Effective Second-Language Reading Transition: From Learner-Specific to Generic Instructional Models

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Abstract

This study examines two questions involving students in a transitional bilingual education program learning to read in a second language. The first question deals with the impact of second-language (L2) text structure on comprehension processes, while the second deals with the level of oral language proficiency necessary to comprehend L2 texts. Findings demonstrate that comprehension "errors" begin at the word level and expand to the sentence level (or beyond) in order for the reader to make meaning from the texts. Oral language proficiency proved to be an inadequate measure in determining "correct" comprehension of L2 texts. A generic processor or whole group model of instruction is inadequate in meeting L2 readers' needs because the generic processor perspective assumes that L2 learners come to school with similar linguistic backgrounds, experiences, and cultural perspectives. The focus of transition instruction should be on individual learning needs, assessed in a manner that enables the teacher to determine the cultural, linguistic, and cognitive interplay between the text and the reader. Knowing students and their families, along with their instructional needs, will enable teachers to help L2 learners move towards a generic processor model with more success.

Introduction

In attempts to increase achievement and accountability, literacy teaching and learning have been the focus of recent reform efforts (Freeman & Freeman, 1999). Although second-language (L2) literacy learning has been investigated in the past (e.g., Carrell, Devine, & Eskey, 1988; Steffenson, Joag-dev, & Anderson, 1979), there has been a continued call to research the reading processes of L2 learners[1] (Au, 1998; August & Hakuta, 1998; Bernhardt, 1991; Chamot & O'Malley, 1996; Fitzgerald, 1995a; Fitzgerald & Noblit, 1999; Gersten, 1996; Jiménez, García, & Pearson, 1996; Kerper-Mora, 1999; Koda, 1996).

Issues specific to L2 literacy learning have appeared from the research in this area (Anderson & Roit, 1998; Fitzgerald & Noblit, 1999; Reese, Garnier, Gallimore, & Goldenberg, 2000). This study examines two of these issues with regard to comprehension. First, how are the comprehension processes of L2 learners transitioning to English reading affected by L2 text structure? In other words, what syntactical text structures might be problematic for students transitioning from Spanish to English reading? Second, what is the role of L2 oral proficiency with regard to L2 text comprehension?

There are not many studies investigating bilingual literacy processes among elementary-age students (Comeau, Cormier, Grandmaison, & Lacroix, 1999; Ramírez, 1994). Moreover, there are few qualitative studies that allow for "in-depth analysis of fewer subjects with a broader number of variables" (González, 1999, p. xv) enabling "obstacles"[2] from the L2 learners' perspectives to be uncovered. This paper reports the results of a bilingual (English-Spanish) study investigating errors from student-generated written recalls. The researcher's intent was to come to a better understanding of L2 students' text interpretations and to ascertain what role, if any, L2 text structure (syntax) and oral proficiency played in their comprehension of texts.

Literature Review: Second-Language Reading Cognitive Processes

There are several comprehensive reviews of the literature with regard to L2 reading in general (e.g., Bernhardt, 1991; Fitzgerald, 1995b; Geva & Verhoeven, 2000; Kerper-Mora, 1999; Ramírez, 1994). This paper focuses on the comprehension processes that L2 readers experience, as well as the L2 oral proficiency necessary to successfully comprehend L2 texts as a native speaker might comprehend them. It is recognized at the onset that reading is a complex cognitive process involving more than language proficiency to understand texts as native speakers might comprehend them; however, oral language proficiency is commonly used by teachers to make instructional decisions and used as a readiness indicator for program placement or to transition students to L2 reading (Goldenberg, 1996). As Cummins (2003) points out, there is a misconception regarding the three levels of language proficiency. The basic interpersonal conversation skills (BICS) are generally acquired within 2 to 3 years, enabling L2 learners to communicate effectively using cues (i.e., facial expressions, tone of voice, intonation, gestures) during their everyday use of language. This is the level of proficiency most native English speakers have acquired upon entering kindergarten. The second tier pertains to the student's knowledge of how discrete language skills (DLS) (i.e., punctuation, grammar, and conventions of print) function in the L2. As the students progress through the grades, their knowledge of DLS grows and becomes more complex. If the first-language (L1) DLS closely align with those

of the L2, these skills will be acquired faster. Finally, the cognitive academic language proficiency (CALP) needed to succeed when reading about abstract concepts (especially in the upper grades) generally takes 5 or more years to attain. Many in education base their instructional decisions upon students' first tier of language proficiency (BICS) without considering students' DLS or CALP in the L1 or the L2. At the time of this study's data collection, the district utilized criteria for transition that included L1 reading and listening comprehension, as well as L2 oral proficiency and listening comprehension; however, most of the participants were in a transition reading group based upon teacher judgement and had never had the transition readiness criteria administered to determine instructional placement. In addition, many districts, in states that do not have bilingual programs, base program placements upon the first tier of oral language proficiency.

To further complicate matters, teachers generally teach as if all students are at the same place in their learning development. This "generic processor" model assumes that all students comprehend or interpret texts the same. Learning is viewed as generic or "one size fits all" and is played out by asking "known answer questions" (Heath, 1983) to check comprehension. It is assumed that all students will glean the same meaning from texts, all students will understand concepts in the same way, and all students bring the same knowledge about the English language with them to school. This is not accepted as an accurate view of learning or reading processes today (Freeman & Freeman, 1999).

L2 Reading Processes

Reading models designed specifically for L2 learners have been available for some time (Bernhardt, 1991; Carrell, Devine, & Eskey, 1988). It is important to note that these models were created based on studies with L2 adult participants. Cognitively, children have been found to think as adults; however, children lack the experiences that enable them to process information as adults (Carey, 1985). The author contends that children approach L2 reading differently than adults. As stated earlier, little work has been published to date that focuses on bilingual children's L2 reading processes. This raises the question of generalizability to younger, less experienced L2 readers. Although it is problematic to assume children become L2 readers akin to adults, many studies have taken that leap without considering the problems of this approach. At times when reading the literature, it is difficult to discern the age of participants because studies that may or may not have included children are cited to support statements. For the reader's information, where applicable, work concerning L2 children has been marked with an asterisk following these citations. In this review, every attempt was made to only include studies that had children as participants.

Another issue stressed by García, Pearson, and Jiménez* (1994) concerns the many bilingual program models found throughout the United States. One district or school might define "bilingual" differently than another district or school. These variables point to the importance of González's* (1999) call for more in-depth investigations of participants' school environments, as well as what Freeman & Freeman* (1999) term "external factors" (culture, L1, socioeconomic status, etc.) that contribute to the overall education of our language-minority children.

