Collaborative Center for Literacy Development: Early Childhood through Adulthood

Annual Technical Report and Addenda

September 1, 2022

Over the past few years, CCLD has fielded suggestions from several Kentucky legislators that CCLD should provide more technical detail in our annual reports about what we do, how we do it, how that conforms to the requirements in regulatory statute governing CCLD (e.g., KRS 164.0207), and how state monies are being used to those ends.

Over the past 25 years, CCLD has used its Annual Report, required by regulatory statute, for both reporting our efforts to the government as required, and to market our programs and services to educators, schools, and districts. That colorful, glossy, 28-page report gives a great sense of who we are, why we do what we do, and what we can achieve (see current and past reports at www.kentuckyliteracy.org), but it arguably lacks the granularity of detail some legislators have requested. To that end, we present this technical report.

CCLD's inaugural Annual Technical Report with Addenda is a literacy almanac of sorts, presenting the documentation, often internal, we have produced in the past year to guide our work. We offer this collation of items to provide greater depth to legislators' understanding of our processes.

We thank the legislators who have inspired this addition to our annual reporting, and advisors at KDE, and look forward to further feedback and guidance.

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Greetings, lovers of literacy! Careful readers, adept writers, eloquent speakers, and attentive listeners: It is with great pleasure that I welcome you to the 24th annual report of the Collaborative Center for Literacy Development (and, proudly, my 12th year as executive director). In these pages you will find an overview of CCLD's state-directed objectives, the programs and initiatives by which they are realized, the results of the past year's efforts, and our plans for revitalization and reformation in the coming year.

Like many, we have emerged from the pandemic finding ourselves in a world much changed. The good news is that empirical evidence (such as from this year's Read to Achieve annual evaluation, compiled by CCLD in partnership with the UK Office of Research and Evaluation) demonstrates that the impact of the pandemic on student learning, while clearly discernable, was hardly as severe as many had feared it could be. This is a testament to the resilience of our students, our parents, our teachers, and our schools.

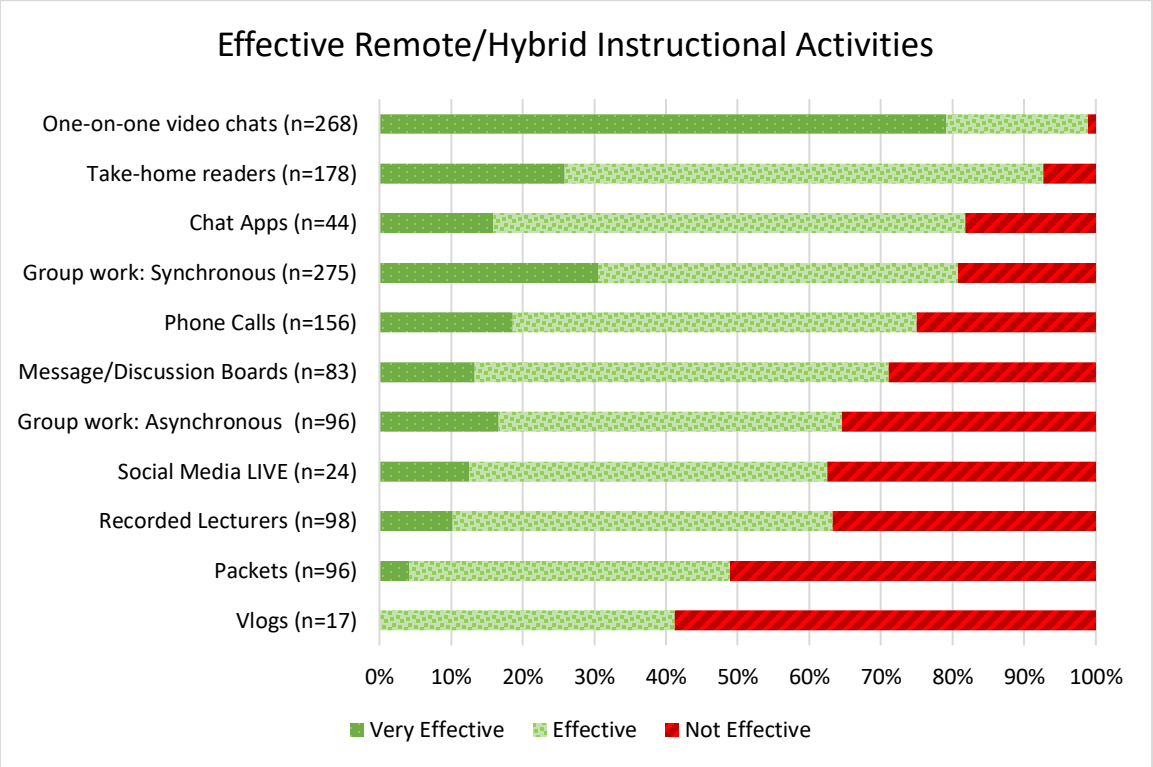
The teacher colleges at our state universities worked hard to meet Kentucky's need for knowledgeable and highly skilled teachers of reading and literacy. It is truly gratifying to work with such dedicated and knowledgeable professionals. These university faculty have continued their dedication to the research basis for effective instruction. But nothing works for everyone, nor for everyone all the time. And true to CCLD's original model (and evidence-based professional development research), the instructional needs perceived by teachers themselves to improve their students' reading become the focus for their literacy action plans, informal assessments, progress monitoring, and lesson planning.

On the other hand, our public schools have yet to rebound to pre-pandemic vibrancy, and a fear is growing that they may never do so unless leadership can rein in the causes. Teacher retirements and resignations have risen markedly, while student enrollment at most university teacher preparation programs has plummeted. Reasons range from teacher pay to pensions to working conditions—traditional reasons for teacher turnover—but newer causes include deteriorating facilities; rancorous school board meetings where trolls-for-hire disrupt needed discussion and threaten the safety of school personnel; and teachers' loss of control over curriculum and instruction because of reliance on technology platforms and packages formerly used for at-home instruction during the pandemic, now too often used as an in-school default in lieu of meaningful learning.

Attempting to fill the instructional gap are well-intended but under-prepared citizens, sometimes taking up positions as paraprofessionals (often without the benefit of a four-year college degree), put to work as emergency classroom facilitators—*classified*, as some say, but not *certified* teachers. Similarly, substitute teachers, retirees, non-instructional personnel and even parent volunteers are stepping up to meet the education challenge. Surely, the time has passed when we can continue to blame all of this on the pandemic. Longer-term structural issues

from well before Covid have come home to roost and are having their inevitable long-term effect. Longer-term vision is required to find sustainable solutions. We are certain that Commissioner Jason Glass and the legislators of Kentucky's General Assembly will provide it, and we truly appreciate the way our vision for CCLD's future has been focused by the leadership work of Senators Stephen West and Max Wise and Representatives James Tipton and Tina Bojanowski. Kudos!

Here at CCLD, supporting effective teachers, from wheresoever they hale, is the first line of defense against the threat of deteriorating educational achievement. No one can do this as well as top-tier literacy faculty such as those at Kentucky's state universities. But these institutions, too, have suffered severely from long-term annual budget cutting over 15 years; university literacy education faculty have shrunk severely, their course loads doubled or trebled. Rather than wait for the world to somehow return to normal so everyone can hop back to business-as-usual, it is time that leadership led us back to a new normal, one better supported with the best that the Commonwealth has to offer. At CCLD, as always, we are ready to support and assist!



Comparison of effectiveness of different instructional techniques in remote/hybrid instruction. (From *Kentucky's Read To Achieve Program Yearly Evaluation Report, 2020-2021*, p. 23, Figure 12.)

Collaborative Center for Literacy Development (CCLD)
FY 2021 - 2022
Annual Expenditures and Funding

Administrative Costs	$	19,700
Adolescent Literacy Project		310,000
CCLD Research		105,000
Clearinghouse & Communications		157,000
Dyslexia Initiative		23,000
Early Childhood Initiative		50,000
Kentucky Reading Project for 8 Universities		485,000
National Center for Families Learning (NCFL)		15,000
Personnel Support		307,754
Physical Operations		106,776
Total CCLD Literacy & Instruction Budget		***$ 1,579,230***
Total CCLD Reading Recovery Budget		*$ 1,329,480*

CCLD Grant Initiatives

KRP 4 RTA Grant	$	267,757
KYCL - Grant		347,600
KY Imagination Library Grant		122,100
Total CCLD Grant Initiative Funding		***$ 737,457***
TOTAL 2021 – 2022 Funding		***$ 3,646,167***

Crosswalk of KDE Requested Deliverables for CCLD, 2022-2023 (based on KRS 164.0207)

[For more detail about CCLD's programs, professional learning models, research and advisory services, see most recent CCLD annual reports, available at the CCLD website: www.kentuckyliteracy.com]

	KDE Requested Deliverables	CCLD Programs/Methods Employed	Projected Timeline	Projected Budget Amount	
	1. Developing, implementing, and maintaining a clearinghouse for information about programs addressing reading and literacy from early childhood and the elementary grades (P-5); *Progress toward implementation should be reported quarterly, and the clearinghouse should be available and maintained on the CCLD website for Kentucky educators by June 1, 2023.*	Programs: Website/Resource Repository & Kentucky Reading Project (KRP). Methods: Current Resources drop-down design will be redesigned for ease of use and cross-page integration, and contents will be updated with materials from KDE (e.g., toolkits); from KRP (and ELLP & ALP) faculty at the 8 state universities, as well as participating private universities; from NCFL; and from private sector consultants. A "Repository of Repositories" approach will draw resources from already existing resource repositories on the Internet; it will be designed and implemented by Late May, 2023.	First Quarter: CCLD staff brainstorming and discussion; literacy faculty discussion and strategizing collection of new content at KRP Director's meeting, 9/9/2022. Second Quarter: Redesign proposed, approved and begun; selection committee formed to choose new content and materials compiled. Third Quarter: Updating of design and materials completed (for now); sent to KDE for review and useful additions. Fourth Quarter: Adjustments, additions, and public announcements.	Repository $82,191.78 KRP Covered by base funding	

2. Providing advice to the Kentucky Board of Education regarding evidence-based comprehensive reading instruction and on other matters relating to reading.	Programs: Executive and Program Directors and universities' literacy faculty. Methods: As pertinent to specific requests. Friendly quarterly reminders to KDE of availability to consult and/or information about new evidence-based literacy relevant events, studies, or projects. Occasional briefs.	On-going	Covered by base funding	
3. Collaborating with public and private institutions of postsecondary education to provide teachers and administrators quality preservice and professional development relating to reading diagnostic assessments and intervention and to the essential components of successful reading: phonemic awareness, phonics, fluency, vocabulary, comprehension,	Programs: Early Language and Literacy Project (ELLP), KRP, Adolescent Literacy Project (ALP), Reading Recovery, CCLD Research Office, Research Repository. These CCLD programs have been running annually for anywhere from the past 24 years (KRP, Reading Recovery) to the past 7 years (ELLP). Methods: Directors' meetings of the participating university faculty are held bi-annually at the Kentucky Reading Association (typically in September-October) and the CCLD Share Fair (typically in April);	Current and Ongoing. Programs plans, events, and progress will be reported both in advance and in retrospect in quarterly and annual reports to KDE. See also items 5 & 7.	KRP From item 5 as required ALP. From item 8 as required ELLP. From item 5 as required RR. From item 4 as required Research. From item 9 as required.	

