

NEPC REVIEW: TEACHER PREP REVIEW: STRENGTHENING ELEMENTARY READING INSTRUCTION (NATIONAL COUNCIL ON TEACHER QUALITY, JUNE 2023)



Reviewed by:

P.L. Thomas
Furman University

September 2023

National Education Policy Center

School of Education
University of Colorado Boulder
nepc.colorado.edu

Acknowledgements

NEPC Staff

Faith Boninger
Publications Manager

Francesca López
Academic Editor

Elaine Duggan
Production Design

Alex Molnar
NEPC Director

Kevin Welner
NEPC Director

Suggested Citation: Thomas, P.L. (2023). *NEPC review: Teacher prep review: Strengthening elementary reading instruction*. Boulder, CO: National Education Policy Center. Retrieved [date] from <http://nepc.colorado.edu/review/teacher-prep>

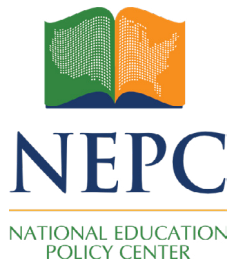
Funding: This review was made possible in part by funding from the Great Lakes Center for Educational Research and Practice.



This work is licensed under a [Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License](https://creativecommons.org/licenses/by-nc-nd/4.0/).

This publication is provided free of cost to NEPC's readers, who may make non-commercial use of it as long as NEPC and its author(s) are credited as the source. For inquiries about commercial use, please contact NEPC at nepc@colorado.edu.

The National Education Policy Center (NEPC), a university research center housed at the University of Colorado Boulder School of Education, sponsors research, produces policy briefs, and publishes expert third-party reviews of think tank reports. NEPC publications are written in accessible language and are intended for a broad audience that includes academic experts, policymakers, the media, and the general public. Our mission is to provide high-quality information in support of democratic deliberation about education policy. We are guided by the belief that the democratic governance of public education is strengthened when policies are based on sound evidence and support a multiracial society that is inclusive, kind, and just. Visit us at: <http://nepc.colorado.edu>



NEPC REVIEW: TEACHER PREP REVIEW: STRENGTHENING ELEMENTARY READING INSTRUCTION (NATIONAL COUNCIL ON TEACHER QUALITY, JUNE 2023)

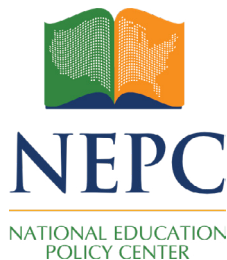
Reviewed by:

P.L. Thomas
Furman University

September 2023

Summary

Teacher Prep Review: Strengthening Elementary Reading Instruction, released June 2023 by the National Council on Teacher Quality (NCTQ), evaluates 693 out of the 1,146 elementary teacher preparation programs in the US. It claims to identify how well candidates are prepared to teach elementary reading based on NCTQ’s Reading Foundations standards for scientifically based reading practices. The evaluation, drawn simply from analyzing course syllabi and materials, concludes that “[o]nly 25% of programs adequately address all five core components of reading instruction.” Further, the report outlines model programs as well as recommended actions for teacher preparation programs, state leaders, school districts, and advocates, teachers, and parents. While addressing teacher preparation for initial reading instruction is a high priority as states increasingly adopt new reading legislation grounded in the “science of reading,” this report repeats patterns identified in external reviews of previous NCTQ reports over the past two decades. For instance, this report again relies on flawed research methodology grounded in selective use of evidence to promote NCTQ’s narrow education reform agenda. Policymakers as well as the media are strongly cautioned to view this report as narrowly constructed reform advocacy rather than a valid or scientific analysis of the quality of reading content in elementary teacher preparation programs.



NEPC REVIEW: TEACHER PREP REVIEW: STRENGTHENING ELEMENTARY READING INSTRUCTION (NATIONAL COUNCIL ON TEACHER QUALITY, JUNE 2023)

Reviewed by:

P.L. Thomas
Furman University

September 2023

I. Introduction

Since World War II, the US has experienced recurring cycles of media and political claims of a reading crisis.¹ Over the last two decades, the influence of the National Reading Panel (NRP)² in the No Child Left Behind (NCLB) Act, which mandated guidelines for high-quality teachers,³ created a high-stakes environment around teacher preparation and reading instruction.⁴ Concurrent with the NCLB era, the National Council on Teacher Quality (NCTQ), founded in 2001 by the Thomas B. Fordham Institute,⁵ has promoted teacher preparation reform through a series of high-profile reports evaluating teacher preparation.⁶

Most states over the last decade have adopted or revised state reading legislation⁷ grounded in the “science of reading” (SOR)—a movement advocating for reading instruction based exclusively on experimental/quasi-experimental research and brain research—reinforced by media coverage⁸ and think tank advocacy such as ExcelinEd (which provides a template for SOR-based reading legislation) and The Reading League.⁹ The media story about the failures of reading achievement, teacher practice, and teacher preparation remains influential even though scholars have noted that SOR advocates’ identified causes and solutions are oversimplified and misleading.¹⁰ The National Assessment of Educational Progress (NAEP) testing has also increasingly prompted media and political claims of a reading crisis.¹¹

Teacher Prep Review: Strengthening Elementary Reading Instruction (NCTQ, June 2023)¹² evaluates 693 out of the 1,146 elementary teacher preparation programs in the US. The purpose of the report, based on NCTQ’s Reading Foundations standards for scientific reading practices and an analysis of course syllabi and materials, is to identify “basic evidence that programs are using what is empirically known about how to teach reading—so every child can learn to read.”¹³ The report assigns an A-F grade to programs “based on the number of components of scientifically based reading instruction they adequately cover (phonemic

awareness, phonics, fluency, vocabulary, and comprehension) and instructional approaches (instructional hours, objective measures of knowledge, practice/application, background materials).”¹⁴ The evaluation process has been revised since NCTQ’s last report in 2020¹⁵—increasing the amount of instructional time considered adequate, adding a review of “material for the presence of reading practices contrary to the research,” assessing practice opportunities for candidates, and including an ungraded analysis of “which programs prepare aspiring teachers to teach English learners, struggling readers, and students who speak language varieties other than mainstream English language.”

