

Comments on the LEARN Act

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Introduction	1
LEARN and Phonemic Awareness (PA)	3
LEARN and Phonics	5
LEARN and Vocabulary	9
LEARN and Text Structure	12
LEARN and Testing	16
Recommendation: First Deal with Poverty	21
References	26

Introduction

I do not support the LEARN Act. As described in the Senate Bill, the LEARN Act is Reading First expanded to all levels. It is Reading First on steroids.

The approach required by LEARN for K-3 is identical to the five "essential components" of the National Reading Panel: "... systematic, and explicit instruction in phonological awareness, phonic decoding, vocabulary, reading fluency, and reading comprehension." The conclusions of the panel were thoroughly criticized by some of the most respected scholars in the field. The same five components became the foundation of Reading First, which failed every empirical test (e.g. Krashen, 2006, 2007, 2008).

To make matters worse, LEARN presents the same philosophy of literacy development for grades 4- 12: "... direct and explicit instruction that builds academic vocabulary and strategies and knowledge of text structure for reading different kinds of texts within and across core academic subjects."

LEARN thus assumes that direct instruction is the only way children become literate, that "The intellectual and linguistic skills necessary for writing and reading must be developed through explicit, intentional, and systematic language activities ..." and assumes that there is no contrary view.

There is massive evidence that this approach is incorrect, as I will show in subsequent sections of this report. Even if it were valid, however, it is not at all clear that a certain methodology or theory should be enforced in the schools by law.

LEARN also endorses excessive testing, requiring "diagnostic, formative and summative assessments ... at all levels." This is an astonishing requirement at a time when children are already overwhelmed with tests, when schools are being turned into test-prep academies, and when education is facing severe budget cuts. It also presumes that we do not trust our teachers to evaluate their students (see LEARN and Testing).

LEARN does not mention the most important factor in education: Poverty. There is overwhelming evidence that children of poverty do poorly in school and overwhelming evidence that environmental factors are responsible. There is, however, one environmental factor we can deal with easily: Improving access to books for children of poverty. This can be done for a fraction of the cost of the LEARN Act.

In the following report I review the research in several areas, showing that research does not justify requiring direct and explicit instruction in the phonemic awareness, phonics, vocabulary, and text structure, and that LEARN neglects the real source of our competence in these areas: Reading. (I have discussed the limits of direct and explicit instruction in spelling and grammar elsewhere, e.g. Krashen, 2003, 2004). Subsequent chapters deal with the fact that LEARN calls for excessive and inappropriate testing, and suggest steps we can take to improve education in the United States at far less cost than LEARN.

LEARN and Phonemic Awareness (PA)

Phonemic awareness (PA) is the ability to divide a word into its component sounds, i.e. the ability to take the word “pit” and divide it into “pe” “i” and “te.” It is thus an aural ability.

The claim is frequently made that phonemic awareness is prerequisite to learning to read, and must be “trained.” The LEARN Act assumes that this is correct. Research and observations cast doubt on this claim, however, and strongly suggest that phonemic awareness, beyond the most basic level, is a result of reading, not a cause.

No Evidence PA Training Improves Reading

Children who get phonemic awareness training improve on tests of phonemic awareness, but there is no evidence that PA training benefits reading comprehension, that is, performance on tests in which children have to understand what they read.

Few studies have been done in which researchers even attempt to see if PA training has an effect on reading. A review of the research literature (Krashen, 2001a) produced only six studies and eleven comparisons. Only three studies dealt with English-speaking children, several produced low, zero and even negative effects for PA training, and in some studies the number of children who underwent the training was very small.

There was only one study that reported substantial effects as well as statistically significant results in favor of those trained in phonemic awareness, a study done in Israel with Hebrew-speaking children, involving only 15 children who underwent PA training.

Low PA Read OK

It has been widely observed that many children with low or even no phonemic awareness learn to read quite well. Also, many children judged to have low phonemic awareness when young develop good reading ability later in life, and some adults who are excellent readers do poorly on tests of phonemic awareness (research reviewed in Krashen, 2001b). These results

cast doubt on the claim that phonemic awareness is a prerequisite to learning to read.

PA Develops Without Training

Even if PA were necessary or even helpful in learning to read, it doesn't have to be trained. Phonemic awareness can develop on its own, without training: In PA "training studies" one group of children receives training in PA and the other does not. Those who received the training do better on tests of PA, but the comparison group also makes gains on PA, without training. Also, several longitudinal studies reveal growth in PA without training (Krashen, 2003).

PA The Result of Reading

PA beyond the initial levels appears to be the result of reading, not the cause. This conclusion is consistent with studies showing low levels of PA among adult illiterates and the observation that all but the most rudimentary aspects of phonemic awareness emerge at about the age children learn to read. In addition, reading aloud to children has been associated with growth in PA (Krashen, 2003).

