FEATURES:
KEYNOTE: Anything but Reading
Stephen Krashen

"Only one method of improving reading ability really works: engaging in a great deal of interesting (better yet, compelling), comprehensible reading."
Anything but Reading

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Both the popular media and professional literature are filled with suggestions on how to improve reading, but the one approach that always works is rarely mentioned: provide readers with a supply of interesting and comprehensible books. Instead, we are given advice that is dead wrong as a means of improving reading (e.g., roller skating and chess)—advice that leads only to reading-like behavior (intensive phonics), or advice that teaches students to use strategies that are innate (e.g., prediction), or that they will acquire anyway as they read.
What Really Works
I will begin with my conclusion. Only one method of improving reading ability really works: engaging in a great deal of interesting (better yet, compelling), comprehensible reading. Massive evidence supports this view, both in first and second language research.

Briefly, studies show that those who read more read better. They also write better, spell better, have larger vocabularies, and have better control of complex grammatical constructions (Krashen 2004).

The research literature also contains a number of case histories, cases in which self-selected voluntary reading resulting in unmistakable improvement in reading and other aspects of literacy. These studies are "scientific" in that there was no other possible source of the improvement other than reading (e.g., Cho and Krashen 1994, Mason 2006).

Even more convincing are experimental studies in which students who do self-selected reading for a given amount of time are compared to students who devote the same amount of time to "regular" instruction. Self-selected reading has been a consistent winner in these studies, in first and second language, for children and older students, and in widely differing circumstances (Krashen 2004).

I present here only a small portion of this research in an area that has not received much attention: studies of students of English as a foreign language. These studies are of interest for practical reasons, of course, in that English is studied worldwide. They are also of theoretical interest, as most subjects in these studies have little access to English outside of class. It is thus a "clean" experimental situation.

Table 1 presents all the experimental studies I could find of self-selected reading studies for students of English as a foreign language at the high school and university level.

The studies were published in professional journals or appeared in conference proceedings, and were done in Taiwan (Yuan and Nash 1992, Sims 1996, Sheu 2004, Hsu and Lee 2005, Hsu and Lee 2007, Lee 2005, Lee 2006, K. Smith 2006, K. Smith 2007, Liu 2007), the Philippines (Lituanas et. al. 2001), Japan (Mason and Krashen 1997), and Yemen (Bell 2000). In all studies time was set aside for self-selected reading, and readers were compared to similar students who did not have reading time included as part of their English program. Studies in which a significant percentage of reading was assigned are not included here, and only studies that included reading tests (reading comprehension and cloze tests) were included.

The results were startling. Most important, without exception, the readers did better than those in the comparison group. This is reflected in the ES Cloze (fill in the blanks in passages) and ES RC (reading comprehension) columns, which