“[C]ontent contrary to research-based practices” results in programs losing points for covering running records, guided reading, some assessments (DRA, IRI, QRI, etc.), balanced literacy, miscue analysis, reader’s workshop, leveled texts, three-cueing system, and embedded/implicit phonics. The report also includes model programs as well as recommended actions for teacher preparation programs, state leaders, school districts, and advocates, teachers, and parents.

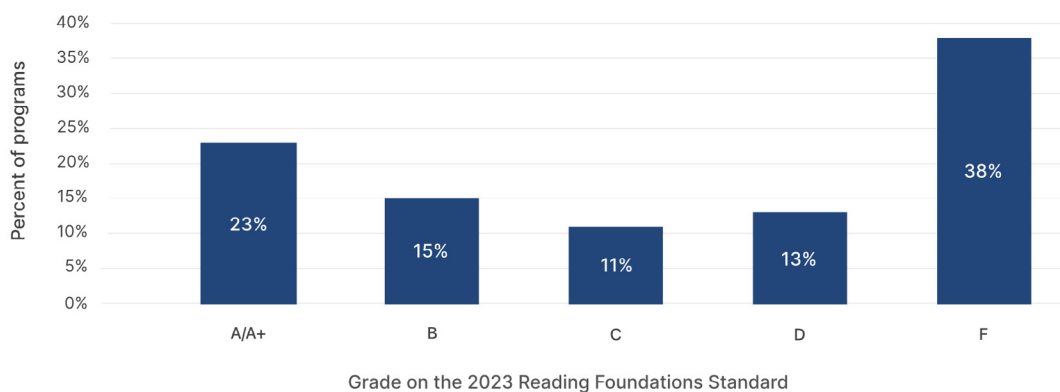
II. Findings and Conclusions of the Report

The report’s six findings include:

1. One in four programs “adequately address[es] all five core components of reading instruction”;
2. Programs most often fail to cover phonemic awareness;
3. One in three programs doesn’t include practice for core components of reading;
4. State policy can improve teacher preparation quality;
5. Programs remain weak in “preparation in teaching reading to English learners, struggling readers, and speakers of English language varieties”; and
6. More than half of the programs reviewed scored a D or F.¹⁶

Figure 8.

Distribution of grades



Note: n = 693. Percentages are rounded and may not add to 100%.

The report identifies exemplary programs (48 of the 173 programs addressing all five reading components) and recommends action plans for programs failing to meet the Reading Foundations standards established by NCTQ:¹⁷

- Teacher Preparation Programs
 - Revise programs using NCTQ feedback;
 - Include more scientifically based reading instruction;
 - Increase candidate practice time;
 - Adopt high-quality, research-based materials;
 - Remove content contrary to research-based practices;
 - Expand scientifically based reading instruction throughout entire program.
- State Leaders
 - Establish clear standards for preparation in scientifically based reading instruction;
 - Include accountability for preparation in scientifically based reading instruction;
 - Test for reading licensure, including preparation in scientifically based reading instruction, and publish pass rates;
 - “Deploy a comprehensive strategy to implement scientifically based reading instruction and prioritize teacher prep”;
 - Advocate from positions of political power.
- School Districts
 - Recruit new teachers prepared in scientifically based reading instruction;
 - Partner with programs strong in scientifically based reading instruction when providing field experiences;
 - Focus professional development on scientifically based reading instruction;
 - Target curricula and programs that address scientifically based reading instruction.
- Advocates, Teachers, and Parents
 - Advocate for scientifically based reading instruction.

The report concludes by identifying promising practices at six programs.

III. The Report’s Rationale for Its Findings and Conclusions

The rationale for the report’s findings and conclusions dovetails with the broader claims of the SOR movement¹⁸ and the recent trends of state-level SOR reading legislation.¹⁹ The report identifies a national “literary crisis” and claims to offer a clear solution for reading achievement. It makes the following claims associated with this crisis:

- More than a third of students do not meet the achievement level of “basic” defined by the National Assessment of Educational Progress (NAEP);

- The “status quo” of 30% failing to be on grade level can be increased to 90% through implementing SOR;
- Based on *Education Week* surveys, over 70% of teachers claim to have been implementing practices “debunked by cognitive scientists decades ago”;
- Reading achievement is strongly linked to life outcomes and inequity;
- Teacher preparation is a key for improving reading achievement.²⁰

IV. The Report’s Use of Research Literature

Although the report²¹ and accompanying technical report²² are heavily referenced, the 2023 report repeats problems identified in prior NCTQ reports.²³ It relies on a narrow set of evidence—the 2000 National Reading Panel (NRP) report, the 2016 Institute of Education Sciences report, The What Works Clearinghouse,²⁴ the National Institutes of Health, and cognitive science. Moreover, it routinely mixes citations of selected scientific research with citations to sources of questionable validity (i.e. media articles, podcasts, and surveys; social media posts; and think tank advocacy) to support absolute statements that are contradicted by a fuller consideration of the literature.²⁵ Acknowledging that broader evidence in a 2023 *Teachers College Record* article, Reinking and colleagues concluded, “there is no indisputable evidence of a national crisis in reading, and even if there were a crisis, there is no evidence that the amount of phonics in classrooms is necessarily the cause or the solution.”²⁶

Also as noted in reviews of prior NCTQ reports,²⁷ citations include selected research from the field of teacher education, but fail to acknowledge standards and research established by organizations of literacy professionals (e.g., the National Council of Teachers of English, International Literacy Association, and Literacy Research Association) or accreditation organizations (e.g., the Council for the Accreditation of Educator Preparation).

The report’s most problematic use of research literature is in its identification of “reading practices contrary to the research” in the program evaluations. It suggests that cognitive science has “debunked” certain teaching practices, ignoring both scholarly challenges to the utility of cognitive science for understanding reading development²⁸ and the warnings of cognitive scientists themselves.²⁹

For example, the selective use of evidence and citations to support absolute statements about “reading practices contrary to the research” is missing recent meta-analyses and international research that reveal a more nuanced and detailed understanding of balanced literacy, phonics instruction, the findings of the NRP, and three-cueing (multiple-cueing) approaches to reading comprehension.³⁰

Overall, the report is characterized by selective citations, failure to distinguish between scientific and non-scientific evidence, and misrepresentation and overstatement of the research base related to the rationale for the report³¹ and the use of “reading practices contrary to the research” to grade teacher education programs.³² These make it more a work of advo-

cacy than a careful technical analysis of the scientific research.

