# Ten Myths of Reading Instruction

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Michael Pressley, in his excellent book, *Reading Instruction that Works*, concluded with a discussion of what he considered to be "Ten Dumb and Dangerous Claims about Reading Instruction." All of the points he made were quite compelling, but one wonders if these are his "top ten" picks for the most dangerous myths about reading instruction.

Some might at least argue that the list should be re-ordered (placing some higher on the list than Pressley did), and certainly some would argue that there are a few myths that should have made the cut that he never mentioned. Curious readers are directed to his book to review his "top ten" list (the book is well written and highly informative), but here we will examine a second perspective of the most damaging myths and misconceptions about reading instruction. Let us begin with a myth that Pressley did not mention, but which is arguably the most pernicious myth currently influencing reading instruction:

**Myth #1 – Learning to read is a natural process**

It has long been argued that learning to read, like learning to understand spoken language, is a natural phenomenon. It has often been suggested that children will learn to read if they are simply immersed in a literacy-rich environment and allowed to develop literacy skills in their own way. This belief that learning to read is a natural process that


comes from rich text experiences is surprisingly prevalent in education despite the fact that learning to read is about as natural as learning to juggle blindfolded while riding a unicycle backwards. Simply put, learning to read is not only unnatural, it is just about the most unnatural thing humans do.

At the outset of this discussion, it should be made clear that there is a difference between learning to read text and learning to understand a spoken language. Learning to understand speech is indeed a natural process; starting before birth, children tune in to spoken language in their environment, and as soon as they are able, they actively seek

out and begin to incorporate a language. If the linguistic environment is not rich enough or if it is confusing, the innate drive to find a language is so strong that, if necessary, children will create a language of their own (examples of this include twin languages and pidgin languages). There is no doubt that given the opportunity, children will naturally develop rudimentary language comprehension skills with little structured or formal guidance.

Reading acquisition, by contrast, is not at all natural. It is useful to remind ourselves that, while the ability to understand speech evolved over many, many thousands of years, reading and writing were invented by man (about 7 different times and in different cultures), and have only been around for a few thousand years. In fact, it has really only been within the past few generations that some cultures have made any serious attempt to make literacy universal among their citizens. Reading and writing simply have not existed long enough to be described as a "natural" phenomenon.

Clearly, if reading was natural, everybody would be doing it, and we would not have to worry so much about dealing with a "literacy crisis" or a "literacy gap." According to the National Institute for Literacy and the Center for Education Statistics, over 40 million adults in this country alone are functionally illiterate, and despite our best educational efforts, approximately 40% of our 4th graders lack even the most basic reading skills. These staggering numbers provide evidence that reading is a skill that is quite unnatural and very difficult to learn. Clearly, if we are ever to come close to teaching all children to read, it will require the most focused and artful instruction from the most knowledgeable and skilled teachers. Merely immersing a child in a literature-rich environment is not at all sufficient to guarantee the development of substantial literacy skills.

**Myth #2 – Children will eventually learn to read if given enough time**

This is arguably the second most pernicious myth, and it is closely related to the first. Many who claim that reading is natural also claim that children need to be given time to develop their reading skills at their own pace. This is a double-edged sword because while it is true that children should be taught to read in developmentally appropriate ways, and that we should always address instruction to each child's zone of proximal development, we should not simply wait for children to develop reading skills in their own time. A child who is not developing reading skills along with his or her peers is a reason for great concern.

Research has revealed an extremely dangerous phenomenon that has been dubbed the "Matthew Effect." The term comes from the line in the Bible that essentially says that the rich get richer and the poor get poorer. That certainly describes what happens as children enter school and begin learning literacy skills. Over time, the gap between children who have well developed literacy skills and those who do not gets wider and wider. At the early grades, the "literacy gap" is relatively easy to cross, and with diagnostic, focused instruction, effective teachers can help children with poor literacy skills to become children with rich literacy skills. However, if literacy instruction needs are not met early, then the gap widens – the rich get richer, and the poor get poorer – until the gap gets so wide that bridging it requires extensive, intensive, expensive and frustrating remedial instruction. The gap reaches this nearly insurmountable point very early – research has shown that if a child is not reading grade-appropriate materials by the time he or she is in the fourth grade, the odds of that child ever developing good reading skills are very slim. It is still possible, but it is much more difficult, and the child's own motivation becomes the biggest obstacle to success.