Theorists (e.g., Cummins, 1981) hypothesized that bilingual students are able to transfer knowledge from their L1 to a second language when they become proficient in that language (Gersten,* 1996). Krashen* (1988; 2002a) includes reading in this equation, stating that "once you can read in one language, this knowledge transfers rapidly to any other language you learn to read. Once you can read, you can read" (2002b, p. 5). Jiménez, García, and Pearson* (1996) used think-alouds in an attempt to invoke cognitive and metacognitive strategies from their bilingual participants. Cultural and linguistic familiarity with the text created a qualitatively different experience for the readers. They found that reading expertise and explicit L1–L2 vocabulary knowledge affected reading comprehension when the bilingual participants were more focused upon strategies that helped them deal with unknown vocabulary. Also, the less proficient bilingual reader believed that her knowledge of English reading only facilitated Spanish reading, whereas the more proficient reader felt there was a reciprocal relationship between the two languages in assisting her comprehension of L1 and L2 texts. The monolingual reader, free from vocabulary and prior knowledge demands, was able to concentrate on the interpretation and comprehension of the text as a whole. These varied metacognitive perspectives point to the different processes students attend to while reading.

Valedez Pierce* (2001) synthesized perspectives about L2 reading models stating that the process of reading in L1 and additional languages is similar, except for two important variables that L2 readers bring to their reading situation. These variables are prior knowledge and L2 proficiency (see also Chamot & O'Malley*, 1996; Peregoy & Boyle*, 2001). Koda (1996) pointed out that connections between the words of the text and the context (global knowledge) brought to the reading task by the reader are "bi-directional" in that they interact and ultimately influence text comprehension overall. She also posits that when students learn to read in the L2 after the L1, "there is greater probability that L1 experience effects interact with other factors in shaping L2 processing procedures" (p. 458). Geva and Verhoeven* (2000) hypothesize that L1 and L2 readers differ in their level of word recognition efficiency but rely on similar strategies and underlying processes when comprehending texts. On the other hand, Grabe* (1988) states that some students may need direct instruction regarding the application of certain reading strategies in the L2, as all reading strategies do not automatically transfer from the L1.

Ramírez* (1994) summarized the literature on literacy acquisition among L2 learners, noting that "the use of extra text-based knowledge, reading . . . strategies, and metalinguistic awareness of literacy conventions play an important role in L2 literacy acquisition" (p. 95). His summary demonstrated that "effectively" interpreting second-language texts, as the mainstream L1 student or teacher might interpret them, requires more on the part of L2 learners. Since L2 learners typically have different experiences and linguistic knowledge than L1 speakers, unknown vocabulary and diverse backgrounds preclude and interrupt the interpretative process.

Role of L2 Oral Proficiency

Anderson and Roit* (1998) highlighted the controversy behind the notion that a student must be "orally proficient" in the L2 before beginning to read that language. They believe that due to the increasing diversity among the U.S. school-age population, it is no longer conceivable (or equitable) to wait for L2 oral proficiency to develop before beginning to read in the L2 (English). Anderson and Roit conclude that L2 reading should be "promoted" for certain L2 learners and "not avoided" for others (p. 51). With proper instructional methods, students can learn strategies that will enhance their reading ability in the new language while increasing oral proficiency.

Goodman, Goodman, and Flores* (1979) assert that L2 reading instruction should begin when the learners show receptive understanding. Barrera* (1983) has shown that learning to read in the L2 provides a reciprocal relationship between oral language proficiency and L2 reading ability. In other words, learning to read in the L2 assists and develops oral language proficiency, while increasing oral proficiency assists and improves L2 reading ability.

In a bilingual study, Langer, Bartolomé, Vásquez, and Lucas* (1990) stated that meaning-making strategies in Spanish and English were what distinguished the better English readers among bilingual fifth graders. Oral language proficiency in Spanish and English did not appear to enable text comprehension; rather, students' ability to make meaning of the texts proved to be a more important variable.

Cummins (2003) and Krashen (2003) also advocate the "power" of extensive reading for L2 readers because it is by reading that students have access to the low-frequency vocabulary and grammatical structures found in texts, as opposed to the high-frequency vocabulary and syntax of everyday conversational language. Freeman and Freeman (2003) discuss the goals of a word-recognition approach versus a sociopsycholinguistic approach to reading instruction. In the former, written language builds upon an oral language base, while the latter emphasizes the construction of meaning based upon the interaction of cues from the text and the background knowledge of the reader. One reason using a word-recognition approach is problematic with L2 readers is that teachers may delay reading instruction until a certain level

of oral proficiency has been reached. Freeman and Freeman go on to state that L2 classroom teachers often work on readiness skills, vocabulary, and pronunciation to the exclusion of reading. Because students pronounce the words correctly when reading does not mean that they comprehend the text accurately; L2 oral proficiency is not the only factor to consider when teaching reading to English language learners (ELLs).

In sum, recent research regarding L2 reading processes appears to support differing cognitive processes for children reading and comprehending L2 texts, compared with L1 readers. The literature also demonstrates the supporting role that L2 oral proficiency plays, rather than purporting a necessary or central role in "accurate" text comprehension. Reading in the L2 should not be delayed for many L2 readers while their L2 oral proficiency is developing (Anderson & Roit, 1998) and should emphasize meaning-making over decoding (Langer, Bartolomé, Vásquez, & Lucas*, 1990). The tiers of language necessary for academic success in English (DLS and CALP) (Cummins, 2003) should be developed simultaneously, building upon the knowledge ELLs bring to school with them.

Theoretical Framework

As mentioned earlier, González (1999) advocates the use of a framework based upon cognitive psychological theory to investigate issues in bilingual education and L2 learning. This approach to research allows the understanding of "internal representational and thinking processes involved" (González, p. xvi). It enables the effects of external factors such as culture and language to be factored into the analysis, while internal factors such as developmental variables are also considered. This ultimately leads to a more comprehensive understanding of within and between group differences while opening doors for students, improving teacher practice, and generating knowledge about L2 readers' cognitive processes. Because reading is an "interactive and multidimensional process," it requires different features to be considered when analyzing L2 readers' data (Ramírez*, 1994, p. 80). L2 learners make meaning from texts via text-based and reader-based features (Anderson*, 1999; Barnett, 1988; Bernhardt, 1986, 1991; Koda, 1996). By examining students' written retellings of texts, researchers can extract and categorize differences in understanding or comprehension into text- and reader-based features. Thus, researchers are able to investigate L2 readers' comprehension in multiple ways and analyze data for "potential relationships in and among the text- and reader-based features" (Bernhardt, 1991, p. 171).

The theoretical framework selected had to allow for microanalyses (Trueba, 1989) of individual comprehension while coding L2 readers' understandings of texts. This was necessary to determine "obstacles" experienced when learning to read in the L2. Bernhardt's (1991) sociocognitive framework for L2

reading fit the criteria because it allowed for the flexibility of: (a) language use for the reader when recalling his or her interpretation of texts, (b) L2 oral proficiency levels, and (c) different text types and levels. The text-based features, or features that are found within the texts, include word recognition (word-level or translation errors), phonemic-graphemic decoding (misidentification of words based upon oral or visual similarities), and syntactic feature recognition (meaning-based errors between and among words at the sentence level) (see Table 1). Reader-based features, or features inherently found within the reader, encompass prior knowledge, intratextual perception, and metacognition, albeit all that is reported here is based upon the qualitative analyses of written recalls focusing on text-based features. (See Avalos, 1999, for the complete study, including quantitative analyses and findings concerning reader-based features.)

