

# Changing Readers, Changing Texts: Beginning Reading Texts from 1960 to 2010

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## ABSTRACT

Over the past 50 years, substantial changes have occurred in the texts used for the instruction for beginning reading. This article analyzes four prominent perspectives that have most influenced beginning reading instruction texts in the United States over this period. This article examines changes in beginning reading texts in relation to changes in the nation's demographics and young children's literacy-related experiences, including media exposure, availability of children's books, and time spent in nonparental care. These analyses are followed by an examination of the research underlying three assumptions that shape the reading instruction found in all current core reading programs: (a) earlier is better, (b) word repetition is not a factor in learning to read, and (c) one size fits all. The review ends with a call for the careful design and selection of texts for students whose literacy levels are impacted greatly by the quality of their school experiences—children in high-poverty communities.

## INTRODUCTION

Currently accepted definitions of reading comprehension all reflect a process that involves three interrelated elements—a reader, a text, and an activity or purpose for reading—that occur within a social and cultural context (e.g., Snow, 2002). Of these three elements, texts have been viewed to be most malleable and, as a result, have often been the focus of interventions and policies intended to promote reading achievement, particularly for beginning readers. Indeed, for several decades, state education policymakers have focused their attention on these beginning reading texts, issuing a series of mandates about specific features the texts must contain.

This article focuses on the texts intended for use with beginning readers, describing changes that have occurred in them over the past 50 years and examining these changes relative to the students who are expected to achieve literacy by using them. Changes in readers are more difficult to describe (and certainly to engineer) than are changes in textbooks; however, the strengths and needs of students should be the foundation upon which educational practice is based. Therefore, the first section describes several societal and cultural factors that have affected young children's schooling and literacy learning over the 50-year period. The second section addresses major turning points in the evolution of beginning reading texts over this period. The third section examines the text–student match for different groups of readers. The article concludes

with a proposal for developing texts that can improve that match for students who are now failing to attain proficient literacy levels.

## CHANGES IN READERS

The most obvious change in beginning readers over time has been in the demographics of a school entry cohort. However, changes in children's preschool experiences also potentially influence literacy development. In this article, age cohorts are identified according to the year of entry into first grade. For example, the class of 2010 refers to the cohort that entered first grade in the fall of 2010.

### Changes in Demographics

The past 50 years have seen changes in population demographics as national immigration policies have changed. At the beginning of the period, immigration was limited by quota-based immigration policies. In 1970, the number of immigrants to the United States comprised approximately 4.8% of the population (Kandel, 2011) and 85% of immigrants came from Europe or Canada (Gibson & Lennon, 1999). The Immigration and Nationality Act of 1965 (U.S. Congress, 1965) abolished the quota system. By 1990, the percentage of Americans who were immigrants had increased to 7.9% of the population (Kandel, 2011), with 70% of the immigrants coming from Latin American and Asia (Gibson & Lennon, 1999). In 2010, at the end of this period, immigrants made up 12.9% of the American population (Grieco et al., 2012), 81% of whom originated in Latin America or Asia.

Table 1 shows what changes in demographic patterns have meant for American schools. In 1960 (a time when the Census Bureau and the U.S. Department of Education made little differentiation in ethnicity), 86% of the first-grade cohort was classified as White; in 2006, that number had declined to 56.5%. As the table shows, the largest shift in demographics has been in the increased percentage of students who are Hispanic. Differences in immigration status and ethnicity can be related to diversity in children's native languages, poverty levels, and literacy patterns in their homes and communities (Camarota, 2012; Kochhar, 2008). These variables, in turn, can affect the literacy opportunities that children have before school entry (Bradley & Corwyn, 2002; Van Steensel, 2006). However, the manner in which selected demographic variables affect literacy knowledge cannot be compared across the 50-year period, since large-scale studies of young children's literacy were only begun in the late 1990s. At that point, the National Center for Education Statistics began a series of longitudinal studies of young children. To date, two studies have been completed—the *Early Childhood Longitudinal Study, Kindergarten*

Class of 1998–99 (ECLS-K; Denton & West, 2002) and the *Early Childhood Longitudinal Study, Birth Cohort of 2001* (ECLS-B; Flanagan, McPhee, & Mulligan, 2009)—and a third study that began with students who entered kindergarten in 2010 (ECLS-K: 2011; Mulligan, Hastedt, & McCarroll, 2012) is underway. At the present time, the ECLS-B provides the most comprehensive data on the influences of demographic variables on the literacy growth of children in kindergarten and first grade.

The scale score for literacy in ECLS-B study (Flanagan et al., 2009) combines letter recognition, letter-sound knowledge, recognition of words, phonological awareness, receptive and expressive vocabulary knowledge, and knowledge of print conventions. Out of a total of 85, the average score is 43.9, and the standard deviation is 14.2. Table 2 summarizes data on the relationship of this measure to six variables: gender, race/ethnicity, poverty status, home language, family type, and age.

**Table 1. Racial/Ethnic Distribution of American Children/Youth**

	White	Black	Hispanic	American Indian/Alaska Native	Asian/Pacific Islander
1960	86	14	–	–	–
1970	85	15	–	–	–
1980	70	16	10	1	3
1990	62.9	17.1	15	1.1	3.9
2003	60.3	16.8	17.7	1.3	3.9
2006	56.5	17.1	20.5	1.2	4.7

*Note.* Data Sources: Reports of the U.S. Census Bureau (1961, 1970, 2011) and reports of the U.S. Department of Education (1986, 1996–97, 2003–2004, 2006–2007)

Although poverty status and race/ethnicity (especially for American Indian and Alaskan Native children) have been shown to influence levels of literacy knowledge, the age-related patterns are most striking. From age 5 onwards, every additional six months of age is reflected in one third of a standard deviation of higher literacy knowledge. The variance from age 5 to 6 is equivalent to the effects of a home language other than English.

### Changes in Children’s Preschool Experiences

From 1960 to 2010, the experiences of children as preschoolers changed in several significant ways germane to literacy learning: (a) increased exposure to literacy-related media (television and movies), (b) greater availability of children’s books, and (c) increased time spent in nonparental care.

