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Revisiting the Case for Narrow Reading with English Language Learners

Laurie E. Hansen

University of California, Irvine

Penelope Collins

University of California, Irvine

ABSTRACT

This study investigated children's access to books, narrow independent reading volume, and growth in vocabulary knowledge and comprehension. Two hundred-twenty English language learners and native-English speaking children from diverse socioeconomic backgrounds were given measures of vocabulary and literacy in the fall and spring of fourth grade. Book reading volume was recorded using reading management programs. ELL children had greater access to books at school than had been previously reported among children from low income communities. However, ELLs were exposed to fewer words and comprehended books more poorly than their non-ELL peers. Growth in receptive vocabulary knowledge was related to the proportion of narrow books children read, regardless of language status. The findings of this study suggest that teachers can support ELL children's literacy development by helping them select appropriately difficult books, encouraging them to engage in more independent reading, and suggesting that they read narrowly.

INTRODUCTION

The number of K-12 English language learners (ELL) in the U.S. is growing rapidly, accounting for ten percent of the school population, or an estimated 4.7 million students (Aud, et al., 2012). Despite national attention to raise achievement among ELLs, a striking 59% in California are projected not to attain full English proficiency by secondary school, thus becoming Long Term English Learners (LTEL; No Child Left Behind Act, 2002; Olsen, 2010). Differences in reading achievement between ELL and non-ELL children are of particular concern, because gaps in comprehension scores tend to emerge by Kindergarten, widen through fourth grade, and persist well into high school (Chall & Jacobs, 2003; Hemphill & Vanneman, 2011; Kieffer, 2008).

More than 30 years ago, Krashen (1981) made the case for narrow reading as a means to improve ELL literacy through exposure to repeated vocabulary, background knowledge, writing styles, and story structures. *Narrow reading* is defined broadly as reading several books written by the same author, on the same topic, or from the same genre (Hadaway & Young, 2010). The purpose of the present study was to investigate whether or not children's narrow independent

reading volume was related to their growth in vocabulary knowledge and comprehension, taking into account contextual factors that serve as barriers to independent reading. To track children's independent reading, book comprehension, and narrow reading volume we used computerized reading management programs.

To provide background on the research base supporting this study, we first summarize research on children's independent reading and the use of computerized reading management programs. Next, we describe research on ELLs' literacy development in English. Last, we summarize research on narrow reading.

Independent Reading and Children's Reading Achievement

Abundant research suggests there is a strong, positive relationship between the amount of independent reading children engage in and their reading achievement (Anderson, Wilson, & Fielding, 1988; Heyns, 1978; National Center for Education Statistics, 2011; National Reading Panel, 2000). Students who reported reading for fun every day showed higher reading scores than those who reported rarely or never reading (Perie, Moran, & Lutkus, 2005). Unfortunately, children who live in poverty tend to have limited access to books, which can negatively affect not only their opportunities to read, but also their attitudes toward reading (Constantino, 2005; Duke, 2000; Ivey & Broaddus, 2001; Neuman & Celano, 2001, Ramos & Krashen, 1998). Recent experimental studies suggest that providing Black and Latino low income children with free books to read during the summer can increase book reading volume and improve reading achievement scores, especially when coupled with comprehension scaffolding (Allington et al., 2010; Kim, 2006; 2007; Kim & White, 2008).

As these studies imply, several factors affect children's book reading volume and the benefits they can derive from independent reading. Reading management programs (RMP) are very popular in U.S. schools, because they are designed to address these factors and may (a) encourage children to read more often, (b) improve their attitudes toward reading, (c) increase book access, and (d) provide teachers with a tool to monitor students' book comprehension and reading volume (Anderson, 2001; Gadberry & Pipkin, 2003; Grenawalt, 2004; Kirschenman, 1999; Renaissance Learning, 2013; Rogers, 2003; Scholastic, 2013). To use reading management programs, children read books from leveled lists and then use school computers to take short literal comprehension quizzes for which they accumulate points (Grenawalt, 2004). Research suggests there is a positive relationship between the use of reading management programs and children's reading comprehension, vocabulary knowledge, reading volume, overall reading achievement, access to books, motivation to read, and amount of class time allocated for silent reading (Everhart, 2005; Johnson & Howard, 2003; Kulik, 2003; McGlenn & Parrish, 2002; Sadosky & Brem, 2002; Volland, Topping, & Evans, 1999).

ELL Children and English Literacy Development

Although ELL and non-ELL students share commonalities, there are important differences between these two groups that impact their ability to succeed in school. Many ELLs immigrate to the U.S. with little prior schooling, and thus may not have learned to read in their native language. These children are at a disadvantage as compared to native English-speaking children, because many U.S. schools do not provide primary language instruction for languages other than English. For many bilingual K-12 students, facility in the primary language is not seen

as beneficial or necessary, and in fact is often marginalized to support a hegemonic English-only instructional environment (Macedo, Dendrinos, & Gounari, 2003). ELLs are thus viewed as language minorities, and bilingualism is often not encouraged until students reach high school.