	and the connections between writing and reading acquisition and motivation to read. *Progress toward implementation should be reported quarterly, and the professional learning programming for each postsecondary institution should be evidence-based and aligned to the essential components of reading. Professional learning programming session plans from the institutions should be collected by CCLD by April 15, 2023, and then shared with the KDE for review by April 22, 2023.*	professional learning session plans for these programs' summer 2023 intensives will be collected by April 15, 2023; reported to KDE by April 22, 2023. Reading Recovery and Reading Recovery Teacher Leaders will continue to provide reading diagnosis and intervention services for participating districts. <u>Note</u>: CCLD does not mandate templated uniform syllabi of the 8 state universities, NCFL, or other partners carrying out its teacher PD programs. The faculty at each institution develop the form of syllabi required and pertinent to their institution, coherent to their institution's requirements, mission, resources, and notably responsive to the needs of the students, teachers, and schools within their service region. However, CCLD faculty are committed to the common goals, methods, and procedures identified by CCLD, indicated by			

	evidence-based research reviews, on effective classroom instruction and effective teacher professional development. These goals are cohesively updated as common points of agreement reviewed at directors' meetings held twice per year and through additional communication as necessary. Among those evidence-based teacher PD practices is a programmatic focus on individual teachers' perceived needs for improved instruction, and to address the learning needs of their specific students. Such a focus has been shown to be crucial for teacher buy-in and motivation to master new methods learned in a PD and thus its efficacy. Traditionally, the typical CCLD program participant has already been teaching from 2-20 years (6-8 years on average); comes to CCLD programs voluntarily; and is already well acquainted with classroom programs,			

	policies, and mandates. They are also usually conversant with the fundamentals of teaching reading (e.g., the 5 pillars; science of reading), as introductory review of these fundamentals during CCLD program intensives confirms. In traditional KRP, ALP, and ELLP cohorts, a Needs Survey is given to teachers prior to the start of the summer intensive to determine what *they* believe they need to know to better help their students learn to read. These areas then become the focus of participants' literacy action plans created by each teacher for implementation in their own classrooms during the coming school year, with follow-up reporting of results at the CCLD Share Fair (typically in April). In addition to the development and implementation and fine tuning of a literacy action plan, CCLD PDs review the necessary foundations of			

		literacy instruction, the science of reading, current research advances, as well as legislative, regulatory, and KDE expectations and requirements			
	4. Collaborating with the Kentucky Department of Education to assist districts with students functioning at low levels of reading skills to assess and address identified literacy needs, *including providing advisement information and professional learning regarding evidence-based strategies for dyslexia diagnosis and accelerating student learning; Progress toward implementation should be reported quarterly, and a module should be available and maintained on the CCLD website*	<u>Programs</u>: Reading Diagnosis and Intervention Services, including Reading Recovery, Reading Differences and Dyslexia, KRP and ALP, CCLD Research Office, and CCLD Resource Repository. <u>Methods</u>: Involvement in KDE's Read To Achieve program both by training high quality reading interventionists for the schools and districts, and through providing high quality professional development for classroom teachers (e.g., RTA's year-two classroom teacher PD). Reading Recovery interventionist trainings and observational and training learnings with regional Reading Recovery Teacher Leaders will be maintained. Dyslexia	<u>Ongoing</u>: Reading Recovery trainings and teacher leader trainings are ongoing. Teachers in traditional KRP and ALP are also ongoing, with the typical cycle being (1) registration and needs survey in the preceding spring; (2) summer intensive in June or July; (3) implementation of literacy action plan in teachers' classrooms fall through winter with expert visitation and feedback, communication with peers; and (4) analysis of data and results for sharing at April CCLD Share Fair. <u>Third Quarter</u>: Reading Differences and Dyslexia will relocate and update dyslexia	<u>RR</u> $497,195.70 <u>Dyslexia</u> $3,000 <u>KRP</u> Per RTA MOA w/ KDE, or grants from schools/districts <u>Research</u> From item 9 as required	

	for Kentucky K-12 educators by June 1, 2023.	module—formerly on the UK College of Ed student portal—will be relocated for open access to CCLD's website and updated. Instructional videos (at least one in first year) will also be made available as a new dyslexia module resource.	module, adding a video.		
	5. Providing professional development and coaching for early childhood educators and classroom teachers, implementing selected reliable, replicable evidence-based reading programs. The professional development shall utilize technology when appropriate.	<u>Programs</u>: ELLP and KRP <u>Methods</u>: As per the description in Item 4, Timeline, above. These programs are meant to facilitate both reviews of the fundamentals and the creation of teacher-designed literacy action plans specific to teachers' particular students and classrooms; as such they are meant to conform to and extend the impact of district or *school-selected* reading programs. Technology use in classrooms is per school. Technology use in ELLP and KRP (as well as ALP) is primarily for access to ancillary materials and resources, communications, etc.	<u>Ongoing</u>: Teachers in traditional KRP and ALP are ongoing, with the typical cycle being (1) registration and needs survey in the preceding spring; (2) summer intensive in June or July; (3) implementation of literacy action plan in teachers' classrooms fall through winter with expert visitation and feedback, communication with peers; and (4) analysis of data and results for sharing at April CCLD Share Fair. Quarterly Reports of events and benchmarks as per items 3 & 7.	<u>ELLP</u> $52,837.57 <u>KRP</u> $17,011.74	

	Online teacher PD was attempted by necessity during the pandemic but not found ideal.			
6. Developing and implementing a comprehensive research agenda evaluating comprehensive reading programs and reading intervention programs implemented in accordance with KRS 158.792.	Programs: CCLD Research Office, in contracted conjunction with the UK College of Ed's Evaluation Office and KRP. Methods: In accordance with KRS 158.792 and the requests of KDE, CCLD's Research Office collaborates with the UK College of Ed's Evaluation Office and KDE to determine the progress and effects of RTA reported annually to KDE by October 1.	Ongoing: As required per KRS 158.792.	Research $51,000 (for UK Eval Office), plus funds from item 9 as required	
7. Maintaining a demonstration and training site for early literacy located at each of the public universities.	Programs: KRP Methods: KRP summer intensives are held annually either on university campuses or at schools or public spaces within their service regions. ALP sites are provided in similar fashion. Discussion about opening two ELLP training sites will occur during the CCLD	Ongoing: Teachers in traditional KRP and ALP are also ongoing, with the typical cycle being (1) registration and needs survey in the preceding spring; (2) summer intensive in June or July; (3) implementation of literacy action plan in teachers' classrooms fall through winter	KRP $37,000	

		Advisory meeting in 2023.	with expert visitation and feedback, communication with peers; and (4) analysis of data and results for sharing at April CCLD Share Fair. See also items 3, 5, & 7. Progress, events, and benchmarks reported quarterly and annually.		
	8. Assisting middle and high schools in the development of comprehensive adolescent reading plans and maintaining a repository of instructional or summary materials that identify comprehensive best practices in the teaching of each subject area and a list of classroom-based diagnostic reading comprehension assessments that measure student progress in developing students' reading comprehension skills; *Findings*	<u>Programs</u>: ALP and Resource Repository <u>Methods</u>: Current ALP Resources on CCLD website will be updated as part of the reorganization of the Resources feature in the updated CCLD website, per deliverable 1. Disciplinary comprehension improvement methods will be organized by subject and grade band level (i.e., intermediary, middle grade, high school). Reading diagnosis advisories and review of diagnostic instruments will also be reviewed and provided on the website.	Plans, progress, and accomplishments reported quarterly and annually to KDE.	<u>ALP</u> $352,250.49	

	should be reflected in the clearinghouse. Progress toward implementation should be reported quarterly, and the clearinghouse should be available and maintained on the CCLD website for Kentucky educators by June 1, 2023.	KDE toolkits will be linked as well (e.g., SEL, Equity, and High-Quality Instruction toolkits).			
	9. Reviewing national research and disseminating appropriate research abstracts, as well as conducting ongoing research of reading programs throughout the state. Research activities undertaken by the center shall consist of descriptive as well as empirical studies. The center may contract for research studies	Programs: CCLD Research Office Methods: CCLD will hire a CCLD Research Office director to re-establish the required research agenda. See item 10.	First Quarter: Currently attempting to finalize the appointment of a CCLD Research Office director. Second through Fourth Quarter: Upon hiring, new CCLD Research Office director will address the deliverables in Item 9 and 10 of this crosswalk.	Research: $107,512.72	

	to be conducted on its behalf.				
	10. The research agenda should, at a minimum, consider the impact of various reading and intervention programs: 1. In eliminating academic achievement gaps among students with differing characteristics, including subpopulations of students with disabilities, students with low socioeconomic status, students from racial minority groups, students with limited English proficiency, and students of different gender; 2. In schools with differing characteristics, such as urban versus rural schools, poverty versus nonpoverty schools, schools with strong	<u>Programs</u>: CCLD Research Office <u>Methods</u>: For financial and instrumental reasons, it is not feasible to pursue research on currently employed reading programs *within* Kentucky schools without massive external grant funding, and even then the likelihood of reliable results are stymied by instrumental limitations (e.g., inadequate subject sets resulting in high probability of false positives). A search for external grant funding sources will be conducted and grant proposals submitted as per feasibility and grant call deadlines. In the interim, preexisting reviews of research findings on reading programs currently employed in Kentucky (but not necessarily researched in Kentucky) will be	<u>Ongoing:</u> Quarterly Reports of Activities to KDE.	<u>Research</u> Transferred from item 9 as required and per grants <u>Repository</u> Transferred from item 1 as required	

	library media center programs versus schools with weak library media center programs, and schools in different geographic regions of the state; 3. In terms of their costs and effectiveness; and 4. In maintaining positive student progress over a sustained period of time. *Findings related to the evaluation of comprehensive reading and intervention programs should be reflected in the clearinghouse. Progress toward implementation should be reported quarterly, and the clearinghouse should be available and maintained on the CCLD website for Kentucky educators by June 1, 2023.*	assembled. As a baseline, the Institute of Educational Sciences *What Works Clearinghouse* and similar credible resource sites will be consulted. These reviews are highly comprehensive but often dated. Reviews of available research on programs since last review date per program will be assembled. Evaluation of whether reading program content or design have been revised since earlier reviews will also be done. The results from this review will be reported on the CCLD Website, and by necessity will need to be ongoing. Note: Absence of sufficient evidence for a particular program does not constitute evidence of inadequate effect.			

	11. Submitting an annual report of its activities to the Kentucky Department of Education, the Governor, and the Legislative Research Commission no later than September 1 of each year.	Programs: All CCLD programs and offices.	Fourth Quarter: Annual Report details will be collected and reported to editor; document designed and laid out; sent to publisher for hard copy and uploaded to CCLD Website by September 1 annually.	From Base funding.	
	Total			$1,200,000.00	

Science of Reading Fundamentals

(Reading Science for Beginners)

George G. Hruby, Ph.D.
Collaborative Center for Literacy Development
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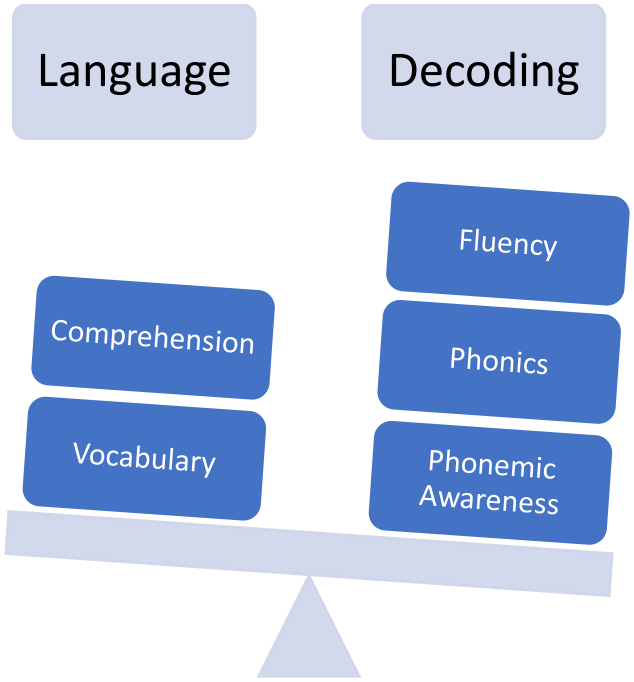


A Brief Prepared for the General Assembly of the Commonwealth of Kentucky's Interim Joint Committee on Education, June 2022.

Science of Reading Fundamentals

(Intro to Reading Science for Beginners)

George G. Hruby
University of Kentucky

The term **Science of Reading** refers to evidence-based knowledge about reading and reading development that has accrued since the first scientific study of reading in 1879. The science in question is primarily educational (cognitive) psychology, but other social sciences have also contributed (e.g., developmental science, linguistics, cognitive neuroscience, anthropology). Science of Reading relies on statistical measurement of population samples (i.e., inferential statistics) to calculate the probability of variable-manipulated outcomes for the general population. Science of Reading is essentially similar to what, in the 2010s, was termed "evidence-based reading," and before that, in the 2000s, was termed "scientifically-based reading," and before that, in the 1990s, was termed "research-based reading."

In 2000, as the result of the Reading Excellence Act of 1998, Congress directed the National Institute of Child Health and Human Development (NICHD) to draw up a panel of reading experts to review the research literature on the best ways to teach reading. The result was the National Reading Panel's (NRP) *Teaching Children to Read: An Evidence-Based Assessment of the Scientific Research Literature on Reading and Its Implications for Reading Instruction* (2000). The report comprised research-based analyses of 5 topics: (1) Alphabetics (including phonemic awareness and phonics), (2) Fluency, (3) Comprehension (including vocabulary and text comprehension strategies), (4) Teacher Education and Reading Instruction, and (5) Instructional Technology and Reading Instruction.

