3/11/19, AIM Institute

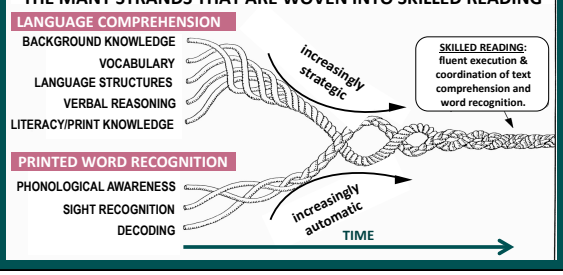
A CASE HISTORY OF A TWISTY METAPHOR

Hollis Scarborough
Senior Research Scientist, Emerita
(((Haskins Laboratories)))

And the subject of the case history is….

"THE READING ROPE"

THE MANY STRANDS THAT ARE WOVEN INTO SKILLED READING



The Language Comprehension Strands

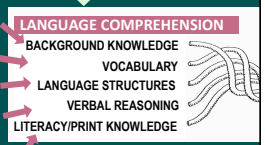
Learning to spell correctly can be a life-or-death matter at Hogwarts.

Eschewing the vulgate can obfuscate the lucidity of your rhetoric.

Time flies like an arrow, but fruit flies like a banana.

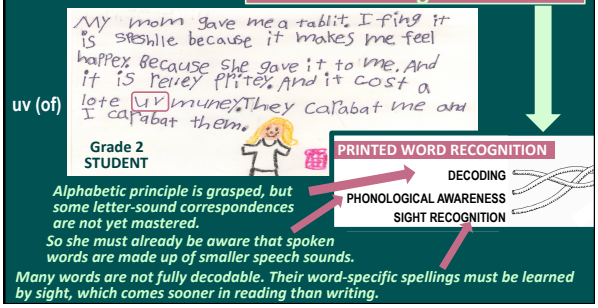
Two roads diverged in a wood, and I – I took the one less traveled by, And that has made all the difference.

A woman, without her man, is nothing. A woman: without her, man is nothing.



Insanity is, perhaps, the absence of punctuation.
- W.H. Auden -

The Word Recognition Strands

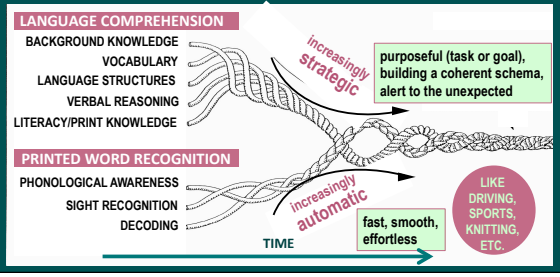


Alphabetic principle is grasped, but some letter-sound correspondences are not yet mastered.

So she must already be aware that spoken words are made up of smaller speech sounds.

Many words are not fully decodable. Their word-specific spellings must be learned by sight, which comes sooner in reading than writing.

DEVELOPMENT *Over time and with practice, processing becomes more tightly interwoven, strategic & automatized.*



THE READING ROPE: CASE HISTORY

I. BIRTH
II. PRENATAL ENVIRONMENT
III. THE EARLY YEARS
IV. MATURITY
V. R.I.P.

I. BIRTH

D.O.B.: ~1992

Current age: ~27 years

Delivery: Labor lasted several hours. I made a model from pipe cleaners, drew it with pencil and eraser, traced it in ink, then typed up the labels and glued them on.

Inheritance:

The rope is the child of scientific research .

It distills the mountain of rigorous work, 1970-1990, on the reading process, on literacy development, and on understanding reading/language difficulties.

The researchers were from diverse academic fields: cognitive psychology, educational psychology, perception, psycholinguistics, early literacy, assessment, genetics, neuroscience, etc., etc.

(Funding for reading research was abundant then!)