I have informal evidence to add to this: I have asked audiences to perform the classic PA task of stripping the initial consonant from a word like "pit." Of course, everybody gets this right with no problem. Then I ask them to do the same with "split." After some hesitation, most people get it right. I then ask them how they did it. Universally, people report that they spelled the word in their mind's eye, removed the /p/ sound, and pronounced the remainder. This confirms that the ability to do complex PA activities is dependent on the ability to read.

What all this suggests is that PA need not be taught. It is not essential for learning to read, and those who develop it do so from reading itself.

LEARN and Phonics

The debate on phonics has been going on for a long time: “Many are doubtless endeavoring to decide as to the most efficient method of teaching primary reading, whether through phonetic drills or otherwise” (Currier and Duguid, 1916).

Phonics means the rules relating sounds to spelling, i.e. the fact that the letter “b” is generally pronounced in as in the first sound in “bomb,” but is sometimes silent, as the last “b” in “bomb.”

There are several possible positions about the role of consciously learned phonics in reading.

Intensive, Systematic Phonics

“Phonics instruction is systematic when all of the major letter-sound correspondences are taught and covered in a clearly defined sequence ...” (Ehri, 2004, p. 180).

Intensive systematic phonics claims that we learn to read by first learning the rules (“all the major rules) of phonics, that is, learning how letters are pronounced (“sounding out”), and by practicing these rules in reading out loud (“decoding to sound”). It also asserts that our knowledge of phonics must be deliberately taught and consciously learned, that intensive instruction is “essential” (Ehri, 2004). The LEARN Act requires the use of intensive systematic phonics (“systematic and explicit instruction”).

Basic Phonics

Basic Phonics refers to straight-forward rules, the ones that work well and that students can remember.

According to Basic Phonics, we learn to read by actually reading, by understanding what is on the page. Most of our knowledge of phonics is the result of reading; the more complex rules of phonics are subconsciously acquired through reading (Smith, 2003).

A conscious knowledge of some basic rules can help children learn to read by making texts more comprehensible. Smith (2003) demonstrates how this

can happen: The child is reading the sentence “The man was riding on the h ____.” and cannot read the final word. Given the context and knowledge of ‘h’ the child can make a good guess as to what the final word is. This won’t work every time (some readers might think the missing word was “Harley”), but some knowledge of phonics can restrict the possibilities of what the unknown words are.

Basic Phonics appears to be the position of authors of *Becoming a Nation of Readers*, a book widely considered to provide strong support for phonics instruction:

“...phonics instruction should aim to teach only the most important and regular of letter-to-sound relationships ... once the basic relationships have been taught, the best way to get children to refine and extend their knowledge of letter-sound correspondences is through repeated opportunities to read. If this position is correct, then much phonics instruction is overly subtle and probably unproductive” (Anderson, Hiebert, Scott and Wilkinson, 1985, p.38).

Zero Phonics

This view claims that direct teaching is not necessary or even helpful. I am not aware of anyone who holds the position that no phonics should ever be taught.

To summarize:

INTENSIVE SYSTEMATIC PHONICS
phonics taught in sequence
all “major” rules
all rules consciously learned
reading = practice of learned rules
BASIC PHONICS
no optimal sequence
consciously learn only basic rules
most rules subconsciously acquired from reading
reading = source of most phonics knowledge
ZERO PHONICS
all rules subconsciously acquired
reading = source of all phonics knowledge

The Evidence Against Intensive Systematic Phonics.

Complexity

An argument against intensive systematic phonics is the observation that many rules are very complex and many don't work very well. Teachers have told me that quite often they have to review the rules before coming to class: If teachers who have taught the rules for years can't remember them, how can we expect six year olds to remember them?

As Smith (2003) notes, many phonics rules are “unreliable ... there are too many alternatives and exceptions ... 300 ways in which letters and sounds can be related” (p. 41). His most famous example is the fact that each of these uses of “ho” has a different pronunciation: hot, hoot, hook, hour, honest, house, hope, honey, and hoist. Smith notes that even if a reader knew the rules, the words cannot be read accurately from left to right, letter by letter: The reader needs to look ahead. (Some have claimed that the rules of phonics that appear not to work very well can be repaired and should be taught, but attempts to state better generalizations have resulted only in more complex rules that are only slightly more efficient (Krashen, 2002b)).

Smith also notes the different phonics programs teach different rules, a stunning counterargument to the claim that teaching complex rules is necessary.

