as input. The study specifically examines the impact of: (a) topic familiarity, (b) L2 reading proficiency, (c) L2 passage sight vocabulary, and (d) background knowledge on incidental vocabulary acquisition of 99 adult learners of Spanish as a second language at the university level. The participants were assigned incidental tasks to read for comprehension. The tasks entailed two narrative passages that were familiar scenarios to the participants and two that were less familiar scenarios. The primary focus of the study was to investigate the three reader-based factors and their impact on L2 incidental vocabulary gain through reading and its consistency and effects over time (p. 245). The findings indicate that L2 learners at all reading proficiency levels demonstrated greater vocabulary gains after reading about familiar topics, which is considered the cognitive underpinning for negotiating meaning and allocating higher order thinking.

**b. Closing the Gap: Addressing the Vocabulary Needs of ELLs in Bilingual and Mainstream Classroom** (Carlo, August, McLaughlin, Snow, Dressler, Lippman, Lively, and White, 2004). This 15-week study focused on the impact of a vocabulary enrichment intervention that combined direct word instruction with instruction in word learning strategies outcomes for ELLs. Two hundred and fifty-four (254) bilingual and monolingual students from nine fifth grade classrooms participated in this study. One hundred forty-two (142) of the 254 participants were ELLs. The instruction was delivered for 30-45 minutes for four days, with 10-12 words per week. Students had the opportunity to preview words in Spanish, worked in large and small groups, heterogeneous language groups, and completed cloze tasks with target words. The findings indicated that teaching academic words, awareness of polysemy, using context clues to infer meaning and analyzing morphological and cross-linguistic aspects of word meaning did improve the performance of both ELLs and English only students to equal degrees.

**c. Designing and Testing Vocabulary Training Methods and Materials for Japanese College Students Studying English as a Foreign Language** (Loucky, 1997). Loucky examined the English vocabulary and reading comprehension levels of approximately 1,500 Japanese post secondary school students. The study compared three different formats for teaching vocabulary in ESL classes. The findings indicate that teachers can improve vocabulary instruction by: a) having students practice with
an intense concentrated quantity of new essential core vocabulary in a broad variety of new contexts, b) stimulating activation of associative memory networks, c) maximizing active student acquisition of new words and activating passive vocabulary through maximum productive or generative use, and d) following a set pattern of steps in learning any new vocabulary.

d. Teaching Vocabulary to Adolescents to Improve Comprehension (Curtis & Longo, 1983). In this 16-week study, middle and high school “at risk” students were introduced to a reading intervention program called Reading is FAME. The purpose of the study was to improve comprehension that developed students’ vocabulary through the use of four modalities; listening, speaking, reading, and writing. FAME has a number of steps (e.g., focusing on vocabulary, moving vocabulary words from isolation to context, and selecting words for instruction). There were five principles of this intervention (introduce and activate word meanings, present words in a variety of contexts, provide multiple opportunities to learn and expand on meanings, promote active and generative processing, and provide ongoing assessment and communication of progress). As a result of this intervention, 26 of the students gained, on average, one grade level in reading achievement on vocabulary and comprehension subtests. Students demonstrated an ability to identify unknown words within context, improved in reading fluency, and acquired new concepts resulting in an ability to analyze the selected reading.

e. The Effects of Synonymy on Second-Language Vocabulary Learning (Webb, 2007). This case study investigated the effects of synonymy on vocabulary learning with 84 Japanese student participants of English as a second language who were first year college students. The study focused on whether learning synonyms for known second-language (L2) words is easier than learning non-synonyms, and sought to determine if this would provide insights on the vocabulary acquisition process. Two sets of words were given to the students to determine how well they would learn them. The first set consisted of 10-low frequency words with high-frequency synonyms and set 2 consisted of 10 low-frequency words without high-frequency synonyms (disguised forms replaced the L2 forms of the low-frequency words and were matched with their L1 meanings to ensure that participants had no prior knowledge). The participants were exposed to two learning conditions; one required the participants to view the words in glossed sentences and the second in word pairs. The findings indicated that the scores for learning synonyms for known words were higher than words that excluded synonyms and showed promise in vocabulary development.