V. Review of the Report's Methods

This report has addressed some methodological concerns raised about previous reports,³³ but ultimately fails to reach the standard of “scientific” evidence promoted by The Reading League (ironically cited approvingly throughout the report) and literacy scholars: experimental/quasi-experimental design, blind independent peer review, and published in scholarly publication.³⁴

A heavily referenced and detailed technical report justifies the methodology:

NCTQ recognizes that given the availability of evidence, we cannot directly measure the mastery of the content and pedagogical knowledge candidates obtain (this is a function typically reserved for state-adopted licensure assessments) or the application to teaching (a function typically reserved for teacher evaluation processes).³⁵

The methods are grounded in analyzing program syllabi and materials based on the revised Reading Foundations standards established by NCTQ (see Section II above). The technical report offers sufficient detail to suggest at first blush that the teacher preparation program analysis is internally consistent, even though the empirical grounding is weak. To identify appropriate courses and syllabi for analysis, NCTQ used an Expert Advisory Panel, a Technical Advisory Group, and an Open Comment Survey, in addition to working with reviewed programs. Unlike earlier reports where noncooperating programs were failed for missing information, this report grades only participating programs (693 out of 1,146). Of the 693, 313 programs cooperated fully, but NCTQ had to send open records requests when allowed by state law for the remaining evaluated programs.

However, relying on published syllabi as comprehensive evidence of course content to grade teacher education programs on reading instruction is a weak design, despite use of inter-rater reliability practices and better explanation of the report's methods. One serious concern is that NCTQ appears to use a self-confirming litmus test for choosing analysts: Its analysts are disproportionately trained in the for-profit programs endorsed within the report (LETRS, Orton-Gillingham, Wilson).³⁶

The most problematic methodological element is the inclusion of “content contrary to research-based practices.” Identifying content and practices as either scientific or not scientific misrepresents the broader body of literature (see Section IV); further, the report mixes as evidence seemingly cherry-picked research studies, media articles and surveys, podcasts, social media, and think tank reports, contradicting the report's narrow expectation for “scientific” practices in the programs being graded.

VI. Review of the Validity of the Findings and Conclusions

The rationale and the inclusion of content contrary to research-based practices are not supported by the full body of evidence in reading science.³⁷ The report's findings lack validity because the standards used to evaluate are oversimplified, absolute claims about what counts as scientific practices, yet the methodology itself fails to meet the basic standards of scientific inquiry.³⁸

Further, the Expert Advisory Panel and the External Reviewers include think tank members (ExcelinEd, Deans for Impact) and scholars with market stakes in the report's findings (Language Essentials for Teachers of Reading and Spelling [LETRS], CORE), raising concerns about conflicts of interest eroding the validity of the report. For example, the report repeatedly endorses LETRS as "scientific," although that program is not supported by scientific research,³⁹ while lowering grades for programs putatively "debunked" by scientific research.

VII. Usefulness of the Report for Guidance of Policy and Practice

This report is ambitious and carefully constructed ideological advocacy, but not a scientific analysis of teacher preparation suitable to inform policy or practice. The report recommendations may offer a plausible structure for needed research on student reading proficiency, teacher preparation quality, and the role of reading programs and materials in reading instruction. However, it is rendered inadequate by significant conflicts of interest, ideological claims presented as "scientific," and weak methodology.

Notes and References

- 1 Thomas, P.L. (2022). *The Science of Reading movement: The never-ending debate and the need for a different approach to reading instruction*. Boulder, CO: National Education Policy Center. Retrieved June 22, 2023, from <http://nepc.colorado.edu/publication/science-of-reading>
- 2 U.S. Department of Health and Human Services. (2000, April). *Report of the National Reading Panel: Teaching children to read*. Retrieved May 18, 2022, from <https://www.nichd.nih.gov/publications/pubs/nrp/smallbook>

U.S. Department of Health and Human Services. (2000, April). *Reports of the subgroups*. Retrieved July 26, 2022, from <https://www.nichd.nih.gov/publications/pubs/nrp/report>
- 3 U.S. Department of Education, Office of Planning, Evaluation and Policy Development, Policy and Program Studies Service, State and Local Implementation of the No Child Left Behind Act, Volume VIII. (2009). *Teacher quality under NCLB: Final report*. Washington, DC. Retrieved June 22, 2023, from <https://www2.ed.gov/rschstat/eval/teaching/nclb-final/report.pdf>
- 4 Rosenberg, B. (2004, May). *What's proficient? The No Child Left Behind Act and the many meanings of proficiency*. Washington, DC: American Federation of Teachers. Retrieved June 22, 2023, from <https://files.eric.ed.gov/fulltext/ED497886.pdf>
- 5 National Council on Teacher Quality <https://www.nctq.org/>

Thomas B. Fordham Institute <https://fordhaminstitute.org/>

Note that Fordham's mission (<https://fordhaminstitute.org/about>) includes advocacy for charter schools and school choice.
- 6 Dudley-Marling, C., Stevens, L.P., & Gurn, A. (2007, April). *A critical policy analysis and response to the report of the National Council on Teacher Quality (NCTQ)*. NCTE. Retrieved July 8, 2023, from <https://ncte.org/resources/reports/critical-policy-analysis-response-nctq-report/>

Benner, S.M. (2012). *Quality in student teaching: Flawed research leads to unsound recommendations*. Boulder, CO: National Education Policy Center. Retrieved July 8, 2023, from <https://nepc.colorado.edu/thinktank/review-student-teaching>

Fuller, E.J. (2014). Shaky methods, shaky motives: A critique of the National Council of Teacher Quality's review of teacher preparation programs. *Journal of Teacher Education*, 65(1), 63-77. Retrieved July 8, 2023, from <https://journals.sagepub.com/doi/10.1177/0022487113503872>

Cochran-Smith, M., Stern, R., Sánchez, J.G., Miller, A., Keefe, E.S., Fernández, M.B., Chang, W., Carney, M.C., Burton, S., & Baker, M. (2016). *Holding teacher preparation accountable: A review of claims and evidence*. Boulder, CO: National Education Policy Center. Retrieved July 8, 2023, from <http://nepc.colorado.edu/publication/teacher-prep>

Cochran-Smith, M., Keefe, E.S., Chang, W.C., & Carney, M.C. (2018). *NEPC review: 2018 teacher prep review*. Boulder, CO: National Education Policy Center. Retrieved June 22, 2023, from <http://nepc.colorado.edu/thinktank/review-teacher-prep-2018>