The limited impact

The National Reading Panel (NICHD, 2000) concluded that the experimental research supports intensive systematic phonics. Garan (2002), in an examination of this report, noted that the impact of intensive phonics is strong on tests in which children read lists of words in isolation, but it is miniscule on tests in which children have to understand what they read. Thus, intensive phonics instruction only helps children develop the ability to pronounce words in isolation, an ability that will emerge anyway with more reading. Garan's results agree with the results of many other studies that show that intensive phonics instruction has a positive impact on tests of decoding but not on tests of comprehension (Krashen, 2009).

The Reading Panel also concluded that Intensive Systematic was superior to Whole Language, but this claim does not hold if Whole Language is defined

correctly, as including the reading of interesting texts that teachers help children understand (Krashen, 2002a).

If the Basic Phonics position is correct, which rules are teachable and useful? Experienced professionals agree that the rules for pronouncing most initial consonants and a few other rules can be learned and applied to text by small children, but some rules will be impossible for six year olds (and most adults), rules such as this one, recommended by Johnson (2001): “the a-e combination is pronounced with the long vowel and the final e silent (except when the final syllable is unaccented - then the vowel is pronounced with a short-i sound, as in ‘palace,’ or the combination is ‘are,’ with words such as ‘have’ and ‘dance’ as exceptions”).

Competence without instruction

Another strong argument against the necessity of intensive systematic phonics are the many attested cases of children who learned to read on their own with little or no explicit decoding instruction and who appear to be able to decode quite well (e.g. Goodman and Goodman, 1982, McQuillan, 1998).

Reading experience results in both reading ability and the ability to do well on tests of "decoding."

Children who have been given the opportunity to do a great deal of interesting, comprehensible reading and have less decoding instruction perform as well as or better than children in decoding-emphasis classes on decoding tests, and typically score higher on tests that test what really counts in reading: comprehension (Morrow, O'Conner and Smith, 1990, Eldridge, 1991; Klesius, Griffith, and Zielonka, 1991).

The Great Misunderstanding

There is certainly strong support among the public and the media for “phonics” instruction. What is not clear is whether the support is for Intensive Systematic Phonics, or Basic Phonics. Whole language advocates are regularly accused of supporting the Zero Phonics position, but they actually support Basic Phonics, maintaining that Basic Phonics is one way to help make texts more comprehensible. Public opinion might be much closer to the whole language view than to the extreme position taken by the National Reading Panel and by the LEARN Act.

LEARN and Vocabulary

Vocabulary comes from Reading

The Learn Act requires direct instruction in vocabulary. This position is not supported by the research, which consistently concludes that vocabulary comes from reading, not study.

Crucial evidence for the hypothesis that vocabulary comes from reading and that reading provides all the vocabulary we need comes from "read and test" studies. In these studies, subjects read a passage that contains words unfamiliar to them, are not focused on the new words, and are then given a surprise test on the words.

Some of the most important read and test studies were done at the University of Illinois (Nagy, Herman, and Anderson 1985; Nagy, Anderson, and Herman 1987). The Illinois researchers used elementary school students as subjects and passages from elementary school textbooks as texts. Their measures of vocabulary knowledge had an important feature: They were sensitive to whether subjects had acquired just part of the meaning of a target word. Nagy and colleagues (1985) concluded from their data that when an unfamiliar word was seen in print, "a small but reliable increase of word knowledge" typically occurred (Nagy and Herman 1987, p. 26), but this increase was easily enough to account for vocabulary acquisition.

Size and Complexity

There are simply too many words to teach and learn one at a time. Estimates of adult vocabulary size range from about 40,000 (Lorge and Chall, 1963) to 156,000 words (Seashore and Eckerson 1940), and it has been claimed that elementary school children acquire from eight (Nagy and Herman 1987) to more than 14 (Miller 1977) words per day.

Not only are there many words to acquire, there are also subtle and complex properties of words that competent users have acquired. Quite often, the meaning of a word is not nearly adequately represented by a synonym. As Finegan (1999) points out, words that appear to have the same meaning refer

to slightly different concepts or are used in slightly different ways (e.g. the difference between "vagrant" and "homeless.")

Also, when we acquire a word we acquire considerable knowledge about its grammatical properties. English speakers, for example, can freely add "un" to many adjectives, e.g. producing "unhappy" from "happy," and but cannot do the same with "sad." Professional grammarians have struggled to properly describe the generalizations underlying such phenomena, and they are rarely taught.

Vocabulary teaching methods typically focus on teaching simple synonyms, and thus give only part of the meaning of the word, and none of its social meanings or grammatical properties. Intensive methods that aim to give students a thorough knowledge of words are not nearly as efficient as reading in terms of words gained per minute. In fact, Nagy, Herman, and Anderson (1985) argue that picking up word meanings by reading is 10 times faster than intensive vocabulary instruction. Their suggestion is not to do both instruction and reading – the time is better spent in reading.