**Media exposure.** The type and extent of media exposure of the first-grade cohort of 1960 differed significantly from previous generations. Whereas young children in the 1930s and forward saw movies occasionally, television has been present in the homes of most children beginning in the 1960s. American households with televisions increased from 9% in 1950 to 65% in 1955 and 87% in 1960. By 1975, the percentage of American households with televisions had stabilized in the high 90s (U.S. Census Bureau, 2011). However, the amount of television programming aimed at children in the mid- to late 1950s was already substantial, with shows such as *Lassie* and host/puppet shows such as *Kukla, Fran, and Ollie*.

From its earliest days, television had been marketed as a means for increasing children’s learning, although equally vocal claims had been made of its potential negative effects (Schramm, 1968). Given that large-scale studies of young children’s learning were rare at that time, the effects of television viewing were not established

**Table 2. ECLS (Birth Cohort of 2001): Contrasts in Kindergarten-Entry Literacy Performances**

Overall Factors	Specific Comparison	Difference (Scale Scores)	Proportion of Standard Deviation
Gender	Girls-Boys	44.9 – 43 = 1.9	.13
Race/Ethnicity	White-Black	46.4 – 41.1 = 5.3	.37
	White-Hispanic	46.4 – 39.4 = 7	.49
	White-Asian	46.4 – 51.9 = –5.5	–.39
	White-American Indian/Alaska Native	46.4 – 37.1 = 9.3	.65
	White – All ethnicities	46.4 – 44.2 = 2.2	.15
Poverty Status	At or above - below	46.0 – 37.3 = 8.7	.61
Home Language	English – Non-English	44.8 – 40.4 = 4.4	.31
Family Type	Two parent – single parent	45.2 – 40.1	.36
	Two parent – other	45.2 – 38.9	.44
Age	< 5 – 5/5.5	35 – 39.7 = –4.7	–.33
	< 5 – 5.5/6	35 – 45.8 = –10.8	–.76
	< 5 – 6+	35 – 50.4 = –15.4	–1.08
Primary Care (year prior to kindergarten entry)	Nonparental - parental	44.8 – 39.8	.35
	Non Head Start preschool – Head Start	47.2 – 40.3	.49
	Home: nonrelative – relative	45.4 – 39.5	.42

with the class of 1960. With the launch of *Sesame Street* in 1969, however, documentation of the effects of educational programs on television began. *Sesame Street* was the pioneer of what became a burgeoning industry of educational programming for preschoolers (Fisch, 2004). Viewing of *Sesame Street* and its successors such as *Blue's Clues* has been associated with increased literacy, numeracy, and general knowledge (Mielke, 2000). Long-term effects of frequent viewing of *Sesame Street* for literacy, including more leisure reading as adolescents, have also been reported (Huston, Anderson, Wright, Linebarger, & Schmitt, 2000).

Since the arrival of videos and cable television in the early 1980s, opportunities for young children to watch educational programs have increased beyond those available to early viewers of *Sesame Street*. In the late 1990s and early 2000s, the landscape changed again with a deluge of digital products for the preschool market. Because of a lack of data regarding children's school-entry literacy knowledge, the effects of media on that knowledge remain uncertain, although available evidence points to at least some positive benefits of media exposure on a variety of cognitive and socioemotional outcomes (Troseth, Saylor, & Archer, 2006).

Since the arrival of the iPad in 2010, the landscape of the learning environment of preschoolers has changed yet again as applications (apps) have become available on digital tablets and phones. Hernandez (2014) concluded that nine of the top 10 paid education apps are designed for young children ages four and up. A critical issue, of course, is not the educational games but the non-educational games, including those targeted to older children. For example, a debate on the appropriateness of the app *Angry Birds* for preschoolers on parenting sites (e.g., Lack, 2011), illustrates that discussions of young children's engagement with apps need to consider games aimed at older children and noneducational outcomes. Until as late as 2014, empirical evidence on what young children are engaging with on digital tablets and mobile devices and how time spent on these devices influences learning and development had yet to be gathered (Hernandez, 2014).

**Availability of children's books.** The low-cost Golden Books that had become widely available in the 1940s meant that children in the 1960s had access to books in greater abundance than their parents and grandparents did. But the Golden Books were only the beginning, as the number of titles of children's books published annually went from approximately 1,500 in 1955 to almost 3,000 in 1980 to about 9,000 in 2000 (Bogart, 2010). With the publication of Dr. Seuss's *The Cat in the Hat* (Geisel, 1957), a new type of children's books entered the marketplace: books to support independent reading skills. Following the success of Dr. Seuss, similar books proliferated as part of trademarked programs (e.g., I Can Read, Easy Readers).

The ECLS-K examined the effects on children's literacy performance of their access to books at home and of read-alouds by parents (Denton, West, & Walston, 2003). Although parent read-alouds predicted literacy performance on kindergarten entry, the number of available books predicted end of first-grade performance. Levitt

and Dubner (2005) chose this pattern as the focus of a chapter in their popular book *Freakonomics* to illustrate how statistical analyses uncover anomalies in human behavior. One of the explanations for the greater influence of the number of books—not raised by Levitt (an economist) and Dubner (a journalist)—may lie in the influence of time spent with books on a broader and more extended variable: vocabulary (Paris, 2005).

**Time spent in nonparental care.** Without question, more preschoolers are spending more time in nonparental care settings in the 2000s than they did in the 1950s. But obtaining trustworthy information to contrast these patterns is obfuscated by factors such as lack of data from the earlier period. Current available data show, however, that at least for the year prior to kindergarten, approximately 74% of four-year-olds spend at least part of a day in non-home settings (Flanagan et al., 2009).