The NRP report is often cited as the basis for the "5 Pillars of Reading"—phonemic awareness, phonics, fluency, vocabulary, and comprehension—and for its guidance on how to teach reading. Unfortunately, it is also often falsely cited for claims it never made (Shanahan, 2003). As noted by NICHD (n.d.), the report has not been updated in 22 years. Several of the determinations by the panel are no longer current. For instance, there was no research at the time on sustained silent reading, so the panel did not make a recommendation about its use—and some miscited this lack of evidence as "proof" it was ineffective—but several studies since then demonstrate that sustained silent reading practice has a significant effect on vocabulary and comprehension improvement (e.g., Garan & DeVoogd, 2008; Hiebert & Reutzel, 2010; Kuhn & Schwanenflugel, 2019).

There is more to effective reading instruction than knowing about the 5 pillars. It is important to understand what they entail, how they relate, and why they develop over time. In the following pages we provide a skeleton key outline of key concepts behind the Science of Reading.

Science of Reading Fundamentals

1. The **Simple View of Reading** (Gough & Tunmer, 1986)
    a. R = D x C

R = D x C

    b. **R** = **Reading** as measured on an end-of year standardized reading comprehension test
    c. **D** = **Decoding** skills
    d. **C** = **Language comprehension** ability
    e. So: **Reading (R) is the product of students' Decoding Skills (D) and their Language Comprehension ability (C)**
    f. Both decoding and language comprehension are necessary to read well; inadequate development of **either** will result in low reading scores
    g. 12% of students who score weakly demonstrate neither D nor C deficits
    h. A low reading test score can be due to underdeveloped decoding skills, underdeveloped language ability, a bit of both, or something else as well; summative test scores do not distinguish the reasons for lower scores
    i. Most reading researchers employ far more sophisticated models of reading (e.g., Duke & Cartwright, 2021).

2. **Definition** of **Decoding** and **Language Comprehension**
    a. **Decoding skills** = **D** = cognitive processes a reader uses to translate the marks on a page or screen into recognizable word forms
    b. Decoding skills include print concept, alphabet knowledge, *phonemic awareness*, rapid automatized naming, *phonics*, sight word reading, and *fluency*
    c. **Language Comprehension abilities** = **C** = knowledge a reader uses to recognize word forms as items of meaningful vocabulary, grammatically arranged in clauses and sentences, to infer the meaning of a text intended by the author
    d. Language comprehension abilities include (1) *language familiarity* (e.g., vocabulary, grammatical pattern recognition, knowledge of common semantic devices such as mechanics, punctuation, idioms, tropes), (2) *symbolic reasoning ability* (e.g., categorization, comparison, analogy, pattern recognition, prediction, inference), (3) *knowledge base* (i.e., prior knowledge of subject content, world, self, interpersonal relations, soft skills, "common sense"), and (4) *comprehension strategies* (e.g., text structure analysis, summarization, discussion, visualization, graphic organizers) (Pearson et al., 2020)

3. **Neuroscience Research** Validates the Decoding/Language Comprehension Distinction and Many Subcomponents (Hruby & Goswami, 2011, 2019)
    a. The brain is an environmentally responsive pattern learner and anticipator
    b. It reads texts either by "sounding out" letter sequences to recognize auditory patterns (sound sequences as in spoken language) or by recognizing visual letter sequences (as in sight word reading)
    c. Younger and struggling readers rely more on the auditory method; older and better readers rely more on visual sight word recognition
    d. Note color-coded distinctions Fig. 1 (purple = auditory; orange = visual):

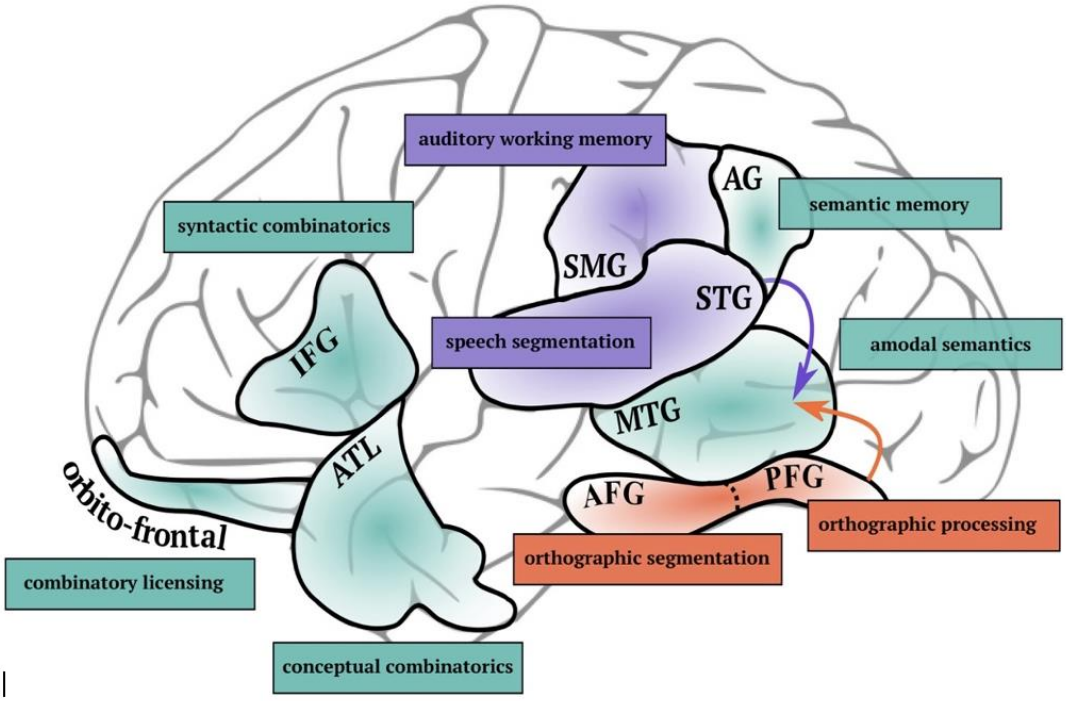


Figure 1. Putative brain regions associated with different stages of morphological processing. Orange areas refer to modality-specific written word processes. Purple areas to modality-specific spoken word processes. Turquoise refers to putative a-modal processes. Key: PFG, posterior fusiform gyrus; AFG, anterior fusiform gyrus; STG, superior temporal gyrus; SMG, supramarginal gyrus; AG, angular gyrus; MTG, middle temporal gyrus (although here rather posterior); ATL, anterior temporal lobe; IFG, inferior frontal gyrus. From Gwilliams, 2019, depicting possible language and reading loci of left-side of the cerebral cortex.

Above, a diagram of the left hemisphere of the cerebral cortex with areas related to reading and language processing identified. Purple areas = auditory pattern decoding regions; Orange areas = visual pattern decoding regions; Green areas = language comprehension regions. (Gwilliams, 2019)

Following page, a diagram mapping neural activation across the brain during decoding processes (blue arrows), and language comprehension processes (red arrows). The amount of time required to activate all areas to comprehend a single simple word is about six-tenths of a second. (Hruby & Mitra 2022)

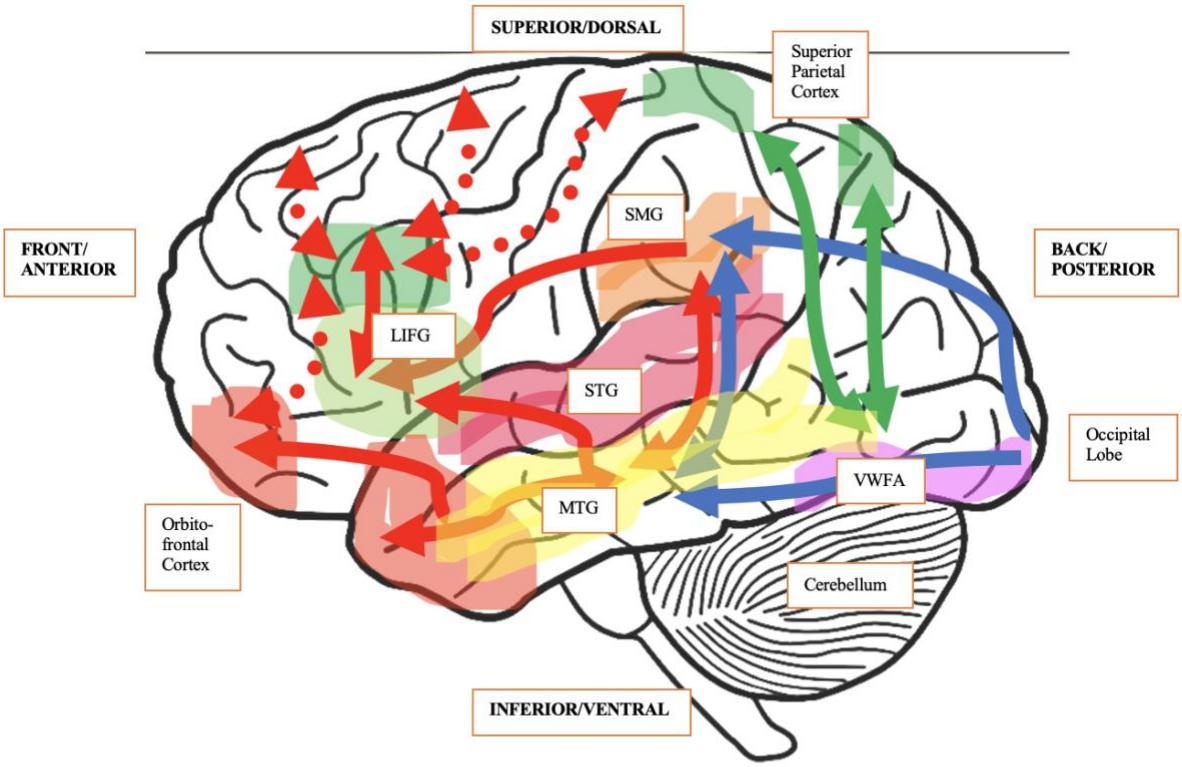
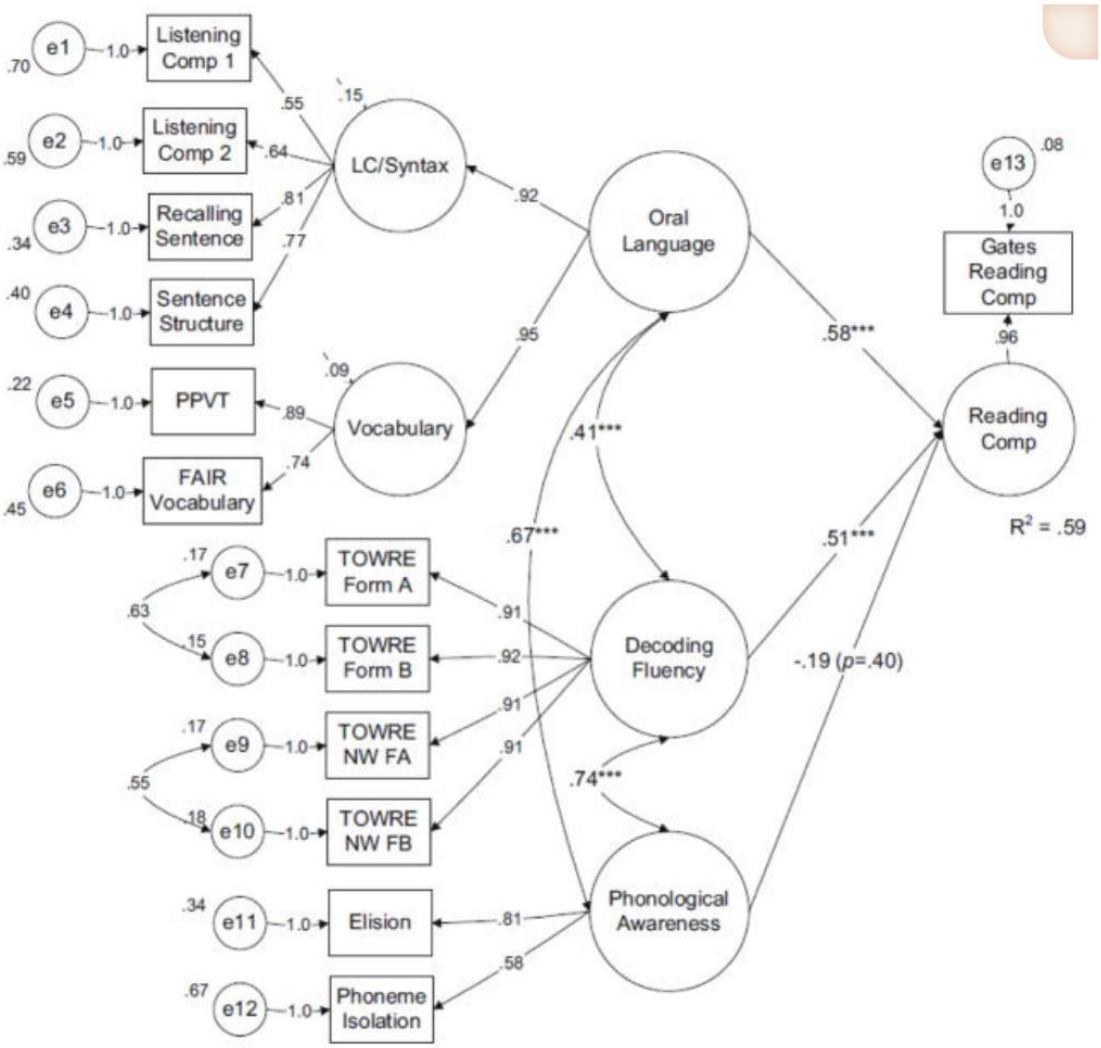


Figure 3. Potential cerebral pathways and ROIs for reading in left cerebral cortex; Blue arrows—decoding pathways; solid red arrows—language comprehension pathways [vocabulary, grammar, clausal meaning]; dotted red arrows—a-modal comprehension pathways; green arrows—semantic and scenario pattern prediction and confirmation pathways; darker green areas: semantics and scenario; lighter green area: syntax; red-orange areas: emotional meaning associations; magenta area: word sound patterns; orange area: auditory processing; periwinkle: orthographic processing.