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**Myth #3 – Reading programs are "successful"**

It is extremely common for schools to buy a reading program to address their reading instruction needs, and trust that the program will solve their school's literacy issues. Typically these programs require a great deal of commitment from the school, both in terms of time and money.

However, while reading programs can be "useful," no reading program has ever been shown to be truly "successful" -- not with all children, all teachers, and all cultures. And no reading program has been shown to accelerate all children to advanced levels of performance. There have been a few programs that have been shown to improve overall reading scores significantly (especially in low-performing schools), but that improvement is still a long way from what anybody should describe as "success." If 60% of the students in a school are performing unacceptably on the benchmark reading assessments, moving that number to 40% is an improvement, but it is still unsatisfactory.

People often ask if there are reading programs that research has shown to be effective, and the answer is that there is no reading program that, by itself, will even come close to ensuring high levels of reading success for all children. There are a few programs that, if properly implemented, could help a school to move in the right direction, but nothing could ever take the place of a knowledgeable and talented teacher.

Research has repeatedly indicated that the single most important variable in any reading program is the knowledge and skill of the teacher implementing the program, so why do we persist in trying to develop "teacher-proof" programs? Some would argue that it is our over-dependence on such reading programs that is preventing us from cultivating more knowledgeable and effective teachers. After all, if you want somebody to become a chef, you can't just hand that person a cookbook and tell him or her to follow a recipe.

The right answer is the hard answer – there are no quick fixes. To achieve success for all children, teachers need to become extremely sophisticated and diagnostic in their approach to reading instruction. Every child is different, and each child must be treated differently. A program can not be sensitive to the varied and rapidly evolving learning needs of individual children, but a diagnostic, knowledgeable teacher certainly can.

**Myth #4 – We used to do a better job of teaching children to read**

As the song goes, "The good old days weren't always so good." We have, in fact, never done a better job of teaching children to read than we do today. The bad news is, we've never really done a worse job either. We are basically just as successful today as we have always been (which is to say, not very successful).

Nothing illustrates this better than the National Assessment of Educational Progress (the NAEP). This assessment has been given to children across the country aged 9, 13, and 17 since 1970. Student performance at those three age levels has not changed substantially in over 30 years -- consistently, depending on the age tested, between 24 and 39 percent of students have scored in the "below basic" category, and between 3 and 7 percent have scored in the "advanced" category. Other investigations have found that literacy rates have not really changed in this country since World War II, and some studies suggest that literacy rates were actually worse before the war.

While the literacy rates really have not changed substantially in recent history, the demand and need for literacy has increased

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markedly. Literacy is essentially a prerequisite for success now, and in the future, the ability to read will be an increasingly indispensable skill. As Marilyn Jager Adams states, "It is not just that the teaching of reading is more important than ever before, but that it must be taught better and more broadly than ever before. We are witnessing an explosion in both information and technology. Alonglside, the social and economic values of reading and writing are multiplying in both number and importance as never before."

We clearly do not need to get back to the old ways of teaching children to read – the old ways were really no better than (and some would argue, "no different than") the current ways. Relatively recent research has given us great insights into why some children have difficulty learning to read, and the next frontier in reading education is to help teachers understand and apply that research information.

**Myth #5 – Skilled reading involves using syntactic and semantic cues to "guess" words, and good readers make many "mistakes" as they read authentic text**

Research indicates that both of these claims are quite wrong, but both are surprisingly pervasive in reading instruction. The idea that good readers use context cues to guess words in running text comes from a method of assessment developed by Ken Goodman that he called "miscue analysis" (which has given rise to the popular "running records" assessments). For his dissertation, Goodman examined the types of mistakes that young readers make, and drew inferences about the strategies they employ as they read. He noticed that the children in his studies very often made errors as they read, but many of these errors did not change the meaning of the text (e.g. misreading "rabbit" as "bunny"). He surmised that the reason must be that good readers depend on context to predict upcoming words in passages of text. He further suggested that for good readers, these context cues are so important that the reader only needs to occasionally "sample" from the text (i.e. look at the words on the page) to confirm the predictions. Children who struggle to sound out words, Goodman says, are over-depending on the letter / word cues, and need to learn to pay more attention to the semantic and syntactic cues.