BUILDING BACKGROUND KNOWLEDGE

The following articles/studies list recommended strategies to build background knowledge for secondary school ELLs:
a. **Background Knowledge** (Strangman & Hall, 2003). Strangman and Hall (2003) conducted a study that explored the importance of background knowledge, how students retrieve and use it in reading, and how it influences the understanding of texts. The best-supported approaches that emerged were direct instruction in background knowledge, student reflection on recording of background knowledge, and activation of background knowledge through questioning. One important aspect of this study is the effectiveness of background knowledge instruction for improving student comprehension of narrative texts. Another important aspect of this article discusses how teachers need to take into consideration the students’ characteristics, their familiarity with a topic and the accuracy of their prior knowledge, in selecting approaches to support the activation of background knowledge. By effectively selecting and implementing instructional strategies to build and/or activate background knowledge, teachers can better support all students on their way toward learning to read and succeeding throughout the curriculum.

b. **Tapping the Linguistic Resources of Spanish/English Bilinguals: The Role of Cognates in Science** (Bravo, Hiebert & Pearson, 2005). This case study explored the relationship between a set of Spanish/English cognates that have the potential for (improving) Spanish/English bilingual students’ experiences with English science texts. Researchers developed three steps for the classification scheme and the identification of words for this linguistic analysis: a) establishing a critical science word list, b) developing the cognate classification scheme, and c) identifying the frequency of words in English and Spanish in three Science disciplines: Life, Earth and Physical Science. During this intervention, targeted words were presented and analyzed using a rubric to determine the frequency of words in both L1 and L2. Researchers concluded that obtaining the skills and awareness of cognates in science would increase students’ reading comprehension and content knowledge. Failure to recognize these high-frequency Spanish words will prevent students from capitalizing on the native language knowledge-base in order to support English language development and content knowledge in Science.

c. **A Model for Developing Academic Language Proficiency in English Language Learners through Instructional Conversation** (Villar, 1999). The primary focus of this study was to provide ELLs with opportunities to engage in higher levels of English oral proficiency. The research indicated that instructional conversation has great potential in developing linguistic and academic competence in ELLs. The study incorporates a theoretical rationale for examining instructional conversation from the perspective of social constructivist theory. The findings indicate that there is a significant difference between the turn-taking patterns of the participants and those of the teacher-centered classroom. Prior knowledge is important in the success of instructional conversation. The teacher must be an expert both in the subject he/she teaches and in questioning techniques. He/she must also be familiar with the socio-cultural background of the students. Instructional conversation enhances the students’ ability to link old knowledge with new learning and to maintain a thematic focus.
CONTENT AREAS

The following articles/studies recommend strategies to teach content areas to secondary school ELLs:

**a. Apprenticing Adolescents to Reading in Subject-Area Classrooms** (Schoenbach, Braunger, Greenleaf, & Litman {2003}).

This article examines content area teachers’ apprenticeship approach to literacy and content development. Aware of the challenges that academic texts tend to offer, they opted for a collaborative approach to build students’ confidence level and to become more engaged with academically challenging texts. The objective of the apprenticeship approach is for teachers to serve as mentors, to model cognitive advance thinking, to support students in the learning process, and to encourage students to engage more in reading, with the ultimate goal being the development of skillful independence in concept formation and practice. The apprenticeship framework involves four interacting dimensions in the development of reading strategies and techniques in the classroom: a) the social, b) the personal, c) the cognitive, and d) the knowledge building dimensions. This approach has been shown to improve students’ attitude and outlook, particularly in the case of struggling readers as well as those students who are reading way below grade level. Students view reading as an interactive process resulting in self-to-text interaction while making sense of texts.

**b. ESL Math and Science for High School Students: Two Case Studies**
(Spanos, 1992).

Two case studies were conducted at a high school with a student population of 15,483 students, 71% of which were Spanish speaking and 254 of which were receiving ESL services. Using the CALLA approach, data was collected through the use of a "Word Problem Procedure" for math and a "Scientific Method Procedure" for science. These procedures invite the use of learning strategies and enable instructors to collect data on the linguistic, academic, and strategic aspects of content-ESL.

In the math study, 20 students used a program called the Word Problem Procedure (WPP) that was developed by Polya in 1957. It contains four steps (e.g., understanding the problem/devising a plan/carrying out the plan/looking back). In addition, WPP engages the students and enables them to practice reading, writing, speaking and listening to do the math problems. The study found that students benefit from this approach because math teachers incorporated CALLA and WPP activities that encouraged ELLs to think aloud when solving problems. Students followed the WPP steps correctly and used meta-cognitive strategies to further their learning.