Table 2 includes information on kindergartners' entry-level literacy knowledge as a function of spending time in different early care/education settings in the year prior to kindergarten entry. Children who spent the year prior to kindergarten in nonparental early care had higher early literacy performances than those who spent that year in parental care contexts ( $SD = .35$ ), a difference that indicates educational benefit. However, the effect of spending the year prior to kindergarten in Head Start rather than in parental early care is substantially less ( $SD = .04$ ). This finding suggests that time spent in Head Start does not have an appreciable effect on children's literacy-related knowledge when they enter kindergarten.

## Conclusions: Changes in Readers

The presence of literacy-focused media, more books for children, and more time spent in preschool learning environments raise the question: Are modern children more literate than their counterparts of 50 years ago? Once again, the lack of long-term data makes it impossible to provide a definitive answer to that question. However, the data in Table 3 do give a glimpse of the literacy knowledge of the 1998 kindergarten class. As these data show, children are learning letter names; but even with greater availability and numbers of books, increased time spent in preschool settings, and more exposure to literacy-focused media, few children learn to read prior to first grade (Denton & West, 2002). What does appear to have changed over the past 50 years are the expectations of parents, educators, and the public about formal reading instruction for young children. In general, the dominant advice from schools and experts to parents in the 1950s and early 1960s was "hands off" in formally teaching children to read (Durkin, 1966). In the recent report of the National Early Literacy Panel (Lonigan & Shanahan, 2009), formal instruction in literacy-related skills is assumed in kindergarten and identified as a critical part of the preschool curriculum as well.

Further evidence of changes in expectations of when children should begin reading independently is found in the Common Core State Standards (CCSS) (National Governors Association Center for Best Practice [NGACBP] & Council of Chief State School

Officers, 2010) where kindergarten literacy is treated similarly to first grade. Neither kindergarten nor first grade expectations for text difficulty were included in the staircase of text complexity that provided accelerated levels of text, but a decline in the difficulty of kindergarten texts is claimed by the CCSS writers: “K–12 reading texts have actually trended downward in difficulty in the last half century” (NGACBP & CCSSO, Appendix A, p. 3). Core reading programs had no kindergarten texts 50 or even 25 years ago (Hiebert & Papierz, 1990). But the inclusion of kindergarten in this conclusion about text complexity illustrates a sea change in expectations about when children are expected to begin their entry into formal reading. These changes in expectations as well as those found in texts are discussed in the following section.

Literacy Outcome	Fall (Kindergarten)	Spring (Kindergarten)	Spring (First Grade)
Letter recognition	67	95	100
Beginning sounds	31	74	98
Ending sounds	18	54	94
Sight words	3	14	83
Words in context	1	4	48

## CHANGES IN TEXTS

At the beginning of the 50-year period of focus in this article, core-reading programs were numerous (approximately 12, according to Smith, 1965) and were used almost universally in American beginning reading instruction (Austin & Morrison, 1963). By 2010, the programs were fewer, with three publishers producing the five programs that dominated the market. The use of these programs also appears to have dwindled, with the best available evidence indicating that 25–30% of teachers of beginning reading describe themselves as using guided reading programs, rather than core reading programs (Fitzgerald et al., 2015). The guided reading programs that form the primary competitor to core reading programs, however, have considerable similarity to the texts in the anthologies of core reading programs in the rate at which new words are introduced and the level of repetition of new words (Murray, Munger, & Hiebert, 2014).

Additionally, these core-reading programs vary little from one another in either philosophy or components (Foorman, Francis, Davidson, Harm, & Griffin, 2004). For this reason, the analysis in this section focuses on the texts contained in one program. This specific program was chosen for two reasons: (a) of the two core reading programs reviewed by Chall (1967, 1983a) in her landmark study, it is the only one still published, and (b) it is typical of current core reading programs (Foorman et al., 2004; Hiebert, 2005).

Publishers typically produce a new edition, or copyright, of a program every four to five years (Chall & Squire, 1991). One copyright can be almost identical to a previous one, as was the case with the Scott Foresman *Basic Readers* from 1940 (Gray, Baruch,

& Montgomery, 1940) through the mid-1960s (Robinson, Monroe, & Artley, 1962). Copyrights can differ markedly, however, when states such as California and Texas, which adopt textbooks for statewide use, mandate the inclusion of new features in those textbooks. The copyrights of the program chosen for these analyses represent four watersheds in beginning reading texts: (a) copyright 1962 (Robinson et al., 1962), which typifies the stress placed on the repetition of high-frequency words in beginning reading texts from 1930 through the late 1980s; (b) copyright 1993 (Allington et al., 1993), which contains texts that reflect the whole language movement’s push for the use of authentic literature; (c) copyright 2000 (Afflerbach et al., 2000), which marks the emergence of decodable texts to accompany the strong emphasis on phonics in instruction; (d) copyright 2008 (Afflerbach et al., 2008), which shows the changes in expectations about formal literacy instruction for young children; and (e) copyright 2013 (Afflerbach et al., 2013), which follows the adoption and implementation of the CCSS in many states.

Beginning reading programs contain many components (e.g., word and sentence cards, ancillary sets of books, numerous workbooks), but at their core are the five or six books, called readers or anthologies, that contain grade-specific reading selections. It is the anthology selections that are the focus of these analyses.

The indices used by Chall (1967, 1983a) in her analyses are the basis for the comparison of text features of the four copyrights presented here. The first set of indices relates to cognitive load: (a) type-token ratio, or the number of unique words relative to total words in a text, and (b) number of words that appear only once in a text. The second set addresses linguistic content. Each unique word is analyzed on two dimensions: (a) word frequency, which is defined as the percentage of words that are among the 300 most frequently used words in written English (Zeno, Ivens, Millard, & Duvvuri, 1995), and (b) grapho-phonetic complexity, which is measured by the percentage of words that contain simple vowel patterns (i.e., CV, CVC, CVC-e, and CVVC) (Juel & Roper/Schneider, 1985). For each of the four copyrights, linguistic and cognitive data are summarized for the 10 texts that form the first and last units of the first-grade program and, starting with 2008, the kindergarten program.