Competence without Instruction

People with large vocabularies and good writing ability do not generally claim to have developed them through study. Smith and Supanich (1984) tested 456 company presidents and reported that they had significantly larger vocabulary scores than a comparison group of adults did. When asked if they had made an effort to increase their vocabulary since leaving school, 54.5 percent said they had. When asked what they did to increase their vocabulary, however, about half of the 54.5 percent mentioned reading. Only 14 percent of those who tried to increase their vocabulary (3 percent of the total group) mentioned the use of vocabulary books.

Comparison of Reading/Hearing Stories and Instruction

In a series of studies of adult second language acquirers, Beniko Mason (Mason and Krashen, 2004) concluded that developing vocabulary knowledge from listening to stories is much more efficient in terms of words acquired or learned per minute than vocabulary-building exercises. In addition, in studies comparing in-school self-selected reading (sustained silent reading) with traditional instruction, readers consistently show superior performance on tests of vocabulary (Krashen, 2004).

Light Reading and Vocabulary Growth

Research by Hayes and Ahrens (1988) suggests that lighter reading can play an important role in helping readers move to more demanding texts.

According to their findings, it is highly unlikely that much educated vocabulary comes from conversation or television. Hayes and Ahrens found that the frequency of less-common words in ordinary conversation, whether adult-to-child or adult-to-adult, was much lower than in even the “lightest” reading. About 95% of the words used in conversation and television are from the most frequent 5000.

Printed texts include far more uncommon words, leading Hayes and Ahrens to the conclusion that the development of lexical knowledge beyond basic words “requires literacy and extensive reading across a broad range of subjects” (p. 409). Table 1 presents some of their data, including two of the three measures they used for word frequency. Note that comic books occupy a position between conversation and abstracts of scientific papers, falling somewhat closer to conversation. This suggests that they can serve as a conduit to more challenging reading.

Table 1. Common and uncommon words in speech and writing

	frequent words	rare words
Adults talking to children	95.6	9.9
Adults talking to adults (college grads)	93.9	17.3
Prime-time TV: adult	94	22.7
Children’s books	92.3	30.9
Comic books	88.6	53.5
Books	88.4	52.7
Popular magazines	85	65.7
Newspapers	84.3	68.3
Abstracts of scientific papers	70.3	128.2

frequent words = percentage of text from most frequent 5000 words

rare words = Number of rare words (not in most common 10,000) per 1,000 tokens.

from: Hayes and Ahrens (1988)

LEARN and Text Structure

The Learn Act requires the direct teaching of "text structure" for grades 4-12: "... direct and explicit instruction that builds ... knowledge of text structure for reading different kinds of texts within and across core academic subjects."

This requirement reflects a common assumption that a conscious knowledge of the details of how texts are put together will help students understand texts as well as produce them.

Text structure research has been on teaching the structure of narratives, termed "story grammars," as well as the structure of expository text.

Different experts use different terminology, but the general content of story grammars is similar (e.g. stories have a setting, beginning, simple reaction, goal, attempt, outcome, and ending; Spiegel and Fitzgerald, 1986; Dymock (2007) refers to setting, theme, characters, plot, resolution, with subcategories subgoal, attempt, and outcome).

Research on text structure of expository prose in children has typically focused on comparison/contrast ("a text structure in which the likeness or differences between or among two or more events, items, objects, and so forth are described according to their likenesses and differences"; Englert, Stewart, and Hiebert, 1988, p. 145), enumeration ("a text structure in which a collection or series of points that relate to a specific topic are presented, although the order of points is unimportant," Englert et. al., p. 145), sequence ("a text structure in which a series of items or events related to a process are presented in chronological order," Englert et. al. p. 145), and problem/solution. Purcell-Gates, Duke and Martineau (2007) focused only on science texts written for second graders, distinguishing informational and procedural, the latter "written for the purpose of instructing a reader in how to conduct investigations or experiments ..." (p. 15).

Teaching Text Structure Directly: What the Research Says

There have been studies in which the elements of the text structure of stories are taught to children directly and explicitly, with claims made that this

instruction helped, that is, it improved children's ability to retell stories, or read and write expository texts that conformed to the elements of the text structures studied. Direct teaching of text structure was, however, not a significant predictor of text structure knowledge in another study and 'authentic reading and writing' was.

Compared to nothing

In one case, instructed children outperformed children who did unrelated activities: In Spiegel and Fitzgerald (1986), comparisons "received an equivalent amount of time in word study and dictionary use." In other words, story grammar study was found to be better than doing nothing, a situation seen in other research claimed to support heavy skills-based instruction (Coles, 2003).