Freeman and Freeman* (1999) call for a "sociopsycolinguistic" theory of reading focusing on external factors (culture, L1, socioeconomic status, etc.) and errors made by the reader to determine strengths and weaknesses. Meaning is constructed and reconstructed by the reader while using three cueing systems together: the graphophonic (written and sound), syntactic (words and grammar), and semantic (meaning) systems of language (Goodman, 1965). The combination of sociological and psycholinguistic literacy theories brings to light the importance of the three cueing systems available to the reader, based on background knowledge and prior experiences. As readers construct meaning, background factors interact with the cueing systems available to the reader, leading to the construction of meaning; whether it is the meaning the author intended depends upon the reader's knowledge of the cueing systems and similar background experiences. This study utilized sociocognitive (Bernhardt, 1991), sociocultural, and psycholinguistic (Freeman & Freeman, 1999) approaches to data analysis in order to comprise external factors and individual errors.

Method

Setting and Participants

This study took place at an elementary school located in a southern California city with a population of over 235,000 people. The population of the school was about 900 students (preschool through sixth grade) at the time of the study. At the time, the school had the largest minority student population within the district and was characterized by a high L2 learner population and low socioeconomic status. Ninety-three percent of the school's population participated in the federally funded free or reduced-price meal program. During the year of data collection, 82% of the students were Hispanic, 10% non-Hispanic White, 6% African American, 1% Asian American, and 1% other. Sixty percent of the Hispanics enrolled were designated as limited English

proficient (LEP) according to district criteria. These students were placed in a setting that enabled them to receive instruction in their native language (Spanish) to transition them to English reading instruction. Generally, this transition took place in third or fourth grade, but the population's high mobility rate (over 40%) necessitated bilingual teachers through the sixth grade.

Table 1
Bernhardt's Text-Based Features

Feature	Definition	Example of error in this category
Word Recognition	Mistranslation; incorrect use of semantic interpretation.	Text read, "A woman came walking up the hill. 'Gala! Kiss!' she called." Student wrote, " . . . a lady named Kiss." The student interpreted "called" as the Spanish "*llamar*" [to be named].
Phonemic-Graphemic	Misidentification of words based upon visual or aural similarities	Text read, "Un Haltillo de Cerezas [A bundle of cherries]." Student wrote, "Un haltillo de cervezas [A bundle of beers]."
Syntactic Feature Recognition	Misunderstanding the relationship between and among words at the sentence level	Text read, "She was their owner. . . . Dorothy was an American, but she had come to live and work in the Swiss Alps." Student wrote, "Their owner lived and worked in America."

Thirty fourth-grade students were randomly selected by phase of L2 oral proficiency (Preproduction—Phase 1; Early Production—Phase 2; Speech Emergence—Phase 3; and Intermediate Fluency—Phase 4) and L2 reading transition levels (Beginning or second-grade level; Middle or third-grade level; and End or fourth-grade level). The L2 oral proficiency phases were determined

by the teachers via the Student Oral Language Observation Matrix assessment, conducted 4 months prior to data collection. The transition reading levels were determined by teachers using established district criteria (L2 oral language proficiency and listening comprehension, and L1 reading comprehension and writing proficiency). Of the 30 randomly selected participants, 22 received parental permission to participate (mean age = 10.9 years) (see Table 2 for detailed participant information). All of the students had been classified as LEP and placed in a classroom with L1 instruction upon school enrollment. The participants in the study were either receiving Spanish language arts instruction (Phase 2 students) or were at the beginning, middle, or end of transition to English language arts.

Classroom reading instruction

Participants came from various classrooms; some had transferred from multiple schools between kindergarten and fourth grade. Teachers at the school had differing philosophies regarding the teaching and learning of reading. Some were more traditional in their instruction than others with the more traditional teachers using basal series and direct instruction; however, the majority emphasized meaning construction over decoding. In addition, this Title I school had the resources to reduce class size during language arts, and students were grouped according to instructional needs for guided reading, even in the middle and upper grades. Teachers throughout the school planned thematically and integrated content and language arts instruction.

Data Collection and Analysis

The data collected and analyzed included student records, written recalls, and prior knowledge surveys. The researcher gathered written recall protocols from the 22 fourth-grade participants to assess reading comprehension processes both intralingually and interlingually (within and across languages). The written recalls were gathered over a period of 6 days and totaled 241.

Data Collection

Student records and recalls

Student records included LEP files containing longitudinal oral English proficiency data, district transition criteria scores, standardized test scores in both the L1 and L2 when available, and teachers' running record analyses that provided a reading level with comprehension (see Table 2). These records provided in-depth information of participants and served to triangulate the complete data set (see Avalos, 1999, for a complete report).

Table 2

Student Profiles

Student code	Gender	L2 oral prof. phase	Age	Yrs. in U.S./grade Entered	Free/ reduced lunch	SAT scores (percentile) '97	'98	APRENDA score (percentile) '97	'98
01	F	2	9.7	2nd/3rd	Free	-	-	33	-
02	M	2	9.11	1st/4th	Free	-	-	-	-
03	F	4	910	5th/K	Free	-	-	36	-
04	M	4	10.1	6th/PRE	Free	-	23	74	-
05	F	4	10.3	5th/K	Free	-	20	21	-
06	M	4	10.0	5th/K	Reduced	-	11	43	-
07	M	4	9.11	5th/K	Free	-	11	-	-
08	M	4	9.8	5th/K	Free	-	-	-	-
09	M	4	9.10	5th/K	Free	-	43	17	-
10	F	4	10.2	5th/K	Free	-	7	25	-
11	F	3	11.5	2nd/3rd	N/A	-	62	10	-

Student code	Gender	L2 oral prof. phase	Age	Yrs. in U.S./grade Entered	Free/ reduced lunch	SAT scores (percentile) '97	SAT scores (percentile) '98	APRENDA score (percentile) '97	APRENDA score (percentile) '98
12	M	2	9.9	2nd/3rd	Free	-	-	71	-
13	M	3	9.5	5th/K	Free	78	-	-	1
14	F	4	10.1	6th/PRE	Free	-	45	99	-
15	F	4	10.4	5th/K	Free	-	33	-	-
16	F	3	10.2	6th/PRE	Free	-	30	-	-
17	M	3	9.10	6th/PRE	Free	-	26	-	-
18	F	3	9.9	5th/K	Free	-	27	-	-
19	M	2	9.10	6th/PRE	Reduced	-	23	-	-
20	M	3	9.9	5th/K	Free	-	32	-	-
21	F	2	9.6	2nd/3rd	Free	-	18	96	-
22	F	4	10.0	6th/PRE	Reduced	-	31	-	-

L2 Oral Proficiency Phase: Stage of oral English Acquisition (1 = Preproduction–5 = Fluent English Proficient)

SAT = Stanford Achievement Test, APRENDA = Spanish language achievement test

Running Record Level: S = Spanish; E = English (determined by classroom teachers on a quarterly basis)

District Transition Criteria Met: NG = not given; * = These students were receiving "transition instruction during language arts for at least six months prior to data collection, according to their teachers. "Transition" language arts instruction included using second- (beginning transition) or third- (middle transition) grade level literature-based basal series with the students.