4. Predicting **Good Reading Scores**
    a. Grade-level decoding skills and language development sub-scores together predict reading score outcomes significantly
    b. Decoding and language comprehension can be broken down to their constituent sub-factors; the average scores on these variables differ by individual and grade
    c. Averaged predictive validity of subfactors changes by grade
    d. Averaged across grade-level populations, Decoding predicts reading outcome strongly in grades K-1, moderately in grades 2-3, and weakly in grades 4 and beyond (it is not that decoding becomes unimportant, but that most students have mastered it to ceiling effect by upper grades; as a result, the distribution of decoding skill scores from grade 3 skews severe right, not matching the typical variation—bell curve—of reading test scores, and are thus not predictive of them)
    e. Averaged across grade-level populations, Language Comprehension predicts reading test outcome moderately from grade 1-2, and moderate-high thereafter
    f. Decoding skills do NOT correlate with IQ, but acquisition speed may
    g. Language Comprehension ability correlates almost perfectly with IQ (.95)

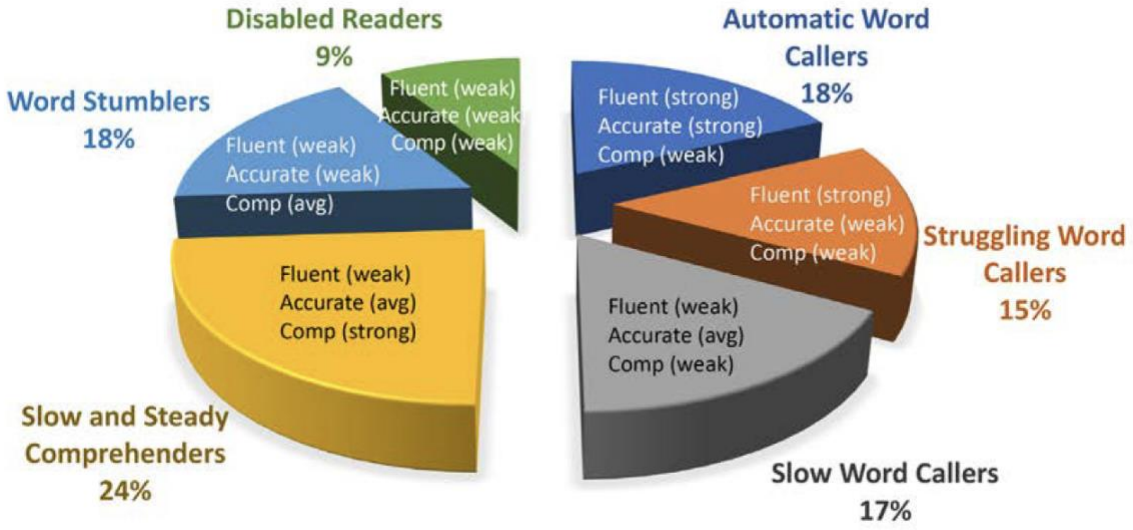
h. Individual student performance on decoding and language comprehension will differ from population averages and over time



Above, hierarchical linear equation model of reading and reading factor and subfactors tests and their degree of correlation to higher level test outcomes for 2nd grade readers, from elemental/lower-order skills tests (leftmost) to higher order ability tests (middle columns) to reading comprehension test score (rightmost). Second from right, Oral Language = Language Comprehension, Decoding Fluency = Decoding Skills. (Foorman et al., 2015)

5. Easily Measured **Reading Abilities**
    a. For **quick assessment** of readers in classroom contexts, standardized reading comprehension tests are not particularly effective, as their score does not indicate a student's particular strengths or needs
    b. **Reading Inventories** can give a very detailed assessment of a student's strengths and needs, but they require trained professionals to use reliably and are time consuming to employ
    c. **Accuracy, fluency, and language comprehension** are the three most evident and easily assessed reading abilities for a classroom teacher to use regularly
    d. **Accuracy** involves accurately sounding out letter sequences and/or word forms aloud and is the result of good phonics instruction and structured practice; emphasized in grades K-1; word lists (e.g., San Diego) assess this easily
    e. **Fluency** is the ability to read texts aloud quickly and easily, and is primarily the result of ample practice; emphasized in grades 1-3; timed fluency tests (e.g. Dibels) assess this and are quick and easy
    f. **Language comprehension** in reading involves understanding the word forms in texts as items of vocabulary grammatically arranged to indicate intended meanings. Language comprehension develops ("naturally") in response to a student's linguistic experience (from toddler years forward), and will improve with ample opportunity for active use with more verbally adept language users (e.g., teachers, peers, parents) and/or with structured instruction to improve vocabulary, grammatical familiarity, etc.; important in all grades; oral language use is one way to assess this, but teacher confirmation biases can challenge accuracy, especially for ELL students and non-standard dialect speakers
    g. Practice is required to improve in these key reading abilities; students need to practice out-of-school as well as in the classroom. For that reason, student **motivation** from positive, engaging learning experiences is necessary to support their willingness to **practice. The motivation-to-practice variable is crucial!**

6. Why "**Struggling Readers**" Struggle
    a. Varies by grade; as an example, consider 2nd grade struggling readers (see pie chart, next page) distinguished by three reading-related abilities: (1) decoding fluency (≈65%), (2) language comprehension (≈60%), and (3) decoding accuracy (≈40%) (Valencia, 2011). Some students struggle with one, some with two, some with all three abilities.
    b. In this urban district sample, struggling students were 22% of grade population, excluding special needs and ESL/ELL students; most readers do not struggle inordinately with learning to read, but these lagged in their mastery



7. Reading Difficulties and **Developmental Differences**
    a. On just about anything people can be measured on, they differ. This is true of reading ability, decoding skills, and language development, too
    b. Some students will be "ahead of the pack," some further behind, most will be around the middle
    c. Put another way, some students are faster learners, some need more time and effort to reach the finish line, most demonstrate average-rate learning
    d. Some students are not only faster, but start their first year of school ahead of the pack, some start further behind; this is often because of the amount of language and literacy they've experienced before their school years
    e. These early home experience-effects typically continue throughout the school years, too, and if the resulting developmental disparity is not addressed can result in a widening "achievement gap" over years between quicker and slower students on reading tests
    f. Therefore, interventions that can catch kids up to their peers are urgently required
    g. Being too far behind the pack is demotivating to students and undermines their willingness to practice their skills, hampering reading improvement
    h. There are many reasons why students can have temporary reading difficulty, and it is helpful to identify these individual issues accurately to address them effectively

8. **Dyslexia** – Two (2) Definitions
    a. Temporary reading difficulties and developmental differences should not be confused with permanent reading disabilities such as Specific Learning Disorder with Impairment in Reading, or Dyslexia (APA, 2015)
    b. There are two definitions of dyslexia: clinical (literal) and vernacular (figurative); these should not be confused, and the latter term should be avoided
    c. In the strict **clinical** sense, dyslexia is a neurobiological mental disorder demonstrated by impaired phonological processing; neural or genetic deficiencies are presumed to impair the reader's ability to sound out letters fluently and thus impair subsequent development of good sight word reading, fluency, vocabulary acquisition and comprehension for content learning from written texts (International Dyslexia Association, 2002)
    d. Because dyslexia is a neurobiological disorder, possibly genetic, it is considered incurable (phonics exercises cannot change anyone's genome); students with dyslexia are taught accommodations to "work around" their impediment (National Institute of Child Health and Human Development, n.d.; National Institute of Neurological Disorders and Stroke, n.d.; Yale Center for Dyslexia and Creative Learning, n.d.)
    e. Clinical dyslexia is unrelated to age, I.Q., SES, or psychiatric co-morbidities; it afflicts between 1.5 - 5% of the population (depending on how it is measured); it is thought to be a spectrum disorder with most cases at the mild end of the distribution where they become difficult to distinguish from cases of normal developmental delay (thus the wide prevalence estimation range)
    f. Prognoses for most dyslexic children is good, especially if they have average or better language development; sight word reading can often be developed despite phonological processing impairment and syntactic and semantic regularities can often facilitate reading for meaning in mild cases
    g. In the widely used **figurative** sense of dyslexia found in commercial and social media, dyslexia is defined as *just any kind of reading difficulty* (Elliot & Grigorenko, 2014)
    h. This definition is not helpful for reading difficulty diagnosis as it can be applied to anyone at some point in their development and covers any kind or cause of difficulty; prevalence estimates of 20-30% are inflated by the inclusion of readers with only temporary reading development delay
    i. Solutions to problems are problem-specific, obviously, so accurate determination of the cause(s) of a student's reading difficulty is important to address those difficulties effectively
    j. Because disability accommodations provide "work-arounds" instead of reading skills development, true clinical dyslexics should be distinguished from slower or

developmentally delayed readers to avoid cheating typical-but-delayed children of the skills, abilities, and knowledge necessary for literate and productive lives

9. **The Reading-Writing Connection**
    a. Learning to read and learning to write have a fortuitous co-relationship, rather like how a child learns to speak a language as they learn to understand it
    b. The better a student gets at reading, the better their writing; the better they get at writing, the better their reading; so teaching reading and writing in ways that support the development of both are recommended; consider…
    c. The better students get at writing letter shapes, the better they get at recognizing those shapes in print (and vice versa)
    d. The better they get at sequentially sounding out letters in a print text (thereby learning the orthographic regularities of English), the better they get at spelling words (and vice versa)
    e. The better they get at comprehending the meaning of written texts, the better they get at expressing themselves in their formal writing (and vice versa)
    f. And the better they get at expressing themselves with effective writing techniques, the better they get at recognizing and appreciating good writing in the exemplary texts they will read in upper grades (and vice versa)
    g. Good writing is more than fastidious attention to grammar mechanics and punctuation; it involves techniques for ensuring clarity, concision, cohesion, and coherence

10. **The Literacy Diet** Instructional Pyramid – An Extended Analogy
    a. Just as a child needs a well-rounded diet of all the USDA food groups for good health and optimal growth, so too students need a well-rounded "diet" of good literacy instruction for good reading development
    b. Just as a child needs carbohydrates as part of their diet, students need an ample helping of phonics as part of their early reading diet
    c. Just as there are many ways to obtain carbohydrates, there are many ways to provide phonics instruction and research shows they are all similarly "nutritive" in the hands of competent teachers (Bowers, 2020; National Reading Panel, 2001)
    d. Although a child needs carbohydrates as part of their diet, it will not do to feed them bowls of pasta three times a day; they need their fruits and vegetables, meat and fish, dairy, and healthy oils. Similarly, research shows that instruction focused on phonics to the exclusion of other elements of reading instruction is less effective for improving scores on standardized reading tests than phonics taught in combination with those other elements (e.g., language use, vocabulary,

writing instruction, reading aloud, reading for learning and enjoyment, oral presentation, etc.). The right mix will depend, as always, on the grade level and the needs of the individual student (Kentucky Academic Standards for Reading and Writing, n.d.)

e. In cases where a child has a demonstratable deficiency, short term use of supplements (interventions) is useful, but no substitute for a balanced diet if the goal is to create independent readers, learners, and thinkers

11. **Recap and Additional Insights**:
    a. Decoding and Language Comprehension Ability are both *necessary* to read well
    b. Practice makes for improvement; motivation makes for practice
    c. Most students who trail their peers in early grades decoding skills can catch up with well-focused intervention; growth spurts are not uncommon in children, including with reading and writing skills, and can be encouraged
    d. Students who trail their peers in language development will likely not catch up to them without at least some instructional support; this is the trouble with expecting children to learn either decoding or language "naturally"
    e. Reading and writing instruction amplify the development of *both* reading and writing ability; this is called the "reading-writing connection"
    f. Practitioners and researchers often have their preferred methods, and some methods may be better suited to a particular child at a particular time, but this is a difficult thing to predict accurately in advance; some trial and error is unavoidable
    g. Standardized reading tests (like all standardized tests) are *g-weighted*, meaning their reliability is in part due to *g* (Spearman's correlate for general intelligence); this is what gives a standardized test its reliability without which it would be invalid as a comparative assessment; but for that reason, such tests are more reflective of most students' language comprehension than their decoding ability
    h. There is evidence that early and ongoing language and literacy development improves learners' intelligence as well as their subsequent reading and writing ability, content knowledge, learning, and school success
    i. Most students with reading difficulty are only demonstrating the normal distribution of variance found in human populations on any ability; most can catch up and will develop adequate reading ability with time, motivation, and the persistent support of effective interventions and skilled reading specialists
    j. Dyslexia is different than typical reading difficulty: it is an incurable neurobiological mental disorder involving abnormal neural architecture for processing language sounds which makes sounding out letters and words difficult, often slowly and with many inaccuracies; it makes reading comprehension difficult and hampers text-based vocabulary and knowledge growth. It cannot be

cured but only accommodated. For that reason, it is important not to misdiagnose garden variety slower readers (more common difficulty) as clinically dyslexic (very rare)

k. Changing instructional regimens regularly (but coherently) to keep things interesting, avoid drudgery, giving students positive opportunity to demonstrate their developing abilities, and emphasizing the interesting and joyful aspects of reading can **motivate children to practice** their skills so they improve, making them better and happier readers
l. There are no silver-bullet solutions. Nothing works for everyone nor for anyone all the time.
m. In clinical interventions, avoid misdiagnosis and over-diagnosis. Above all, **Do No Harm**.