Burke, K.J. & DeLeon, A. (2020). Wooden dolls and disarray: Rethinking United States' teacher education to the side of quantification. *Critical Studies in Education*, 61(4), 480-495. Retrieved July 8, 2023, from <https://www.tandfonline.com/doi/abs/10.1080/17508487.2018.1506351>

Stillman, J. & Schultz, K. (2021). *NEPC review: 2020 teacher prep review: Clinical practice and classroom management*. Boulder, CO: National Education Policy Center. Retrieved June 22, 2023, from <http://nepc>

colorado.edu/thinktank/teacher-prep

Thomas, P.L. & Goering, C.Z. (2016). *NEPC review: Learning about learning: What every new teacher needs to know*. Boulder, CO: National Education Policy Center. Retrieved June 22, 2023, from <http://nepc.colorado.edu/thinktank/review-teacher-education>

- 7 Thomas, P.L. (2022). *The Science of Reading movement: The never-ending debate and the need for a different approach to reading instruction*. Boulder, CO: National Education Policy Center. Retrieved June 22, 2023, from <http://nepc.colorado.edu/publication/science-of-reading>

Reinking, D., Hruby, G.G., & Risko, V.J. (2023). Legislating phonics: Settled science or political polemics? *Teachers College Record*, 125(1), 104-131. Retrieved June 22, 2023, from <https://doi.org/10.1177/01614681231155688>

Olson, L. (2023, June). *The reading revolution: How states are scaling literacy reform*. FutureEd. Retrieved June 22, 2023, from <https://www.future-ed.org/teaching-children-to-read-one-state-at-a-time/>

Collet, V.S., Penaflorida, J., French, S., Allred, J., Greiner, A., & Chen, J. (2021). Red flags, red herrings, and common ground: An expert study in response to state reading policy. *Educational Considerations*, 47(1). Retrieved July 26, 2022, from <https://doi.org/10.4148/0146-9282.2241>

Cummings, A. (2021). *Making early literacy policy work in Kentucky: Three considerations for policymakers on the "Read to Succeed" act*. Boulder, CO: National Education Policy Center. Retrieved May 18, 2022, from <https://nepc.colorado.edu/publication/literacy>

Cummings, A., Strunk, K.O., & De Voto, C. (2021). "A lot of states were doing it": The development of Michigan's Read by Grade Three law. *Journal of Educational Change*. Retrieved April 28, 2022, from <https://link.springer.com/article/10.1007/s10833-021-09438-y>

Schwartz, S. (2022, July 20). Which states have passed "science of reading" laws? What's in them? *Education Week*. Retrieved July 25, 2022, from <https://www.edweek.org/teaching-learning/which-states-have-passed-science-of-reading-laws-whats-in-them/2022/07>

- 8 Hanford, E. (2018, September 10). *Hard words: Why aren't kids being taught to read?* APM Reports. Retrieved June 22, 2023, from <https://www.apmreports.org/story/2018/09/10/hard-words-why-american-kids-arent-being-taught-to-read>

Hanford, E. (2020, October 16). *Influential literacy expert Lucy Calkins is changing her views*. APM Reports. Retrieved June 9, 2022, from <https://www.apmreports.org/story/2020/10/16/influential-literacy-expert-lucy-calkins-is-changing-her-views>

Hanford, E. (2019, December 5). There is a right way to teach reading, and Mississippi knows it. *New York Times*. Retrieved May 16, 2022, from <https://www.nytimes.com/2019/12/05/opinion/mississippi-schools-naep.html>

Goldstein, D. (2022, May 22). In the fight over how to teach reading, this guru makes a major retreat. *New York Times*. Retrieved May 22, 2022, from <https://www.nytimes.com/2022/05/22/us/reading-teaching-curriculum-phonics.html>

Wexler, N. (2021, December 21). The 10 posts I wrote in 2021 that got the most views. *Forbes*. Retrieved April 27, 2022, from <https://www.forbes.com/sites/nataliewexler/2021/12/21/the-10-most-viewed-posts-of-2021/>

Kristof, N. (2023, February 11). Two-thirds of kids struggle to read, and we know how to fix it. *New York Times*. Retrieved June 22, 2023, from <https://www.nytimes.com/2023/02/11/opinion/reading-kids-phonics.html>

- 9 Early literacy. (2022). *ExcelinEd*. Retrieved June 23, 2023, from <https://excelined.org/policy-playbook/early->

literacy/

The Reading League. (n.d.) Retrieved June 23, 2023, from <https://www.thereadingleague.org/>

- 10 Aukerman, M. (2022a). *The Science of Reading and the media: Is reporting biased?* Literacy Research Association Critical Conversations. Retrieved June 22, 2023, from <https://literacyresearchassociation.org/stories/the-science-of-reading-and-the-media-is-reporting-biased/>

Aukerman, M. (2022b). *The Science of Reading and the media: Does the media draw on high-quality reading research?* Literacy Research Association. Retrieved June 22, 2023, from <https://literacyresearchassociation.org/stories/the-science-of-reading-and-the-media-does-the-media-draw-on-high-quality-reading-research/>

Aukerman, M. (2022c). *The Science of Reading and the media: Does the media draw on high-quality reading research?* Literacy Research Association. Retrieved June 22, 2023, from <https://literacyresearchassociation.org/stories/the-science-of-reading-and-the-media-how-do-current-reporting-patterns-cause-damage/>

Reinking, D., Hruby, G.G., & Risko, V.J. (2023). Legislating phonics: Settled science or political polemics? *Teachers College Record*, 125(1), 104-131. Retrieved June 22, 2023, from <https://doi.org/10.1177/01614681231155688>

Thomas, P.L. (2022). *The Science of Reading movement: The never-ending debate and the need for a different approach to reading instruction*. Boulder, CO: National Education Policy Center. Retrieved June 22, 2023, from <http://nepc.colorado.edu/publication/science-of-reading>

Hoffman, J.V., Hikida, M., & Sailors, M. (2020). Contesting science that silences: Amplifying equity, agency, and design research in literacy teacher preparation. *Reading Research Quarterly*, 55(S1), S255-S266. Retrieved June 22, 2023, from <https://doi.org/10.1002/rrq.353>

