THE READING ROPE: KEY IDEAS BEHIND THE METAPHOR

Presenter: Hollis S. Scarborough

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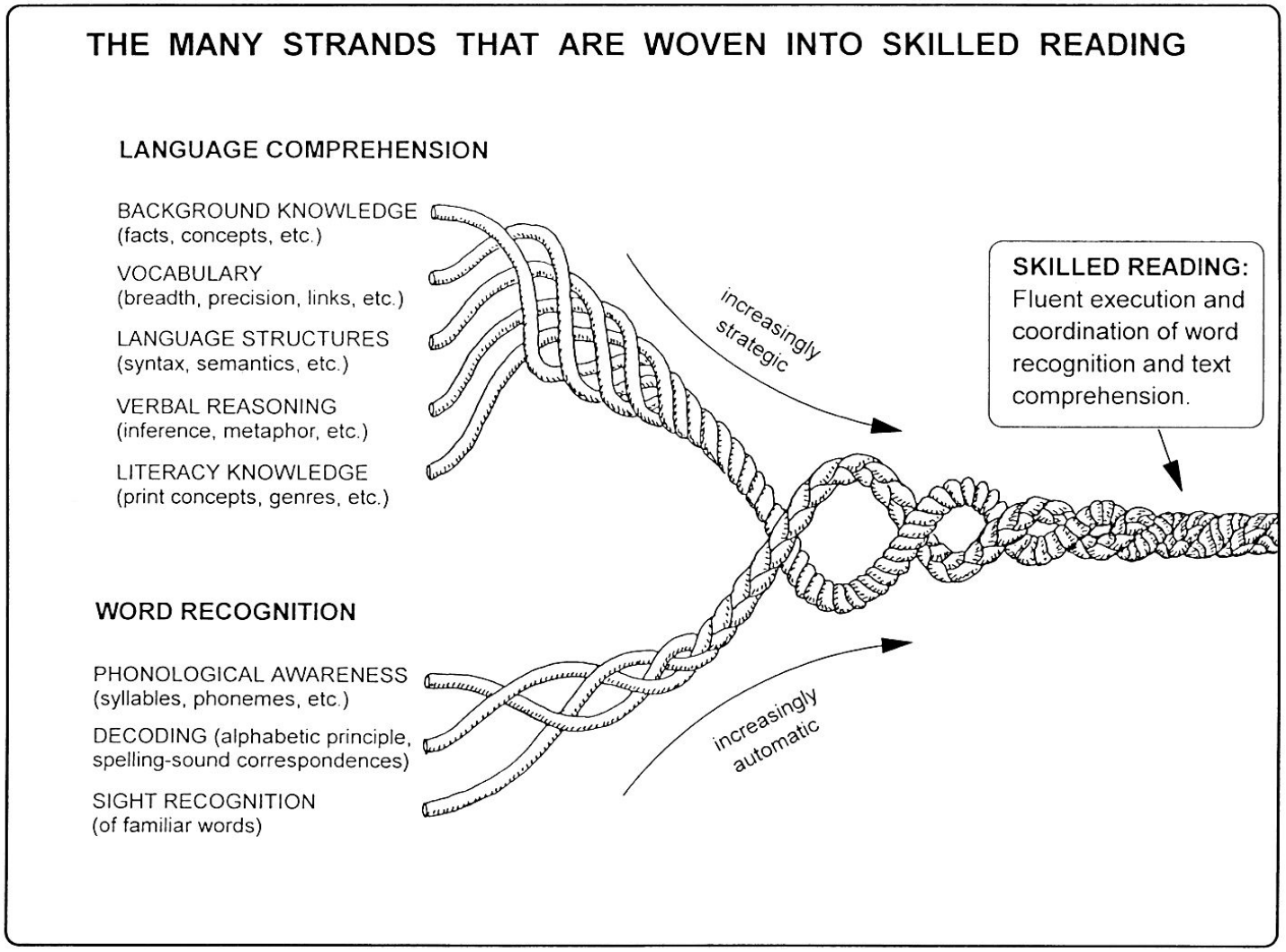
Hollis S. Scarborough



Scarborough, H. S. (2001). Connecting early language and literacy to later reading (dis)abilities: Evidence, theory, and practice. In S. Neuman & D. Dickinson (Eds.), *Handbook for research in early literacy* (pp. 97-110). New York: Guilford Press.