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Evidence-based Methods, Interventions

- **Tier 1: Strong Evidence**: well-designed and implemented randomized control experimental study or studies ***
- **Tier 2: Moderate Evidence**: well-designed and implemented quasi-experimental study or studies (non-randomized; pre-post) ***
- **Tier 3: Promising Evidence**: well-designed and implemented correlational study or studies ***
- **Or Demonstrates a Rationale**: Method justified by high quality research findings*** or positive evaluation data *** that suggests it is likely to have a positive outcome; and user is continuing to examine the effects of such activity (pilot studies; proof of concept studies; etc.)

- 20 USC § 7801(21)A ***statistically significant outcome

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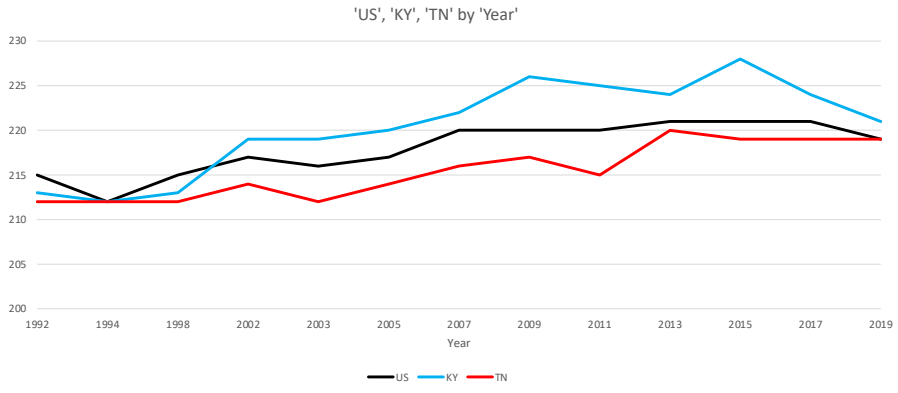
conducted one-on-one or in small groups; shall be ***evidence***~~[research]~~-based, reliable, and replicable; and shall be based on the ongoing assessment of individual student needs***; and***~~[.]~~

(d) "Reliable, replicable ***evidence***~~[research]~~" means objective, valid, scientific studies that:

1. Include rigorously defined samples of subjects that are sufficiently large and representative to support the general conclusions drawn;
2. Rely on measurements that meet established standards of reliability and validity;
3. Test competing theories, where multiple theories exist;
4. Are subjected to peer review before their results are published; and
5. Discover effective strategies for improving reading skills.

NAEP Reading Scores, KY, US, TN, 1992-2019



Literacy Q & A: Rep. Tina Bojanowski and Dr. George G. Hruby

In August of 2021, Dr. George Hruby, executive director of CCLD, was called upon to present to the Interim Joint Finance Subcommittee on Education. In June of 2022, Dr. Hruby was called upon to present to the Interim Committee on Education, and did so with Dr. Melinda Harmon, director of Kentucky Reading Recovery. During and in the aftermath of both meeting presentations, Representative Tina Bojanowski asked several penetrating questions about CCLD and Reading Recovery. It is likely that other members of the legislature might have similar questions. The emailed responses to Rep. Bojanowski's extensive follow-up questions have been compiled and edited for clarity below. CCLD and Drs. Hruby and Harmon are thankful to Rep. Bojanowski and the chairs and other members of these committees for their assistance in clarifying communication needs between CCLD and the legislature.

Questions from Rep. Bojanowski; Answers from Dr. Hruby and Harmon in **bold**:

1. On slide 14 titled "Sustained Effects," you stated that the recovery rate for Reading Recovery students in 2020 indicated that "79% of students in KY exiting RR program required no further intervention."

   The date on this data was pre-pandemic so the year was 2018-2019.

2. When you state "exited," does that represent students who were "discontinued" from Reading Recovery or does it also include students who were "recommended"?

   This data set includes both Discontinued and Recommended students.

   What percentage of all students who participated in Reading Recovery required no further intervention?

   79% of all students who received a full series of lessons/complete program were Discontinued and 21% of all students who received a full series of lessons/complete program were Recommended.

   <u>All Students Served</u>
   61% were discontinued
   16% were recommended
   18% had incomplete programs at year end
   3% of students moved

3. On slide 20 of the presentation, you list a line item of $806,737 for Reading Recovery and CIM and $600,000 for Reading Recovery Teacher Leaders.

The $600,000 is a typo, that should read $500,000.

Are those funds appropriated to districts to support the costs of Reading Recovery teacher salaries that are only partially covered by RTA grants?

No

If not, how are those funds used?

The Reading Recovery University Training Center budget is $806,737, plus the $500,000 for a total of $1.306,737. 75% of this funding goes directly to Host Districts through a Teacher Leader Grant process. The remaining 25% supports the University Training Center at UK which holds the trademark for all Reading Recovery implementations in the state.

$975,000 -These funds are used to support regional Teacher Leaders across the state of Kentucky through a grant process with the host district. These Teacher Leader sites provide initial training and ongoing professional learning to Reading Recovery teachers across multiple districts as well as providing professional learning to classroom teachers, coaches, and administrators in Literacy Processing Theory and procedures for both one on one interventions and small literacy groups including the Comprehensive Intervention Model (CIM).

$331,767- remains for the University Training Center for the salaries of Trainers and Administrative staff, rent, utilities, phones, postage, duplicating, travel, professional books and teaching materials, and other costs associated with the training and ongoing professional learning of the Teacher Leaders across the state.

I also have the following questions:

4. What percentage of students in the state who participated in Reading Recovery during the last three school years were “discontinued”?

I am including the past three years of data because of concerns about fidelity to implementation. The 2019-2020 and 2020-2021 school years were the Pandemic years. Due to interrupted services, missing year end data (2019-2020), missing Observation Survey Tasks and certain lesson components (2020-2021), and the virtual nature of assessments and teaching, we were not able to collect all of the typical data required. While our teachers did the best they could, Reading Recovery was not designed for a virtual setting.

Complete interventions are defined as all children whose interventions were successfully discontinued plus all children who were recommended for further instructional support after completing a full series of lessons.

2018-2019 Discontinued-79% Recommended-21%

2017-2018 Discontinued-74% Recommended-26%
2016-2017 Discontinued-77% Recommended-23%

5. Do you have any data on the performance of Reading Recovery students (including students who were discontinued, referred, incomplete, and moved) on 3rd/4th/5th KPREP or MAP assessments?

   The JCPS Follow-up Report provides this data. (It is available from CCLD on request.) available

   KDE's Infinite Campus Intervention Tab could be cross referenced with KPREP data if requested of KDE.

6. Are special education students considered for Reading Recovery instruction?

   Yes, they are considered for Reading Recovery. We also are now training Special Ed and English learner teachers who also provide services called Literacy Lessons to special populations both in one to one settings and small literacy groups.
   In Kentucky,
   - **In 2018-2019, 17% of the students we served were Special Education students (473).**
   - **In 2017-2018, 17% of the students we served were Special Education students (525).**
   - **In 2016-2017, 16% of the students we served were Special Education students (519).**

   What criteria are used to select Reading Recovery students?

   All students are first ranked by their former Kindergarten or current First Grade classroom teachers, then the students ranked as the lowest 20% are administered the Observation Survey of Early Literacy Achievement, those who score the lowest on this diagnostic assessment (lowest Stanines) are taken first.

   What criteria are used to exclude students from the Reading Recovery program?

   There are no criteria for excluding students. The only reason a student can be excluded is that the student was not able to understand the tasks of the Observation Survey of Early Literacy Achievement during administration. That happens very rarely.

7. In the Reading Recovery Complete Tables and Figures of Louisville: 2018-2019 it stated that 51% of the students participating in Reading Recovery in Jefferson County were "discontinued." I am assuming that means that 49% of the students did not meet the Reading Recovery goal. Am I correct?

No, the 49% figure would include students who were recommended (22%) because they did not reach the average of their classrooms following a full series of lessons or were able to complete the intervention, students who had incomplete programs (21%) due to the end of the school year and were unable to complete a full series of lessons, and those that moved (5%) from the school before completing a full series of lessons.

Could you explain what "CIM" is? In the RTA Evaluation Report (20-21), CIM was the most frequently reported intervention designated in the intervention tab on Infinite Campus. Is CIM based on the Reading Recovery program and do teachers need to be certified in Reading Recovery to provide CIM?

Yes, teachers must be certified in Reading Recovery, Literacy Lessons or Literacy Processing Specialist before being trained in CIM.

The Comprehensive Intervention Model recognizes that reading and writing are complex, meaning-making processes. The goal of each intervention is to develop self-regulated, strategic readers and writers who are able solve literacy problems with flexibility, efficiency, and understanding. The various components of the intervention groups are designed to promote the following literacy processes: oral language development, concepts about print, phonemic awareness, phonics, problem-solving strategies, comprehension strategies, fluency, word-solving strategies, reading and writing reciprocity, the writing process (including composing, transcribing, revising strategies, and crafting techniques), knowledge of text structures, and task persistence. There are 4 different small group interventions:

1. ***Guided Reading Plus Groups*** **are for children at the early to transitional levels of reading and writing, but are lagging behind their classmates. The lesson format spans two days with 30 minutes of instruction per day. Day 1 includes four components: pre-planned word study activity, orientation to the new book, independent reading with teacher observations and follow-up teaching points, including discussion of the message. On Day 2, the lesson format begins with assessment: the teacher takes a running record on two children while the other students read easy or familiar texts. Then the focus shifts to the writing component, which includes four predictable parts: responding to yesterday's guided reading text, composing individual messages, writing independently, and holding one-to-one writing conferences with the teacher.**
2. ***Assisted Writing Groups*** **are designed to support children at the early stage of writing development who are lagging behind their classmates. During interactive writing and, later, writing-aloud, the students learn about the writing process: composing, revising and editing strategies, and the link between reading and writing.**
3. ***Writing Process Groups*** **are designed for children who are struggling with the writing process in their writing workshop classrooms. The Intervention**

Specialist provides tailored instruction that focuses on the writing process, including drafting, revising, crafting, editing, and publishing processes.

4. ***Comprehension Focus Groups*** **are for children who are reading at the transitional level and beyond, who are having difficulty comprehending the wide range of text genres as they move up the grades. The interventions are designed to help students develop reading and writing knowledge for three major text types: literary, informational, and persuasive. The intervention includes two major components: 1) students participate in a comprehension focus unit around a specific text type or genre for a minimum of 3 weeks, and 2) students participate in the writing process by developing an original piece of writing within the genre of the focus unit. The lessons are 30 minutes daily**.

8. If a district decided to do so, could the Reading Recovery program be modified? I read that "… changes cannot be made to the program without the approval of the trustees of the Marie Clay Literacy Trust" (Chapman, Tumner, 2016, p. 65).

No, changes cannot be made without permission as stated. Reading Recovery is a copyrighted program. This is how program fidelity (fidelity of implementation) is maintained worldwide.

8. Do you have an idea of how many Reading Recovery teachers receive funding through the RTA grant?

No; you could check with KDE to get that number.

For teachers who do not receive funding through the grant, what is the most common source of the funding?