Goodman's model, that eventually gave rise to the "Three Cueing Systems" model of word recognition, is very influential in reading instruction, but unfortunately, it has never been supported by research evidence.

In fact, repeated studies have shown that only poor readers depend upon context to try to "guess" words in text – good readers depend heavily upon the visual information contained in the words themselves (i.e. the letter / word cues) to quickly and automatically identify the word. Keith Stanovich has been especially critical of the three cueing systems model because the predictions made by the model are exactly the opposite of what has been observed in research studies.

Philip Gough and I addressed the second claim and showed that, in fact, good readers almost never make any mistakes at all when they read, which means the notion of conducting a "miscue analysis" is somewhat suspect – how can you perform a miscue analysis when there are typically no miscues? We had over 400 college students read a passage of text from Ken Goodman's book *Phonics Phacts*, and showed that the modal number of mistakes made by these students was zero – almost all of the students read the passage flawlessly. To suggest that good readers are correctly guessing the words in the passage with one-hundred percent accuracy stretched the boundaries of credulity.

However, to be sure, we examined how accurate people would be if they were forced to use semantics and context as their only cues. We concealed the passage of text and asked our college students to guess each of the words in the passage one at a time; after each guess, the correct word was revealed, and students were asked to guess the next word. This process was repeated for every word in the passage, so the students always knew the words leading up to the unknown word. We found that, given unlimited time to ponder, students were able to correctly guess one out of ten content words in the passage. That's a ninety percent failure rate, as opposed to the zero percent failure rate seen in skilled readers who were not forced to make guesses based on context.

It is clear that good readers depend very heavily upon the visual information contained in the word for word identification (what is commonly called the graphemic information or orthographic information). The semantic and syntactic information are critical for comprehension of passages of text, but they do not play an important role in decoding or identifying words. Good readers make virtually no mistakes as they read because they have developed extremely effective and efficient word identification skills that do not depend upon semantics/context or syntax. For good readers, word identification is fast, fluent, and automatic – it needs to be so that the their attention can be fully focused on using semantics and syntax to comprehend the text.

**Myth #6 – Research can be used to support whatever your beliefs are – lots of programs are "research based"**

Unfortunately, it is true that a lot of people do selectively search and sample the research literature, citing only the research that seems to support their pre-conceived notions. Often research results are skewed or biased to appear to be consistent with hypotheses proposed. And unfortunately, there are many people who are unwilling to reject a

hypothesis or a theory even when research evidence does not support that theory. Adding to the problem of poor research is the problem that the public is largely uninformed about what the hallmarks of good research are.

Many articles seem to be "research" articles, but are not. The article you are reading right now, for example, might be cited as "research" by some, but in fact this is not a research article – this is an article written by a researcher, and that is an important distinction. This article, and others that appear in journals like Phi Delta Kappan and The Reading Teacher are typically created as informative journalistic documents. These articles are meant to be analogous to newspaper articles, but are often more like editorials and commentaries. They stimulate thought, and focus attention on interesting issues, but they are not in any way "research" articles.

Real research is much more rigorous. Real research requires peer review. Real research is tested and scrutinized from many angles by multiple, unrelated researchers. There is documented objectivity associated with real research, and where possible, there is replication. And even after all of that, a "healthy skepticism" is still adopted by the research community. Researchers know that one piece of research evidence is nothing to get excited about. Several bits of evidence might get some attention. But it is only when there is substantial "convergent evidence" from multiple sources supporting a theory that the research community is willing to embrace the theory.