Given this difference in status, the question is: Do ELLs acquire language and literacy skills in English comparably to native English speakers? The answer is no. Although ELL children tend to acquire similar basic literacy skills in English as native speakers, by the upper elementary grades their limited vocabulary knowledge often leads to difficulty in comprehension (Chall & Jacobs, 2003; Kieffer, 2010; Lesaux & Geva, 2006; Lesaux, Koda, Siegel, & Shanahan, 2006; Mancilla-Martinez & Lesaux, 2011). Indeed, National Assessment of Educational Progress (NAEP) data from 1998 to 2009 suggest that Hispanic ELL children have consistently weaker reading comprehension skills than Hispanic non-ELL and White children in fourth grade and that this gap widens by eighth grade (Hemphill & Vanneman, 2011). The 2009 and 2011 NAEP reports showed a 40-point gap in vocabulary scores between ELL and non-ELL children in fourth grade and a 58-point gap in eighth grade (National Center for Education Statistics, 2012).

Narrow Reading and Second Language Learners' Literacy in English

The goal of this study was to examine the relationship between narrow independent reading and ELL children's reading comprehension and vocabulary knowledge in English. One line of research on narrow reading focuses on analyses of text collections to determine whether narrow text collections repeat words more often than unrelated text collections. Gardner (2004) found that narrative and expository children's books written by different authors or on different topics tended not to repeat vocabulary. However, topically-related expository texts repeated content words (Gardner, 2004). In a follow-up study, Gardner (2008) found that narrative texts written by the same author repeated more low frequency vocabulary than texts written by different authors. Two additional studies examined vocabulary repetition among informational texts in newspapers. Kyongho and Nation (1989) found that topically-related newspaper stories repeated more word families than stories that were unrelated. Similarly, Schmitt and Carter (2000) found that topically-related newspaper stories repeated content words and proper nouns more often than unrelated stories. Collectively, the findings of these studies suggest that narrow text collections can provide readers with multiple exposures to words which may facilitate incidental vocabulary acquisition.

A second line of research focuses on the use of narrow reading as an intervention to help second language learners acquire English literacy. Cho, Ahn, and Krashen (2005) conducted a study of fourth grade Korean children who were learning English. After listening to several books read aloud from the *Clifford* series written by Norman Bridwell, the children showed significant growth in English vocabulary after 16 weeks. Another study provided evidence that narrow reading of children's books can improve adults' second language literacy. In this study, one Spanish- and three Korean-speaking adults who read several books from the *Sweet Valley* series written by Francine Pascal acquired between seven and 37 new words per book read (Cho & Krashen, 1994). In a study of expository narrow reading, Chinese-speaking Taiwanese high school students who read topically-related informational texts made statistically significant gains in receptive and expressive vocabulary during a five week period and retained significant vocabulary knowledge three months later (Min, 2008). Although the results of these studies are promising, the participants were English-as-a-Foreign-Language (EFL) students or adults. To our

knowledge, no studies of narrow reading and ELL K-12 students in the U.S. have been conducted.

The Study

We sought to determine whether narrow independent reading was related to ELL and non-ELL children's growth in reading comprehension and vocabulary knowledge, taking into consideration children's access to books and the volume and quality of their independent reading. The following questions guided this research.

1. Did the ELL children have adequate access to books at home and in their classroom and school libraries?
2. Did ELL and non-ELL children engage in similar independent reading volume?
3. Did narrow reading volume relate to growth in vocabulary knowledge and comprehension for ELL and non-ELL children?

METHODOLOGY

Participants and Setting

There are longstanding disparities in school and community resources available to children from low income backgrounds as compared to those living in middle class or affluent neighborhoods (Kozol, 1991; 2012). We wished to investigate resources (i.e., book access) and behavior (i.e., narrow and independent reading volume, book comprehension) among ELL and non-ELL children who lived in the same geographic area and in a community that was socioeconomically diverse. We also wished to examine reading comprehension and vocabulary knowledge of children during the "fourth grade slump." Therefore, we recruited fourth grade children from five schools within the same city of a suburban school district in southern California.

Table 1 presents the percentage of students at each school who were classified as ELL, who qualified for free or reduced-price lunch (FRPL), as well as by race. The concentration of poverty at the schools and the percentages of White, Hispanic, Asian, and ELL children reflected national trends that suggest that a greater percentage of White and Asian children attend low poverty schools, while Hispanic and ELL children attend schools with more concentrated poverty (Aud et al., 2012; Aud, Fox, & KewalRamani, 2010). The federal government classifies schools as *high poverty* when more than 75% of the students qualify for FRPL and as *low poverty* when less than 25% of the students qualify for FRPL (Aud et al., 2012). Thus, Jacinto was classified as high poverty, Hydrangea and Carnation were classified as low poverty, and Azalea and Manzanita were mid-poverty schools (i.e., less than 75% but more than 25% FRPL).