Following Bernhardt's model, texts were selected by the researcher and passages excerpted (approximately 100 to 125 words per excerpt) for the participants to read and recall in writing. The excerpted texts contained approximately the same amount of words found within a running record assessment, and the typical number of words that would allow students' comprehension and reading levels to be assessed (Johns, 2003). Five of the texts were written in Spanish and six in English, including narrative and expository passages from second-, third-, and fourth-grade textbooks (Hann & Jones, 1965; Harcourt Brace, 1997a, 1997b; Scholastic, 1996; Silver Burdett, 1984a, 1984b, 1985a, 1985b). For the purpose of this study, these texts are viewed as "authentic texts" because the passages (with the exception of Hann & Jones, 1965) were selected from books that were either actually used by the teachers or available to the students as supplemental resources in their classrooms. Therefore, students were exposed to these texts on a daily basis and the texts are, thus, described as "authentic" in the sense that this was the reality of print for L2 students within the context of school. Hann and Jones's (1965) piece was selected so that a narrative expository passage could be included within the text types.

To determine students' prior knowledge of passages and content selected, a survey (see Appendix A) was completed (in English or Spanish) prior to data collection. This was done after the topics and passage titles were discussed with the participants' five teachers to determine the amount of instructional time (if any) spent on each. The fourth-grade classroom teachers had not used the passages selected. When participants were asked to self-report information on the prior knowledge survey, only 18 of 242 possible responses (13%) indicated previous knowledge of the texts or concepts (see Appendix A for a sampling of responses).

Recall procedure

Over a period of 6 days at the end of the participants' fourth-grade academic year, the researcher pulled the students from their classrooms to collect the data. Students were asked to read the selected passage excerpts and immediately write what they recalled from these texts. Prior to reading each passage, the students were prompted orally by the researcher and in writing as follows:

> Read the following passage. When you finish, turn the passage over and write everything you remember so that a friend would be able to understand what you just read. You may write in English or Spanish, the choice is yours. Take your time when reading since there isn't a time limit, and remember, you will be writing about what you are able to recall from the text when you finish reading. Once you turn the passage over, you will not be able to look at it again. If you have a question, please raise your hand so that I can assist you. While I can't

help you with the reading of the text, I will be able to clarify the procedure for you. When you are writing about what you have read, do not worry about correct spelling. How you spell isn't as important as your thoughts and what is written. Try to sound out the word. However, if you need help with spelling, raise your hand and I will assist you.

The prompt was read aloud first in Spanish and then in English as the researcher explained the recall procedure to the students. There was no time limit for reading the texts since the focus of this study was on L2 reading comprehension rather than fluency or speed.

Data Analysis

While part of a larger study, the focus of the data analysis for this paper is the qualitative coding of written recalls into Bernhardt's three text-based features. Based upon text-based recall errors creating alternative understandings of the texts, the researcher looked at the recall data to determine text- and language-based variables affecting comprehension. (See Appendixes B and C for examples of texts and recalls.)

Recall analyses

Johnson's (1970) method of scoring recall protocols was adapted by Bernhardt (1991) and used for data coding purposes. After the texts were selected, three fluent readers of English read the English texts individually and marked all places in the text where they naturally paused or stopped while reading. Three fluent Spanish readers completed the same procedure for the Spanish texts. This was done to establish "pausal units" so that the passages could be divided into comprehensible chunks of language based upon the main ideas and supporting details of the texts. These pausal units were analyzed for interrater reliability between the three English and the three Spanish readers. Agreement was reached on 99% of the Spanish and 100% of the English texts. After the passages were divided, each pausal unit was scored from 1 to 4; units scored as 1 were considered the least important in comprehending the main ideas of the text, and those scored as 4 were considered very important in understanding the main ideas. Once more, the three English-language and the three Spanish-language researchers established an acceptable interrater reliability (100%) for the scores after the discussing differences.

Student recalls were analyzed in a similar fashion. Their individually written summaries were divided into chunks and coded according to the pausal units established by the three English-language and the three Spanish-language readers (see Avalos, 1999, for examples of coded data). Thereafter, the participants' errors were coded into Bernhardt's text-based features (see Table 1). Reliability checks were completed with two others to ensure that there was agreement in coding the recall "chunks" into appropriate categories.

An interrater reliability rate resulted in 100% after discussion and verification of consistency across different text types. Again, space limitations preclude the author from reporting results of the entire study here.

Strengths and limitations of the study

The strengths of the methodology used for this study include the ability to analyze students' understandings of texts at a micro level while factoring out individual differences among oral proficiency levels. In addition, limiting participants to one grade level benefited the study in a couple of ways. First, selecting students from one grade level enabled more control over differing maturity levels, reading levels, and student interests. This resulted in more reliable and generalizable findings to similar- or same-age L2 populations. Second, the researcher selected passages from different texts with one grade level or curriculum in mind, thus facilitating passage selection.

An advantage to using this procedure included no "interference" (positive or negative) between what the student actually recalled and what the student might have recalled if prompted with questions. In addition, this situation somewhat mirrors what L2 learners must undertake when tested or completing tasks without teacher support. These advantages were also found to be disadvantages because the participants were not accustomed to this procedure. In their classrooms, as in most classrooms, comprehension was assessed by teacher questions, worksheets, or journal activities. Also, while in class, students were generally allowed to look at the texts when summarizing, answering questions, or even when taking standardized tests. These differences in what the students were used to doing in their classrooms, and what they were asked to do for this study might have skewed the data slightly.

The use of these methods with children versus adult participants is something else that must be considered. Bernhardt (1991) had college- and high school–age participants in her study; their L2 reading and cognitive processing abilities were different than those of children. It could be argued that these methods are not entirely applicable to a younger population. To give L2 readers a text and ask them to summarize the content is a challenging task; however, an overwhelming majority of recalls were written in Spanish, even when recalling English texts. Having the option to write in their L1 or L2 provided participants the opportunity to use their dominant language in recalling the text (Bernhardt, 1991); however, to write a summary is a skill that children generally develop when there has been an instructional emphasis, and this might not have been the case for these participants. Another limitation was the small number of participants for generalizability; however, the design is what González (1999) advocates in order to look in depth at the interplay between cognition, culture, and language. This study was an ambitious effort to recognize the individual needs of L2 learners stemming from different texts and L2 oral proficiency levels. The unassisted interaction between the reader

and the texts resulting in students' comprehension or interpretations of the texts is what was sought for analysis. The use of recall assumed that the student understood enough of the text to be able to write about it. This might not have been the case for all students. More bilingual research is needed among younger L2 learners acquiring English while learning to read. However, what is reported here is viewed as important work that contributes to the knowledge base regarding L2 reading comprehension processes.