<table>
<thead>
<tr>
<th>STUDY</th>
<th>n</th>
<th>DURATION</th>
<th>ES Cloze</th>
<th>ES RC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yuan and Nash 1992</td>
<td>37</td>
<td>one year</td>
<td>0.38</td>
<td></td>
</tr>
<tr>
<td>Sims 1996a</td>
<td>30</td>
<td>one year</td>
<td>0.81</td>
<td></td>
</tr>
<tr>
<td>Sims 1996b</td>
<td>30</td>
<td>one year</td>
<td>0.65</td>
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<tr>
<td>Mason retakers (Mason and Krashen 1997)</td>
<td>30</td>
<td>one sem</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mason Jr college (Mason and Krashen 1997)</td>
<td>31</td>
<td>one year</td>
<td>1.47</td>
<td></td>
</tr>
<tr>
<td>Mason university (Mason and Krashen 1997)</td>
<td>40</td>
<td>one year</td>
<td>1.11</td>
<td></td>
</tr>
<tr>
<td>Mason: response L (Mason and Krashen 1997)</td>
<td>40</td>
<td>one year</td>
<td>0.24</td>
<td>0.61</td>
</tr>
<tr>
<td>Mason: response L (Mason and Krashen 1997)</td>
<td>36</td>
<td>one year</td>
<td>0.63</td>
<td>0.48</td>
</tr>
<tr>
<td>Lituanas et al. 2001</td>
<td>30</td>
<td>six months</td>
<td>1.7</td>
<td></td>
</tr>
<tr>
<td>Bell 2001</td>
<td>14</td>
<td>one year</td>
<td>1.31</td>
<td>3.14</td>
</tr>
<tr>
<td>Sheu 2004</td>
<td>31</td>
<td></td>
<td>0.71</td>
<td></td>
</tr>
<tr>
<td>Sheu 2004</td>
<td>34</td>
<td></td>
<td>1.04</td>
<td></td>
</tr>
<tr>
<td>Lee 2005</td>
<td>65</td>
<td>twelve weeks</td>
<td>0.24</td>
<td></td>
</tr>
<tr>
<td>Hsu and Lee 2005</td>
<td>47</td>
<td>one year</td>
<td>0.58</td>
<td></td>
</tr>
<tr>
<td>K. Smith 2006</td>
<td>51</td>
<td>one year</td>
<td>0.47</td>
<td>0.39</td>
</tr>
<tr>
<td>Lee 2006</td>
<td>41</td>
<td>one year</td>
<td>1.02</td>
<td></td>
</tr>
<tr>
<td>Hsu and Lee 2007</td>
<td>47</td>
<td>three years</td>
<td></td>
<td></td>
</tr>
<tr>
<td>K. Smith 2007</td>
<td>41</td>
<td>one year</td>
<td>0.56</td>
<td></td>
</tr>
<tr>
<td>Liu 2007</td>
<td>46</td>
<td>one year</td>
<td>1.59</td>
<td></td>
</tr>
</tbody>
</table>
contain effect sizes, a measure of the impact of a treatment. All effect sizes are positive. They range from small (0.24) to very large—over 1.00 in some cases. The average effect size for cloze tests was 0.46, which is considered modest, which for some reason increased to 0.73 when sample size was taken into consideration. For reading comprehension the average effect size was a substantial 0.87, which increased to 0.88 when weighted for sample size.

Motivating Readers
The usual objection to the simple approach is that students simply will not read. But if interesting, comprehensible reading material is available, they do. One of the most convincing areas of research supporting this is research on access to books—research that shows, consistently, that more access to books results in more reading (Krashen 2004).

If it is true that more reading leads to better reading, as well as better development of other aspects of literacy, then increasing access to books should result in better reading. Studies of the impact of

The usual objection to the simple approach is that students simply will not read. But if interesting, comprehensible reading material is available, they do.

The third predictor in table 2, LIBRARY, means the percentage of schools with school libraries containing more than 500 books. Table 2 shows that availability of a school library is a very strong predictor of reading scores—nearly as strong as the effect of poverty (compare the betas). This is remarkable. Not only is it consistent with other reports of the effectiveness of libraries, it is also independent of the effect of poverty, and it is well established that children of poverty have less access to books, as just stated. This suggests that good libraries can help alleviate at least some of the problems of poverty.

The final predictor is the amount of formal instruction in reading that children receive in each country. Note that the beta is negative. This means that more time devoted to instruction is associated with lower fourth-grade reading scores. This predictor fell just short of statistical significance.

At the bottom of table 2, it says that \( r^2 = .63 \). This means that if we know the level of poverty of a country, whether children do sustained silent reading, the percentage of children who are in sustained silent reading programs, the percentage of schools with libraries with more than 500 volumes, and the amount of time devoted to formal reading instruction, we have 63 percent of the information we need to predict that country's grade four reading scores. This is impressive.

Note that the consistent winner in all the studies discussed here is self-selected reading. Nevertheless, self-selected reading is still a hard sell. People seem to be attracted to nearly every possible means of improving reading ability other than the most obvious, and whenever these ideas come up, or come up again, the media cheerfully reports them as major breakthroughs.
Anything But: Non-Reading Approaches to Improving Reading

Chess

An article in USA Today on September 18, 2008 announced that second and third graders in Idaho are being exposed to chess as a means of improving their math and reading scores. The article did not mention any evidence that chess helps reading, and Idaho schools Superintendent Tom Luna is quoted as saying, "There's little hard evidence students actually benefit from playing chess, and it could take a few years before Idaho can gauge whether students who learn chess are more successful in academics." Nevertheless, enthusiasm for chess is high.

I was able to find only one study on chess and reading, published in 1992 by the American Chess Foundation: "The Effect of Chess on Reading Scores: District Nine Chess Program Second Year Report" by Stuart Margulies. Fifty-three children in the mid-elementary grades in District Nine in the Bronx, New York City (we are not told exactly what grades they were in) voluntarily participated in a chess program in 1990 and 1991. It is claimed that these students made better gains in reading over the year than comparison children, moving from the 57.69 percentile to the 63.07 percentile, a gain of 5.37 percentiles. Comparisons, we are told, showed no additional gain.