### 1960 to 1990

Prior to 1930, books such as the Stickney Readers (Stickney, 1885/1985) consisted of selections that contained both high-frequency words and numerous phonetically regular words (e.g., *sun, sat, bee*). In 1925, Gray articulated a different perspective that would become the foundation for texts over a 60-year period. Appearing first in the Elson Readers (Elson & Gray, 1930), this text is often remembered for its characters (Dick and Jane and their family members, friends, and pets). Gray’s interest, however, lay in applying Thorndike’s (1903) laws of learning—readiness, exercise, identical elements, and reinforcement. By repeating a core group of high-frequency words, Gray believed that the laws of learning were applied in a form that ensured successful reading

acquisition. Since Thorndike’s laws of learning provided no guidance regarding what needed to be repeated in learning to read, Gray turned to Thorndike’s (1921) analysis of word frequencies, which showed that approximately 300 words accounted for almost 50% of all words in written English. In Gray’s model, these words became the unit of repetition and pacing. Because many of these frequently used words have variant letter-sound patterns (e.g., *the, of, one, some*), Gray’s instruction encouraged beginning readers to use a “look-say,” or memorization strategy, rather than sounding out words.

As the word-features data in Table 4 show, 50% of the words in the 1962 copyright’s entry-level first-grade texts fell into the group of 300 most frequent words. The first unit of that copyright did have words with common vowel patterns, reflecting the names of characters (e.g., *Dick, Spot, Jane*) or high-frequency words (e.g., *can, did, had*), but these were not words chosen to represent particular letter-sound patterns. New words were introduced at the rate of 10 new words for every 100 words of text, which means that most words were repeated at least 10 times. No word appeared a single time in the first-grade entry text, but the exit-level text had a small percentage (7%) of single-appearing words.

From 1930, when this model was first used in beginning reading programs (Elson & Gray, 1930; Gates & Huber, 1930) to 1990, when no mainstream reading programs used the model, the look-say approach was criticized (e.g., Flesch, 1955). The look-say method, critics argued, failed to make beginning readers adept at attending to the many regular phoneme-grapheme relationships that characterize an alphabetic language such as English. Criticisms of the look-say method escalated with the increased scrutiny of

America’s educational system following the Soviet Union’s successful Sputnik launch in 1957 (e.g., Bloomfield & Barnhart, 1961). But it was Chall (1967, 1983a) who made the issue prominent with the publication of *Learning to Read: The Great Debate*. Based on a review of research of reading-acquisition studies and an analysis of textbook features, Chall concluded that the look-say approach failed to provide beginning readers with the level of experiences with the codes that are required for a propitious start in reading. Stringent adherence to this approach had produced texts, Chall argued, that moved too slowly and tediously. She argued for texts that offered a more strenuous pace as well as an enlarged vocabulary with more phonetically regular words.

A frequent assumption is that Chall’s (1967, 1983a) critique precipitated substantial changes in beginning reading programs. The 1971 copyright of the Scott Foresman program (Aaron et al., 1971) did change course, dropping the Gray (1925) model and increasing the number of unique words. It did not, however, increase the number of phonetically regular words within the student texts. When the 1971 program with its emphasis on high-meaning words met with limited acceptance in the marketplace (Chall & Squire, 1991), the next copyright (and those of other publishers) returned to the look-say instructional approach. The changes that followed Chall’s (1967) critique were in the teacher’s manuals, rather than the student texts, as Chall noted in a subsequent review. Chall (1983a) observed that the teachers’ manuals had almost doubled in size as publishers inserted additional guidance, including phonics instruction. Rarely, though, did the content of these phonics lessons connect to the words in student reading selections (Beck & McCaslin, 1978).

**Table 4. Features of Beginning Reading Texts from Five Copyrights of a Core Reading Program**

Copyright	Program Level	Number of Words per Text (X)	New, Unique Words per 100			
			(X)	Single-appearing (%)	Highly Frequent (%)	Phonetically Regular (%)
1962	Entry Gr. 1	18	10	0	50	39
	Exit Gr. 1	378	8	7	60	17
1993	Entry Gr. 1	79	29	46	41	24
	Exit Gr. 1	385	20	41	34	29
2000	Entry Gr. 1	83	21	40	50	42
	Exit Gr. 1	334	19	40	37	30
2008	Entry K	33	27	54	28	40
	Exit K	110	14	31	62	80
	Entry Gr. 1	131	23	35	39	71
	Exit Gr. 1	353	23	43	31	33
2013	Entry K	35	26	58	23	43
	Exit K	110	16	36	42	80
	Entry Gr. 1	129	25	38	37	70
	Exit Gr. 1	307	26	52	30	29
ECLS Reading					75	40

## 1990 to 2000

As frameworks that were grounded in cognitive science and psycholinguistics were brought to the analysis of text in the 1970s and early 1980s, criticisms of the look-say model became compelling and frequent. The Commission on Reading that summarized the cognitive science research in *Becoming a Nation of Readers* (Anderson, Hiebert, Scott, & Wilkinson, 1985) had two distinct themes that influenced the next generation of beginning reading texts. The first theme summarized Chall's (1967, 1983a) updated analysis of the 1970s copyrights of texts, which she concluded remained focused on high-frequency words rather than phonetically regular words. The Commission recommended that beginning texts "should be interesting, comprehensible, and give children opportunities to apply phonics" (Anderson et al., 1985, p. 118) and identified *Green Eggs and Ham* (Geisel, 1960) as an exemplar of beginning texts.

This recommendation of interesting, comprehensible, and phonics-based beginning texts was an important influence on the next generation of beginning reading texts. But a recommendation that was as influential in the design of subsequent generations of beginning reading texts came from the section in the report entitled "Extending Literacy" (Anderson et al., 1985). That section summarized research on the obstacles to comprehension created by manipulations of text to comply with readability formulas. Texts manipulated to comply with readability formulas could create obstacles for readers, especially challenged ones, when a sentence was divided into two sentences to bring down the readability level. Even though sentences were short, poorer readers did not necessarily do better when connectives between ideas had been eliminated to create the short sentences. Without the information provided by connectives, readers need to make inferences—a challenge for poorer readers.