II. PRENATAL ENVIRONMENT

No rope would ever have been created if, at that time, there had been broad consensus about what skills and knowledge were most important for becoming a good reader, and about the best way to teach children to read.

But instead of consensus, we had…

THE TOXIC READING WARS OF THE 1980s – 1990s

WHOLE LANGUAGE
Ken Goodman
Yetta Goodman
Frank Smith
Hans Grundin
Richard Allington
Regie Routman
Denny Taylor
Gay Sue Pinell

Phonicators!

Burn down the Ed schools!

Teaching phonics is child abuse!

The plural of "anecdote" is not "evidence!"

SYSTEMATIC PHONICS
Louisa Moats
Reid Lyon
Keith Stanovich
Rudolph Flesch
Jean Chall
Ed Kame'enui
Isabelle Liberman
Marilyn J. Adams

READING WARS REDUX?

Emily Hanford, an NPR journalist, reports that systematic phonics instruction has fallen out of favor in many PA schools, and suggests that the reading wars may be heating up again! Yikes!

You can read her article on the AIM website.

www.apmreports.org/story/2018/09/10/hard-words-why-american-kids-arent-being-taught-to-read

Meanwhile, I just needed a handout.

My focus then was on preschoolers. When I thought about the reading wars at all, I saw myself as a centrist who could see merit on both sides.

I was being asked to give talks about reading research to parents and teachers. And audiences always like a handout to doodle on. *I had to make one that was palatable to all, or risk offending someone.*

It was with that mindset that I created the rope.

III. THE ROPE'S EARLY YEARS

The rope had a busy and fulfilling early life as a handout for parents and teachers at workshops that I led.

Leslie Rescorla remembers first seeing it at an Act 48 session at Bryn Mawr College in 1994.

Its Purpose: to illustrate to a non-researcher the complexity of reading and how skilled reading is acquired, according to research to date.

The rope succeeded because it was a helpful metaphor that made sense to people on both sides of the war.

NB: Act 48 is the statute that governs continuing professional education in Pennsylvania.

IV. MATURITY

THE ROPE GOES PUBLIC (2001)

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.

Since then, there has been a steady flow of requests for permission to reproduce it, mainly in materials for teacher professional development. So the rope's original role has been maintained over the years, although the audience is wider.

VALIDITY: CONVERGING EVIDENCE FOR THE STRANDS FROM PRESCHOOL PREDICTION RESEARCH

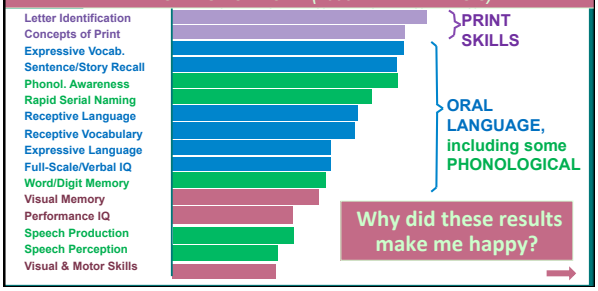
I had gotten interested in the prediction of reading outcomes from differences among kindergartners on various measures.

In part, this involved conducting a "meta-analysis" to average the results of the 61 available studies from which appropriate data could be extracted.

The AVERAGE PREDICTIVE STRENGTH of 16 kinds of kindergarten predictors is shown on the next slide.

The results should not surprise you.

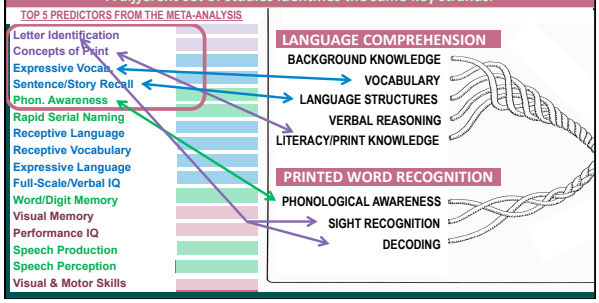
HOW STRONGLY DO START-OF-K MEASURES PREDICT FUTURE READING PROFICIENCY? *(1998 META-ANALYSIS)*



Why did these results make me happy?