Compared to traditional instruction

In other cases, instructed children did better than comparisons engaged in traditional instruction. In Reutzel (1985) and in Greenwald and Rossing (1986), comparisons did a reading task followed by comprehension questions (directed reading activity).

Compared to "authentic reading and writing"

In Purcell-Gates, Duke, and Martineau (2007), one group of second graders received ordinary science instruction, without explicit mention of text structure. A second group had direct instruction on the structure of both informational and procedural science texts. The research team reported that the amount of explicit teaching going on in all classes was not a significant predictor of gains in reading or writing science-oriented texts over a two-year period, but the quantity of "authentic reading and writing activities" taking place was. Unfortunately, Purcell-Gates et. al. did not investigate the specific contribution of reading, but their results are consistent with the hypothesis that reading is the source of children's knowledge of text structure.

Purcell-Gates et. al. reported a "glimmer" of a positive effect of explicit teaching of text structure for one measure: writing procedural science text when examiners looked at specific features of the writing, not overall rating, and the effect was present for second grade but not third grade. Also, the

effect was only present when the explicit teaching was accompanied by "authentic reading and writing activities." Their overall conclusion was: "... for second and third graders, growth in the ability to comprehend and write science informational texts and procedural texts is not enhanced by the explicit teaching of linguistic features specific to those genres as implemented in this study" (p. 41).

Summary of research

Research on direct teaching of text structure tells us only that it is better than doing nothing and better than traditional instruction (reading short passages and answering comprehension questions). Only one study investigated the role of reading (combined with writing): The amount "authentic reading and writing activities" taking place was a significant predictor of competence in using text structure, but explicit instruction was not.

The Case for Reading

There are good reasons to hypothesize that our knowledge of text structure is gradually absorbed through reading, not through the study of text structure.

The most obvious reason is the fact that people been acquiring knowledge of text structure long before it was "discovered" in recent years.

Another reason is the vast research evidence consisting of correlational and experimental studies showing those who read more write better and read better; both activities require knowledge of text structure (Krashen, 2004, 2007).

Third, there are studies showing that knowledge of text structure emerges gradually over time, and in a predictable order. Spiegel and Fitzgerald (1986) observed that older children have better developed story grammars, and note that "there is some indication that youngsters acquire this knowledge through repeated exposure to stories in school and at home" (p. 676). They claim, however, without evidence, that "some children do not seem to learn about story structure easily on their own and are especially likely to profit from instruction in story structure" (p. 677).

Similarly, Dymock (2007) claims that "While some students are able to figure out the structure of narrative text on their own, there are others who

are not so lucky" (p. 166). Purcell-Gates et. al. found no evidence that some children are more likely to profit from direct instruction. More likely, it isn't luck at all but reading experience. Examining the same children a few years later might give very different results. There are no studies I know of in which well-read children have been shown to be lacking of an implicit knowledge of the structure of stories.

Children also gradually develop mastery of expository text structures over time. Writing of sixth graders shows better knowledge of expository text structures than the writing of third graders and that those who score higher on reading and language tests have better knowledge of text structures (Englert, Stewart, and Hiebert, 1988).

Studies also suggest that competence in different text structures emerges in a certain order. Englert et. al. reported that the enumeration text structure was easier than the sequence text structure, with some children using the enumeration structure when the sequence structure was called for. Richgels, McGree, Lomax and Sheard (1987) reported that sixth graders did better on tasks involving comparison/contrast than tasks involving causation.

These arguments demonstrate that explicit teaching of text structure cannot be necessary. The fourth argument, below, suggests that there are limits to how much of text structure can be taught explicitly.

Complexity

It is doubtful that all aspects text structure can be taught. Adult raters of student papers in Englert et. al. ("experienced teachers") were not totally firm on their grasp of text structure: Agreement on scoring student papers with respect to text structure was around 90% (p. 146) and in a training session raters only classified text structures in passages correctly 90% of the time (p. 145). If experienced teachers are not fully sure about what text structure is, it is unlikely that students will be.

Conclusion

If the LEARN Act passes, schools must teach text structure. A weak hypothesis with only a "glimmer" of supporting evidence will acquire the status of law, while the most obvious means of developing the ability to use and understand text structure will be marginalized.

LEARN and Testing

LEARN will use " ...age appropriate screening assessments, diagnostic assessments, formative assessments, and summative assessments to identify individual child learning needs, to inform instruction, and to monitor student progress and the effects of instruction over time."