Table 1. Demographic Characteristics by School

School	%Poverty	%ELL	%White	%Hispanic	%Asian	%Black	%Other
Jacinto	90%	69%	6%	89%	2.5%	2%	.5%
Manzanita	54%	32%	14%	71%	9%	1%	5%
Azalea	51%	29%	29%	58%	8%	4%	1%
Hydrangea	12%	5%	58%	18%	19%	2%	3%
Carnation	5%	3%	56%	26%	10%	2%	6%

Of the 16 fourth grade teachers at the five schools, 14 agreed to participate and parent consent letters were sent home in September with each of their students. A total of 220 children (ELL, $n = 113$; non-ELL, $n = 107$) received parental consent to participate in the study. The non-ELL children were native-English speakers. The ELL group included children whose home languages were not English and who had been designated by the school district as limited in English proficiency upon entrance to Kindergarten (i.e., a score below *advanced* on the state test of English language proficiency). Seventy-one of the ELL children were *current ELLs*, meaning that by school district standards they currently had difficulty speaking English. Forty-two children were *former ELLs*, meaning that by third grade they had been reclassified as fluent in English by school district and state standards (i.e., a score of *advanced* on the state test of English language proficiency and a score of *proficient* or *advanced* on the state English language arts test). The Hispanic ELL children spoke Spanish, the Asian ELL children spoke Chinese, Gujarati, Indian, Kannada, Korean, Tagalog, or Vietnamese, and the Black and White ELL children spoke Somali, Arabic, or Spanish.

Procedures

Children in six of the classrooms were asked to read as many books as possible that were written by the same authors or on the same topics during the study period. The children in the other nine classrooms were asked to read as much as possible during the study period. Table 2 presents the means for the proportion of narrow books read (i.e., number of narrow books read per child divided by the total number of books read per child) in each classroom. Ultimately, the amount of narrow reading that children engaged in was up to them.

Table 2 Proportion Narrow Reading by Classroom

Teacher	Proportion Narrow
1 (narrow)	.54
2	.46
3	.52
4 (narrow)	.47
5 (narrow)	.42
6	.42
7 (narrow)	.27
8	.24
9	.25
10 (narrow)	.25
11	.64
12	.55
13	.28
14 (narrow)	.16

Measures

Children were given vocabulary and literacy measures by the research team in fall and spring. Book reading data were collected from October to March. Data from the classroom and school libraries were collected in October.

Reading management program variables. We used the computerized reading management programs that the schools were already using to track children's independent reading. Four of the schools used the *Accelerated Reader* program (Renaissance Learning, 2013) and one of the schools used the *Reading Counts!* program (Scholastic, 2013). Children read books and then took quizzes on computers in or near their classrooms. The software recorded for each quiz taken (a) title and number of pages per book, (b) number of questions answered correctly, and (c) book difficulty level. The reading management program reports also included the points possible per book and the number of points children earned per quiz. Points possible – determined by the publishers of the reading management programs – varied depending on book length and book difficulty, and ranged from .5 to over 44 points per book. Reading Counts! uses different quizzes than Accelerated Reader, so data from children at Hydrangea School were analyzed by number of quizzes taken and book titles only. Reading management program reports include the number of pages for each title. Amazon.com was used to determine the number of words for each of the titles. These data were used in the analyses for books, pages, and words read.

To obtain the number of *narrow books read*, each child's list of book titles was examined. The research team used Amazon.com to look up the author's name for each book read by any child in the study and added these names to the database. The research team used the titles and Amazon.com to ascertain the topics for each nonfiction book. For example, the books titled *Navies of World War II*, *Air Forces of World War II*, *World War II*, and *Weapons of World War II* were all coded as the topic, *World War II*. Some of the other topic codes included *ocean animals*, *baseball*, *sports biography*, *insects*, and *community helpers*. On each child's list, books

were coded as *narrow* if he or she read more than one fiction book written by the same author or more than one nonfiction book on the same topic. The total number of narrow books was then added for each child. To obtain the proportion of narrow books read, the number of narrow books read per child was divided by the total number of books read per child.

Access to books. To estimate children's access to books, data on the number of books at home and in the classroom and school libraries were collected. In October and March, participants were asked to estimate the total number of children's books they had at home. These two numbers were averaged to create the *books at home* variable for each child. In October, the total number of books available for independent reading in each classroom library was counted and a classroom library checklist was used to determine the range of book difficulty levels, fiction or nonfiction, types of texts, authors, and series available. In October, each school librarian or library clerk was asked to report the total number of books in the school library.