YAY! CONVERGING EVIDENCE!

A *different* set of studies identifies the *same* key strands.



EXTENDING THE METAPHOR TO READING DISABILITIES

IT'S HARDER TO CREATE A STRONG ROPE FROM FRAYED STRANDS.

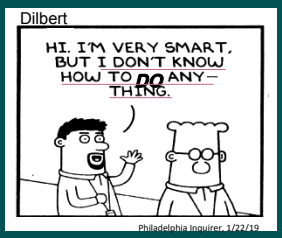
Weakness in one strand can potentially disrupt reading.
Given the interconnectedness of strands, that could hold other strands back from developing.
Weakness in several strands can be especially disruptive.
The severity of the fraying also matters.

V. R.I.P.

No, not *that* R.I.P.!

Research Into Practice

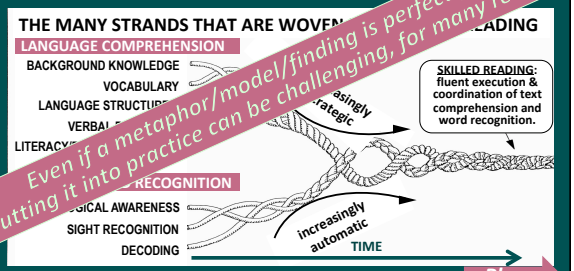
Dilbert



Philadelphia Inquirer, 1/22/19

I admit to ignorance about the practical side of education, and would not dare to tell anybody how to teach reading.

Even if a metaphor/model/finding is perfectly ap… putting it into practice can be challenging, for many reasons



Plus

Many Factors that Influence Reading Are Not in the Rope

The rope is intended to illustrate the knowledge and skills that the reader brings to the situation, and that are specific to reading (rather than, say, to math).

So one must always think of the rope as being "woven" in a particular context that could affect the growth of some or all of the strands. Potential influences:

- preschool experiences
- SLI, ESL, ADD, other EF weaknesses
- family history
- adequacy of prior instruction
- socioeconomic (SES) differences

Did you know…?

SES of the SCHOOL matters a lot. SES of the FAMILY doesn't.

The average socioeconomic status (SES) of the student body of the school that children (will) attend strongly predicts the average reading achievement of the school's students.

r = .64-.70

However, prediction is much weaker from the SES of an individual child (family) to the reading score outcome of the individual child.

r = .23-.27

This has been known for almost 40 years (White, 1982) and replicated more recently (Sirin, 2005). Nonetheless, the distinction continues to be widely ignored.

What research CAN often do is prune out the weeds.

Did you know that rigorously obtained scientific evidence indicated that the following popular myths and longstanding ways of thinking are false?

- "Bonding" between infant and parent in the first few days of life is crucial for the child's well-being.
- High sugar intake raises children's activity levels.
- A common sign of dyslexia is reversing letters (seeing them backwards).
- Reading instruction is more effective if it is tailored to a child's particular "learning style."
- Skilled readers don't actually read most of the words on a page because they can use context so well.

Why do people cling to such myths despite the clear science?

Why the Slow Progress Toward Evidence-Based Educational Practice?

- INERTIA? *I'm all for progress. It's change I can't stand.* (Mark Twain)
- SHORTCOMINGS OF TEACHER TRAINING?
- SHORTCOMINGS OF TEACHERS?
- DEFINITIVE EVIDENCE IS TOO SPOTTY?
- POOR COMMUNICATION SKILLS OF RESEARCHERS?
- *ALL OF THE ABOVE?*

I heartily applaud the attempts at AIM to develop more evidence-based educational policies and practices.
I look forward to observing their progress in doing that, and feel privileged to have a front row seat.