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It takes years to convince the research community that a theory has merit, but it takes no time at all to convince the public. People outside of the research community tend to pay attention to unexpected or unusual findings. Cold fusion is an example of the type of inappropriate attention the public and media pays to unusual research findings. There is a mountain of evidence showing that cold fusion is not possible given our current technology and understanding of physics. But when one research team circumvented the normal “channels” of peer review and claimed that they had found a solution for cold fusion, they were celebrated in the media, and the public payed a great deal of attention to their claims.

When there is a preponderance of evidence supporting a theory, the research community puts a great deal of faith in that theory, but when there is one claim that refutes the preponderance of evidence, the public tends to pay inordinate attention to the exceptional claim while ignoring the substantial evidence that would refute that claim. A wall of mundane consistency fades to the background when one incongruent speck appears.

It is true that new "research based" fads and programs come and go, but that stems from a misuse of the term "research based." All of us need to adopt a bit of healthy skepticism, and we need to demand that a *substantial* research base be provided as evidence to support claims. And we also need to learn to pay more attention to the research evidence and less attention to the messenger – the credentials of a researcher are important, but even researchers can editorialize and put forth unfounded opinions. Just because a well-known researcher said it, that doesn't make it so.

In short, we should always remember the researcher's credo: "Remarkable claims require remarkable evidence."

**Myth #7 – Phoneme awareness is a consequence (not a cause) of reading acquisition**

The evidence showing the importance of phoneme awareness to literacy acquisition is overwhelming. Still, there are some that are not convinced. Some claim that teaching children to develop phoneme awareness is not necessary or even beneficial. They usually accept that children do develop phoneme awareness as they learn to read, but they claim that phoneme awareness is nothing more than a byproduct of reading acquisition that arises as a result of learning to read – not the other way around. Further, it is often argued that phoneme awareness instruction is "inauthentic" and "unnatural," and is therefore inappropriate.

The research evidence, however, does not support this view. First, it is quite clear that phoneme awareness is a necessary pre-requisite for developing decoding skills in an alphabetic writing system such as English. Phoneme awareness in the early grades is one of the best predictors of future reading success. All successful readers have phoneme awareness. People who do not have phoneme awareness are always poor readers, and poor readers almost never have phoneme awareness (almost never – phoneme awareness is necessary but not sufficient for reading success). However, the most compelling evidence for the importance of phoneme awareness stems from the research that has shown that when children are taught to develop phoneme awareness, they are more likely to develop good word decoding skills, and they develop those skills

faster and earlier than children who are not taught to be aware of phonemes in spoken words.

Second, phoneme awareness instruction can be very authentic and natural. Teachers can use music, tongue twisters, poetry and games to help children develop phoneme awareness. Children actually enjoy playing these games; they love to experiment with language, and teachers should give them every opportunity to explore speech.

Given the importance of finding developmentally appropriate ways of helping children to develop foundational reading skills as early as possible (see the Matthew Effect discussion in Myth #2), assessment of phoneme awareness should begin early, and games and lessons that help children to develop an awareness of phonemes in speech should be used to help those that need it.

**Myth #8 – Some people are just genetically "dyslexic"**

The belief in an underlying genetic cause for dyslexia ignores the fact that reading and writing simply have not been around long enough to become part of our genetic makeup (see the Naturalness argument in Myth #1). It was long argued that when a disparity existed between a person's intelligence and their reading skill, the person should be described as a "dyslexic." The term "dyslexic" eventually became a catch-all term used to account for people who failed to learn to read despite apparent intellectual capacity and environmental support.

Frankly, the term "dyslexia" is basically meaningless. The term simply means "difficulty with words," and anybody who has not learned to read could be called "dyslexic." There is nothing about that taxonomy that addresses the underlying reasons for the difficulty with words. We know that people fail to learn to read for a very wide variety of reasons, and categorizing all non-readers under the "dyslexia" umbrella belies the complexity of reading disorders.

Clearly, some people have more difficulty learning to read than others. In broad strokes, the three reasons people have difficulty developing basic reading skills are,

1. they have difficulty developing decoding skills,
2. they have difficulty developing language comprehension skills or,
3. both.

