Ten maxims: What we've learned so far about how children learn to read

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Over the last 50 years, there's been a vast outpouring of research about reading development, drawing on insights from neuroscientists, psychologists, linguists, speech pathologists, educators and other experts. I'm sometimes asked to summarise, in plain language, what we've learned so far. These ten maxims represent my best attempt at doing that.

This may seem like a fool's errand, because no set of maxims can fully convey the scope or the nuance of thousands of studies. I hope nevertheless that these maxims might be useful in crystallising some of the most essential findings. In collaboration with some outstanding researchers and practitioners, I've compiled a selective list of studies that underlie each of the ten maxims. The research behind the maxims addresses a wide range of individual differences in reading development, reading difficulties and reading instruction. Taken as a whole, the studies encompass children identified as having dyslexia and other learning disabilities as well as children who struggle with reading as a result of inadequate instruction. Many of the studies also include proficient readers.

Because these maxims are very broad, there is of course more to say about specific sub-populations of students with distinct strengths and needs. I encourage advocates for these students to formulate additional maxims that are not adequately covered by these first ten. Any additions should be in clear, consumer-friendly language and supported by cited studies that report relevant empirical findings.

The overarching message is that learning to read is a complex process involving multiple abilities, skills and knowledge. Each is essential but none is sufficient on its own.

With that as prologue, here are my **ten maxims**:

1 Almost all children learn to speak naturally; **reading and writing must be taught**.

2 Literacy begins at birth. It is rooted in early social interactions and experiences that include regular exposure to oral language and print. **Strong roots tend to produce stronger readers**.

3 **All good readers are good decoders.** Decoding should be taught until children can accurately and independently read new words. Decoding depends on phonemic awareness: a child's ability to identify individual speech sounds. Decoding is the on-ramp for word recognition.

4 Fluent readers can instantly and accurately recognise most words in a text. They can read with expression and at an appropriate rate for their age. **Reading fluency requires comprehension AND it supports comprehension**.

5 Comprehension – the goal of reading – draws on multiple skills and strengths, including a **solid foundation of vocabulary and background knowledge.**

6 One size does not fit all: **use student data to differentiate your instruction.**

7 **Direct, systematic instruction helps students develop the skills they need to become strong readers.** Indirect, three-cueing instruction is unpredictable in its impact on word reading and leaves too much to chance.

8 **These maxims apply to English Learners/Emergent Bilinguals,** who often need extra support to bolster their oral language as they learn to read and write in a new language.

9 **We should support students who speak languages or dialects other than General American English* at home,** by honouring their home language and by giving them expanded opportunities to engage with General American English* text.

10 To become good readers and writers, **students need to integrate many skills that are built over time.**

With appreciation to Kelly Butler, Claude Goldenberg and Noel Gunther.

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**Editor's note: In Australia, the 'mainstream' dialect is referred to as General Australian English.*

This article originally appeared on Reading Universe. References to research in support of the ten maxims are available on Reading Universe. Background information relating to this article and the author's work more generally is available in a two-part special on Science of Reading: The Podcast.

Dr Reid Lyon has had a distinguished career as a research scientist, professor, classroom teacher, special education teacher, neuropsychologist, school psychologist, and leader in the development of evidence-based education policy at federal and state levels. From 1992 until 2005, Dr Lyon served as the Chief of the Child Development and Behavior Branch within the National Institute of Child Health and Human Development at the National Institutes of Health.

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