Local, State and Title I are all used as well as IDEA-EIS, IDEA-RTI and IDEA-SPED

9. The CCLD has a budget of $70k for a clearinghouse for information about programs addressing reading and literacy from early childhood and the elementary grades. Where can the clearinghouse be found?

The CCLD is the clearinghouse. Initial information can be found on the CCLD website: Kentuckyliteracy.org. Further information is provided as requested per case. The design of the website has changed several times over the years, and the nature of the online clearinghouse information has changed accordingly. Initially it acted as repository of vetted research studies and teacher professional journal advisories, as well as technical reports from reputable research centers. As the number of online resources expanded in scope beyond our limited staffing to tally and update (also rendering it difficult to navigate by users), the site was rebuilt as a reference to other sites that already were doing this, including the KDE's own resource site. The CCLD site is currently being

redesigned yet again to include helpful videos, white papers, and advisories. These materials are largely located under "Resources" on the CCLD website. Individual advisory services are offered to districts and school upon request. The lion's share of the resource budget goes to pay for the multi-media specialist who maintains the site. The remainder goes to license and usage fees, website charges, and similar.

10. Could you provide me with the syllabus for the professional development that you provide relating to reading diagnostic assessments and intervention and to the science of reading and essential components of successful reading? I believe that I asked this question in committee. I'm not sure if this would be the KY Reading Project or if there is another method by which you support professional development. I would also like to have a copy of the agenda and syllabus for the KY Reading Project.

There is no set syllabus for the Kentucky Reading Project (KRP) or the Adolescent Literacy Project (ALP). This is because (1) these professional development (PD) services are offered as graduate level courses through, and taught by, full-time literacy education faculty at all 8 of Kentucky's state universities. Each section would have its own syllabus/course framework suited to the institution in question. Also, (2) each university's KRP or ALP centers its curriculum around current KDE initiatives, on the one hand, and teachers' individual determination of what they feel they need to know to do better with their students, on the other hand. We determine the latter on the basis of initial needs surveys of the teachers registered for the course. The teachers' chosen focus is then the basis for their development during the summer intensive of a literacy action plan (a practical form of teacher action research, as recommended by KDE). That literacy action plan, whether developed by an individual teacher or small group working together allows teachers to hone their less well-developed skills rather than review what they already know how to do.

KRP and ALP create PD that provides teachers with the best research-based evidence for best practice in addressing the topics, methods, or issues teachers themselves have identified as key. (Keep in mind that the typical KRP or ALP teacher has been teaching for 5-8 years already and is not unaware of her business-as-usual strengths or her less frequently addressed needs.) Centering the PD around teachers perceived needs guarantees participant buy-in from the onset, high participation energy during the summer intensives, and determined application during the school year that follows, which is when the teachers implement their literacy action plans. Their results are then shared in the statewide Share Fair in April. With this design, teachers receive the PD they themselves believe they require; their interest, attention, and devotion to success on the issue are thereby assured; time, money, and effort is not wasted on repeating redundant trainings the teachers have already received, often repeatedly, from well-meaning but presupposing sources. Our high satisfaction rates from our participating teachers are precisely because of this, and dedicated, energized teachers make for good instruction.

11. Could you describe how you are collaborating with KDE to assist districts with students functioning at low levels of reading skills to assess and address identified literacy needs, including providing advisement information and materials regarding evidence-based strategies for dyslexia diagnoses and accelerating student learning?

Over the years, CCLD's collaborations with KDE have been many. Currently this includes our work on Read To Achieve, both for services through Reading Recovery and CIM, as well as our special "KRP for RTA" model designed with Whitney Hamilton at KDE, and our annual RTA evaluation report. CCLD advised on the creation of the Dyslexia Toolkit with Amanda Ellis. And we are currently assisting in the scale-up of Kentucky Imagination Library, which CCLD piloted for several years, with KDE and the Dollywood Foundation.

12. Could you list any programs other than Reading Recovery for which you provide professional development and coaching for early childhood educators and classroom teachers?

KRP
KRP4RTA (with KDE)
ALP
Striving Readers (with KDE)
Kentucky Comprehensive Literacy (with KDE)
ELLP (Early Language and Literacy Project)
Kentucky Imagination Library
Adolescent Coaching Project (discontinued)
Early Intervention in Reading (discontinued)
Leveraged Literacy Intervention (discontinued)

13. Could you share your research agenda for the evaluation of early reading models implemented in KY?

The Read To Achieve Evaluation Plan is being conducted with the Office of Evaluation at the College of Education, University of Kentucky. It annually produces an evaluation of RTA and the early reading models used with KDE approval of those schools. The exact nature of that evaluation changes from year to year, per requests from KDE. A set 4-year study was planned for 2018-2020, but the disruption of schooling by the pandemic has made the data that was possible of limited use for some of the planned analyses. However, the KDE is currently reviewing the latest proposal for further research with the limitation imposed by this event taken under consideration. If you would like copies of previous evaluations we have done for KDE, I am sure KDE would be happy to release these to you. Once KDE approves the current research plan, we will be happy to share that as well. [As of the date of this document, the evaluation plan has been approved, and the first year's report, 2021-2022, is being reviewed currently by KDE.]

Research on reading programs is costly and is of limited value when the number of people using the program is small and localized; this is because of the statistical improbability of determining valuable scale-up findings from programs used by only a few districts. (Because of local control of the schools, assessments and reading programs are a patchwork of incomparable measures and methods.) When studies on particular reading programs have been done at a scientific level of evidence-based reliability, the Institute of Educational Sciences at the US Dept. of Education has collated this information into their What Works Clearinghouse. CCLD has often availed itself of this information. CCLD has offered to do further evaluation work for the programs approved by KDE for use in the schools.

14. Could you direct me to the repository of instructional materials to support middle and high schools in the development of comprehensive adolescent reading plans?

As noted in Question 9, above, these kinds of materials are no longer assembled on CCLD's website as the effort would be costly, time-consuming, and largely redundant to what is already available from other sources. In addition, CCLD supports legislated and KDE-approved materials, programs, and approaches already assessable online through KDE. For this reason, we only link to research relevant for the currently approved methods and materials within the materials or on the KDE website. These materials are currently handled by the publishers of the materials, and further excellent resources have been set out by KDE. We will be linking these (several new) in the updated design of our website. In addition, we provide secondary grades literacy PD through ALP through the 8 state universities. And we provide adolescent instruction in reading advisory services for schools and districts on request. The materials recommended will differ between sites, districts, etc., as per what is available at those districts.

15. Could you provide your review of national research as well as your research on reading programs being used throughout the state for the last three years?

The answer to the second half of this question is provided in the answer to question 13, above. As to reviews of the national research base, there are currently over 120,000 published studies from the past 50 years of research one could review. For this reason, reviews of reading research are restricted to well-focused subtopics. For instance, when the National Reading Panel, created by Congress in 1999, reviewed the reading research on early grades reading instruction, they created 5 distinct research reviews as subcommittee reports on (1) Alphabetics, (2) Fluency, (3) Comprehension, (4) Reading and Teacher Education, and (5) Reading and Instructional Technology.

My own reviews have been focused on Reading and Developmental Neurobiology. My research review work from the past decade while at CCLD, in reverse chronological order, is as follows:

Hruby, G.G. & Ayan, M. (in press; 2022). Variation and variance in the neurosciences of language and literacy. In P. Davies (General Ed.), *International encyclopedia of education* (4th ed.), D. Yaden & T. Rodgers (Vol. Eds.), *Volume 7: Literacies and language education*. Oxford, UK: Elsevier Ltd.

Hruby, G.G. (2022 [released 9/21]). Naturalizing literacy: Finding meaning in the biology of language, thought, and being. In D. Sumara & D. E. Alvermann (Eds.), *Ideas that Changed Literacy Practices: First-Person Accounts from Leading Voices* (pp. 173-182). Gorham, ME: Myers Education Press.

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Hruby, G.G. & Goswami, U. (2019). Educational neuroscience for reading education researchers. In D. Alvermann, N. Unrau, M. Sailors, and R. Ruddell (Eds.), *Theoretical Models and Processes of Literacy* (7th ed.) (pp. 252-278). New York: Routledge Taylor and Francis.

Hruby, G.G. (2017). Literacy, comprehension, and the neurosciences. In S. Israel, *Handbook of research on reading comprehension* (2nd ed.) (pp. 191-216). New York: Guilford.

Hruby, G.G., Burns, L., Boztakis, S., Groenke, S., Hall, L., Laughter, J. Allington, R. L., Clark, G., & Davis, J. (2016). The meta-theoretical assumptions of literacy engagement: A preliminary centennial history. *Review of Research in Education, 40* (1), 588-643. [American Educational Research Association centennial anniversary issue.] DOI: 10.3102/0091732X16664311

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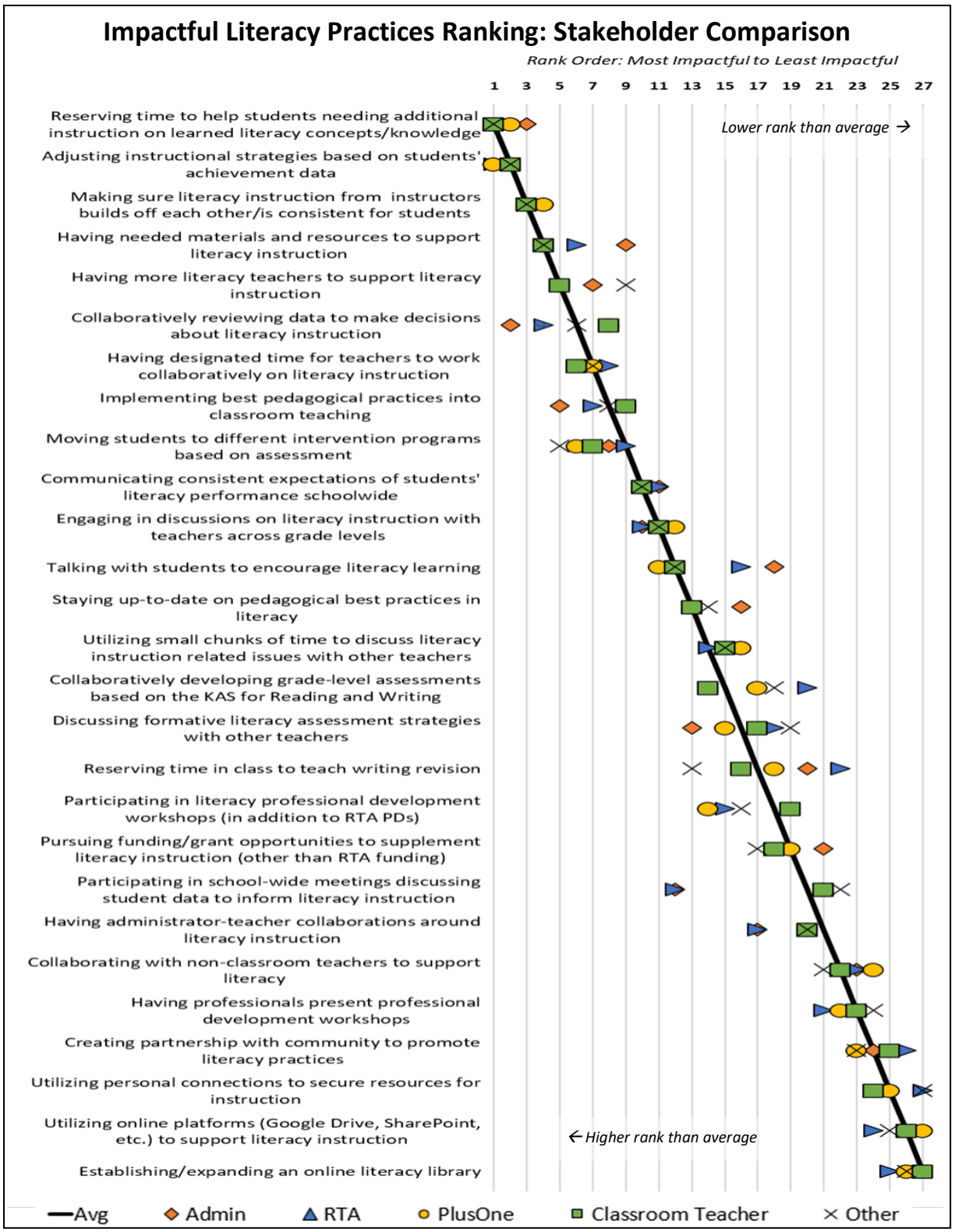

Figure 14. Best-worst impact ranking comparing different groups' perceptions of rank order of practices. (From *Kentucky's Read To Achieve Program Yearly Evaluation Report, 2020-2021*, p. 28.)

How Reading Recovery® Teaches the essential components of successful reading: phonemic awareness, phonics, fluency, vocabulary, comprehension, and the connections between writing and reading acquisition and motivation to read.