Difficulties developing decoding skills very often arise from difficulties processing sounds in speech (phonological processing skills). Some people seem to have an easier time than others mentally breaking spoken words apart and tuning into the subparts of spoken words (e.g. alliteration, rhyme, etc.).

simply do not get adequate instruction in other necessary knowledge domains that are important for developing good decoding skills (concepts about print, letter knowledge, and knowledge of the alphabetic principle). Or, they do not get ample opportunities to practice decoding real words, and thus fail to develop sufficient cipher knowledge or lexical knowledge about words. There is no genetic factor for insufficient instruction – the deficit is not intrinsic to the child; it is intrinsic to the classroom and the system that failed to help the child to develop these critical knowledge domains.

To learn to decode words (at least in alphabetic systems like English), it is necessary to understand that the letters in text represent the phonemes in speech. For people who have difficulty hearing and manipulating the phonemes in speech (because of poor phonological processing skills), it is unlikely that they will make the connection between letters and phonemes.

It could be argued that there is a genetic foundation for variations in phonological processing skills -- some people do seem to naturally tune in to speech sounds, and others seem to have difficulty examining and manipulating the phonemes in speech. Furthermore, these abilities do have a tendency to run in families. However, even if there are genetic foundations for phonological processing skills, we know that it is quite easy to teach children to be aware of the phonemes in speech regardless of their genetic tendencies.

While some children have difficulty developing decoding skills because of poor phonological processing skills, other children

Difficulty developing language comprehension skills often stem from either insufficient practice with language in general or insufficient practice with a particular language (children often have well developed language comprehension skills in languages other than English). To be good at understanding a language, children need to develop a rich vocabulary and appreciation for semantics, and they need to combine that with a wealth of background knowledge about the world. They also need to have an implicit understanding of the mechanics of the language (syntax), and their ear needs to be tuned to the phonology of the language so they are less likely to confuse words that sound similar (like "hair" and "here").

None of these areas could be described as "genetic" factors that lead to reading

difficulty. They are environmental factors, and good instruction can overcome them. The unpleasant fact that we must come to terms with is that the reason that so many children are "dyslexic" has nothing to do with the children; it has to do with the quality of their education. They were simply never taught to read.

**Myth #9 – Short-term tutoring for struggling readers can get them caught up with their peers, and the gains will be sustained**

Pull-out programs for reading instruction are extremely common in schools. Typically in one of these programs, a highly trained teacher will pull individual students out of the classroom for short, intensive, one-on-one instruction sessions. After a few weeks of this intensive intervention, the students are exited from the program, and they resume normal classroom activities. The prevalence of these fairly expensive programs reflects an underlying belief that this sort of intervention is effective, and that the gains that children experience in these programs are sustained when they return to the normal classroom.

In fact, it is evident that such gains as are made by children in these programs (and even those gains are questionable) are not sustained for very long once they are exited from the program. Studies of these pull-out tutoring programs have shown that children who are not thriving like their peers in the classroom continue to fail to thrive when they are placed back in that classroom full time. This suggests that there is something about the classroom environment that is not supporting and scaffolding these children as they learn to read.

Studies have shown that the best hope for these children is to place them with a "strong" reading teacher full time – a teacher who has a sophisticated understanding of the process of learning to read, a tendency to use assessment data to inform individualized instruction, and a talent for engaging students in focused and interesting instructional activities. For example, Catherine Snow has been reporting research findings that indicate that "at risk" students who are placed with "strong" teachers for two consecutive years are very likely to be successful readers. Similarly, she has shown that students who are not "at risk" are likely

to have difficulties learning to read if they are placed with "weak" teachers for two consecutive years.

Once again, we see that the right answer is the hard answer (see Myth #3); the solution for helping struggling readers to become successful readers is to cultivate a population of teachers who are very knowledgeable about how children learn to read, and who are adept at applying their understanding of reading acquisition to the assessment and instruction of individual children.