Receptive vocabulary. Form A of the Peabody Picture Vocabulary Test – 4 (PPVT-4; Dunn & Dunn, 2007) was used to measure students' receptive vocabulary in fall and spring. In this task, students were asked to identify which of four pictures best illustrates a given word. The task ended once children had eight or more errors in a set of twelve. Raw and percentile scores were calculated for each child. The alpha coefficient for the PPVT-4, form A for children in this sample was .96.

Expressive vocabulary. Form A of the Expressive Vocabulary Test-2 (EVT-2; Williams, 2007) was used to measure students' expressive vocabulary in fall and spring. In this task, the examiner presented students one picture at a time. Students were required initially to name pictures, and to provide a synonym for a target word that matched the picture for more difficult items. The task was discontinued once children made five consecutive errors. Raw scores and percentile scores were calculated for each child. The alpha coefficient for the EVT-2, form A for children in this sample was .94. Because of time constraints imposed by the school, this measure was not given to the students at Jacinto School.

Word reading. The Tan form of the Wide Range Achievement Test – Third Edition, Reading (WRAT-3; Wilkinson, 1995) was used to measure children's word reading skill in fall and spring. In this task, children were given a list of words out of context and asked to read as many as they can. Raw scores and percentile scores were calculated for each child. The alpha coefficient for children in this sample was .84 for WRAT-3.

Decoding. The Word Attack subtest of the Woodcock Johnson III (Woodcock, et al., 2001) test was used to measure children's skill at reading non-words in fall and spring. Children were required to read aloud a graded list of non-words. The task ended when children made six consecutive errors ending with the final item of a set. Raw scores and percentile scores were calculated for each child. The reliability coefficient for children in this sample on Word Attack was .89.

Reading comprehension. The Passage Comprehension of the Woodcock Johnson III (Woodcock, McGrew, & Mather, 2001) was used to measure children's reading comprehension in fall and spring. In this task, students were asked to silently read passages of increasing length and difficulty, and answer questions about those passages. The task ended when children had six errors. Raw and percentile scores were calculated for each child. The alpha coefficient for Passage Comprehension for the children in this sample was .88.

RESULTS

The data analyses addressed three research questions. First, did the ELL children have adequate access to books? Second, did ELL and non-ELL children engage in similar independent reading volume? Third, did narrow reading volume relate to growth in vocabulary knowledge and comprehension for ELL and non-ELL children?

Did the ELL Children Have Adequate Access to Books?

Table 3 presents the total number of books in each classroom library and the number of books per student per classroom. As can be seen from the table, the number of books in the classroom libraries ranged from about 100 to nearly 1,000. On average, children in this study had access to 492 books in their classroom libraries, or 14.8 per student. A *t*-test revealed there was a statistically significant difference in the number of books in the classroom libraries, $t(13) = 8.3$, $p < .001$, as well as the number of books per student in each classroom library, $t(13) = 8.4$, $p < .001$.

Table 3 Books in the Classroom Libraries

School	Teacher	Total books	Students	Books per student
Azalea	5	109	31	3.5
Azalea	6	278	36	7.7
Hydrangea	13	292	36	8.1
Manzanita	4	306	33	9.2
Manzanita	3	365	35	10.4
Manzanita	2	403	35	11.5
Azalea	8	500	35	14.2
Jacinto	9	505	33	15.3
Carnation	12	563	31	18.2
Manzanita	1	581	35	16.6
Carnation	11	621	32	19.4
Jacinto	10	655	31	21.1
Azalea	7	716	36	19.9
Hydrangea	14	990	36	27.5
<i>M</i>		492	34	14.5
<i>SD</i>		(223)	(2)	(6.5)

Table 4 presents the total number of books in each school library. As can be seen from the table, the number of books in the school libraries ranged from just under 9,000 to over 13,000. The number of books available per student ranged from 14.8 to 21.9.

Table 4 Book Access in School Libraries

School	Total Books	#Students	Books per Student
Jacinto	8,994	502	17.9
Carnation	10,847	732	14.8
Azalea	11,864	547	21.7
Hydrangea	12,463	569	21.9
Manzanita	13,745	745	18.5
<i>M</i>	12,183.9	619.0	19.0
<i>SD</i>	(1,683.6)	(111.8)	(3.0)

Table 5 presents the average number of books that children reported having at home as a function of language subgroup. An ANOVA revealed a significant main effect of language subgroup on books at home, $F(2, 208) = 5.89, p < .01$. Bonferroni-adjusted post-hoc tests revealed that current ELLs reported having fewer books at home than native English-speaking children. No other effects were significant.