Prepared by Lindy Harmon, Ed.D.
Collaborative Center for literacy Development

FLUENCY **Research From the National Reading Panel Reports and *Put Reading First***	Ways in which Reading Recovery® Teachers support the Development of Phrased and Fluent Reading
❑ Fluency is defined as "the ability to read a text accurately and quickly. [Fluent readers] group words quickly to help them gain meaning from what they read." (p. 22) ❑ "Fluency is important because it provides a bridge between word recognition and comprehension." Studies have found a close relationship between fluency and reading comprehension. (pp. 22–23) ❑ "To read with expression, readers must be able to	Ways in which Reading Recovery® Teachers support the development of phrased and fluent reading include the following teaching events: • Teach for fluent reading on carefully selected continuous texts that are not too difficult. • Provide many opportunities for oral reading. • Provide opportunities for multiple readings of familiar texts. • Recognize that with beginners, fluency is affected by the need to gain control of one-to-one matching and to learn to look at and decode the print in text. • Encourage flexibility in varying the speed of oral reading to match the difficulty of the text (e.g., new or more

divide the text into meaningful chunks. These chunks include phrases and clauses. Readers must know to pause appropriately" when reading orally. (p. 23) ❑ "Fluency is not a stage of development at which readers can read all words quickly and easily. Fluency changes, depending on what readers are reading, their familiarity with the words, and the amount of practice with reading text." (p. 23) "It is important to provide students with instruction and practice in fluency as they read connected text." (p. 23)	difficult texts will generally affect fluent reading). • Demonstrate fluent reading on a text the child is reading. • Encourage the child to read familiar texts quickly so that it sounds like talking. • Select texts that will facilitate fluent reading. • Attend to the role of oral language and increasing experience with the print. • Arrange opportunities for children to reread their familiar texts to parents or other available listeners. • Mask the text and ask the child to read phrases all at once. • Slide a card underneath text to discourage finger pointing and word-by-word reading. • Slide a card over the text to force the eyes ahead. • Arrange a cut-up sentence in phrases for the child to read. • Insist that the child pause appropriately, using punctuation.
PHONICS **Research From the National Reading Panel Reports and *Put Reading First***	Ways in which Reading Recovery® Teachers support Phonics Instruction
❑ "Phonics instruction is not an entire reading program for beginning readers.…[It] is most effective when introduced early." (*Put Reading First,* p. 15) ❑ "Systematic and explicit phonics instruction is effective for children from various social and economic	A comprehensive and systematic literacy assessment system is used to identify children's knowledge and skills. Programs are individually and systematically designed to address those areas the child does not know. Daily assessment is conducted to revise and tailor the program as the child takes on new learning. The child is individually assessed to determine

levels." (*Put Reading First,* p. 14)

- Phonics instruction improves early word recognition, spelling, and reading comprehension. (*Put Reading First,* p. 14)
- Only "a few studies examined effects of phonics instruction several months after the treatment had ended.…[Students were tested] from 4 months to 1 year after training…[and] the effect size remained significantly greater than zero," although effects were "somewhat diminished." (*Report of the National Reading Panel: Reports of the Subgroups*, p. 2-113)
- "You can teach phonics effectively to the whole class, to small groups, or to individual students. The needs of the students in your class and the number of adults working with them determine how you deliver instruction." (*Put Reading First,* p. 17)

"Effective programs offer phonics

instruction that

- helps teachers…instruct children in how to relate letters and sounds, how to break spoken words into sounds, and how to blend sounds to form words;
- the number of upper- and lowercase letters known by name
- the number of phonemes the child can connect to letters
- the phonemes that the child can represent with letters in writing
- the degree to which children can use letter-sound knowledge and word patterns to spell words
- the degree to which children can locate words in a text after hearing them
- the upper- and lowercase letters the child can match
- the child's ability to use phonics strategies while reading continuous text

Children study letters and connect them to sounds through working with magnetic letters, building words, and making personalized alphabet books.

- They also read letter books that provide opportunities to notice and internalize key words that illustrate beginning consonant sounds.
- Teachers demonstrate how to take words apart by segmenting them into sounds and how to make new words by adding, deleting, or substituting letters.
- Children internalize and learn how to use the principles and gain control as they apply principles to more examples.
- They learn flexible, quick recognition of the letters (and associated sounds) in words.

In the process of writing a message:

- Children analyze phonemes in words and represent them with letters.
- They say words slowly, segmenting them into the sounds they hear.

• helps students understand why they are learning the relationships between letters and sounds; • helps students apply their knowledge of phonics as they read words, sentences, and text; • helps students apply what they learn about sounds and letters to their own writing; • can be adapted to the needs of individual students, based on assessment; • includes alphabetic knowledge, phonemic awareness, vocabulary development, and the reading of text." (*Put Reading First*, p. 16) "Few if any studies have investigated the contribution of motivation to the effectiveness of phonics programs, not only the learner's motivation to learn but also the teacher's motivation to teach. The lack of attention to motivational factors by researchers in the design of phonics programs is potentially very serious.…[Future research should] determine which approaches teachers prefer to use and are most likely to use effectively in their classroom instruction." (*Report of the National Reading Panel: Reports of the Subgroups*, p. 2-97)	• They check written words by blending phonemes together. • Teachers draw attention to letter-sound relationships that children need to learn next. Children learn to isolate; blend and segment sounds in words that have been cut apart for reassembling. • This action requires children to think about the sounds in words, to locate them and place them in order. • Based on what children need to know next, the teacher decides how to segment the words so that they can focus on beginning, ending, or medial parts. In selecting and introducing new texts to children, the teacher takes care that the text will be within the readers' control so that every reading will be successful and that the text will be interesting to children. • The teacher introduces the text in a manner that prepares readers for decoding the words of the text, engages interest, and motivates the children. As children engage in guided oral rereading of texts, they learn to monitor their reading by checking for mismatches using letter-sound information. In guided oral reading of new texts, teachers draw children's attention to the use of letter-sound information as an important tool for decoding/solving words. • The teacher demonstrates ways to use letter-sound relationships to monitor accuracy of reading and to decode unfamiliar words. • The teacher shows children how to identify and work with syllables in spoken words, with onsets and rimes in

	spoken syllables, and with individual letters and sounds as strategies. • Children need opportunities to use what they have learned in problem-solving unfamiliar words that they encounter within continuous text. • They use word-solving strategies to take words apart while keeping the meaning in mind.

PHONEMIC AWARENESS **Research From the National Reading Panel Reports and *Put Reading First***	Ways in which Reading Recovery® Teachers support the Development of Phonemic Awareness
"Phonemic awareness instruction does not need to consume long periods of time to be effective. In these analyses, programs lasting less than 20 hours were more effective than longer programs." (*Report of the National Reading Panel: Reports of the Subgroups*, p. 2-6) "Phonemic awareness instruction is most effective when children are taught to manipulate phonemes by using letters of the alphabet." (*Put Reading First*, p. 7) Phonemic awareness can be improved by instruction that helps children • hear individual phonemes, syllables,	In Reading Recovery®, individual diagnostic assessment is used to identify children's knowledge and skills. Individual assessments of phonemic awareness include determining the • number of upper- and lowercase letters the child can recognize and name • number of phonemes the child can hear in words • number of phonemes the child can connect to letters • specific phonemes the child can represent with letters in writing • degree to which the child can locate words in a text after hearing them • upper- and lowercase letters the child can match Individual instructional programs are systematically designed based on these assessments. ▪ Children work with alphabet letters and related sounds, for example, making

onsets and rimes, and word boundaries. (*Put Reading First,* pp. 4–5) • "focus on and manipulate phonemes in spoken syllables and words." (*Report of the National Reading Panel,* p. 7) • learn letter names and shapes along with phonemic awareness (*Put Reading First,* p. 7) • see how phonemic awareness relates to their reading and writing. (*Put Reading First,* p. 6)	personalized alphabet books with key pictures and letters so that they can link sounds and letters. ▪ The teacher models and children learn how to take words apart by segmenting them into sounds; children also learn to blend sounds together in the writing and reading of a word. ▪ Children learn how to make words by adding, deleting, and substituting phonemes. This work involves using magnetic letters. ▪ Children become fast and automatic at applying these principles. As children orally read and reread texts, the teacher demonstrates ways to use phonemic awareness and letter-sound relationships to monitor reading accuracy and to decode new words. Using books that provide opportunities to apply principles they are learning; the teacher shows children how to: ▪ identify and work with syllables in spoken words ▪ identify and work with onsets and rimes in spoken syllables ▪ identify and work with individual phonemes in spoken words as strategies for decoding unfamiliar words. In writing, children learn to record the sounds they hear in words and notice the sequence of sounds. ▪ The teacher shows children how to identify and work with individual phonemes in spoken words. ▪ The teacher models and children learn how to segment and blend phonemes in individual words.

	Children work with individual words and segments of words that they put together into sentences. ▪ This activity requires children to think about the sounds in words and their sequence. ▪ Words are cut into parts to focus children's attention on first letter-sounds, ending letter-sounds, and medial letter-sounds.

TEXT COMPREHENSION **Research From the National Reading Panel Reports and *Put Reading First***	Ways in which Reading Recovery® Teachers support **Text Comprehension**
❑ "Comprehension is the reason for reading. If readers can read the words but do not understand what they are reading, they are not really reading." (p. 48) ❑ "Good readers are purposeful. Good readers have a purpose for reading." (p. 48) ❑ "Good readers are active. Good readers think actively as they read. To make sense of what they read, good readers engage in a complicated process. [They use] their experiences and knowledge of the world, their knowledge of vocabulary and language structure, and their knowledge of reading strategies." (p. 48) ❑ "Text comprehension can be improved by instruction that	In Reading Recovery®, teaching for comprehension must begin at the start of the intervention. Children must learn that understanding is the goal of reading. As they gain phonemic awareness, phonics and decoding skills, fluency, and vocabulary, the teacher supports children's active use of these abilities while simultaneously making sense of what is read. For young children, especially those in need of literacy intervention, explicit attention should be given to their development of the following processes: • monitoring their own reading, being aware of what they do and do not understand • using print information in text to gain meaning (e.g., letter sequences, word sequences) • using prior knowledge to support meaning

helps readers use specific comprehension strategies" (p. 49–56) ▪ monitoring comprehension: being aware of what they do and do not understand and using appropriate "fix-up" strategies to solve problems in comprehension ▪ using graphic and semantic organizers ▪ answering questions about the text ▪ generating questions about the text ▪ recognizing story structure ▪ summarizing: identifying main themes and central ideas while eliminating unnecessary and redundant information ▪ making use of prior knowledge: drawing on prior knowledge and experience to help with understanding ▪ using mental imagery(pp. 49) ❑ "Students can be taught to use comprehension strategies." ❑ "Effective strategy instruction is explicit or direct" and can include direct explanation, modeling, guided practice, and application.	• taking the initiative to self-correct when the text does not make sense • discovering new things within the text • asking their own questions about the text • building concepts about how books and stories work **in which teachers can support the development of these processes in young children include the following teaching events:** • Select texts that will support the child's present knowledge and skills. • Select a variety of texts and text types to promote the flexible use of the child's knowledge in new situations. • Introduce texts by activating prior knowledge about the story and building experiences needed to enhance understanding. • Emphasize what the child already knows that will help in solving words and interpreting the story. • Build connections during and after reading to support understanding. • Have meaningful conversations about the text. • Hold the child accountable for meaning during oral reading. • Teach for comprehension when children are writing as well as when they are reading. The reciprocal nature of the two processes will be mutually supportive. Because early interventions work with children who are demonstrating unique difficulties, approaches to comprehension instruction must be appropriate for each individual. For example, the questions the teacher asks the child should be determined by the child's progress and responses to reading and writing experiences. Teachers must be

❑ "Effective instruction helps readers use comprehension strategies flexibly and in combination."(pp. 53–54) ❑ "Teachers should emphasize text comprehension from the beginning, rather than waiting until students have mastered the basics of reading." (p. 55)	knowledgeable and flexible in supporting comprehension in young readers and writers.