These tests are mandated for use from kindergarten to grade 12, and LEARN even opens the door to assessing children "from birth through kindergarten entry": The Senate version of the Learn Act, Section 9 (e) (1) (c) states that LEARN requires "screening assessments or other appropriate measures to determine whether children from birth through kindergarten entry are developing appropriate early language and literacy skills."

We all agree that assessment is an integral and necessary part of teaching. The LEARN Act, however, opens the door to excessive and inappropriate testing.

Excessive Testing

School should include only those tests and parts of tests that are necessary, that contribute to essential evaluation and learning. Every minute testing and doing "test preparation" (activities to boost scores on tests that do not involve genuine learning) is stolen from students' lives, in addition to costing money that that can better be used elsewhere.

If we accept the principle of No Unnecessary Testing, we must ask whether we need enforced "diagnostic assessments, formative assessments, and summative assessments" from K to 12, over and above what teachers do now. Do they tell us more than teacher evaluation does? (see appendix: The hijacking of formative testing.) If current tests are shortened and/or given less frequently or abandoned, will student performance be affected? These issues must be looked at scientifically before we make massive investments in new tests.

It is likely that teacher evaluation does a better job of evaluating students than standardized commercial tests do: The repeated judgments of professionals who are with children every day is probably more valid than a

test created by distant strangers. Moreover, teacher evaluations are “multiple measures,” are closely aligned to the curriculum, and cover a variety of subjects.

There is evidence supporting this view for high school students: Research by UC Berkeley scholars Saul Geiser and Maria Veronica Saltelices shows that high school grades in college preparatory courses are a better predictor of achievement in college and four-year college graduation rates than are standardized tests (the SAT). Geiser and Saltelices found that adding SAT scores to grades did not provide much more information than grades alone, which suggests that we may not need standardized tests at all. Bowen, Chingos, and McPherson (2009) have reached similar conclusions.

For those who argue that we need standardized tests in order to compare student achievement over time and to compare subgroups of students, we already have an instrument for this, the NAEP. The NAEP is administered to small groups of children, who each take a portion of the test, every few years. Results are extrapolated to estimate how the larger groups would score. No test prep is done, as the tests are zero stakes: There are no (or should be no) consequences for low or high scores. If we are interested in a general picture of how children are doing, this is the way to do it. If we are interested in finding out about a patient’s health, we only need to look at a small sample of their blood, not all of it.

There is no evidence that more high stakes testing leads to better achievement. Nichols, Glass, and Berliner (2006) found in general no relationship between testing "pressure" in 25 states and achievement on the NAEP math and reading tests. There is, in fact, evidence that it has the opposite effect on learning (see below).

My assertions, however, need to be put to the empirical test. A conservative path is to start to cut back on standardized tests, both in length and frequency, and determine if this has any negative consequences. This is an essential move now, when funds are so scarce, and it is an essential exercise of our responsibility to students. This needs to be done before we open the door to more tests.

Inappropriate testing

Most testing done today strongly encourages a skills approach to literacy development, assuming that literacy can be taught directly and explicitly. There is tremendous evidence, as presented earlier, that this is incorrect, that most of our knowledge of phonics, vocabulary, grammar, spelling, and text structure is the result of wide reading.

The current approach to testing works against literacy development in several ways: It encourages practice on skills, in order to pass tests, it implicitly informs students that study of skills in isolation is the path to literacy development, it bleeds time from activities that really do help literacy development, and it bleeds money from libraries, cutting many students off from the only source available to them for literacy development (see discussion in Recommendation).

A culture of test-prep

"...our children are tested to an extent that is unprecedented in our history and unparalleled anywhere else in the world. Rather than seeing this as odd, or something that needs to be defended, many of us have come to take it for granted. The result is that most of today's discourse about education has been reduced to a crude series of monosyllables: "Test scores are too low. Make them go up." (Kohn, 2000, p.2).

As we have already seen with NCLB, rigid national standards and tests promote a culture of school as test-preparation, and gives rise to a focus on increasing test scores, not real learning.

"Linda Darling-Hammond offers this analogy: Suppose it has been decided that hospital standards must be raised, so all patients must now have their temperatures taken on a regular basis. Shortly before the thermometers are inserted, doctors administer huge doses of aspirin and cold drinks. Remarkably, then, it turns out that no one is running a fever! The quality of hospital care is at an all-time high! What is really going on, of course, is completely different from providing good health care and assessing it accurately – just as teaching to the test is completely different from providing good instruction and assessing it accurately" (Kohn, 20000, p. 32).

Post-script: The hijacking of formative testing

Formative testing has traditionally been used to refer to teacher-generated assessments that are part of their teaching practice. There are two concerns with the inclusion of formative testing in any law.