Not a single study had been conducted on the ability of completely uncontrolled text to affect reading acquisition positively when California education officials (California English/Language Arts Committee, 1987) and, soon after, those in Texas (Texas Education Agency, 1990) specified that programs accepted for their next textbook adoptions had to contain only "authentic" literature, or literature that was not constrained by readability formulas. By the early 1990s, the anthologies of all major reading programs consisted of authentic literature. Among teachers and the public, this instructional perspective was known as *whole language*.

In that these state mandates did not distinguish between texts for beginning reading and those for subsequent grade levels, the vocabulary of the first-grade texts was no longer controlled according to the Gray (1925) model. Instead, the new beginning reading texts used predictable text structures, in which key words are substituted within repeated phrases or sentences. In the prototypical predictable text, *Brown Bear, Brown Bear, What Do You See?* (Martin, 1967), colors and animals are substituted in the question "What do you see?" and the answer "I see a . . ." Texts such as this one differed substantially in the amount and repetition of vocabulary from *Green Eggs and Ham* (Geisel, 1960), which the

Commission on Reading (Anderson et al., 1985) had identified as exemplifying beginning reading texts that were interesting, comprehensible, and phonics-based. For example, *Brown Bear* presents new words at almost 3 times the rate of *Green Eggs and Ham*: 16 new words per 100 for the former and 6 for the latter. The idea of the pedagogy underlying texts such as *Brown Bear* was that beginning readers would be gaining recognition of these words through repeated reading of such texts. Evidence that, in fact, young children attended to the individual words when the texts could be memorized and chanted was lacking at the time the model was introduced. Subsequent research has shown that nonreaders learn few of the words in these predictable texts (Johnston, 2000).

The shift in tasks for beginning readers from the years 1962 (when entry-level, first-grade texts had 10 new words per 100; see Table 4) and 1983 (when the same type of entry-level, first-grade texts introduced new words at the rate of 5 per 100; Hiebert, 2005) to the year 1993 (when new words were introduced at the rate of 29 words per 100) represents a sea change. Given that most high-frequency words are function words (e.g., *I, can*), these words appeared in the whole-language texts, but 46% of the unique words appeared a single time in the first 10 texts of the 1993 entry-level text (see Table 4), whereas entry-level texts for first graders in 1962 had had no single-appearing words. With no constraints on the number of new, unique words or a need to repeat them, the rate of introducing new words from the entry- to exit-level texts is flat. The only accommodation is in length, with entry passages substantially shorter than exit passages (although substantially longer than entry passages in 1962).

## 2000 to 2008

The look-say model lasted for approximately 60 years as the driving philosophy for first-grade texts, while the whole language perspective only lasted for a decade as a vehicle of policy. When the results of the first state-by-state comparison of the National Assessment of Educational Progress (NAEP) were released in 1996 (Campbell, Donahue, Reese, & Phillips, 1996), the poor performances of California's fourth graders were interpreted as a reflection of whole language policy (Levine, 1996) and precipitated a widespread demand for a return to reading instructional methods that stressed "the basics"—most specifically, phonics.

Because of state textbook adoption cycles, Texas (Texas Education Agency, 1997) preceded California (California English/Language Arts Committee, 1999) in mandating that programs provide increased phonics instruction accompanied by decodable texts. From among numerous types of texts that emphasize the consistency of phoneme-grapheme correspondences—often described as *decodability*—Texas chose the individual phoneme-grapheme as the focus of text creation, meaning that a program had to contain lessons and accompanying texts for each of the 44 phonemes in the English language. A handful of words in a text could be taught as high-frequency or sight words but, for a text to be designated as decodable, the phoneme-grapheme correspondences of all words in a text needed to have been covered in the current or a previous

lesson (Stein, Johnson, & Gutlohn, 1999). This definition of decodability came to be called *lesson-to-text match* and was presented as providing young readers with the potential to read all words in a text accurately. Both Texas and California set percentages for words in a text that needed to fit the potential-for-accuracy criterion: 80% (Texas Education Agency, 1997) and 90% (California English/Language Arts Committee, 1999). The additional 20% (Texas) or 10% (California) of words were designated words that were to be taught as sight words.

The data in Table 4 indicate that the percentage of phonetically regular words in reading texts increased from 24% in 1993 to 42% in 2000. Despite this difference in the kinds of words in texts, the 2000 copyright was similar to the 1993 copyright in the cognitive load (i.e., the number of different words), and the percentage of single-appearing words and type-token ratios was similar, regardless of whether the underlying rationale for word selection emanated from whole language or decodability. Since decodability was defined as the match between the content of lessons and students' texts, repetition of individual words in the students' texts was not a factor in evaluating texts for beginning readers in 2000.

### 2008 to the Present

The next group of programs (Afflerbach et al., 2008; Bear et al., 2008; Beck et al., 2008) retained the same types of words (i.e., decodable) and a similar rate of introduction as the copyrights of the early 2000s. A crucial change from 2000 to 2008 was *when* students were asked to read the first texts of the programs. Starting with the programs that followed No Child Left Behind (NCLB; U.S. Congress, 2002), formal reading instruction in the core reading programs moved from first grade to kindergarten.

Analyses of core programs from the late 1980s show no reading texts for kindergartners. At most, the reading readiness workbook used in kindergarten had some pages that could be folded into a small booklet (Hiebert & Papierz, 1990). In an observational study of kindergarten reading instruction, Durkin (1987) reported that the majority of teachers emphatically stated *no* when asked whether reading should be taught in kindergarten. Instead, these teachers believed that children should be taught to match letters to sounds, but not be involved in formal reading instruction.

In the early 1990s, publishers added big books for read-along sessions to the kindergarten components of their reading programs (Allington et al., 1993). A set of decodable texts was also included in the early 2000 kindergarten program copyrights (Afflerbach et al., 2000; Cooper et al., 2002), but these books were not the primary focus of instruction. Thus, by the 2007 Texas textbook adoption (Texas Education Agency, 2005) and the 2006 call for new texts in California (California State Board of Education, 2006), formal reading instruction in kindergarten was a given.