Results

As Bernhardt (1991) posits, student recalls contained all error types for L1 and L2 texts. The degree of error varied depending upon the language and structure of the text (L1 or L2) and the accuracy of the conjecture. In other words, some errors were problematic with regard to comprehension while others were not. For example, the use of *"cuarto de los visitantes"* ("visitor's room") for *"dormitorio de las visitas"* ("visitor's bedroom") as written in *¡Musica maestra!* (second-grade Spanish text) (Williams, 1996) was not considered problematic because they are synonymous. On the other hand, the translation of "owner" as "boss" could create problems for the reader when posed with questions or retelling the story because the meanings are not necessarily synonymous (see Table 1 and Appendixes B and C for examples). Reported here are the problematic text-based errors, or those that might lead the student to an alternative or different understanding of the text when compared with the understanding gleaned by a native speaker. All recalls reported here were translated with corrected spelling and/or grammar for the ease of the reader. Space limitations prevent the inclusion of all texts and recalls within this manuscript; however, Appendixes B and C include excerpted texts and recall samples.

Word Recognition Errors

Errors in this category involved word-level or translation errors. When reading in their L1, the participants made fewer word recognition (WR) errors. Limited recall of L2 texts and English-Spanish semantics, along with a limited knowledge of English syntax and vocabulary, appeared to be problematic. For example, as indicated in the paragraph above, one participant interpreted "owner" as "boss." The text read, "She was their owner, Dorothy Eustis," and the student (LEP Phase 4) wrote, "Their boss was a lady, she had many dogs." (See Appendix B for the complete text excerpt). Probing the student would clarify the interpretation; however, if completing a task (e.g., a standardized test) that does not allow for teacher or peer support, this might lead to further misinterpretations and become a problem when answering set questions. Other examples of WR errors within student recall, as compared with the actual text, are provided in Table 3.

Table 3
Examples of Word Recognition Errors

Student code(s)	LEP phase	Text level/type	Recall and analysis
4	4	2-1 Narrative	" . . . (illegible) owner came, it was a woman her name was Galla Kiss she was the owner of the dogs." [Interpreted "called" as the Spanish "*llamar*" (to be named).]
9	4	2-1 Narrative	" . . . about Gala and Kiss an American [who] went to live in . . . " [Interpreted names "Gala" and "Kiss" as belonging to one person.]
12	3	2-1 Narrative	" . . . a lady named Kiss." [Interpreted the name "Kiss" to be the woman's name rather than the dog's.]
21	2	2-1 Narrative	" . . . and a lady gave each of the dogs a kiss and the dogs went to play again." [Interpreted the name "Kiss" as a verb.]
1	2	2-1 Narrative	"Banks" as in "river banks" [possibly interpreted as financial institutions], " . . . *habia dinero*" [" . . . there was money"].
12	3	2-1 Narrative	"Rivers" interpreted as "*charco*s [puddles]."
8	4	2-1 Narrative Expository	"Rainy season" interpreted as "*primavera* [spring]." "Mate" interpreted as "*hijos* [children]."
7	4	2-1 Narrative	"Owner" interpreted as "boss."
9	4	4th Expository	"Clothing" interpreted as "cloth."

English-Spanish semantics

Many students used the Spanish meaning of a word to interpret English text. These errors were made across L2 proficiency levels and text types. In some cases, false cognates interfered with student comprehension, but this error category had other roots as well. Recalls from the lower-level L2 texts (second- and third-grade narratives) had problematic errors, as did the fourth-grade narrative and expository recalls for all students regardless of oral English proficiency.

The second-grade narrative recalls had many errors related to the following excerpt: "A woman came walking up the hill. 'Gala!' 'Kiss!' she called" (Moore, 1996). Students 4, 9, and 12 interpreted "called" as the Spanish verb "*llamarse*," which is literally translated as "to call oneself." The common English translation of "*llamarse"* is "to be named"; therefore, the students appeared to create meaning by literally translating and naming the woman "Gala Kiss," rather than using "called" in the context of summoning. Interestingly, this beginning transition text (second-grade level) is what caused the most WR difficulty for participants of all the texts used in the study. This text which the researcher (and more than likely the majority of teachers) thought to be easier to comprehend—because it was from a lower level reading book (second grade)—actually had more misinterpretations due to literal translations from L1 to L2 across proficiency levels, as well as a more complex syntactical structure.

It is apparent by examining Table 3 that WR errors were made by students at all proficiency levels when reading L2 narrative texts. Although WR errors were also noted for the expository texts, these errors were not considered problematic and did not lead students to alternative understandings. For example, a common error found in the expository recall was the mistranslation of "city" as *"pueblo* [town or village]." Because these terms are sometimes used interchangeably, they were not included in Table 3. A possible explanation behind the lack of expository text WR errors might have been a lack of content comprehension, resulting in the students' inability to write much about what was read. Expository text recalls were typically limited in scope across proficiency levels.

Limited knowledge of English syntax and vocabulary

Limited vocabulary knowledge appeared to create difficulties for students across languages and proficiency levels and was predominantly found within recall of L2 texts. The vocabulary WR errors in L1 were primarily words that were not commonly used (e.g., *"hatillo,"* meaning "bushel"), whereas the L2 WR vocabulary errors included what native English speakers would think of as common terms and concepts (e.g., boss, rivers) as well as uncommon words (e.g., mate, clothing). Students 1, 7, 8, 9, and 12, as shown in Table 3, provide examples of other problematic interpretations of L2 vocabulary. Oral English proficiency levels were not found to be the predictor behind WR errors since all students had these errors in their L1 and L2 recalls.

Phonemic-Graphemic Errors

According to Bernhardt's model, phonemic-graphemic errors include the misidentification of words based upon oral or visual similarities. These errors were also found throughout. (See Table 4 for examples of these errors.)

Many students had difficulty with "popular" versus "populated" across proficiency levels (in the excerpt from the social studies text). It appears that participants interpreted "populated" as "popular." "Popular" has the same meaning in Spanish as in English, indicating similar words with the same root could be another possible source of comprehension problems. Phonological awareness and differences between the L1 and L2 is another important variable when comprehending L2 texts. In Spanish, the letter "G" sounds like the English "H." This presented a problem for Student 2 as the word "German" (as in German Shepherds) was interpreted as the name "German [Herman]." This interpretation led the reader to write about "a boy named German" rather than German Shepherds.

Syntactic Feature Recognition

Syntactic feature recognition (SFR) errors include meaning-based errors between and among words at the sentence level. This error category includes interpretations that differ from what the author intended, beginning at the word level, but compounded by the complex syntactical structure of the sentence. In other words, the syntax or structure of the text can lead to semantic (meaning-based) errors. These errors were found to be present in L1 and L2 across all proficiency levels and text types.