Table 5 Number of Books Reported at Home

	Non-ELL <i>n</i> = 112	Current ELL <i>n</i> = 70	Former ELL <i>n</i> = 40
<i>M</i>	91.7 ^a	39.8 ^b	54.5
<i>SD</i>	(126.8)	(58.7)	(64.1)

Groups with different superscripts differ significantly.

Did ELL and Non-ELL Children Show Similar Independent Reading Volume?

Table 6 presents the means and standard deviations for the reading management program variables as a function of language group. A Multivariate Analysis of Variance (MANOVA) revealed a significant main effect of language subgroup on the book reading variables, $F(4, 154) = 4.7, p < .001$. There were no significant differences in the number of quizzes taken between children in the three language subgroups. However, there was a statistically significant difference in the average book level, $p < .001$, average percentage correct on quizzes, $p < .001$, and total number of points earned, $p < .01$. Bonferroni-adjusted post-hoc tests suggested that native English-speaking children read more difficult books than current ELLs, native English-speaking and former ELL children had higher average quiz scores than current ELLs, and native English-speaking children earned more points than current ELLs. No other effects were significant. While the percentage correct on quizzes is an indication of book comprehension, the number of points earned per book takes into account not only how well children understand what they read, but also the length of the books they read (Topping, Samuels, & Paul, 2007). These findings suggest that although children in all three subgroups took a similar number of quizzes, the current ELLs tended to read books that were shorter in length than the books the native English-speaking children read.

Table 6 Reading Management Program Variables as a Function of Language Subgroup

		Non-ELL	Current ELL	Former ELL
Quizzes taken	<i>M</i>	49.1	50.1	50.0
	<i>SD</i>	(38.4)	(31.3)	(34.9)
Avg % correct	<i>M</i>	80.4 ^a	68.8 ^b	78.6 ^a
	<i>SD</i>	(19.4)	(14.6)	(14.5)
Avg book level	<i>M</i>	4.4 ^a	3.4 ^b	4.1
	<i>SD</i>	(1.1)	(0.8)	(0.7)
Points earned	<i>M</i>	57.4 ^a	14.2 ^b	48.1
	<i>SD</i>	(93.1)	(9.8)	(88.4)

Groups with different superscripts differ significantly.

Given that the current ELLs in our study tended to read shorter books, children's reading volume was analyzed in terms of exposure to books, pages, and words read, as well as the proportion of narrow books to total books read as a function of language subgroup, the means and standard deviations of which are presented in Table 7. A MANOVA using book, page, and word exposure as the dependent variables and language subgroup as the independent variable revealed a significant main effect of language subgroup on reading volume, $F(6, 436) = 5.35, p < .001$. Bonferroni-adjusted post hoc tests revealed that current ELL children were exposed to significantly fewer words than non-ELL children, $p < .01$. The difference between current and former ELLs in exposure to pages was marginally significant, $p < .055$. No other effects were significant. A separate ANOVA was calculated using proportion narrow books read as the dependent variable and language subgroup as the independent variable. There were no significant differences between children in the three language subgroups in the proportion of narrow books read.

Table 7 Reading Volume as a Function of Language Subgroup

	Non-ELL	Current ELL	Former ELL
#Books	34	39	47
	(38)	(34)	(35)
#Pages	1,880	1,140	2,166
	(2,600)	(924)	(2,652)
#Words	307,301 ^a	77,581 ^a	277,016
	(537,584)	(100,007)	(558,025)
Proportion Narrow	.39	.34	.43
	(.34)	(.29)	(.34)

Groups with different superscripts differ significantly.

Did Narrow Reading Relate to Growth in Vocabulary and Comprehension?

Table 8 presents the means and standard deviations for the pretest literacy and vocabulary measures, reported as percentile scores for ease of comparison to national norms. As can be seen from the table, non-ELL children showed receptive vocabulary, expressive vocabulary, word reading, and decoding skills well above national norms (e.g., the 50th percentile) for the fall of

fourth grade. Non-ELLs had reading comprehension skills just below national norms. Although current ELL children showed word reading and decoding skills that neared national norms for the beginning of fourth grade, their vocabulary and comprehension skills were well below average. Former ELLs had above average word reading and decoding skills, average vocabulary scores, and comprehension scores just below average.

Table 8 Pretest Vocabulary and Literacy Percentile Scores as a Function of Language Subgroup

	Non-ELL	Current ELL	Former ELL
PPVT-4	60.97 ^a (26.64)	23.74 ^b (19.62)	50.36 ^a (31.65)
EVT-2	63.97 ^a (27.18)	28.06 ^b (21.64)	52.18 ^a (31.65)
WRAT-3	74.30 ^a (23.24)	44.10 ^b (24.06)	71.78 ^a (22.52)
Word Attack	70.41 ^a (19.84)	46.25 ^b (20.90)	70.98 ^a (20.04)
Passage Comprehension	48.74 ^a (23.10)	21.75 ^b (12.95)	42.73 ^a (22.65)

Groups with different superscripts differ significantly.