Most people would agree that reading is complicated.

An apt metaphor can be helpful for clarifying complicated things. The Reading Rope is a visual metaphor for what we understand about the acquisition of reading from start to finish.
I created the image in 1992, based on a large body of important research studies carried out in the 1970s-80s on reading and reading disabilities. Knowledge has certainly broadened and deepened since then, but the Reading Rope remains consistent with contemporary understanding in its broad outlines.

The rope image was created, and has been used from the outset, for two main purposes:

-- for introducing the fruits of reading research to parents and educators with little or no research background; and

-- for facilitating discussion among parents, educators, and researchers about the complexity of reading.

It is important to bear those aims in mind when discussing or evaluating its merits.

THE STRANDS

In the physical world, to make a strong rope you must tightly combine two or more strands of some sort of durable material.

In the metaphorical Reading Rope, there are 8 strands. Each represents **a type of knowledge or skill that pertains to reading acquisition.**

There are 5 strands in the **Language Comprehension** bundle, and 3 strands in the **Word Recognition** bundle.

LANGUAGE COMPREHENSION

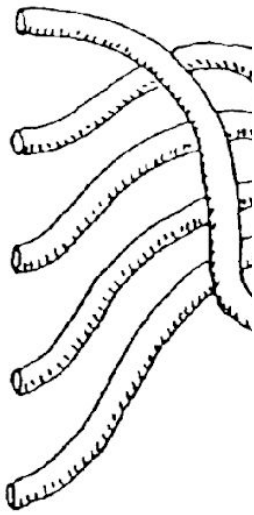
BACKGROUND KNOWLEDGE
(facts, concepts, etc.)

VOCABULARY
(breadth, precision, links, etc.)

LANGUAGE STRUCTURES
(syntax, semantics, etc.)

VERBAL REASONING
(inference, metaphor, etc.)

LITERACY KNOWLEDGE
(print concepts, genres, etc.)

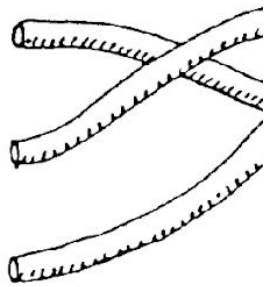


WORD RECOGNITION

PHONOLOGICAL AWARENESS
(syllables, phonemes, etc.)

DECODING (alphabetic principle, spelling-sound correspondences)

SIGHT RECOGNITION
(of familiar words)



Why *those* 8 strands? I wanted them to be the sorts of skills and knowledge that:

(a) the student brings to the literacy learning situation; and

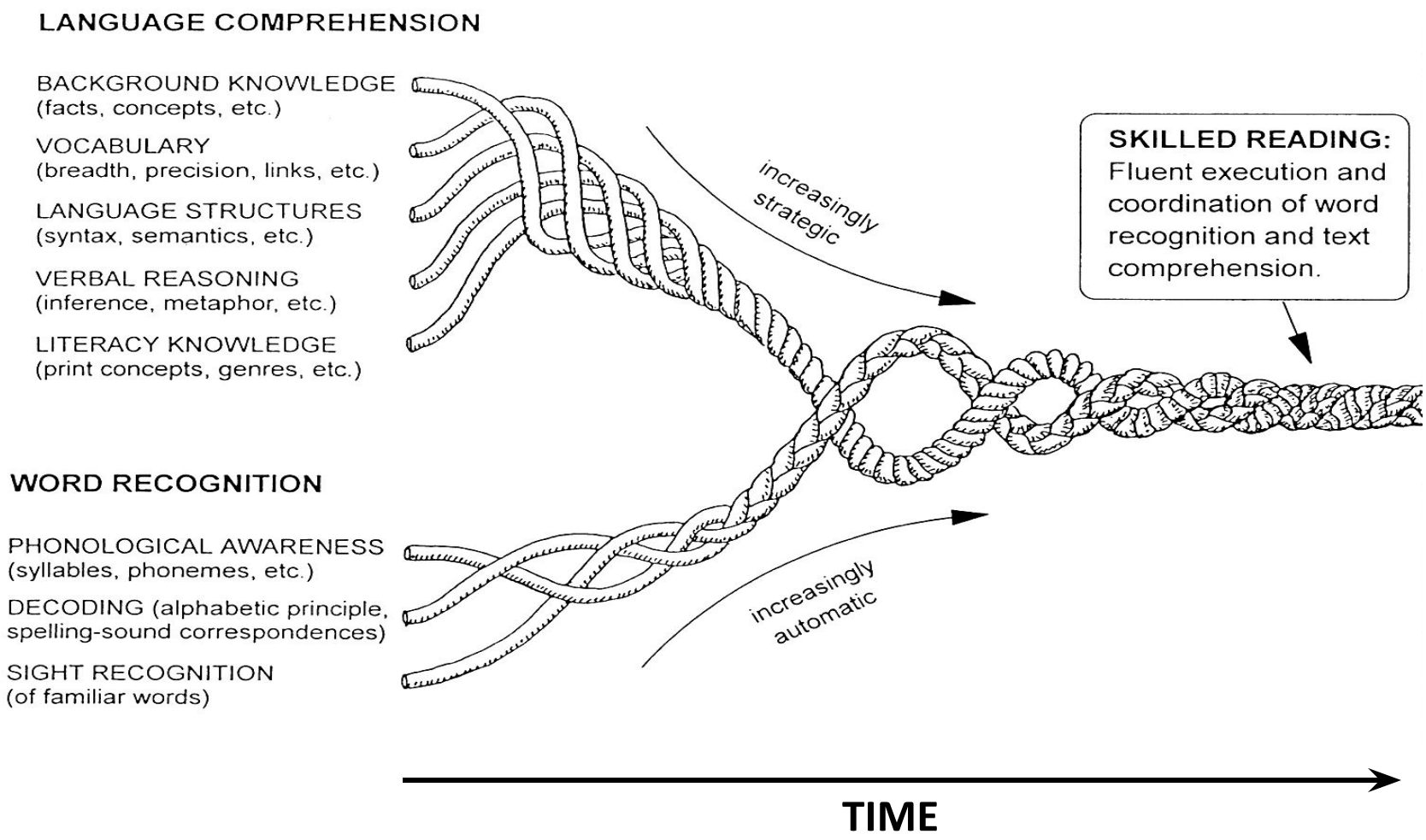
(b) are specifically tied to <u>reading</u> acquisition rather than to learning in general.

Many other things that undeniably affect learning to read do not meet those criteria, including:

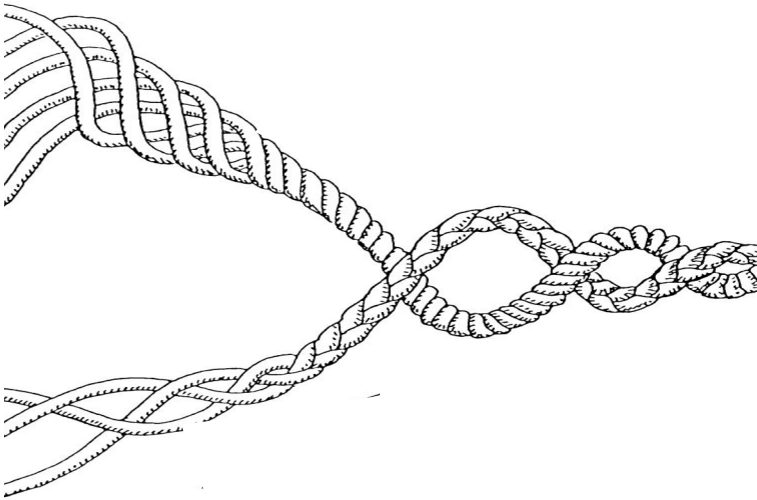
-- other *intrinsic* factors that also greatly affect learning in *other* domains (math, science, music, etc.) such as: attention, working memory, self-monitoring, other executive functions; motivation & effort; theory of mind; social-emotional competencies; processing speed; visual, hearing, motor, & health difficulties; and so forth;

-- *extrinsic* factors that affect a student's learning in important ways, but are not developing within the learner, such as: family history of reading difficulties; poverty/SES of the household but more importantly of the school district; quality of schooling; multiple language/literacy status; nutrition & healthcare; and so on.