MacPhee, D., Handsfield, L.J., & Paugh, P. (2021). Conflict or conversation? Media portrayals of the science of reading. *Reading Research Quarterly*, 55(S1), S145-S155. Retrieved July 26, 2022, from <https://doi.org/10.1002/rrq.384>
- 11 Loveless, T. (2023, June 11). Literacy and NAEP proficient (blog post). *Tom Loveless*. Retrieved June 22, 2023, from <https://tomloveless.com/posts/literacy-and-naep-proficient/>

Loveless, T. (2016, June 13). *The NAEP proficiency myth*. Brookings. Retrieved June 22, 2023, from <https://www.brookings.edu/blog/brown-center-chalkboard/2016/06/13/the-naep-proficiency-myth/>

Reinking, D., Hruby, G.G., & Risko, V.J. (2023). Legislating phonics: Settled science or political polemics? *Teachers College Record*, 125(1), 104-131. Retrieved June 22, 2023, from <https://doi.org/10.1177/01614681231155688>

Rosenberg, B. (2004, May). *What's proficient? The No Child Left Behind Act and the many meanings of proficiency*. Washington, DC: American Federation of Teachers. Retrieved June 22, 2023, from <https://files.eric.ed.gov/fulltext/ED497886.pdf>
- 12 Ellis, C., Holston, S., Drake, G., Putman, H., Swisher, A., & Peske, H. (2023). *Teacher prep review: Strengthening elementary reading instruction*. Washington, DC: National Council on Teacher Quality. Retrieved June 22, 2023, from https://www.nctq.org/dmsView/Teacher_Prep_Review_Strengthening_Elementary_Reading_Instruction
- 13 Ellis, C., Holston, S., Drake, G., Putman, H., Swisher, A., & Peske, H. (2023). *Teacher prep review: Strengthening elementary reading instruction* (p. 4). Washington, DC: National Council on Teacher Quality. Retrieved June 22, 2023, from https://www.nctq.org/dmsView/Teacher_Prep_Review_Strengthening_Elementary_Reading_Instruction
- 14 Ellis, C., Holston, S., Drake, G., Putman, H., Swisher, A., & Peske, H. (2023). *Teacher prep review:*

Strengthening elementary reading instruction (p. 35). Washington, DC: National Council on Teacher Quality. Retrieved June 22, 2023, from https://www.nctq.org/dmsView/Teacher_Prep_Review_Strengthening_Elementary_Reading_Instruction

- 15 Pomerance, L. & Walsh, K. (2020). *2020 Teacher prep review: Clinical practice and classroom management*. Washington, D.C.: National Council on Teacher Quality. Retrieved November 20, 2020, from <https://www.nctq.org/publications/2020-Teacher-Prep-Review:-Clinical-Practice-and-Classroom-Management>
- 16 Ellis, C., Holston, S., Drake, G., Putman, H., Swisher, A., & Peske, H. (2023). *Teacher prep review: Strengthening elementary reading instruction* (p. 35, Figure 8). Washington, DC: National Council on Teacher Quality. Retrieved June 22, 2023, from https://www.nctq.org/dmsView/Teacher_Prep_Review_Strengthening_Elementary_Reading_Instruction.
- 17 *Teacher prep review: Reading foundations technical report*. (2023, June). Washington, DC: National Council on Teacher Quality. Retrieved June 22, 2023, from https://www.nctq.org/dmsView/Teacher_Prep_Review_Reading_Foundations_Technical_Report
- 18 Aukerman, M. (2022a). *The Science of Reading and the media: Is reporting biased?* Literacy Research Association Critical Conversations. Retrieved June 22, 2023, from <https://literacyresearchassociation.org/stories/the-science-of-reading-and-the-media-is-reporting-biased/>

Aukerman, M. (2022b). *The Science of Reading and the media: Does the media draw on high-quality reading research?* Literacy Research Association Critical Conversations. Retrieved June 22, 2023, from <https://literacyresearchassociation.org/stories/the-science-of-reading-and-the-media-does-the-media-draw-on-high-quality-reading-research/>

Aukerman, M. (2022c). *The Science of Reading and the media: Does the media draw on high-quality reading research?* Literacy Research Association Critical Conversations. Retrieved June 22, 2023, from <https://literacyresearchassociation.org/stories/the-science-of-reading-and-the-media-how-do-current-reporting-patterns-cause-damage/>

Reinking, D., Hruby, G.G., & Risko, V.J. (2023). Legislating phonics: Settled science or political polemics? *Teachers College Record*, 125(1), 104-131. Retrieved June 22, 2023, from <https://doi.org/10.1177/01614681231155688>

Thomas, P.L. (2022). *The Science of Reading movement: The never-ending debate and the need for a different approach to reading instruction*. Boulder, CO: National Education Policy Center. Retrieved June 22, 2023, from <http://nepc.colorado.edu/publication/science-of-reading>

Hoffman, J.V., Hikida, M., & Sailors, M. (2020). Contesting science that silences: Amplifying equity, agency, and design research in literacy teacher preparation. *Reading Research Quarterly*, 55(S1), S255-S266. Retrieved June 22, 2023, from <https://doi.org/10.1002/rrq.353>
- 19 Reinking, D., Hruby, G.G., & Risko, V. J. (2023). Legislating phonics: Settled science or political polemics? *Teachers College Record*, 125(1), 104-131. Retrieved June 22, 2023, from <https://doi.org/10.1177/01614681231155688>

Cummings, A. (2021). *Making early literacy policy work in Kentucky: Three considerations for policymakers on the "Read to Succeed" act*. Boulder, CO: National Education Policy Center. Retrieved May 18, 2022, from <https://nepc.colorado.edu/publication/literacy>

Cummings, A., Strunk, K.O., & De Voto, C. (2021). "A lot of states were doing it": The development of Michigan's Read by Grade Three law. *Journal of Educational Change*. Retrieved April 28, 2022, from <https://link.springer.com/article/10.1007/s10833-021-09438-y>

Collet, V.S., Penaflores, J., French, S., Allred, J., Greiner, A., & Chen, J. (2021). Red flags, red herrings, and

common ground: An expert study in response to state reading policy. *Educational Considerations*, 47(1). Retrieved July 26, 2022, from <https://doi.org/10.4148/0146-9282.2241>