For example, the excerpt from the second-grade English text *Buddy, the First Seeing Eye Dog* (Moore, 1996) read, "'Gala! Kiss!' she called" (see Appendix B for the complete excerpt). This short phrase is problematic because the verb "kiss" was used as a noun (a dog's name) and "called" was literally translated by some students. Students wrote, "…[illegible] owner came, it was a woman her name was Gala Kiss, she was the owner of the dogs" (LEP Phase 4); "There were two dogs named German and Kiss" (LEP Phase 2); "There was a boy named German and he had two important police dogs" (LEP Phase 2); and " …a lady gave each of the dogs a kiss and the dogs went to play again" (LEP Phase 3).

Narrative texts and SFR errors

While students recalled certain aspects of the texts, there were comprehension gaps and/or alternative understandings. For example, in a fourth-grade English text called *The Gold Coin* (Ada, 1991), Juan was a thief who wanted to steal an old woman's gold coin. Students 9, 11, and 16 made Juan the protagonist of the story and "the woman" the antagonist; Student 18 made "the woman" Juan's wife; and Student 19 wrote about searching for a gold coin that belonged to Juan. It is impossible to determine exactly what other factors were involved in leading students to misinterpret the text; prior knowledge or vocabulary limitations are possible explanations. Upon further examination, however, it appeared as if these errors were rooted in other categories (i.e., word recognition, phonemic-graphemic, etc.) and then built upon each other as Bernhardt's (1991) theory predicts. For example, in reading

"Gala and Kiss" (Moore, 1996), one participant (LEP Phase 3) interpreted "Gala and Kiss were almost old enough to begin their training. But they would not become police dogs or rescue dogs" as "Some people trained their dogs but some don't." The student did not interpret the text as the author intended, and while it might not create major problems for comprehension of the main idea, it has the possibility of leading the student to misinterpret other vocabulary or ideas in the context of training or not training dogs. This would lead to difficulties in comprehending subordinate details, a problem pondered by Fitzgerald (1995a).

Table 4

L2 Text Phonetic-Graphemic Errors

Student code	LEP phase	Text level/type	Recall	Analysis
1	2	2-1 En Narr.	" . . . the police came."	Text was about German shepherds being trained to be police dogs . "*Policía*" is the Spanish word for "police"; student used knowledge of Spanish to construct meaning.
2	2	2-1 En Narr.	"There was a boy named German . . . "	"German" (as in "German shepherds") interpreted as a name due to Spanish "G" phoneme sounding like an English "H" (Herman).
16	3	4 En Narr.	"He told a lady which her name was Jane."	"Jane" used for "Juan."
2	2	SS BF Narr.	" . . . the naval commander of Mexico and of California went to the war in boat."	"*Marinero*" (naval or "of the sea") used for "Mariano" (name of commander was Mariano Guadalupe Vallejo).
16	3	SS BF Narr.	" . . . fourteen men with guns . . . "	"Fourteen" used when text read "forty."

Expository texts and SFR errors

More problematic SFR errors were found within the expository recalls than the narrative recalls across languages. Expository texts were dense and filled with references to distances (mileage), dates, and facts. *The Bear Flag* (Hann & Jones, 1965), an expository text in story form, was also problematic for students. Two students, for example, did not appear to recognize the difference between the U.S. (national) flag and the California (state) flag (Students 3, 21). As recent immigrants from Mexico (the country of origin for all participants), they probably did not realize that each U.S. state has its own flag; Mexico does not have state flags, only one national flag.

Although there was a higher rate of SFR errors for L2 expository texts, students at all proficiency levels made SFR errors with similar problems. Students (LEP Phases 2, 3, and 4) interpreted "populated" as "popular" (phonemic-graphemic error), in turn generating SFR errors in order for the student to create meaning when recalling the English social studies text *Los Angeles* (Silver Burdett, 1984a).

It is well accepted that written and spoken language are different (Sperling, 1996). Texts written by and for native speakers assume a level of language proficiency and background experiences. These results indicate the importance text structure plays on beginning L2 readers' interpretations of text. Another insight from these findings includes the fact that there are more appropriate texts for beginning L2 readers that are not characterized by reading level alone. It is not necessarily the readability of the text (typically a measure of how many syllables a text's sample of words contain). It appears a text's syntactical structure and how closely it is aligned with spoken English would be a better predictor of successful L2 reader comprehension.

Summary of Findings

WR errors were a result of literal translation and limited vocabulary. Words with the same root but different meanings and limited L2 phonological awareness appeared to be problematic for students making phonemic-graphemic errors. There were three factors contributing to the syntactic feature recognition feature across proficiency levels contributing to misinterpretations of text. First, this error seemed to begin at the word level and advanced to larger misinterpretations at the sentence level. Generally, participants were able to recall some text details; however, the recall often had a different word in place of a key word, leading to different understandings of the text. Second, for the majority of the participants, the expository texts were more difficult to accurately recall than the narrative texts. This underscores Cummins's (2003) levels of language proficiency and the importance of using expository texts in the early grades as read aloud texts with appropriate visual support for ELLs.

Third, although not new to the field of reading education, aligning background knowledge with content is key in helping students comprehend texts as the authors intended.

Although WR, phonemic-graphemic, and SFR error types were evident within all text recalls across proficiency levels, SFR errors appeared to be the most problematic for the participants. These errors seemed to build upon word recognition or phonemic-graphemic errors when the readers attempted to make meaning of the texts. Students appeared to misinterpret texts beginning at the word level; these misinterpretations then stretched to the sentence level and beyond so that students made sense of the texts. These small misinterpretations would often lead to gross misinterpretations of the text as a whole.

The data indicate that oral language proficiency levels in the L2 should not stand alone in determining the amount of support L2 readers might need in order to "correctly" comprehend texts. Although the text-based features of Bernhardt's framework were the focus of this paper, these comprehension errors stemmed from an interaction between text- and reader-based features. Differing errors were the result of the individual experiences and participants' L1–L2 syntactical knowledge (e.g., previous knowledge of text topics, familiarity with language structure). This demonstrates the importance of teacher support when transitioning L2 learners from Spanish to English, regardless of their L2 oral proficiency.

Discussion

According to the results of this study, Figure 1 depicts a visual model of the variables and processes employed when L2 students are reading. The variables demonstrate that L2 readers do undergo different cognitive processes when comprehending L2 texts. Surrounding the variables are what Reese et al. (2000) termed "antecedent" factors (i.e., socioeconomic status, schooling, stimulation, experiences, parental education level) that influence the entire reading process. Text- and reader-based features, along with the text type and topic, and L1 and L2 proficiency appear to be filtered through a "meaning-making" lens, individual to each learner. This lens takes the reader beyond the word level to the sentence level; thus, the SFR is central to the meaning-making process. This creation of meaning for each reader appeared to be based upon two major variables. First, the interpretation of a word or phrase using background and cultural knowledge or experiences contributed to an interpretation of the text. Second, knowledge of vocabulary and syntactical structures appear to be key when comprehending texts in both languages. Not all students with greater L2 oral proficiency did well, just as not all with lower L2 oral proficiency did poorly. This may indicate the importance of exposure to various text types to aid L2 reading comprehension.