Learning to read depends mainly on instruction and practice, typically over many years. In the rope image, development proceeds from left to right, so the strengthening of the strands is represented by left-to-right progress toward the endpoint.



The <u>interactive</u> nature of development, <u>from the outset</u>, is represented by the interweaving of individual strands with one another, and the coiling of the two bundles around each other.



It is important to remember that **the strands do not develop independently**. Rather, growth on one strand often affects growth on others. For example:

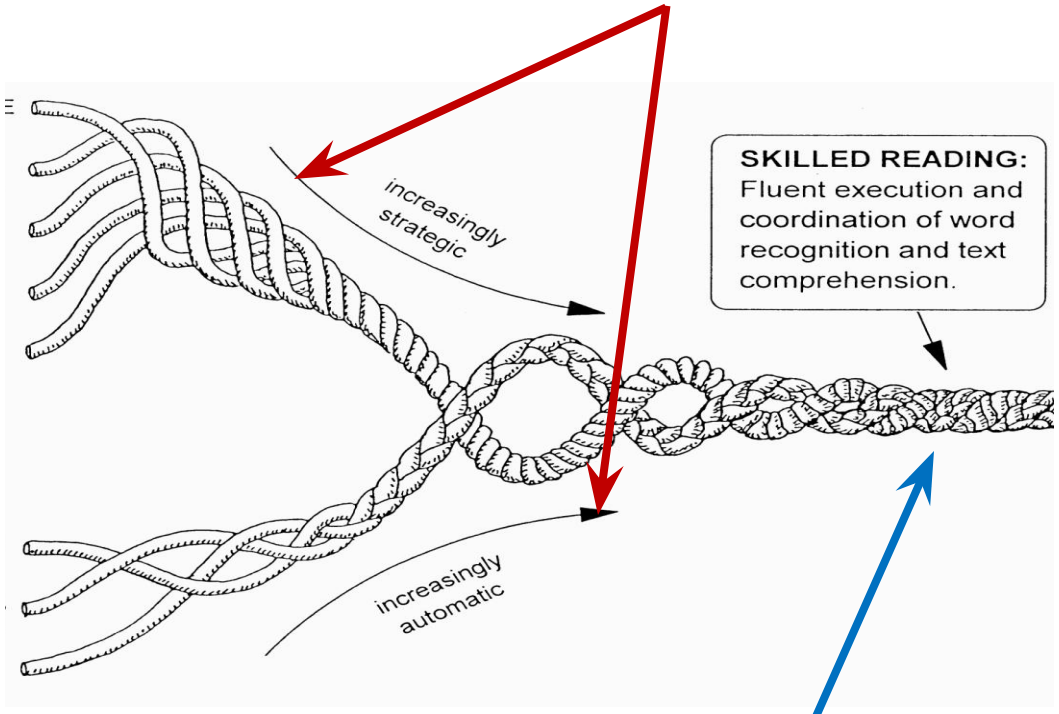
-- Gaining background knowledge usually introduces new oral vocabulary words that are associated with the content.

-- Improving decoding skills enables readers to enlarge their vocabularies by reading text.

-- Having a large oral vocabulary has been demonstrated to facilitate the accurate and rapid decoding of printed words.

Consequently, instruction that is designed to strengthen one strand may often promote progress in other strands as well.

As reading proficiency grows, two broad shifts typically occur. The Language Comprehension strands become increasingly <u>strategic</u> (purposeful, intentional, schema-building, etc.) in their deployment, and the Word Recognition strands are carried out with increasing <u>automaticity</u> (i.e., rapidly, accurately, and with little conscious effort). These trends are marked by the curved arrows beside the two main bundles of strands.



The desired <u>endpoint</u> of reading acquisition is "skilled reading," defined as "the fluent execution and coordination of word recognition and text comprehension." This is the level of proficiency that a reader ultimately attains, typically in adulthood. In the visual metaphor, it is represented by the tightly woven rope made up of all the strands.

Reading Disability/Difficulty (RD)

RD may stem from the learner's weakness in, or delayed acquisition of, some kind(s) of underlying knowledge and skill that are known to contribute to successful reading development. In the rope metaphor, one can envision this as a "fraying" of one or more strands, making it harder to create a tight rope.