Schwartz, S. (2022, July 20). Which states have passed “science of reading” laws? What’s in them? *Education Week*. Retrieved July 25, 2022, from <https://www.edweek.org/teaching-learning/which-states-have-passed-science-of-reading-laws-whats-in-them/2022/07>

Thomas, P.L. (2022). *The Science of Reading movement: The never-ending debate and the need for a different approach to reading instruction*. Boulder, CO: National Education Policy Center. Retrieved June 22, 2023, from <http://nepc.colorado.edu/publication/science-of-reading>

- 20 Ellis, C., Holston, S., Drake, G., Putman, H., Swisher, A., & Peske, H. (2023). *Teacher prep review: Strengthening elementary reading instruction* (pp. 3-4). Washington, DC: National Council on Teacher Quality. Retrieved June 22, 2023, from https://www.nctq.org/dmsView/Teacher_Prep_Review_Strengthening_Elementary_Reading_Instruction
 - 21 Ellis, C., Holston, S., Drake, G., Putman, H., Swisher, A., & Peske, H. (2023). *Teacher prep review: Strengthening elementary reading instruction*. Washington, DC: National Council on Teacher Quality. Retrieved June 22, 2023, from https://www.nctq.org/dmsView/Teacher_Prep_Review_Strengthening_Elementary_Reading_Instruction
 - 22 *Teacher prep review: Reading foundations technical report*. (2023, June). National Council on Teacher Quality. Retrieved June 22, 2023, from https://www.nctq.org/dmsView/Teacher_Prep_Review_Reading_Foundations_Technical_Report
 - 23 Dudley-Marling, C., Stevens, L.P., & Gurn, A. (2007, April). *A critical policy analysis and response to the report of the National Council on Teacher Quality (NCTQ)*. NCTE. Retrieved July 8, 2023, from <https://ncte.org/resources/reports/critical-policy-analysis-response-nctq-report/>
- Benner, S.M. (2012). *Quality in student teaching: Flawed research leads to unsound recommendations*. Boulder, CO: National Education Policy Center. Retrieved July 8, 2023, from <https://nepc.colorado.edu/thinktank/review-student-teaching>
- Fuller, E.J. (2014). Shaky methods, shaky motives: A critique of the National Council of Teacher Quality’s review of teacher preparation programs. *Journal of Teacher Education*, 65(1), 63-77. Retrieved July 8, 2023, from <https://journals.sagepub.com/doi/10.1177/0022487113503872>
- Cochran-Smith, M., Stern, R., Sánchez, J.G., Miller, A., Keefe, E.S., Fernández, M.B., Chang, W., Carney, M.C., Burton, S., & Baker, M. (2016). *Holding teacher preparation accountable: A review of claims and evidence*. Boulder, CO: National Education Policy Center. Retrieved July 8, 2023, from <http://nepc.colorado.edu/publication/teacher-prep>
- Cochran-Smith, M., Keefe, E.S., Chang, W.C., & Carney, M.C. (2018). *NEPC review: 2018 teacher prep review*. Boulder, CO: National Education Policy Center. Retrieved June 22, 2023, from <http://nepc.colorado.edu/thinktank/review-teacher-prep-2018>
- Burke, K.J. & DeLeon, A. (2020). Wooden dolls and disarray: Rethinking United States’ teacher education to the side of quantification. *Critical Studies in Education*, 61(4), 480-495. Retrieved July 8, 2023, from <https://www.tandfonline.com/doi/abs/10.1080/17508487.2018.1506351>
- Stillman, J. & Schultz, K. (2021). *NEPC review: 2020 teacher prep review: Clinical practice and classroom management*. Boulder, CO: National Education Policy Center. Retrieved June 22, 2023, from <http://nepc.colorado.edu/thinktank/teacher-prep>
- Thomas, P.L. & Goering, C.Z. (2016). *NEPC review: Learning about learning: What every new teacher needs to know*. Boulder, CO: National Education Policy Center. Retrieved June 22, 2023, from <http://nepc.colorado.edu/thinktank/learning-about-learning>

edu/thinktank/review-teacher-education

- 24 Covington, N. (2020, March 2). *Why “what works” won’t work and why “what works” may hurt.* Human Restoration Project. Retrieved July 2, 2023, from <https://www.humanrestorationproject.org/writing/why-what-works-wont-work-and-why-what-works-may-hurt>
- 25 See, for example:
- Aukerman, M. (2022a). *The Science of Reading and the media: Is reporting biased?* Literacy Research Association Critical Conversations. Retrieved June 22, 2023, from <https://literacyresearchassociation.org/stories/the-science-of-reading-and-the-media-is-reporting-biased/>
- Aukerman, M. (2022b). *The Science of Reading and the media: Does the media draw on high-quality reading research?* Literacy Research Association Critical Conversations. Retrieved June 22, 2023, from <https://literacyresearchassociation.org/stories/the-science-of-reading-and-the-media-does-the-media-draw-on-high-quality-reading-research/>
- Aukerman, M. (2022c). *The Science of Reading and the media: How do current reporting patterns cause damage?* Literacy Research Association Critical Conversations. Retrieved June 22, 2023, from <https://literacyresearchassociation.org/stories/the-science-of-reading-and-the-media-how-do-current-reporting-patterns-cause-damage/>
- 26 Reinking, D., Hruby, G.G., & Risko, V.J. (2023). Legislating phonics: Settled science or political polemics? *Teachers College Record*, 125(1), 113. Retrieved June 22, 2023, from <https://doi.org/10.1177/01614681231155688>
- 27 Dudley-Marling, C., Stevens, L.P., & Gurn, A. (2007, April). *A critical policy analysis and response to the report of the National Council on Teacher Quality (NCTQ)*. NCTE. Retrieved July 8, 2023, from <https://ncte.org/resources/reports/critical-policy-analysis-response-nctq-report/>
- Benner, S.M. (2012). *Quality in student teaching: Flawed research leads to unsound recommendations*. Boulder, CO: National Education Policy Center. Retrieved July 8, 2023, from <https://nepc.colorado.edu/thinktank/review-student-teaching>
- Fuller, E.J. (2014). Shaky methods, shaky motives: A critique of the National Council of Teacher Quality’s review of teacher preparation programs. *Journal of Teacher Education*, 65(1), 63-77. Retrieved July 8, 2023, from <https://journals.sagepub.com/doi/10.1177/0022487113503872>
- Cochran-Smith, M., Stern, R., Sánchez, J.G., Miller, A., Keefe, E.S., Fernández, M.B., Chang, W., Carney, M.C., Burton, S., & Baker, M. (2016). *Holding teacher preparation accountable: A review of claims and evidence*. Boulder, CO: National Education Policy Center. Retrieved July 8, 2023, from <http://nepc.colorado.edu/publication/teacher-prep>
- Cochran-Smith, M., Keefe, E.S., Chang, W.C., & Carney, M.C. (2018). *NEPC review: 2018 teacher prep review*. Boulder, CO: National Education Policy Center. Retrieved June 22, 2023, from <http://nepc.colorado.edu/thinktank/review-teacher-prep-2018>
- Burke, K.J. & DeLeon, A. (2020). Wooden dolls and disarray: Rethinking United States’ teacher education to the side of quantification. *Critical Studies in Education*, 61(4), 480-495. Retrieved July 8, 2023, from <https://www.tandfonline.com/doi/abs/10.1080/17508487.2018.1506351>
- Stillman, J. & Schultz, K. (2021). *NEPC review: 2020 teacher prep review: Clinical practice and classroom management.* Boulder, CO: National Education Policy Center. Retrieved June 22, 2023, from <http://nepc.colorado.edu/thinktank/teacher-prep>
- Thomas, P.L. & Goering, C.Z. (2016). *NEPC review: Learning about learning: What every new teacher needs to know*. Boulder, CO: National Education Policy Center. Retrieved June 22, 2023, from <http://nepc.colorado.edu/thinktank/review-teacher-education>