VOCABULARY INSTRUCTION **Research From the National Reading Panel Reports and *Put Reading First***	Ways in which Reading Recovery® Teachers support **Vocabulary Instruction**
❑ Most vocabulary is learned indirectly "through everyday experiences with oral and written language." (p. 35) ❑ "Children learn word meanings indirectly in three ways: ▪ They engage daily in oral language. ▪ They listen to adults read to them. ▪ They read extensively on their own."(p. 35) ❑ Some vocabulary must be taught directly by providing students with specific word instruction and by teaching them	Ways in which Reading Recovery® Teachers can support vocabulary development and teach for decoding and word-solving strategies during oral reading and writing activities include the following teaching events. **Selecting and Introducing Books** • Select texts that offer some challenges in word solving and yet support the child's present knowledge and skills. • Select a variety of texts and text types to promote flexible use of word solving. • Engage the child in meaningful conversations when introducing a new book, allowing the child to hear the new words to be encountered in the text. • Draw the child's attention to the important words in a new book, words that convey important ideas to support the meaning of the story and the language structure. • Ask the child to locate one or two words in unfamiliar texts.

word-learning strategies. (pp. 36–37) ❑ Direct instruction of vocabulary helps students learn words "that are not part of their everyday experiences." (p. 36)	**Reading Books** • Provide many opportunities for reading of familiar texts. Rereading familiar texts enables the child to: • monitor reading by checking for mismatches between what the child says with the words in print • use letter-sound information to rapidly read familiar words and decode unknown words while independently reading continuous text • provide opportunities to expand word knowledge and vocabulary • discover new words and new features of words • Teach for word-solving strategies on carefully selected continuous texts that are not too difficult. • During guided oral reading of unfamiliar text, help the child apply knowledge of letters, sounds, and words by using this in combination with comprehending. • During guided oral reading, encourage the child to make links between words read orally and words the child knows how to write. (Reciprocity) • Provide extensive practice in word solving (e.g., to use words the child knows in decoding unfamiliar words). • Demonstrate ways for the child to use phonemic awareness and letter-sound relationships to monitor reading accuracy and to solve new words. • Demonstrate how to take apart and solve new and unknown words. • Demonstrate how to work with syllables in spoken words, with onsets and rimes in spoken syllables, and with individual

	phonemes in spoken words as strategies for solving unfamiliar words. **<u>Writing Stories</u>** • Teach for word solving of new and unfamiliar words when children are writing as well as when they are reading. The reciprocal nature of the two processes will support children's word-learning strategies. • Engage the child in meaningful conversations when constructing sentences. • Guide the child to use language (vocabulary) to compose a message or story and then to write it. • Help the child remember a word in detail by having the child write high-frequency words on the working page of a writing book. • Keep a list of words the child can write independently and keep a weekly progress record of accumulated writing vocabulary over time. This list provides a record of high-frequency words and shifts from laborious to fluent writing of known words. • Teach the child how to use analogies or spelling patterns to write new words. • Encourage the child to increase writing vocabulary and to write increasingly more complex sentences. • Cut a sentence the child has written into language units, phrases, words, and structural segments within words (e.g., prefixes, suffixes, syllables, letter clusters, single letters, and onset and rime) based on assessment of what the child knows. Ask the child to reconstruct the sentence using letter-sound and visual information as well as language and word knowledge. **<u>Learning How Words Work</u>** • Use magnetic letters to explore how words work (e.g., letters, letter clusters,

	inflectional endings, syllables, and onset and rime). **<u>Observing Behaviors</u>** • Examine records of oral reading and writing behaviors for evidence of meaning making while using word-solving strategies on new and unfamiliar words. • Examine records for evidence of growth in reading vocabulary and writing vocabulary. A key to developing the child's vocabulary is repeated exposure to words in many contexts. Reading multiple books in the course of a particular lesson and across the entire early intervention is critical to the child's development of reading and oral vocabulary.

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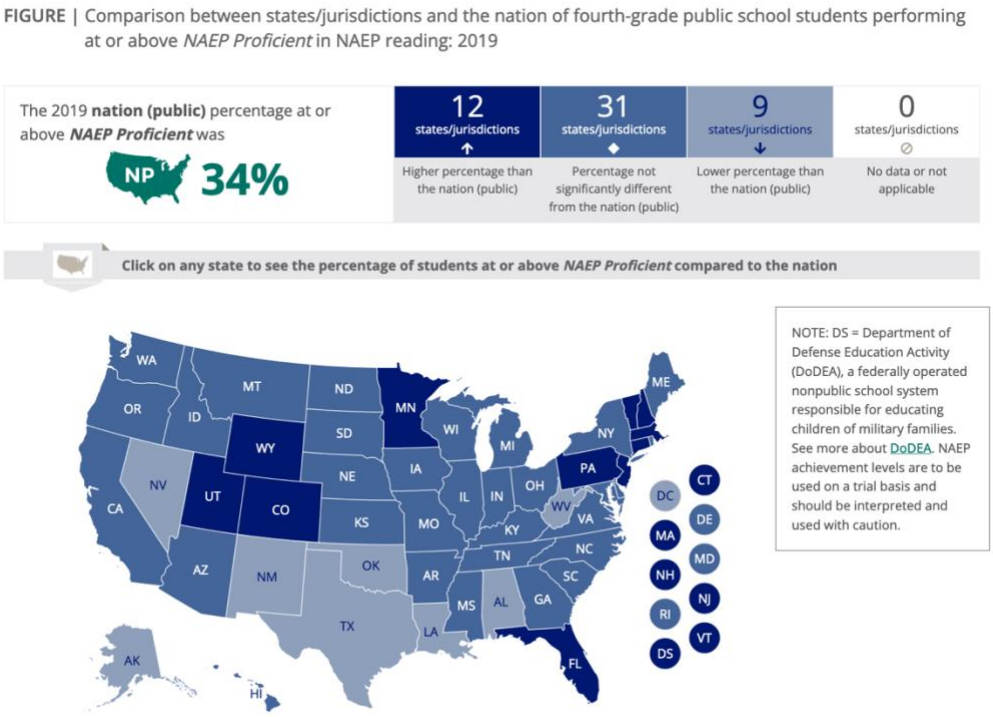


Disinformation Alert

Recently, an ad hoc organization named after a beloved region of Kentucky has claimed that Dr. George Hruby, CCLD's executive director, has been spreading erroneous and possibly confused assertions about Kentucky's performance on the 4th and 8th grade National Assessment of Educational Progress (NAEP) tests of reading achievement. These claims about Dr. Hruby are themselves disinformation. (We know this sounds like a bad Monty Python sketch but bear with us). The claims have been made to several parties including in print and on a voice mail message.

The False Claims: Dr. Hruby is said to have repeatedly referred to Kentucky's *rank order* on the National Assessment of Educational Progress relative to other states. He is said to not understand the statistical limitations of rank order between states and ignores what NAEP itself says cautioning against using such comparisons. It is concluded, Dr. Hruby does not understand the NAEP data.

Truth: In 2012, an edited volume out of Johns Hopkins University, a chapter by Dr. Hruby made clear why concerns about the US *rank order* among PISA nations were statistically insignificant, and thus were not a reason to claim for a "reading crisis." He extended this analysis to individual states.

Truth: Dr. Hruby has not made claims about Kentucky's NAEP rank order, but about its reading scores when the difference between Kentucky's scores and those of another state, or between Kentucky and the US mean (average) score, is *statistically* significant. (A score difference is considered significant when it exceeds "the margin of error," as pollsters say, exceeding a mathematically determined threshold of at least a 95% probability that the result is *not* random noise.)

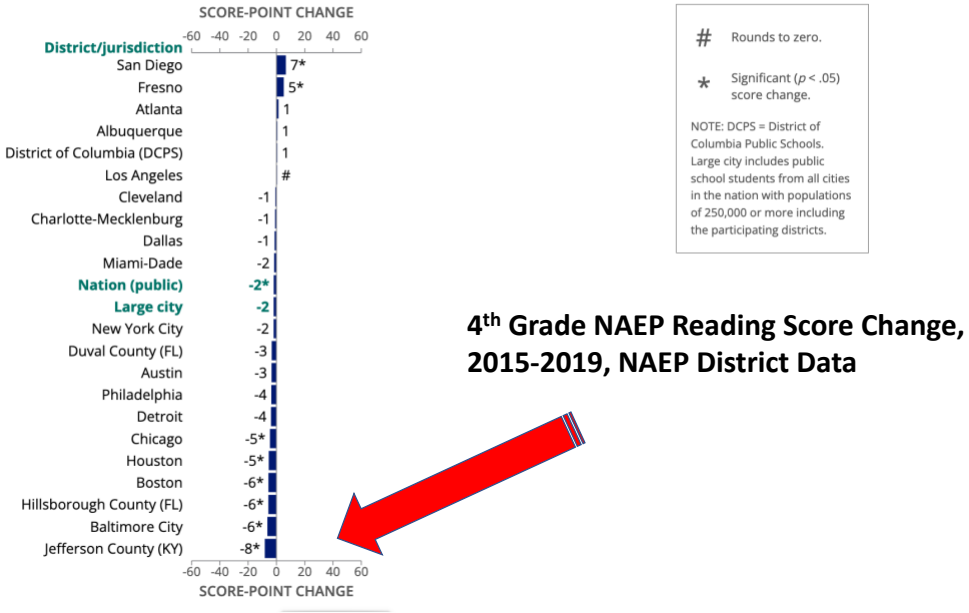
Truth: NAEP itself makes such comparisons on their website and provides color coded maps of the US showing which states are significantly above the national mean (see map above), which significantly below the national mean, and which are not significantly different from the national mean

for any given year. (Kentucky had been significantly below the US mean during the 1980s; it has been significantly above the national mean on reading every testing year at the 4th and 8th grade levels from 1998-2017; it dropped to a non-significant difference from the national mean in 2019.)

Truth: Dr. Hruby's data are directly from the NAEP's "America's Report Card" website, including NAEP's own calculations of whether a score difference between states or the US average are statistically significant, or whether the difference between scores at two different time points or between two different jurisdictions is statistically significant. Readers can bear this out for themselves by visiting the NAEP website at:

https://www.nationsreportcard.gov/reading/states/achievement/?grade=4

FIGURE | Score-point change between 2015 and 2019 for fourth-grade public school students assessed in NAEP reading, by district/jurisdiction



This graphic, used in Dr. Hruby's presentation to the Interim Joint Committee on Education, June, 2022, was copied and pasted straight off of the NAEP website. It is not illustrating a rank order of the included urban school districts, as there are no ordinal numbers ranking these districts. Rather, they are ordered by the amount of positive or negative change they demonstrated between 2015 and 2019. Those changes that were statistically significant are asterisked. Dr. Hruby simply referred to districts that showed a *significant* difference in their growth over that time. Dr. Hruby further noted that those districts that saw a *significant drop* employed a mandated phonics-intensive reading program during those years. Districts that saw a *significant improvement* had switched to a more comprehensive approach to early reading.

Truth: In 2021, Dr. Hruby was one of 12 scholars nationwide to be invited to forward a written opinion on proposed changes to the design of the NAEP reading test, and his comments were read aloud at the meeting by the President of the NAEP Governing Board—presumably because he has some understanding of the issues surrounding NAEP's test design.

Conclusion: The ad hoc amateur experts trying to influence the Kentucky General Assembly are themselves spreading disinformation. It is not clear why they are doing so or why they seem to find the science of reading, statistical evidence, or replicated evidence of policy effects so threatening. They are apparently not themselves a source of accurate or serious analysis.

www.Kentuckyliteracy.org

KRS 164.0207 requires that CCLD maintain a research repository to provide guidance to schools and districts on matters of literacy instruction, development, and assessment. We here highlight the past year's achievements of our Webmaster and Technology Director, William Adams, hired in late 2020.

CCLD's web presence continues to expand by providing more resources for the educators and school administrators of Kentucky, the families they serve, and those who help shape education policies. In 2021, the Adolescent Literacy Advisory Services page was added to highlight materials available from the International Literacy Association, with links to journals and publications that cover topics for the improvement of adolescent reading.

In addition, the CCLD website has linked to the ILA's Resource Collections, which recently released content packets to support struggling readers. The evidence-based resources come in a variety of electronic formats, such as recorded sessions, journal articles, and magazine features, giving the student a choice in what will best suit their need in gaining extra help in improving their reading and comprehension.

With CCLD's resource catalog expanding, a Resources menu redesign is being planned for completion in 2023, along with a new Resource Repository section. The new menu will allow for better navigation and cross-page integration, giving the visitor the ability to readily find varied content, such as KDE toolkits, or materials from KRP faculty at the 8 participating state universities, without having to search through a multitude of pages and links. The new repository will draw from existing resources available on the Internet, supplying a "one stop shop" for those wishing to find similar materials organized by subject and grade level. Reading diagnosis advisories and reviews of diagnostic instruments will also be included.

Due to the Covid-19 pandemic, the 2022 CCLD Share Fair was held exclusively on-line through a virtual conference provider. Presentations were recorded during the event, and they are being made available for streaming via the CCLD webpage. Past presentations are also available, and can be searched for by grade level, focus, or initiative.

The website continues to house the specialized sections of "In Their Own Words: Reflections and Interviews from Experts in Literacy" and Imagination Library video series.

Easily Accessed;
Dependably Valid;
Reliable, Replicable, Evidence-based Information!

WWW.Kentucky literacy.org