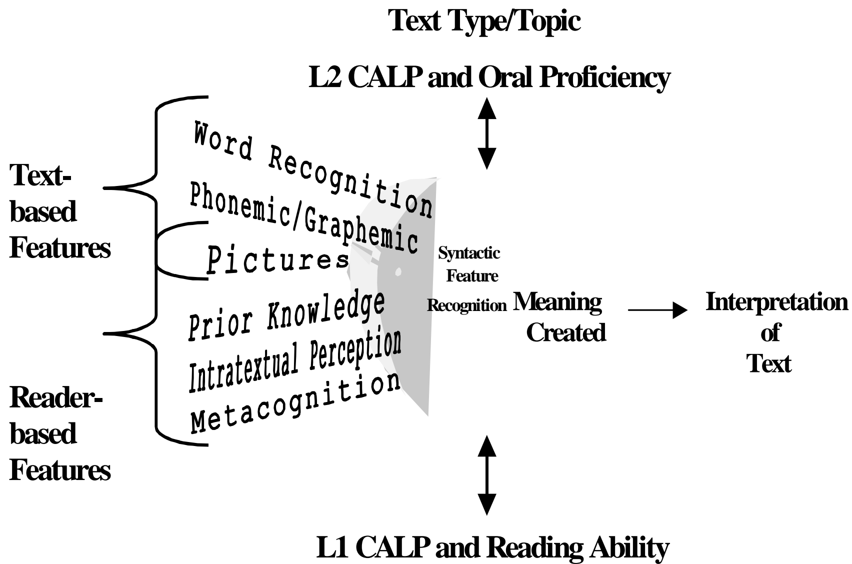

Figure 1. Reading model for L2 learners.

It may be said that all students follow similar cognitive reading processes, in that every student, regardless of language, possesses the antecedent factors, and to varying degrees the text- and reader-based features surrounding each interpretation. However, there are certain variables that L1 readers do not typically have to deal with (e.g., "limited" knowledge of L2 syntax and semantics). In addition, diverse experiences provide different background knowledge, thus adding to the list those variables that are processed differently by L2 readers. All of these features vary from student to student depending upon their knowledge of the topic, language, and text structure. Finally, as briefly mentioned in the section above, L1 reading ability is another variable unique to L2 readers that could act as an obstacle or as a facilitator when learning to read in the L2 (Geva & Verhoeven*, 2000). All of the features and variables appeared to work together in order for the student to create meaning from the text. Based on the results of this study, it is hypothesized that the "accuracy" of meaning created is reflected by a student's knowledge of the topic, vocabulary, and L2 structure.

Instructional Implications

Teachers can facilitate the L2 transition process when knowledgeable about individual student needs; therefore, these data demonstrate the need to steer away from the "generic processor" perspective of reading processing when a student is learning to read in the L2. A generic processor or whole group model of instruction is inadequate in meeting L2 readers' needs because it assumes that all students are the same. For example, using comprehension assessments with predetermined right and wrong answers (i.e., recitation questions) assumes that L2 learners are coming to school with similar linguistic backgrounds, experiences, and cultural perspectives. Sandra Cisneros, notable author of *The House on Mango Street* (1984), explains how the generic processor model affected her when she was a young student. When reading different novels, she could not understand what an "attic" was because she lived in an apartment. There were other features of houses mentioned that she had a difficult time conceptualizing (e.g., why anyone would want to go into a basement when the maintenance man went there only when he had to). Cisneros realized that the houses in the stories were not "her house," and it was a "horrific moment" (Cisneros, 1993). Assuming that all readers will understand in the same way is problematic, yet it is easy for teachers to do just that.

By recognizing the individual needs of L2 learners, teachers will enable them to succeed within the generic processor model of assessment (i.e., norm reference tests). Instructional decisions will be guided by students' needs to make academic gains in an L2 and a diverse cultural context (e.g., experiences, linguistic, phonemic, cognitive). Ways to approach this challenge include

using recall as a tool to determine students' instructional needs (Cooper & Kiger, 2001), adapting a guided reading model (e.g., Fountas & Pinell, 1996) to meet L2 learners' literacy and language learning needs (Avalos & Rascón, 2002), using carefully selected multiethnic literature (Au, Carroll, & Scheu, 2001) and taking time to know the families of L2 students (Peregoy & Boyle, 2001). Instructional approaches such as these allow for teacher access to student thinking. In other words, teachers are able to better understand their students' thinking by asking probing questions such as, "Why do you think that?" or, "How do you know that?" when puzzled by a response or elicitation. When L2 learners answer, there are typically good reasons why students believe what they do.

Knowing students' families on a personal level also provides insight into students' and families' experiences, challenges, triumphs, and sorrows. For example, if a child is consistently tardy, falling asleep in class, or arriving unprepared without books and homework, knowing the situation at home would lead to shared solutions between the teacher and parents, rather than judgments concerning the family by school personnel. Working with parents, instead of for parents, will lead to more effective solutions for the many challenges recent immigrants face (Reardon-Anderson, Capps, & Fix, 2002). Teachers or designated school personnel could conduct interviews upon children's initial school enrollment that would open diverse windows of knowledge, allowing teachers to establish a true partnership with parents.

Teachers are key in determining what is needed to successfully prepare L2 learners for the generic processor models of assessment and instruction commonly used today. Using written recalls in classrooms could be viewed as a viable means to that end, enabling individual needs to be identified while teachers guide students from a learner-specific teaching model to a more generic or whole-group model of instruction.

Conclusion

This study utilized a recall analysis procedure that provided insights regarding individual text interpretations and oral language proficiency as a measure to determine L2 text comprehension. There is a need for more research of this kind (among similar and different populations and across varying educational contexts) with a focus on comparable variables. Ideas for future research include replication of these methods with different texts and students, using a recall assessment method to determine comprehension and instructional decisions; using cognitive academic language proficiency as a measure in lieu of oral language proficiency; and using mainstream and diverse student populations to examine differences in cognitive processes across cultures and languages.

A more proactive stance is necessary with regard to instruction for L2 learners making the transition from L1 to L2 reading. As González (1999) advocates, measures taking into account the interface of cognition, culture, and language must be developed to accurately assess bilingual readers transitioning from one language to the other. Viewing reading as an individual process at the onset of L2 reading instruction calls for an initial focus on individual processing needs, with a gradual progression towards a more generic model over a flexible time period. All L2 students will not achieve the gradual progression to a generic processor model at the same rate; in fact, some may never reach that point. There will always be individual needs as L2 readers make progress and differentiation of instruction is necessary, specifically at the beginning transition stages. As L2 students become more proficient readers, teachers can focus more on "reading to learn" (rather than "learning to read"), building upon what is known (e.g., cultural relevance of texts, prior knowledge or experiences, discrete language skills, vocabulary development) and emphasizing cognitive academic language proficiency to enable L2 learners to achieve success in U.S. schools.