A Multivariate Analysis of Variance (MANOVA) using pretest PPVT and EVT scores as the dependent variables and language designation as the independent variable was calculated. There was a significant main effect of language group on fall vocabulary knowledge, $F(4, 358) = 17.23, p < .001$. Bonferroni-adjusted post hoc tests revealed that current ELL children had weaker receptive and expressive vocabulary knowledge in fall, both $p < .001$. No other effects were significant. A second MANOVA was calculated using fall WRAT-3, Word Attack, and Passage Comprehension scores as the dependent variables and language subgroup as the independent variable. There was a significant main effect of language subgroup on fall literacy skills, $F(6, 426) = 15.78, p < .001$. Bonferroni-adjusted post hoc tests revealed that current ELLs had weaker word reading, $p < .001$; decoding, $p < .001$; and reading comprehension, $p < .001$ skills in the fall. No other effects were significant.

Table 9 presents the means and standard deviations for fall and spring raw PPVT, EVT, WRAT-3, Word Attack, and Passage Comprehension scores as a function of language subgroup. A series of repeated measures ANCOVAs using fall and spring scores as the repeated measures was calculated using language group as the independent variable, and proportion of narrow books read as the covariate. Children showed significant growth in receptive and expressive vocabulary, word reading, and comprehension, $p < .001$, as well as decoding, $p < .01$, from fall to spring. These tests revealed no significant interaction between the proportion of narrow books children read and their growth in expressive vocabulary, word reading, decoding, or passage comprehension. However, the interaction between proportion of narrow books read and growth in children's receptive vocabulary knowledge was marginally significant, $F(2, 212) = 3.60, p < .059$. The interaction between growth in PPVT scores and language subgroup was not

significant, suggesting that children showed similar growth in receptive vocabulary, whether they were native English-speaking, current- or former ELLs.

Table 9 Growth in Vocabulary and Literacy Scores as a Function of Language Subgroup

Measure	Non-ELL		Current ELL		Former ELL	
	Fall	Spring	Fall	Spring	Fall	Spring
PPVT-4 raw	151.82 (16.22)	158.47 (17.49)	118.91 (22.91)	124.87 (22.53)	145.08 (16.16)	150.39 (18.22)
EVT-2 raw	118.20 (15.01)	124.44 (15.27)	91.82 (17.09)	98.37 (17.10)	114.65 (14.25)	114.65 (14.25)
WRAT-3 raw	37.06 (5.95)	38.55 (5.42)	31.01 (3.85)	32.06 (3.82)	36.05 (5.30)	37.64 (5.02)
WA raw	24.56 (5.22)	25.11 (4.50)	17.33 (5.93)	18.91 (5.48)	24.62 (5.26)	24.69 (4.47)
PC raw	28.16 (4.34)	29.65 (4.37)	21.61 (3.14)	22.13 (3.40)	26.69 (4.26)	28.23 (4.18)

CONCLUSION

ELL Children's Access to Books

Prior research suggests that children who live in low income communities have more restricted access to books than those who live in affluent neighborhoods (Constantino, 2005; Duke, 2000; Neuman & Celano, 2001). However, the findings of the present study suggested that access to books was not entirely dependent on poverty level. Although three of the school libraries in this study fell below the 20 books per child threshold recommended by the International Reading Association (2000), only one of those three schools was classified as high-poverty. The number of books in the high- and mid-poverty school libraries ranged from 17.9 to 21.7. In contrast, Neuman and Celano (2001) found that the libraries in high poverty schools contained 10.6 and 12.9 books each. Moreover, the total number of books available at the school with the highest proportion of students living in poverty – Jacinto – was well above the average number of books Constantino (2005) reported in the school libraries of children in communities of poverty (i.e., 8,994 in our study as compared to 1,714 in Constantino's study). The number of books in the other four school libraries approached or exceeded the number of books that Constantino reported available in the most affluent schools (i.e., those in a city with median income exceeding \$700,000). Thus, our findings suggest that children who attended low-, mid-, and high-poverty schools all had adequate access to books, at least in terms of quantity. Given that all five school populations included ELL students, our findings also suggest that access to books in the school libraries was not dependent upon language status.

The International Reading Association (2000) suggests that classroom libraries contain at least seven books per student. Only one classroom in the present study fell below this threshold, and most of the classrooms far exceeded this figure. In terms of the number of books available at home, current ELLs reported that they owned an average of 40 books, while former ELLs reported

owning an average of 55 books at home. In contrast, Constantino (2005) found that children who lived in high poverty communities owned an average of six books at home. Non-ELLs reported having an average of 92 books at home, below the average number of books at home in the most affluent communities reported by Constantino (i.e., an average of 414). Kim (2007) reported even lower average book ownership among low-income children (i.e., an average of 2.97 books) and middle-income children (i.e., an average of 4.15 books). Thus, the results of our study suggest that ELL children reported having better access to books in their classroom libraries and at home than has been previously reported among children living in low income communities.