The data on the kindergarten components of the 2008 copyright in Table 4 show that texts for exit-level kindergarten are highly decodable, with 80% of the words having simple vowel patterns. In the entry-level texts, accommodations include a high percentage of words that start with the featured initial consonants (e.g.,

*muffin, mittens*) and do not follow the CVC pattern that dominates the exit-level kindergarten texts. Texts for the kindergarten exit level are also substantially shorter than were texts for first-graders in previous copyrights. At the same time, expectations for first graders' reading abilities are higher, as is evident in the substantially longer average entry-level text.

Data on the 2013 copyright, which was published after the adoption by many states of the CCSS (NGACBP & CCSSO, 2010) and included the subtitle *Common Core*, are also provided in Table 4. The expectations seem to be slightly higher at the end of first grade in the 2013 copyright but, with respect to kindergarten and the entry level of first grade, the number of unique words and the features of words are not substantially different from 2008 to 2013. However, the pattern set in place with the 1993 copyright with higher numbers of unique words and less repetition of unique words continues to distinguish these first-grade programs from those prior to the early 1990s (see also Fitzgerald, Elmore, Relyea-Kim, Hiebert, & Stenner, in press).

## CHANGING READERS, CHANGING TEXTS: THE MATCH FOR STUDENTS WHO DEPEND ON SCHOOL TO BECOME LITERATE

The factors most directly affecting levels of students' literacy development over the past 50 years arise from the increased diversity within a school-entry cohort. In many American schools today, many students speak English as a second language. Many students also live in low-income communities. Presumably, policymakers are responding to the needs of these students—and others who are most in need of additional help—when they issue new mandates for changes in beginning reading texts. The question, then, is: How well do the textbooks produced in response to these mandates initiate students, especially those in low-income and culturally diverse communities, into school-based literacy?

The lack of long-term data on first graders' performances complicates any efforts to correlate features of first-grade texts with student performance over time. However, the ECLS-K indicates how well kindergartners and first graders were performing at the end of the 1990s (Denton & West, 2002). The data in Table 3 indicate that almost a third (31%) of the entering kindergarten cohort knew letter names and beginning sounds. Another third knew letter names, while the final third could neither name letters nor identify beginning letter sounds, at least at the criterion level.

There are also no data to indicate how students' initial status in kindergarten predicts later performance, but data on end-of-first-year reading performance show a robust relationship to grade-four reading (Juel, 1988). The distribution of fourth-graders' performances on the NAEP—33% (below-basic), 34% (basic), and 33% (proficient/advanced) (National Center for Education Statistics, 2009)—closely resembles kindergartners' performances on letter naming/beginning sound matching on school entry—33% (not attaining either), 36% (attaining letter naming), and 31% (attaining both letter naming and beginning

sounds). The measure that represents the criterion task for first grade is reading connected texts. On this task, 52% of exiting first graders failed to reach this criterion. Table 4 summarizes the features of the unique words on the connected-text reading task of the ECLS-K. These features can be compared to those of current texts. The text that 52% of exiting first graders could not read to criterion is at comparable levels to the instructional texts of first-grade entry-level text in 2000 and kindergarten exit-level text in 2008. If over half the students cannot read an entry-level first-grade text at the end of the year, a reasonable hypothesis is that approximately half the students in a cohort spend their first two years of reading instruction (kindergarten and first grade) with texts that are inaccessible.

## IMPROVING THE READER-TEXT MATCH FOR STUDENTS WHO DEPEND ON SCHOOLS TO BECOME LITERATE

As these analyses show, there is a clear need for texts that better match the needs of beginning readers. Such texts *can* be developed, but even the best texts cannot overcome the challenges created by several prominent assumptions that underlie the beginning reading components of current core reading programs—assumptions that run counter to existing theoretical and empirical scholarship. Therefore, before proposing a model for developing improved texts, this article will address each of these assumptions: (a) earlier is better, (b) word repetition is not a factor in learning to read, and (c) one size fits all.

### Reading Instruction Assumptions of Current Beginning Reading Programs

**Earlier is better.** Correlations between early literacy skills, such as letter naming and letter-sound matching, and subsequent reading performance have been the bases for frequent recommendations that the best approach for boosting low-achieving children's reading achievement is to improve their literacy-related skills prior to kindergarten entry (e.g., Claessens, Duncan, & Engel, 2009; Lonigan & Shanahan, 2009). The use of correlational data as the justification for the downward acceleration of the reading curriculum raises the question of whether earlier acquisition of literacy-related skills translates into higher reading levels for children in subsequent years.

In interpreting data on early childhood status and later performance, a distinction must be made between relative and absolute performances. First, evidence is strong that children's performances relative to their peers stay relatively stable over time (Juel, 1988). Relative status to peers, however, does not mean that initially low-performing students have not attained particular standards or that initially higher-achieving peers have attained higher standards. Currently, two-thirds of an age cohort begins kindergarten with criterion-level letter-naming knowledge (Denton & West, 2002)—an accomplishment that has often been equated with preparedness for reading acquisition. Even with this high percentage of students entering kindergarten with foundational literacy skills,

two-thirds of a cohort fails to attain proficient levels on the NAEP as fourth graders (National Center for Education Statistics, 2009). That is, earlier acquisition of letter naming has not led to higher levels of reading proficiency in later grades. Similarly, substantial investments in literacy-related instruction of four-year-olds and primary-level students have not resulted in commensurate gains in reading achievement in higher grades (Gamse, Jacob, Horst, Boulay, & Unlu, 2008; Jackson et al., 2007).

Systematic data on the effects of earlier school entry and reading instruction on absolute levels of performance are limited, but two recent studies provide pertinent information. Over a six-year period, Suggate, Schaughency, and Reese (2008) assessed students who had school entry ages (SEA) of either five or seven years on a range of measures of reading and prereading skill development. Hierarchical linear modeling accounted for receptive vocabulary, parental income and education, school community affluence, classroom instruction, home literacy environment, reading self-concept, and age. Findings showed that by ages 10 to 11, an initial advantage in reading skills associated with earlier SEA was no longer apparent.