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Appendix A

Prior Knowledge Survey Questions (Administered in English and Spanish)

Students chose to write their responses in English or Spanish and were free to ask the researcher questions, or have the researcher read the question to them. Samples of written responses are included:

1. What is the scientific concept of *convection*?

    - I don't know.
    - It is when cold water is heating, it gets hot.
    - Convection is like a kind of gases or liquids.
    - I forgot.

2. What do you know about the history of Los Angeles? What are the major industries or businesses?

    - I don't know.
    - Coca-Cola.
    - In the Gold Rush, a lot of people came to California. They stayed in Los Angeles.
    - Los Angeles is a very big city with many parts, like Chinatown and Olvera Street.
    - I don't know because I have never been to Los Angeles.
    - I know there are gangs in the city…

3. What is the history of our state flag?

    - I don't know.
    - The stars and stripes.
    - The stars.
    - The flag is blue and white and has 50 stars in a square.

- There was this time when people wanted to settle in California but they didn't want those rules, so they carried a flag that had a bear on it and fight for the land.

4. What do you know about *life cycles*?

- I don't know.
- The cycle of life is important to nature.
- I never heard of life cycles.

5. Have you ever read the following stories?

Yes No

- *The Gold Coin* by Alma Flor Ada

___ ___

- *¡Musica maestro!* by Vera B. Williams

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- *La estrella de Angel* by Albert Blanco

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- *Un hatillo de cerezas,* by Maria Punal

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- *Why Spider Lives in Ceilings* by Joyce Cooper Arkhurst

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- "Gala and Kiss," Chapter 1 from *Buddy, The First Seeing Eye Dog* by Eva Moore

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Appendix B

Sample Narrative Text and Recalls

Transition B (Second-Grade Level) Text Excerpt. Moore, E. (1996). *Buddy, the first seeing eye dog.* New York: Scholastic.

Gala and Kiss, Chapter One

Two dogs were playing in the spring sunshine. They were frisky, young German shepherds. They lived in a place called Fortunate Fields. It was in the mountains known as the Swiss Alps.

Many German shepherd dogs lived at Fortunate Fields. They were trained for important work. Some became police dogs. Some learned to deliver messages. Some were taught to find people who were lost.

A woman came walking up the hill. "Gala! Kiss!" she called. The dogs raced over to the woman. She was their owner, Dorothy Eustis. Dorothy was an American, but she had come to live and work in the Swiss Alps. She raised and trained the dogs at Fortunate Fields.

Gala and Kiss were almost old enough to begin their training. But they would not become police dogs or rescue dogs. They would not be like any other dogs born at Fortunate Fields. Something new was about to happen.

Sample Recalls (edited and corrected for the ease of the reader)

LEP Phase 4

- I read a story called Gala and Kiss. Once there were two dogs that were playing in the mountains and then their owner came it was a woman named Gala Kiss. She was the owner of the dogs.
- A girl lives in the mountains. Every day she was outside of the house looking at the things in the mountains.
- I read about Gala and Kiss. They were playing. They lived in the country where everything was quiet.
- There were two dogs playing in the mountains. They could train them to be a police dog, to rescue people, and to find people that are lost. But this dogs weren't like all dogs. They were different.

LEP Phase 3

- Two black dogs were playing in the park and one lady gives a kiss to each dog and the dogs will go play again.
- Firstly I read that all dogs like to play in comfortable and pretty places. One day a lady came the lady was called Kiss. The dogs ran as if they were playing races to her, they were running around her.
- The dog lived in the mountains one day they were lost but a lady found the dogs.
- Many Germans trained for special work. Some of them were dog trainers. They went to other cities and worked.

LEP Phase 2

- I learned that there was a boy named German and he had two important police dogs and every day he took them out and the mother of Jerman was named Dorothy and she was born in America.
- I learned that some children were playing in the mountains and then a lady came and she saw the dogs and she gave them something to eat. The dogs were lost and like the children they left those dogs alone since they didn't know from whom they were, they left them instead of took care of them. That is all I learned from this story.
- There were two dogs named German and Kiss they lived in the mountain and rescued people and they got lost. Then a lady arrived and spoke to them and now they were not the dogs that rescued lost people.
- It was about two dogs that are at the mountain to help people some came to be police dogs and save people at the mountains or somewhere else.

Appendix C

Sample Expository Text and Recall Responses

Science Text Excerpt (Fourth Grade). Silver Burdett. (1985a). *Silver Burdett Science*. Morristown, NJ: Silver Burdett.

What is a Life Cycle? Lesson 1

If you have heard crickets "singing" outdoors this year—will you find them there again next year? Where do crickets come from?

Early in the fall, male crickets "sing". This attracts the female, making it easier for her to find a mate. Later on, the female lays her eggs in the soil.

After the eggs are laid, the adult cricket often dies. But the eggs are alive. In each egg is everything needed to make a new cricket. All winter the eggs stay in the soil. Then, in spring, the eggs hatch and tiny crickets come out. Each will have legs, eyes, and a mouth. But none of the crickets will have wings.

Little by little, the baby crickets grow and change. By late summer, they are adults with wings. If they are females, they can lay eggs in the soil.

Crickets go through stages:

Egg	**Young**	**Adult**
(line drawing of egg)	(line drawing of young cricket)	(line drawing of adult cricket)

When a cricket has completed its stages, it has gone through a life cycle. A life cycle is all the stages in the life of one living thing.

Sample Recalls (edited and corrected for the ease of the reader)

LEP Phase 4

- I learned that there are bugs everywhere and they can leave eggs under the ground or thrown on the floor or they can leave them on a leaf or in other places they can leave the eggs and you have to be careful not to step on the eggs some are not careful because they can't see or because they are sick with something.
- I read about the cycle of crickets, how they grow and how they're born. First it's eyes [eggs?], then babies, then adults. They leave their parents when they grow their wings. The cycle goes on forever and ever.

- Crickets sing there are males that lay eggs the eggs grow but when they are little, the crickets don't have wings. When they grow they do have wings.

LEP Phase 3

- I learned that the grasshoppers have baby they hide them under the earth and when they come out after one year, they are adults.
- When crickets are little they have mouth, eyes, and all that, but they don't have wings. But when they're adults, they do.
- The men make nests at the nights. The women make the baby in the dirt. When the baby grows, they will learn how to make a nest.

LEP Phase 2

- This was when some insects have eggs. The eggs break (hatch) and make changes in the heat, the mother dies and the babies change and change until they die.
- It's about crickets that sing, then they die, they hatch and they're at the soil and then come new crickets.
- I learned that cockroaches live under the ground and that their family is very nice and that in one year they grow and another year they grow more and the other year (they grow) bigger. It takes three years to grow to be adults (reach a mature age).

Endnotes

[1] For the purpose of this paper, L2 learners are described as elementary-age students learning English as a second language after learning to read in their primary language (Spanish).

[2] The word "obstacles" is not used in a negative way; rather, it is being used to emphasize the different cognitive processes encountered by L2 readers. It is the author's belief that L2 readers bring a rich knowledge base to the classroom; however, teachers must be aware of student differences and individual needs in order to be effective teachers.