edu/thinktank/review-teacher-education

- 28 Yaden, D.B., Reinking, D., & Smagorinsky, P. (2021). The trouble with binaries: A perspective on the science of reading. *Reading Research Quarterly*, 56(S1), S119-S129. Retrieved July 26, 2022, from <https://doi.org/10.1002/rrq.402>
- 29 “[R]eading science is highly relevant to learning in the classroom setting [; however,] it does not yet speak to what to teach, when, how, and for whom at a level that is useful for teachers.”
- Seidenberg, M.S., Cooper Borkenhagen, M., & Kearns, D.M. (2020). Lost in translation? Challenges in connecting reading science and educational practice. *Reading Research Quarterly*, 55(S1), S121. Retrieved July 26, 2022, from <https://doi.org/10.1002/rrq.341>
- 30 Hoffman, Hikida, and Sailors note that a “single organization [NCTQ] can, without any accountability and with the use of so-called science as its claim to legitimacy, make pronouncements and draw on data that contradict the fundamental features of scientific processes It is clear that the repeated critiques of literacy teacher preparation expressed by the SOR community do not employ the same standards for scientific research that they claimed as the basis for their critiques.”
- Hoffman, J.V., Hikida, M., & Sailors, M. (2020). Contesting science that silences: Amplifying equity, agency, and design research in literacy teacher preparation. *Reading Research Quarterly*, 55(S1), S258, S259. Retrieved June 22, 2023, from <https://doi.org/10.1002/rrq.353>
- Bowers, J.S. (2020). Reconsidering the evidence that systematic phonics is more effective than alternative methods of reading instruction. *Educational Psychology Review*, 32(2020), 681-705. Retrieved June 26, 2023, from <https://link.springer.com/article/10.1007%2Fs10648-019-09515-y>
- Compton-Lilly, C.F., Mitra, A., Guay, M., & Spence, L.K. (2020). A confluence of complexity: Intersections among reading theory, neuroscience, and observations of young readers. *Reading Research Quarterly*, 55(S1), S185-S195. Retrieved June 22, 2023, from <https://doi.org/10.1002/rrq.348>
- Reinking, D., Hruba, G.G., & Risko, V. J. (2023). Legislating phonics: Settled science or political polemics? *Teachers College Record*, 125(1), 104-131. Retrieved June 22, 2023, from <https://doi.org/10.1177/01614681231155688>
- Thomas, P.L. (2022). *The Science of Reading movement: The never-ending debate and the need for a different approach to reading instruction*. Boulder, CO: National Education Policy Center. Retrieved June 22, 2023, from <http://nepc.colorado.edu/publication/science-of-reading>
- Tortorelli, L.S., Lupoo, S.M., & Wheatley, B.C. (2021). Examining teacher preparation for code-related reading instruction: An integrated literature review. *Reading Research Quarterly*, 56(S1), S317-S337. Retrieved June 22, 2023, from <https://doi.org/10.1002/rrq.396>
- Wyse, D. & Bradbury, A. (2022). Reading wars or reading reconciliation? A critical examination of robust research evidence, curriculum policy and teachers’ practices for teaching phonics and reading. *Review of Education*, 10(1), e3314. Retrieved June 22, 2023, from <https://doi.org/10.1002/rev3.3314>
- Shanahan, T. (2005). *The National Reading Panel report: Practical advice for teachers*. Learning Point Associates. Retrieved June 22, 2023, from <https://files.eric.ed.gov/fulltext/ED489535.pdf>
- Shanahan, T. (2003, April). Research-based reading instruction: Myths about the National Reading Panel report. *The Reading Teacher*, 56(7), 646-65
- Stephens, D. (2008). *The federal government wants me to teach what? A teacher’s guide to the National Reading Panel report*. National Council of Teachers of English. Retrieved June 22, 2023, from https://cdn.ncte.org/nctefiles/resources/newsletter/magazine/nrp_report.pdf

Garan, E.M. (2001, March). Beyond smoke and mirrors: A critique of the National Reading Panel report on phonics. *Phi Delta Kappan*, 82(7), 500-506. Retrieved June 22, 2023, from <https://doi.org/10.1177/003172170108200705>

Collet, V.S., Penaflorida, J., French, S., Allred, J., Greiner, A., & Chen, J. (2021). Red flags, red herrings, and common ground: An expert study in response to state reading policy. *Educational Considerations*, 47(1). Retrieved July 26, 2022, from <https://doi.org/10.4148/0146-9282.2241>

Yatvin, J. (2002). Babes in the woods: The wanderings of the National Reading Panel. *The Phi Delta Kappan*, 83(5), 364-369;

Yatvin, J. (2003). I told you so! The misinterpretation and misuse of The National Reading Panel Report. *Education Week*, 22(33), 44-45, 56. Retrieved June 22, 2023, from <https://www.edweek.org/ew/articles/2003/04/30/33yatvin.h22.html>