In a second study, Suggate (2009) reanalyzed data from the reading portion of the 2006 Programme for International Student Achievement (PISA) study. Performances of representative samples of 15-year-old students from 55 countries were examined, controlling for social and economic differences. Differences across languages, Suggate argues, were ameliorated by the large sample size. Students' SEA was not a significant predictor of countries' mean reading achievement, but students in countries with an earlier SEA tended to have larger variance in reading achievement at age 15. In speculating on the widening achievement gap in countries with earlier SEA, Suggate questioned whether there are psychological or developmental costs to early literacy instruction. That is, does earlier initiation into literacy instruction for students who are not prepared for this instruction lead to lower levels of engagement and performance in reading?

Because of a lack of evidence on the psychological effects of earlier instruction, Suggate's (2009) question cannot be answered with regard to American school settings. Reflecting on Chall's (1983b) reading model, however, the fit between current forms of early literacy instruction and children's developmental capabilities can be questioned. Chall identified the first of six stages of reading development as Stage 0 and viewed this stage as preceding formal reading instruction. Stage 0 consisted of the typical activities then associated with kindergarten, such as listening to books read aloud, playing with puppets, and scribbling and drawing. The instruction for kindergarteners in the teacher's manuals of current copyrights of core reading programs (Afflerbach et al., 2008; Bear et al., 2008; Beck et al., 2008) varies considerably from the Stage 0 activities described by Chall. The activities in these current programs are more typical of the formal reading instruction described by Chall as Stage 1, where children are expected to read books and are taught lessons about words and parts of words. Kindergarten texts in current programs have been written to emphasize the

target grapheme-phoneme correspondence of the lesson, modeled after the Open Court Reading program, which is illustrated by the text: “Tim spins. Tim dips. Tim has a hat. Tim spins his hat. Tim hits a pit . . . and sits. Tim is sad” (Adams et al., 2000).

Such texts are likely fathomable for children with the hundreds of hours of Stage 0 experiences that Adams (1990) describes as typical in the preschool lives of medium/high-income children. For the children who have not manipulated magnetic letters, listened to hundreds of bedtime stories, and scribbled messages, however, texts with words such as *pits*, *dips*, and *spins* may be challenging to comprehend. Young children’s attitudes and beliefs can be difficult to capture with traditional interviews and surveys, but after observing first-grade classrooms for hundreds of hours, MacKinnon (1959) described young children with little conventional literacy on school entry as confused and bewildered when their initial reading experiences consisted of didactic phonics exercises. MacKinnon did not describe how long this confusion lasted nor did he conduct long-term observations or interviews to determine long-term effects. However, MacKinnon’s classroom observations raise questions about the efficacy of the current trend of giving first graders (and also kindergartners) a heavy diet of decodable texts and eliminating many Stage 0 experiences (e.g., making words with magnetic letters, dictating and listening to stories).

**Word repetition is not a factor in learning to read.** After decades of working with beginning reading anthologies that feature the tedious repetition of words, it is understandable that some teachers would welcome a change from such rigidly controlled texts that were similar to the high-frequency texts of the early 1980s that changed to the whole-language texts of the early 1990s. The ill-conceived implementation of the high-frequency texts of the 1980s, however, does not negate the underlying principle that novices require at least a modicum of repetition in the content they are being asked to learn. Programs for the English learning of individuals who are already proficient literacy users in their native languages emphasizes repetition of English vocabulary (Nation, 2004). Similarly, research on deliberate practice underscores the need for repetition of content if individuals are to have the facility to perform complex processes (Ericsson & Lehmann, 1996). However, in texts used for reading acquisition, little attention is paid to repetition of vocabulary. The issue of repetition in learning to read does not require debate. If repetition of content were not a factor in learning to read, 100%—not 48%—of exiting first graders would be able to read the simple text of the ECLS-K. The question is not *whether* repetition makes a difference, but rather *what* content to repeat for learners at differing points in the developmental progression.

The original algorithm for repetition of words in beginning reading texts was based on Gates’s (1930) research. Gates concluded that, for first graders of average ability, the optimal number of repetitions was 30. Consequently, beginning reading programs of the time (Elson & Gray, 1930; Gates & Huber, 1930) required that every word be repeated 30 times—a pattern that remained

in place for almost 60 years. Unexamined was the generalizability of the finding as a function of the words that Gates had studied—the highest frequency words of written English. As evident in the 10 most frequent words—*the, of, and, to, a, in, is, that, it, was*—many of these words are highly abstract, and many also have variant vowel patterns.

Even for novices learning to read their first words, all words do not require the same amount of repetition to be memorable. Children’s interest and personal meaningfulness account for the fact that names (e.g., their own names, *Mommy*, and *Daddy*) are among the first words they remember (Hiebert, 1983). In addition to meaningfulness, factors that influence word learning are concreteness of the word (Sadoski & Paivio, 2000), the presence of highly frequent grapho-phonemic units (Laxon, Gallagher, & Masterson, 2002; Martinet, Valdois, & Fayol, 2004), and common morphemes (Carlisle & Katz, 2006). Sufficient research exists to conclude that recognition of words varies as a function of word features (Landauer, Kireyev, & Panaccione, 2011).

Repetition of content is also a function of where learners are in the developmental progression. Human beings have the ability to generalize, once a critical amount of knowledge has been gained. Share (1995) describes this phenomenon as *self-teaching*, where readers use existing knowledge to acquire new vocabulary. When almost half the words occur a single time in beginning reading texts—even with phoneme-graphemes that have been taught in lessons—young children may have a difficult time employing a self-teaching strategy.