The first concern is the necessity of requiring formative testing. If formative testing is as defined as above, requiring it means that teachers could be monitored to make sure they are, for example, actually reading students' papers, actually engaging students in academic conversations, paying attention to students' non-verbal reactions to instruction, using questioning techniques in class, etc. In other words, including formative testing as part of a law is equivalent to saying that teachers should be teaching.

The second concern is that the term has been hijacked by several testing companies who are vigorously marketing commercial "formative" tests, which most educators regard as a contradiction (Popham, 2006, Cech, 2008). This adds yet another layer of commercial tests to an already vastly over-tested student population. These new commercial formative tests are often tied to the publisher's text and are insensitive to the teacher's individual selection of activities, further straight-jacketing instruction.

Inclusion of formative testing as a requirement, as part of the law, raises the suspicion that it was deliberately introduced to provide an opportunity for test publishers to create a new market for their products.

Here is the experience of Joe Lucido, a professional educator:

"As a fifth grade teacher, let me tell you how "formative" assessments have affected my classroom:

- 1) They are NOT teacher driven or created at all anymore; that's left in the hands of publishers hoping to make billions.
- 2) They do NOT tell me what I need to know about how my students are doing. Why? Because they are made now to look like our state high stakes test so we can have 'predictable' outcomes. They don't really tell me what my kids can do.
- 3) They have destroyed nearly every semblance of teacher creativity and necessary flexibilities that are required to teach ever changing student populations.
- 4) ... we have become robotic in what we do in the classroom. The kids are

paying a very heavy price for it in terms of a lost, full rounded education.
5) Hours upon hours are now spent analyzing scores at my school, leaving no time for real collaboration (a successful learning/planning strategy in other countries!) with things that might actually help the students.

Because the 'formative' tests come from the publishers, all the writing and reading is based around them; there is little to no freedom to be original about anything from the students' perspective. This ideology is a mirage of rhetoric."

http://ncte2008.ning.com/forum/topics/the-learn-act-and-ncte?xg_source=activity

Recommendation: First Deal with Poverty

The Problem is Poverty

American students from well-funded schools who come from high-income families outscore all or nearly all other countries on international tests of science and math. Only our children in high poverty schools score below the international average (Payne and Biddle, 1999; Bracey, 2009; Martin, 2004). The US has the highest percentage of children in poverty of all industrialized countries (25%, compared to Denmark's 3%). Our educational system has been successful; the problem is poverty.

The First Priority

The first priority should not be new standards and tests but should be reducing poverty. Decades of research (Martin, 2004; Coles, 2008/2009; Berliner, 2009) confirm that poverty has a huge impact on student learning.

1. Children of poverty are more likely to suffer from "food insecurity." Food insecure children more likely to have slow language development, problems in social behavior and emotional control. They are more likely to miss school days, repeat a grade, and have academic problems.

Coles (2008/2009) discusses research showing that the effects of food insecurity are reversible: When previously food secure children experience food insecurity, their reading development slows down relative to food secure children. But "a change from food insecurity to food security can bring concomitant improvements: the study also found that poor reading performance for food insecure children in the beginning grades was reversed if the household became food secure by 3rd grade." (Coles, 2008/2009).

2. High-poverty families are more likely to lack medical insurance or have high co-payments, which results in less medical care, and more childhood illness and absenteeism, which of course negatively impacts school achievement. Berliner (2009) cites studies showing that "children in poor families in most states are six times more likely to be in less than optimal health, experiencing a wide variety of illnesses and injuries, as compared with children in higher income families" (p. 16). School is not helping: Poor schools are more likely to have no school nurse or have a high ratio of nurses to students.

3. Children of poverty are more likely to live in high-pollution areas, with more exposure to mercury, which produces symptoms similar to ADHD, lead, which results in "diminished learning capacity and behavioral problems such as attention deficit disorder and hyperactivity—all affecting school performance," (Berliner, 2009, p. 23; see especially Martin, 2004), PCBs (polychlorinated biphenyls), which results in decreased cognitive function in childhood, and smog, which causes respiratory problems.

4. Poverty means more maternal stress and anxiety, which results in lower birth weight, which in turn results in cognitive and behavioral problems, including sleep disturbances, temperament and attention disorders, and inappropriate behavior.

5. Poverty means more maternal obesity, which results in diabetes, serious birth defects, preterm births, and growth retardation.

Berliner (2009) concludes that these "out of school" factors need to be dealt with before insisting that schools solve the "achievement gap": "A broader, bolder approach to school improvement is indeed required. It would begin by a reasonable level of societal accountability for children's physical and mental health and safety. At that point, maybe we can sensibly and productively demand that schools be accountable for comparable levels of academic achievement for all America's children" (p. 42).