Children's Independent Reading Volume and Quality

Previous researchers have operationalized children's reading volume as the number of books that children reported reading (see e.g., Allington et al., 2010; Heyns, 1978; Kim & White, 2008). In the present study, we operationalized reading volume as the number of words that children were exposed to, which our findings suggest is a more accurate measure of reading volume. Children's books vary tremendously in length and complexity (Guthrie & Greaney, 1991), and using the number of words read takes this into account. The results of our study suggested that although children from all three language subgroups took about the same number of reading management program quizzes, current ELL children were exposed to significantly fewer words than non-ELLs. This finding is consistent with Hunt and Beglar's (2005) work, who reported that ELL students read fewer words than native English speakers.

We also measured children's reading volume differently than has been done in previous work. Studies of independent reading often rely on children to self-report number of books they read or the number of minutes they spend reading. Such methods include surveys asking children how often they read, diaries in which children record the number of minutes per day they spend reading, and postcards that are mailed back to researchers by children once they read a book (Anderson, Wilson, & Fielding, Kim 2006; National Center for Education Statistics, 2011; Perie, Moran, & Lutkus, 2005; White & Kim, 2008). These methods may be subject to inaccurate reporting due to social desirability effects, reliance on memory, or noncompliance with the procedures. Simply put, children can report reading books they have in fact not read. In addition, these methods revealed nothing about how well children understood what they read. One child can read the same number of books as another, but not comprehend them as well, thus leading to little or no growth in reading scores. The use of reading management programs has the advantage of built-in accountability in that children take comprehension quizzes.

In the current study, non-ELLs and former ELLs scored significantly higher on the quizzes than current ELL children, suggesting that at least in terms of literal comprehension, fluent English-speaking children understood what they read better than children with more limited English skills. The fact that the current ELLs scored less than 70% on the quizzes on average suggests they may have been reading books that were too difficult for them, thus introducing the possibility that they were not reaping maximum benefits from their independent reading. Ideally, ELL children should read appropriately difficult books, in fact, "easy" books with no more than two unknown words per page for beginning readers and no more than five difficult words per page for intermediate readers (Day & Bamford, 2002; Hunt & Beglar, 2005; Share, 1995).

Narrow reading and growth in vocabulary. Children in all three language subgroups showed growth across all measures from fall to spring. This is good news, as these results

suggest that current ELL did not fall further behind their fluent-English peers. However, the ELL children's growth in vocabulary knowledge and literacy skills was not sufficient to narrow gaps in scores between them and former- or non-ELLs. However, current ELLs engaged in less independent reading volume than non-ELL children in the present study. These findings imply that independent reading is one potential lever that can be used to promote growth in literacy among ELL children.

The results of our study also suggest that while narrow reading was not related to children's growth in expressive vocabulary, word reading, decoding, and comprehension, the proportion of narrow books read was related to children's growth in receptive vocabulary. Similarly, Cho, Ahn, and Krashen (2005) found that narrow reading was associated with increased vocabulary knowledge. This finding provides tentative evidence that narrow reading may be beneficial for children in recognizing words they read, regardless of their language status. It is possible that narrow reading was not related to growth in word reading and decoding, because the children were already proficient in these skills. It is also possible that narrow reading was not related to growth in comprehension, because of the short duration of the study.

Limitations and Future Research

While the results of this study suggest that narrow reading has promise for increasing children's vocabulary knowledge, there are some limitations associated with this research. First, this is a correlational study and thus causation cannot be inferred from the results. Therefore, it is still unclear whether or not asking ELL children to read narrowly would result in gains in vocabulary knowledge. Future researchers could use experimental designs in which there is a narrow reading treatment group and a control group that engages in no narrow reading. Longitudinal studies could be conducted to see if, over time, children's comprehension skills improve as a result of reading narrowly. Studies that sample children from an age range of students could investigate whether narrow reading is beneficial across grade levels beyond fourth grade. In general, more studies that include ELL children as participants and examine ELLs' reading achievement in relationship to narrow independent reading are needed.

Second, reading management programs estimate children's book reading volume and book comprehension. However, like other measures used to estimate independent reading, they are imperfect because they do not capture children's absolute reading volume. In other words, children can read books and then not take a reading management program quiz because none is available, they forget to, they do not wish to, and so on. The quizzes also estimate children's literal comprehension of the books, but do not estimate children's inferential comprehension. Nonetheless, when children take a quiz, the results provide an indication of whether or not they read the book and understood it at a basic level. In future studies, researchers might consider developing additional ways to estimate children's reading volume and book comprehension that could be used in tandem with reading management programs. For example, researchers could interview children after they read a book and take a quiz, as an additional check of book comprehension. Or, children could complete book logs in addition to taking quizzes. Researchers could then compare reading management reports to the book logs to determine whether there are cases in which children read books, but did not take quizzes.