In the science study, 12 students used a program called Scientific Method Procedure (SMP) (e.g., state the problem, gather information about the problem, form a hypothesis, perform an experiment to test the hypothesis, record and analyze data
from the experiment and state a conclusion). As a result of using the SMP approach, the data indicated that an effective way to involve students in the use of learning strategies is to provide an integrated plan for learning. Spanos states that the performance of both math and science students in following the WPP and SMP indicated that students could learn to apply learning strategies and tactics to the study of language and content. The procedures helped students develop confidence, discipline, and responsibility in conducting experiments and solving problems.

c. Integrating Language and Culture in American History Classes Middle School (Short, 1993). Six middle school and junior high school teachers (two from Virginia, two from Maryland, one from New York and one from Florida), and 37 students were participants of this project. Five of these eight teachers were trained social studies educators; three were ESL educators. The integration of language and content is provided through the following approaches: content-based language instruction, content topics as the framework for instruction, teacher collaboration between subject area teachers, and language teachers in the design and development of lesson plans that reinforce instruction in the regular content area class. The techniques used in integrated language and content classes included increased use of visuals and demonstrations, emphasis on graphic organizers, thinking/study skill development, pre-reading/pre-writing activities, cooperative grouping, and scaffolding. A key feature of an integrated language and content class is the emphasis on active student participation with communication about content topics through all four language skills (listening, speaking, reading, and writing). The findings indicated that the academic language of social studies is consistent with the higher-level literacy demands of other subjects. English language learners who have the opportunity to expand their academic literacy skills through social studies classes may be better prepared to handle the rigors of mainstream instruction.

d. The Effects of Problem-Based Learning on Secondary English Language Learners (Cos, retrieved, 2008). This study examined the use a Problem-Based Learning approach (PBL) to determine what kind of impact it will have on low-achieving, English language learners in science (bus safety). PBL is a strategy that has the potential to increase student achievement because it emphasizes students creating their own knowledge by solving real world problems. This study was conducted with 20 eighth grade ELLs who were failing, were below basic scores on standardized tests, and were not meeting state science standards. The study guided participants through the scientific method process and encouraged students to develop solutions based on their research. Science learning was measured using student questionnaires, interviews, written exams, teacher observations, and student presentations. Pre and post tests and academic grades were analyzed for any significant changes. Analysis of student responses from interviews and questionnaires indicate a significant increase in a favorable view of science. The findings indicated that PBL can increase ELLs’ motivation and interest in learning.
e. Adaptations of Peer-Assisted Learning for English Language Learners; Application to Middle-School Social Studies Classes (Linan Thompson, S., Vaughn, S. 2005-2010). This on-going five year study (2005 – 2010) has as its goal the evaluation of the effectiveness of a social studies intervention based on specific instructional and learning strategies. The project was designed to address challenges faced by ELLs by focusing on practices that enhance students’ understanding of social studies content and of expository text. It provided them with opportunities to learn and use the language of social studies. The intervention, or model of instruction, includes peer mediated learning, research-based practices for vocabulary instruction, the use of media to build comprehension, and the development of background knowledge.

Among the goals of the study are the integration of vocabulary and English as a second language into interventions to enhance comprehension strategy instruction and the identification and description of the response to the interventions by students with differing levels of English proficiency.

f. Dialogic Classrooms, Mediating the Academic Experience of Linguistic Minority Learners (Gerson, 1997).

This study investigated the academic achievement of linguistic majority students in mainstream social studies classrooms. Language was viewed theoretically as the primary semiotic tool through which students are enabled to successfully mediate the demanding milieu of the social studies classroom where both prior content specific and procedural knowledge are often anticipated.

Specifically investigated were 5 strategies and conditions that appear to positively affect the academic competence and language growth of the linguistic minority students in 3 social studies classrooms at the middle and high school levels. They included: a) an institutional focus that develops and maintains a connection between classroom dialogue and task, b) the teacher’s elicitation of and responsiveness to student contributions, c) the activities of relevant schematic, d) overt teaching, and e) the prevalence of assisted performance.