There is one aspect of poverty related to schools that can be easily and immediately dealt with: Increasing access to books by investing more in libraries.

The Case for Libraries

More access > More reading > more literacy

Study after study has confirmed that children who read more do better on tests of literacy: They read better, write better, spell better, have larger vocabularies, and have better control of complex grammatical structures. It has also been established that children with more access to books read more (Krashen, 2004).

Research on libraries: More access > more literacy

Research shows that better public and school libraries are related to better reading achievement. This has been confirmed by studies done in individual states in the United States: schools with better school libraries produce higher reading scores (Lance, 1994). It has also been shown at the national level: States with better school libraries produce higher reading scores (McQuillan, 1998). Studies done at the international level produce similar results: Countries with better school libraries produce higher reading scores (Elley, 1992; Krashen, Lee and McQuillan, 2008). These results typically hold even when researchers control for the effects of poverty.

Poverty and access to books

Children of poverty have the lowest reading test scores, and also have very little access to books in their homes, in school, and in their communities.

Here are some examples: Constantino, Smith, and Krashen (1996) found staggering differences between children in high- and low-income neighborhoods. Children interviewed in affluent Beverly Hills said that had an average of 200 books available to them at home (their own or siblings). Children in low-income Watts, however, averaged less than one book, .4 to be precise. In addition, public libraries in Beverly Hills had twice as many books, and there was much more access to book stories for Beverly Hills children. Finally, Beverly Hills school libraries had two to three times as many books as those in Watts.

Neuman and Celano (2001) compared two high-income and two low-income neighborhoods in Philadelphia. Among their findings:

- * There were more places to buy books in the high-income neighborhoods and bookstores in high-income neighborhoods had much better offerings. In low-income neighborhoods, drugstores were the most common source of books, with little available for young adults.
- * Public libraries in high-income areas had far more juvenile books per child. Both libraries in the high-income neighborhood were open two evenings per week (until 8 pm); the low-income neighborhood libraries were never open past six pm.
- * School libraries in high-income neighborhoods had far more books per child and were open more days.

Neuman and Celano conclude that "... children in middle-income neighborhoods were likely to be deluged with a wide variety of reading materials. However, children from poor neighborhoods would have to aggressively and persistently seek them out" (p. 15).

The findings on school libraries in these and other studies (Allington, Guice, Baker, Michaelson and Li 1995) show that school has not only failed to level the playing field, school has made the disparity worse.

The disparity extends to library services. In a California study, LeMoine, Brandlin, O'Brian, and McQuillan (1996) reported that students in high-achieving schools in affluent areas were able to visit the school library more frequently, both independently and as a class, and were more likely to be allowed to take books home. Seven out of the 15 low-achieving schools studied did not allow children to take books home.

Librarians

Providing access to books is necessary but is not sufficient: Not all children who have access to libraries take full advantage of them (Pack, 2000, Celano and Neuman, 2008). Keith Curry Lance's studies (e.g. Lance, Rodney and Hamilton-Pennell, 2000) confirm that the presence of librarians and overall staffing contributes to reading achievement independent of other measures of library quality.

The most obvious way librarians contribute is helping children find books, in addition to selecting books and other materials for the library, and collaborating with teachers. According to Scholastic's 2008 Kids and Family Reading Report, when asked who gave them ideas about what books to read, forty-eight percent of the youngsters polled (ages 5 to 17) mentioned librarians. (Teachers, 57%, moms, 65%, dads, 43% and friends, 61%, were mentioned more frequently, and TV shows, the internet, other family members, and magazines were mentioned less frequently.)

Neuman and Celano (2001), in their study of Philadelphia discussed earlier, found that both school libraries in high-income neighborhoods had a trained librarian with a master's degree. Neither low-income school library had a trained librarian.

Funding: A Suggestion

No stimulus money is needed to significantly improve school libraries in high-poverty areas. It has been repeatedly shown that No Child Left Behind (NCLB) has not made any difference for literacy development. If one year's worth of NCLB federal funding (\$26 billion) were invested at only 2%, it would generate about \$500 million per year, about \$30 for every child in poverty (There are currently about 15 million children living in poverty in the US.). Dedicated to school and classroom libraries, and to support for librarians, this would make a powerful, and never-ending contribution toward closing the achievement gap.

Conclusion

Our first priority should not be insisting on ineffective direct instruction, as the LEARN Act does, or investing in over-precise and unnecessary standards and measures, as Race to the Top does. Our first priority must be dealing with poverty, and providing access to books for children of poverty is a simple, low-cost first step that will yield tremendous dividends.

The analysis of science and math test scores presented at the beginning of this section suggests that when all our children have the advantages that children from high-income families have, our schools will be considered the best in the world.

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