Yatvin, J. (2000). *Minority view*. Retrieved June 22, 2023, from <https://www.nichd.nih.gov/sites/default/files/publications/pubs/nrp/Documents/minorityView.pdf>

Mora, J.K. (2023, July 3). To cue or not to cue: Is that the question? *Language Magazine*. Retrieved July 6, 2023, from <https://www.languagemagazine.com/2023/07/03/to-cue-or-not-to-cue-is-that-the-question/>

31 The claim that 90% of students can be reading at grade level cites a blog post that admits, at best, this claim is speculative and aspirational, not settled science; access here: <https://www.pedagogyongranta.com/the-95-rule>

32 “It is counterproductive for advocates of SoR to allow the media to create practitioner lore condemning practices associated with theoretical frameworks that are not favored by a certain group of reading scientists. If science of reading advocates seek to maintain legitimacy with the multilingual learner education research community, we must set a very high bar for judging any theoretical framework to be ‘disproven,’ ‘debunked,’ or ‘wrong.’”

Mora, J.K. (2023, July 3). To cue or not to cue: Is that the question? *Language Magazine*. Retrieved July 6, 2023, from <https://www.languagemagazine.com/2023/07/03/to-cue-or-not-to-cue-is-that-the-question/>

33 Dudley-Marling, C., Stevens, L.P., & Gurn, A. (2007, April). *A critical policy analysis and response to the report of the National Council on Teacher Quality (NCTQ)*. NCTE. Retrieved July 8, 2023, from <https://ncte.org/resources/reports/critical-policy-analysis-response-nctq-report/>

Benner, S.M. (2012). *Quality in student teaching: Flawed research leads to unsound recommendations*. Boulder, CO: National Education Policy Center. Retrieved July 8, 2023, from <https://nepc.colorado.edu/thinktank/review-student-teaching>

Fuller, E.J. (2014). Shaky methods, shaky motives: A critique of the National Council of Teacher Quality’s review of teacher preparation programs. *Journal of Teacher Education*, 65(1), 63-77. Retrieved July 8, 2023, from <https://journals.sagepub.com/doi/10.1177/0022487113503872>

Cochran-Smith, M., Stern, R., Sánchez, J.G., Miller, A., Keefe, E.S., Fernández, M.B., Chang, W., Carney, M.C., Burton, S., & Baker, M. (2016). *Holding teacher preparation accountable: A review of claims and evidence*. Boulder, CO: National Education Policy Center. Retrieved July 8, 2023, from <http://nepc.colorado.edu/publication/teacher-prep>

Cochran-Smith, M., Keefe, E.S., Chang, W.C., & Carney, M.C. (2018). *NEPC review: 2018 teacher prep review*. Boulder, CO: National Education Policy Center. Retrieved June 22, 2023, from <http://nepc.colorado.edu/thinktank/review-teacher-prep-2018>

Burke, K.J. & DeLeon, A. (2020). Wooden dolls and disarray: Rethinking United States’ teacher education to the side of quantification. *Critical Studies in Education*, 61(4), 480-495. Retrieved July 8, 2023, from <https://www.tandfonline.com/doi/abs/10.1080/17508487.2018.1506351>

Stillman, J. & Schultz, K. (2021). *NEPC review: 2020 teacher prep review: Clinical practice and classroom management*. Boulder, CO: National Education Policy Center. Retrieved June 22, 2023, from <http://nepc.colorado.edu/thinktank/teacher-prep>

Thomas, P.L. & Goering, C.Z. (2016). *NEPC review: Learning about learning: What every new teacher needs to know*. Boulder, CO: National Education Policy Center. Retrieved June 22, 2023, from <http://nepc.colorado.edu/thinktank/review-teacher-education>

- 34 The Reading League. (2001). *Science of reading: Defining guide*. Retrieved June 28, 2023, from <https://www.thereadingleague.org/what-is-the-science-of-reading/>

See also:

“Cummins’s criteria enable educators to distinguish between evidence-free ideological claims and evidence-based, logically coherent, and pedagogically useful claims that support effective instructional practices for multilingual learners.”

In Mora, J.K. (2023, July 3). To cue or not to cue: Is that the question? *Language Magazine*. Retrieved July 6, 2023, from <https://www.languagemagazine.com/2023/07/03/to-cue-or-not-to-cue-is-that-the-question/>

- 35 National Council on Teacher Quality. (2023, June). *Teacher prep review: Reading foundations technical report*. Retrieved June 22, 2023, from https://www.nctq.org/dmsView/Teacher_Prep_Review_Reading_Foundations_Technical_Report

- 36 National Council on Teacher Quality. (2023, June). *Teacher prep review: Reading foundations technical report*. Retrieved June 22, 2023, from https://www.nctq.org/dmsView/Teacher_Prep_Review_Reading_Foundations_Technical_Report

- 37 Thomas, P.L. (2022). *The Science of Reading movement: The never-ending debate and the need for a different approach to reading instruction*. Boulder, CO: National Education Policy Center. Retrieved June 22, 2023, from <http://nepc.colorado.edu/publication/science-of-reading>

- 38 Mora, J.K. (2023, July 3). To cue or not to cue: Is that the question? *Language Magazine*. Retrieved July 6, 2023, from <https://www.languagemagazine.com/2023/07/03/to-cue-or-not-to-cue-is-that-the-question/>

Cummins, J. (2021). *Rethinking the education of multilingual learners: A critical analysis of theoretical concepts*. Multilingual Matters.

Hoffman, J.V., Hikida, M., & Sailors, M. (2020). Contesting science that silences: Amplifying equity, agency, and design research in literacy teacher preparation. *Reading Research Quarterly*, 55(S1), S255–S266. Retrieved June 22, 2023, from <https://doi.org/10.1002/rrq.353>

- 39 Hoffman, J.V., Hikida, M., & Sailors, M. (2020). Contesting science that silences: Amplifying equity, agency, and design research in literacy teacher preparation. *Reading Research Quarterly*, 55(S1), S255–S266. Retrieved June 22, 2023, from <https://doi.org/10.1002/rrq.353>

Access the current body of research on LETRS at https://docs.google.com/document/d/1HV57h-18km68jirWvkiEDQIyA6GV02JP9LxKt6D_QJU/edit?usp=sharing