Attempts to establish rules for repetition that generalize across all words (Gates, 1930) or word parts (e.g., California State Board of Education, 2006; Texas Education Agency, 1997) fail to recognize that different features of words, including component parts such as the individual phoneme-grapheme (Thompson, Cottrell, & Fletcher-Flinn, 1996), and that readers’ existing knowledge of words and word parts influence the rate of learning and retention of new words. A priority for researchers and funding agencies needs to be an increase in information on levels of repetition required for different types of words and for students at different points in the learning progression.

**One size fits all.** The evidence for the one-size-fits-all assumption found in reading programs comes from teacher reports and newspaper accounts (e.g., Davis, 2011), not from the archival literature. Esquith (2004), a teacher in inner-city Los Angeles, writes how the mandate extended to his fifth-grade class:

Every child at a particular grade level is supposed to finish each unit at the same pace. A child in the fifth grade at one school should be on the same unit as a fifth-grader at a school across town. (p. 38)

The origins of this assumption are unclear. One source may lie in perceptions of equity: that is, giving appropriate materials to initially lower-performing students reflects lower expectations. A related perspective is that, if students are pushed, they will rise

to the occasion and read harder material. This latter perspective is evident in the recommendation of *stretch* texts within the Common Core State Standards (CCSS) (NGACBP & CASSO, 2010). The existing research, however, points in the opposite direction. When texts are too difficult for students, their comprehension suffers (Mesmer & Hiebert, in press), and their attention to the task declines as well (Gambrell, Wilson, & Gantt, 1981). For beginning readers who don't have the self-teaching strategies required to generalize knowledge (Share, 1995), instructional time spent in reading texts where few words are known can be particularly futile (Johnston, 2000).

Esquith (2004) raises another possibility for the "all on the same page" mandate: the lack of preparation and knowledge among beginning teachers. Given that the most inexperienced teachers typically are assigned to teach in inner-city schools with high concentrations of low-income students who often experience challenges in reading development, this edict is often enforced in these settings. After describing the recognition of administrators that one size does not fit all, Esquith states: "These officials have pointed out to me that for many of our young teachers, a carefully scripted series of reading lessons will help, as the teachers are new and don't know what to do" (p. 38).

### Developing an Integrated Model of the Words in Texts

Typically, a review of research ends with a call for more research, and this one is no exception, calling for research that can lead to the development of a model of text that integrates the word-level features in the three types of beginning reading texts of the past 50 years: high-frequency, phonetically regular, and meaningful or engaging. As this article has shown, each change in texts over the years has focused on one of these three types of words. When each text type was introduced as an innovative reform, it was viewed as a competitor for the existing or previous text types. In actuality, all three of these elements, combined with elements related to syntax, discourse/genre, and program, require consideration in a comprehensive model of text for beginning readers (Hiebert, 1999; Mesmer, Cunningham, & Hiebert, 2012). Indeed, evidence shows that all three features of words—meaningfulness, frequency, and grapho-phonemic-morphemic structures—influence the speed with which words are recognized and the number of repetitions required to learn a word, and that these variables interact with one another (Laxon et al., 2002; Martinet et al., 2004).

Within an integrated model of words in the texts for beginning readers, the first criterion is that words are in children's oral vocabulary (Graves, Juel, & Graves, 2004). Those words that are in children's oral vocabularies are then filtered through the lenses of frequency and grapho-phonemic-morphemic structure. For example, many young children currently may be familiar with words such as *reality* (as in reality show) and *idol* (as in "American Idol"). These words, however, are neither frequent in written language nor is their internal structure (i.e., phoneme-graphemes, morphemes, syllables) sufficiently common and consistent to support generalizable knowledge and strategies. Words such as *sun*, *hug*, *bed*, *wet*, and *dog* are known by young children (Kuperman,

Stadthagen-Gonzalez, & Brysbaert, 2012) and also have a high concreteness rating (Brysbaert, Warriner, & Kuperman, 2014). The phoneme-grapheme patterns within these words are also consistent and the rimes (i.e., vowel-consonant patterns) also occur in numerous other words. Within an integrated model of the words featured in beginning texts, words such as these would be the focus. Both theory (e.g., Ehri, 1991) and empirical evidence (e.g., Jenkins, Peyton, Sanders, & Vadasy, 2004; Menon & Hiebert, 2005) serve as the basis for the study of multidimensional models of beginning text.

### CONCLUSION

Over the 50-year period covered in these analyses, the changes in beginning readers and in the texts that initiate them into formal reading have been massive. Over this same period, a seismic shift has also occurred in *when* children begin formal reading instruction. In brief, as the diversity of students in American schools has increased over the past 50 years, the texts used in beginning reading instruction have become increasingly more complex, and students are expected to read these texts at an even earlier age.

Changes in student populations present policymakers and textbook publishers with highly complex issues to address. Too often, however, policymakers and publishers have responded to these complex issues with simplistic solutions that may exacerbate the obstacles for the students who are most in need of effective instruction. In the case of the textbook adoptions by the nation's two largest states, the solutions have often gone from one extreme to another, with the solution of one decade negated by the solution of the subsequent decade. Even more troubling than this vacillation between extremes is the downward push of beginning formal reading instruction into kindergarten (Lonigan & Shanahan, 2009), thus replacing a period of rich literacy experiences—the Stage 0 that Chall (1983b) identified—with earlier and earlier immersion in code-dominated instruction. For children who depend on instruction to acquire school-based literacy, this eliminates a crucial induction period.

Finally, the dramatic changes in the philosophies of reading programs have not addressed adequately the major underlying issues with respect to the complexities of the English language. English is a complicated amalgam of languages. The words are multi-dimensional (Nagy & Hiebert, 2011). Because of the alphabetic nature of the written form, letter-sound correspondences are among the critical dimensions. At the same time, frequency of appearances of words and their component parts, matters. And, at their core, words convey meaning. All these dimensions, as well as the ways in which words form sentences to tell stories or convey information, matter. Unless we adopt solutions that respond to the complexities of written English and of contemporary public school classrooms, we will fail to do justice to students who rely on high-quality texts and instructional approaches to achieve the literacy competence required for success in a digital-global age.

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