*Just because a concept or skill is taught, there is no guarantee that every child will learn it*

Perhaps instead of having our most highly trained and knowledgeable reading teachers pulling students out of class for individual tutoring, a better use of their time would be to make them responsible for providing on-going, job-imbedded professional development and coaching for the other teachers on staff so that all of the teachers can develop expertise in reading theory and reading instruction.

**Myth #10 – If it is in the curriculum, then the children will learn it, and a balanced reading curriculum is ideal**

This is only a half-myth. Clearly, if something is not a part of the curriculum, then children are very unlikely to learn it, but just because a concept or skill is taught, there is no guarantee that every child will learn it. Standards are starting to shift from an emphasis on what is taught to an emphasis on what is learned, and curricula are starting to make the same shift. However, it is still quite common to divide a curriculum into instructional minutes and to focus more on what is taught than on what is learned. A curriculum is too often confused with a recipe – creating proficient readers is not as simple as mixing ingredients in correct proportions. Teaching a complicated skill such as reading to a diverse group of students requires a great deal of flexibility and creativity on the part of the teacher.

As to whether or not a curriculum should reflect a balanced reading approach, the answer is again, "yes and no." Unfortunately, the term "balanced reading" is not very clearly defined. Most teachers currently claim to employ a balanced approach to their reading instruction (according to the NAEP), but what a "balanced approach" means to one teacher may be very different from what a "balanced approach" means to another. Some have started substituting the term "eclectic" for "balanced" to more aptly describe their instructional strategies. The approach most commonly used is to provide instruction traditionally associated with both the Phonics and the Whole Language philosophies, and to add things like phoneme awareness that were never traditionally associated with either philosophy. Sometimes a balanced reading approach involves using phonics activities first, and then adding whole language activities later. Sometimes a balanced reading approach involves supplementing authentic text with phonics worksheets or decodable text. But rarely does it mean the same thing for different teachers.

According to data collected for the NAEP in Reading, the prevalent instructional philosophy shifted in 1996 from Whole

Language to Balanced Literacy, but NAEP scores have been unaffected by this shift. This should be no surprise – when the prevalent philosophy shifted in the late '80s and early '90s from Phonics to Whole Language (with a period of balanced literacy in between), NAEP scores did not change then either. It would seem that the philosophies that drive the curricula simply do not in themselves have an impact on student performance.

What does have an impact on student performance has been a recurring theme throughout this essay – the quality, strength, knowledge and sophistication of the teacher is what really matters for helping children to become proficient readers. The strength of the teacher plays a very large part in determining the reading success of a student. A strong teacher can help every one of her students develop advanced reading skills. A weak teacher can have the opposite effect. The importance of providing good professional development to engender a population of highly qualified, diagnostic reading teachers is paramount, and every child will benefit. It's not easy, but anybody who tells you there is an easier solution to the mounting problem of illiteracy is trying to sell a myth.

## Further Reading

To learn more about these and other related issues in reading instruction and reading research, curious readers are encouraged to examine these titles:


Adams, M.J. (1990). *Beginning to read: Thinking and learning about print.* Cambridge, MA: MIT Press.

Adams, M.J. (1998). The three-cueing systems. In J. Osborn and F. Lehr (eds.), *Literacy for All: Issues in Teaching and Learning* (pp. 73-99). New York: Guilford Press.

Gough, P.B. and Wren, S.A. (1999). Constructing meaning: The role of decoding. In J. Oakhill and R. Beard (eds.), *Reading Development and the Teaching of Reading* (pp. 59-78). Malden, MA: Blackwell.

Moats, L.C. (1999). *Teaching reading is rocket science.* American Federation of Teachers. Washington D.C.: Item # 372.

Snow, C., Burns, S., and Griffin, P. (eds.) (1998). *Preventing Reading Difficulties in Young Children.* Washington D.C.: National Academy Press.

Stanovich, K.E. (1986). Matthew Effects in Reading: Some consequences of individual Differences in the acquisition of literacy. *Reading Research Quarterly*, 21, 360- 407.

Stanovich, K.E. (1992). *How to think straight about psychology.* New York: Harper Collins.