Last, the results of this study provide a snapshot of ELL children's access to books at school in one community. It is still unclear whether or not ELL children in other communities have adequate access to books. Thus, more research is needed on book access among ELL children. In future studies, researchers could randomly select schools across a variety of socioeconomic level communities and then measure ELL children's access to books at school

and at home. In the present study, we asked children to self-report the number of children books they owned at home, a procedure similar to that used in previous research (see e.g., Kim, 2007; Kim & White, 2008). However, we recognize that in future studies a more accurate measure would include researchers physically counting books in the home.

Implications for Teaching

The results of this study provide several implications for teachers of ELL children. First, all children need appropriate access to books. As was demonstrated in this study, the number of books in the classroom libraries varied greatly. Thus, some of the children in this study had better access to books in their class libraries than others. In addition, some children reported owning few books at home. One strategy that teachers might consider to increase book access is to use book exchange carts at school (Roser, 2010). In this practice, children donate books to the book exchange carts at their school. During recess and lunch, children bring a book to donate to the book exchange cart and then take one book from the cart. While book exchange carts may be a successful strategy to use at middle and high SES schools, this practice may not work as well at low SES schools in which children may have fewer books at home they could bring to exchange. In school districts that include low SES as well as more affluent schools, a “sister school” approach may be more feasible. In this approach, an affluent school could partner with a low SES school. Teachers could encourage children at the higher SES school could collect books to donate for a book exchange cart at the lower SES school. Teachers could also ask the parent-teacher organizations at both schools to facilitate book collection and exchange.

A second implication for teaching is that ELL children may need additional support in selecting books that are appropriately difficult. The National Reading Panel (2000) defined independent reading as, “students reading individually on their own with little or no specific feedback” (p. 3-21). Reading management programs give children feedback on their reading and they provide teachers with data that can help them make instructional decisions. Teachers who use a reading management program in their classrooms can use the quiz results on the reports as a tool to determine whether ELL children are reading books that are too difficult or too easy. If a child consistently scores below 80% on quizzes, this suggests that he or she is reading books that are too difficult. In contrast, if a child consistently scores above 95% on quizzes, the books may be too easy. Thus, teachers can help children hit the “sweet spot” by reading books for which they can score between 80-90% on the quizzes. Another strategy for readers who struggle with comprehension is for teachers to ask children to read the same book twice before they take a quiz, known as *repeated reading*. Repeated reading has been found to help children improve in error rate, fluency, and general reading (Hindlin & Paratore, 2007). This strategy would most likely work best for children who read books that are short in length.

Third, the findings of this study suggest that ELL children did not engage in as much independent reading (in terms of exposure to words) as native English-speaking children. Teachers might consider encouraging ELL children to increase their independent reading volume, by providing time during school to read independently, asking children to read at home for homework, and promoting reading during breaks and in the summer when school is not in session. Research on summer reading setback strongly suggests that racial and socioeconomic achievement gaps widen more during the summer when most children do not attend school (Alexander, Entwisle, & Olson, 2007; Allington et al., 2010; Heyns, 1978). The results of the

present study support research on summer reading setback, because achievement gaps did not widen for the children in our sample during the school year.

Last, the findings of our study tentatively imply that narrow reading facilitates receptive vocabulary knowledge acquisition. Teachers can suggest to ELL children that they read (a) fictional book series written by the same authors and are based on the same characters, (b) fictional books written from the same genre, (c) series of expository texts written by the same authors, or (d) expository texts written on the same topic. In each case, it is important that teachers help children find books that they are interested in and can get “hooked” on.

In conclusion, the findings of this study provide tentative evidence in support of narrow independent reading as a means to facilitate ELL children’s receptive vocabulary knowledge acquisition. Book access, assistance in selecting appropriately difficult books, and encouragement to read are all important factors related to ELL children’s independent reading. More research is needed to investigate interventions that can help this important subgroup of children to narrow reading achievement gaps.

***Laurie E. Hansen** is a Lecturer in the School of Education at the University of California, Irvine, where she has been teaching since she earned her Ph.D. there in 2011. Her interests include language and literacy development of English learners, multiple- and single-subject teacher education, and diversity in K-12 education.*

Email: hansenl@uci.edu

***Penelope Collins** is Interim Associate Dean and an Associate Professor at the University of California, Irvine’s School of Education. Her research interests are language and literacy development among linguistically diverse students, and the use of technology to support language arts instruction.*

Email: p.collins@uci.edu

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