A look at the actual scores shows that six of the fifty-three children made unbelievable gains, ranging from 38 to 66 percentiles. If we remove these outliers, the difference between the groups is less than two NCE ranks. The case for chess, in other words, depends on unusual gains made by six children in one study done fifteen years ago.

Have the folks in Idaho considered improving their school and classroom libraries as a means of improving reading?

Latin

Some recent articles have revived the belief that Latin study can help students increase their vocabulary and improve standardized test performance (Woods 2008). Some studies done over the last century appear to support this suggestion, but there is reason to be cautious.

Latin provides readers with internal cues to word identification, cues within words, allowing those with some Latin to infer meanings of many unfamiliar words of Latin origin. Knowledge of internal cues is particularly useful on tests that present words out of context, in isolation.

Readers gradually build up word meanings as they read, acquiring a small part of the meaning of new words each time they are encountered in print.

It may be that Latin gives a temporary boost, allowing less advanced readers to look better on vocabulary tests. Reading, however, offers both a short- and a long-term solution. Gains in vocabulary from reading are generally better than gains resulting from vocabulary study, and if students establish a reading habit, the gains continue lifelong.

In 1923 Thorndike provided evidence that Latin has only a temporary impact; high school Latin students excelled in English vocabulary after one year, but the difference was smaller after two years of Latin. Also, Latin students did clearly better than comparisons on a test of English reading comprehension after one semester, but the difference was smaller after one year.

A better test of the Latin hypothesis is to see whether there is a difference in vocabulary size and reading ability between widely read adults who have studied Latin and those who have not. If Latin gives only a temporary boost, there will be no difference between the groups.

Roller Skating

I was once contacted by an elementary school principal in California who had the idea that roller skating might be a good way to improve literacy. He had read a report (which I have been unable to find) that claimed that poor readers did poorly on a movement test requiring balance, and thought that a full period each school day devoted to roller skating might improve balance and thereby improve reading.

It is not clear that direct teaching of roots and affixes, whether through Latin study or independently, does much good. Levin, Carney, and Pressley (1988) report that direct instruction on roots and affixes helped in clear cases but not in less clear cases. It is highly likely that most of the clear cases are acquired through reading—most readers realize that "bi" means "two" and "pre" means "before."
I asked him if he had ever considered improving school and classroom libraries in his school, especially relevant in his situation because his school was in a high poverty area. He had never thought of this, but thought it was an interesting idea.

**Physical Education**

According to the *Charlotte Observer*, Naperville Central High School in Illinois is now requiring a gym class just before literacy class to boost reading scores (2006).

I did a literature search on the impact of exercise on literacy development and found very little—a few papers that had not yet been published and opinion extrapolated from studies dealing with the positive effects of exercise on brain activity in general.

In contrast, encouraging wide recreational reading has very solid support; increasing the amount of reading students do increases their levels of literacy. Has Naperville considered the obvious step of encouraging students with low reading scores to do more self-selected reading?

**Intensive Phonics Instruction and Reading-Like Behavior**

Phonics frenzy is spreading rapidly. By phonics frenzy, I mean the belief that heavy, intensive doses of direct instruction in the rules relating sounds and spellings are the magic key to reading proficiency. The claim has been made, in fact, that phonics frenzy is supported by scientific research.

It will be helpful to distinguish three positions on teaching phonics.

**Intensive, Systematic Phonics**—Ehri defines this position as follows: “Phonics instruction is systematic when all of the major letter-sound correspondences are taught and covered in a clearly defined sequence...” (2004, 180).

This position claims that we learn to read by first learning the rules of phonics, that is, we learn to read by sounding out or reading out loud (“decoding to sound”). It also asserts that our knowledge of phonics must be deliberately taught and consciously learned; intensive instruction is “essential” (Ehri 2004). Proponents of Intensive. Systematic Phonics tell us that learning to read is hard work (Ehri 2004).

Ehri gives us some idea of what the "major" rules are. They include long and short vowels and vowel and consonant digraphs consisting of two letters representing one phoneme, such as oi, ea, sh, and th. Also, phonics instruction may include blends of letter sounds that represent larger subunits in words such as consonant pairs (e.g., st, bl), onsets, and rimes” (2004, 180).