Metaphorically, weakness in a single strand may disrupt reading acquisition, especially if that strand is severely frayed; weaknesses in several strands can impede progress, even if those strands are only mildly frayed. In either case, strengthening of other strands is held back, and/or too much effort must be diverted to the frayed strand(s) such that the other components of the reading task do not receive adequate processing.

For example, as the **Simple View of Reading** demonstrates elegantly, impaired decoding will interfere with attaining high proficiency in reading comprehension even if language comprehension skills are largely unimpaired. And vice versa.

A Few FAQs

1. The question most frequently asked has always been:

The strands for Word Recognition are braided, but the strands in the Language Comprehension bundle are twisted together. What is the meaning behind this difference, if any?

Extending the rope metaphor by assigning meaning to this visual detail is certainly an interesting idea. However, the difference was not meant to be meaningful. It merely reflects the limits of my drawing abilities. I knew how to draw a 3-strand braid, so I did that for the lower strands. But it was easier to use a twist to represent the five upper strands.

2. **Why isn't reading <u>fluency</u> a separate strand of the rope?**

In my view, fluency is best viewed as an indication of the reader's overall skill level. When we get better at something – i.e., as our knowledge grows and our skills are honed – a natural consequence is that we can carry it out with greater fluency. This holds not just for reading but also for driving a car, knitting, line dancing, playing the piano, solving math problems, and so forth.

Therefore, *assessing* fluency can serve as an efficient way to estimate overall reading proficiency. It is important that such fluency assessments be psychometrically reliable and valid, of course, and provide clear instructions to the test-takers.

3. **What about <u>writing</u>?**

The rope is about reading, not literacy more broadly. But reading and writing are often seen as two sides of a coin because they clearly overlap in their component skills. Some individuals thus envision writing as weaving together some essential strands, as in my rope metaphor for reading. I am not persuaded, however, that a rope image is ideal for helping educators to understand the writing *process,* its *development,* and its reciprocal *relation* with reading. A different metaphor might be more compelling for that aim.

For example, a dear nephew with dyslexia once said, "I hate reading! But writing's not so bad because *I* get to pick the words." His outburst should remind us that the process of reading necessarily starts with the printed page, but the process of writing usually starts with the writer's thoughts and actions (spontaneously, or in response to a prompt or assignment). In that sense, they are not simply mirror images or parallel progressions. To me, this feels like a fundamental difference that should be borne in mind when considering the relationship between reading and writing over development.

ACKNOWLEDGEMENTS

Scientific research is rarely a solo enterprise. I am immensely grateful to the many wonderful students, colleagues, and participants – too many to mention here by name -- that I've had the privilege of working with over the years. Many thanks are also due to the agencies that have provided financial support for the research (most notably the *National Institute for Child Health and Human Development* and the *March of Dimes Foundation*). I also could not have done the work without the love and support from friends and family, especially my dear husband, Don.

I never envisioned in 1992 that many educators would someday view the Reading Rope as a helpful framework for thinking about instruction and assessment. Thanks for your appreciation of the contributions of reading research. It is for you and your students that I prepared this presentation in conjunction with *The Reading League*. Kari Kurto of *TRL* has been especially helpful in getting this project done.

Hollis Scarborough

ABOUT THE AUTHOR

Hollis Scarborough is a developmental psychologist whose research has explored many facets of the relation between language and reading over the lifespan, with a particular emphasis on children with reading disabilities. She received her Ph.D. in 1976 from NYU under the supervision of the late Martin D. S. Braine.

Much of her research was conducted as a Senior Scientist at Haskins Laboratories, and she taught for many years at Bryn Mawr College and elsewhere. Before retirement, she served on the boards of the International Dyslexia Association (IDA) and the Society for the Scientific Study of Reading (SSSR), and on many editorial boards (including *The Journal of Learning Disabilities, Child Development*, and *Annals of Dyslexia*). Dr. Scarborough was also a member of the National Academy of Science's *Committee on the Prevention of Reading Difficulties in Young Children.* In 2019, she was the first recipient of the AIM Institute's *Hollis Scarborough Award*, named in her honor. Her other awards have included the *Samuel Torrey Orton Award* from the IDA in 2008, and the *Award for Distinguished Scientific Contributions* from SSSR in 2009.