Two hypotheses were drawn from the findings and conclusions of the investigation. 1) in middle and high school social studies classes where cultural and linguistic diversity prevail, the teacher’s consistent elicitation of and responsiveness to student contributions will positively affect student attitude and performance; 2) in middle and high school social studies classes where linguistic diversity prevails and students have not yet appropriated the procedural knowledge necessary to independently integrate text and classroom talk effectively, the implementation of text-based discourse as the medium of instruction will positively affect student attitude and performance.
The following articles/studies recommend strategies to integrate technology in the secondary school classrooms.

a) *Enhancing the Writing Development of English Language Learners: Teacher Perceptions of Common Technology in Project-Based Learning.* (Foulger, Jimenez-Silva, 2007). In this year-long study the researchers investigated classroom teachers’ utilization and perceptions about technology and how it impacted on their English language learners’ writing skills in project-based activities. The participating fourteen teachers and their students were from an inner-city K-8 school in a southwestern state. Eighty four percent (84%) of the students who were provided interventions during this study by participating teachers were of Hispanic heritage in general education classrooms. Only one of the participating pedagogues in the research was a bilingual teacher who had a third/fourth grade combination class. Prior to the study the use of technology by the students was about sixty minutes per week with one computer in their classrooms. As part of the study, participating pedagogues received weekly, one-on-one training from a computer specialist. The focus of these training sessions was on individual teacher needs; curriculum development; and cooperative teaching in the computer lab and classroom. The pedagogues also participated in project meetings to discuss and reflect on how their use of the seven teacher practices, based on the Hadaway, Vardell and Young (2002) framework (“time and opportunity to write, a reason for writing, a genuine audience, access to role models, a safe environment, useful feedback and sense of community”). Through the use of technology (computers) they supported their English Language Learners writing development. Data was collected and gathered from the participating pedagogues three times during the year-long study via their cumulative reflections on how the seven aforementioned factors supported their English Language Learners’ writing and how the integration of technology could have positively affected it as well. The results of the study indicated that each of the seven practices from the Hadaway, Vardell and Young (2002) framework should be looked at specifically with the integration of technology. The researchers concluded that these findings have positive instructional implications for other student populations within a school.

b. *Amplifying Autonomy and Collective Conversation: Using Video iPods to Support Mathematics Teacher Learning* (Morris and Easterday, 2008). Morris and Easterday studied the effects of pedagogical training in mathematics, focusing exclusively on algebraic thinking using technology, specifically video iPods, to improve and enhance their teaching practices to English Language Learners in this content area. The purpose of this research was to provide teachers with the opportunity to learn how to guide all their students, including English language learners, to use high order thinking strategies while learning mathematics. As the students made guesses and inferences, they explained their thinking processes.
They assessed the strategies utilized and used various examples and illustrations as they worked their way in the direction of generalizations and verification through the use of video iPods. A combination of about forty elementary, middle and high school pedagogues participated in this three year longitudinal study. The teachers were from five rural and suburban underachieving school districts in Northern California who had been awarded a state Math/Science grant. Data collected for this project included teacher anecdotes, observation notes made by staff developers/facilitators during monthly gatherings, synthesis of facilitators’ mini group sessions, pedagogical presentations to peers and evaluations of attended meetings by participating teachers. The results of the investigation revealed what the researchers had anticipated, that due to the nature of the subject matter and personalized technology (video iPods) participating teachers had to make individual commitments to the resources availed to them actively. They also found that participating educator discussions were comprehensively reflective and they took a more active role in these conversations. The researchers believe that the use of this technology in other subject areas might yield similar benefits for teachers and the students they teach.

c. Enhancing the Writing Development of English Language Learners (Foulger & Jimenez-Silva, 2007).
This study of 14 teachers from grades K-8 focused on how technology-related activities in writing for ELLs can improve when instruction and activities lend themselves to real-world situations. The authors identified seven teaching practices that develop and support the writing proficiency of ELLs. The seven practices are, time and opportunity to write, a reason for writing, a real/genuine audience, role models as a learning behavior, a take-risk and safe environment, appropriate feedback, and instilling a sense of community. Students were presented with problem-solving projects as a way of contextualizing learning (project-based learning). Based on the findings, project based learning and technology students demonstrated decision-making skills which required higher order thinking and this suggests that technology can enhance the writing skills of ELLs. “Environments that provide ELLs with rich opportunities to write in meaningful ways acknowledge the language support that is necessary for them to succeed academically.”

Conclusion
In order to increase the availability of scientific-based literature and effective instructional practices in teaching secondary ELLs, two recommendations are given:

- Doctoral programs at the college level should encourage dissertations in the area of secondary school ELLs, especially in the area of effective instructional practices.
- The NYSED should facilitate resources to individual researchers to identify effective programs and instructional practices for secondary school ELLs.
References


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19.


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