It is unclear what happens to the "minor" rules, whether they are also taught or whether they acquired incidentally. If the minor rules can be acquired, without direct instruction, why can’t all phonics rules be acquired?

**Basic Phonics**—According to this position, it is helpful to teach some rules of phonics, but just the basics, just the straightforward rules.

Basic Phonics maintains that 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 1994).

A conscious knowledge of some basic rules can help children learn to read by making texts more comprehensible. Smith 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.

Zero Phonics—This view claims that all phonics rules can be acquired by reading, and that direct teaching is not necessary or even helpful. I am unaware of any expert who forbids the teaching of some rules of phonics.

Contrary to popular opinion, "scientific evidence" does not support intensive systematic phonics. Study after study shows that children who participate in intensive, systematic phonics programs do quite well on tests in which they have to pronounce words out loud, but do not do well on tests in which they have to understand what they read (Garan 2002, Krashen 2009).

In addition, 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 (Krashen 2009). This means that heavy systematic instruction is not necessary. There are also 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).

In fact, the poor performance of intensive-systematic-phonics children on tests of reading comprehension could be the reason more instruction was associated with less proficiency in table 2.

In addition to the research, common sense also tells us that heavy, detailed phonics instruction can't work because so many of the rules are extremely complex and have many exceptions.

In addition to the research, common sense also tells us that heavy, detailed phonics instruction can't work because so many of the rules are extremely complex and have many exceptions. Frank Smith's example is a good one; consider this list of words: hot, hook, hour, honest, house, hope, honey, hoist. They all start with "ho" but in each case "ho" is pronounced differently! Ask any of your friends if they can explain why.

Teachers who teach systematic intensive phonics have told me that they sometimes have to review the rules before class; if a teacher who has taught these rules for years can't remember the rules, how can we expect a six-year-old to remember them?

There is little doubt that teaching the basics of phonics (sometimes called "alphabetics") is helpful in early stages as a means of making texts more comprehensible. But the ability to decode complex words is the result of reading, not the cause (Smith 2004).

Teaching Reading Strategies

The current approach to reading strategies, as I understand it, is that we first see what strategies good readers use, and then teach these strategies to students. This method can produce good results, but might not work all the time. Good readers may have acquired these strategies by reading, and they may be innate—strategies we were born with.

Consider the familiar advice to "predict what is going to happen next." Yes, good readers do this, but it doesn't have to be taught. Smith (2004) has argued that we predict all the time, and we can't stop predicting. In fact, successful prediction is how we make it through the day. (For example, in the sentence you are now reading, you know exactly what the last word is going to be.) We make predictions based on our knowledge of the world, which includes language. Smith argues that our ability to predict explains why we are so rarely surprised.

The only time readers are unable to make reasonable predictions is when texts are incomprehensible or very boring! The cure is thus not to "teach prediction," but to make sure comprehensible and interesting reading material is easily available.

If the "comprehension hypothesis" is correct, it follows that the strategies that will really help readers are those that help make texts more comprehensible. I will mention two, just to clarify what I mean.
The first is "narrow reading," that is, reading books written by one author, or about a single topic, or reading series books. This strategy contrasts with the usual approach of encouraging students to read "broadly" (e.g., Ruetzel et al. 2008) and helps ensure comprehension because of familiar background and language. Narrow readers, we should be assured, do not typically stay narrow. Back in 1958 LaBrant reported that readers gradually broaden their reading interests as they read more and their interests evolve.

The second strategy is to allow students to select much of what they read themselves, an easy way of making sure that what they read is interesting and comprehensible. (For some supporting evidence, see Lee 2007).

What Next?

I am afraid to predict what people will come up with next. I once wrote a satirical paper suggesting that we try prenatal phonemic awareness training (included in Krashen 1999). Some readers didn't know it was satire, and it was once cited in a published journal paper as a serious suggestion. As Alfie Kohn has pointed out in several presentations, in education, satire is obsolete. It remains mysterious to me why the obvious, most pleasant, least expensive, and probably the only effective way to improve reading ability—providing readers with interesting, comprehensible reading material—appears not only to be the last resort, but is often not even mentioned.

Stephen Krashen is professor emeritus, University of Southern California. He is the author of The Power of Reading (Libraries Unlimited, Heinemann). He holds a black belt in Tae Kwan Do and was the 1978 Venice Beach Incline Beach Press Champion.

Works Cited


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