Research is never a solo enterprise.

HEARTFELT THANKS TO MANY PEOPLE

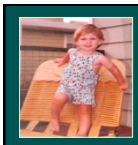
MENTOR & COHORT

MARTY BRAINE was a pioneer in the study of language development, and kindled my interest in it.

LESLIE RESCORLA has long shared my interest in language acquisition, and brought me into the Bryn Mawr family.

MARILYN ADAMS has been a close friend for decades. We disagree a lot, but arguing is fun!

DARION GRIFFIN at AFT and I began our study of dialect differences 20 years ago, and have remained friends ever since.



AGE 2 **J.W.** AGE 42
(nephew)

His *family background of reading difficulties*, and his *atypical early language*, inspired my longitudinal study of preschoolers at risk for RD.

The at-risk youngsters showed deficits in language proficiency at ages 2 – 5 years, and by the end of Grade 2, 65% of them were a year or more behind in reading (vs. just 5% of the control group).

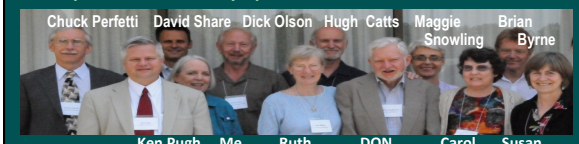
I'm proud to say that the study has been replicated (and improved on) by many other researchers around the world from Finland to Australia.

JW's in finance and makes more in a year than I made in a lifetime.
He's happily married and adores his 2 young daughters.
Despite RD, he became a decent reader, but his spelling is atrocious.

(((Haskins Laboratories)))

MY RESEARCH "HOME" SINCE 1996

Speakers at a 2008 symposium to honor Don Shankweiler



Ken Pugh, Me, Ruth Milliken, DON SHANKWEILER, Carol Fowler, Susan Brady

Anne Fowler

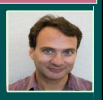
Len Katz

The stellar researchers in the back row are not at Haskins Labs.

IMPRESSIVE EVEN AS BRAND NEW Ph.D.s

LAURIE CUTTING
Vanderbilt U, Psych
comprehension, EF, neuroscience

JOHN SABATINI
Educational Testing Service
adult literacy, models



ANNE CHARITY HUDLEY
UC-Santa Barbara, Sociolinguistics
dialect differences

NICOLE PATTON TERRY
Florida State University
dialects and reading

JEN LEACH
Psychologist in private practice
late emerging reading disabilities

I am also deeply indebted to the countless:

-- research PARTICIPANTS and their families for their patience and generosity;
-- the STUDENTS and ASSISTANTS who worked so diligently and enthusiastically on my team;
-- and the SCHOOLS and TEACHERS who generously and graciously let us carry out research in their classrooms, hallways, closets, and nurses' offices.

Special thanks to the MYSTERY EDUCATOR who asked me about 5th graders with no record of earlier difficulty in reading who were coming to her clinic. That question inspired the LERD study, and I'd like to thank you by name.

NICHD

Nat'l Institute for Child Health and Human Development

(and some other government sources)

and the

MARCH OF DIMES FOUNDATION

Other Professional *Connections*

NJIDA

Georgette & Emerson Dickman

SSSR

Society for the Scientific Study of Reading

Many connections with fellow researchers, like

BARBARA WILSON

NANCY HENNESSY

DON COMPTON

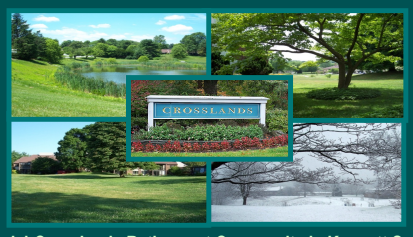
KATE CAIN

Nancy Blair & Pat Roberts

AIM

Thank you!

HSScarborough@verizon.net



Kendal-Crosslands Retirement Community in Kennett Square