Teacher Prep Review

2020

Program Performance in Early Reading Instruction





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Key findings

The number of elementary programs teaching scientifically-based reading instruction to their aspiring teachers continues to increase, a clear trend since the first edition of the *Teacher Prep Review*. Over 50 percent of traditional programs earn an A or a B, compared to only 35 percent in 2013.

The type of teacher preparation program matters. Undergraduate programs are nearly twice as likely to teach scientificallybased instructional methods as graduate programs, and four times more likely as non-traditional "alternative certification" programs.

Teacher prep programs in Mississippi performed the highest of any state's programs (repeating their strong performance in the last edition of the Teacher Prep Review), followed closely by **Utah**. Other notable states with strong performances by a majority of their programs were Arkansas, Delaware, Florida, Idaho, Louisiana, Minnesota, New Hampshire, Ohio, and Oklahoma. States with the most notable improvements among programs include **Arkansas**, Florida, Michigan, New Hampshire, Vermont, and Wisconsin.

Of the five components of scientificallybased reading instruction, traditional programs are most likely to omit the first and most challenging instructional skill teachers need to teach before children can learn to read: **phonemic awareness**. Narrowly half (51 percent) provide instruction in this skill in which children must accurately identify the speech sounds in words. Additionally, too few programs (only 53 percent) spend enough time teaching about the importance of reading fluency. Preparation in how to teach phonics, vocabulary, and **comprehension** are more prevalent.





America's persistent reading crisis

Each year well over a million public school students who have reached the fourth grade are added to the nation's ranks of nonreaders. The lion's share (two-thirds!) are black and Hispanic children, who struggle to achieve in the face of an inequitable education system.² While there are certainly middle-class white children who have difficulty reading, the real fault line for America's high illiteracy rate is class and race.

Effective remediation strategies are largely inaccessible to these nonreaders, which is why 43 million American adults are essentially illiterate, and cannot read well enough to decipher a ballot, file their tax returns, or read their own mail.3

What makes America's stubbornly high rate of illiteracy disturbing is that it is so unnecessary. Research conducted on tens of thousands of children and adults, readers and nonreaders alike, largely under the auspices of the National Institutes of Health, has provided the roadmap needed to slash the rate of reading failure from three in 10 children to one in 10.4 It begins with making sure that teachers can understand and employ research-based instructional methods. It continues with requiring that teachers have the right tools: summative and formative assessments that accurately gauge their students' reading progress and, of course, strong curricula. It is not unlike the components of a successful surgery, with a doctor's deep knowledge as the foundation, supplied by the right diagnostic and surgical equipment — not to mention plenty of support.

The need to guarantee that teachers have expertise in reading instruction (as well as other critical skills NCTQ assesses)⁵ before being entrusted with a classroom of children is the purpose behind the *Teacher Prep Review*. By regularly reviewing the reading coursework and practice opportunities provided by more than 1,200 elementary teacher preparation programs, the National Council on Teacher Quality seeks basic evidence that programs are guided by what is empirically known, not ideology or individual preference.

NCTQ spent 10 years establishing a fair and accurate way to measure if a program is teaching the science of reading before officially launching the Teacher Prep Review in 2013. No fewer than 10 pilot studies, starting in 2006, were conducted to ensure that the Early Reading standard served as a fair reflection of a program's approach. Its structure is the synthesis of research from the 2000 National Reading Panel, convened by the U.S. Congress, reaffirmed by the Institute of Education Sciences in 2009 and again in 2016.⁷

How NCTO assesses program adherence to the science of reading

The methodology used by NCTQ to rate programs in early reading is summarized in a brief animated video and provided in more detail, along with the rubrics used to score programs, on the NCTO website.8

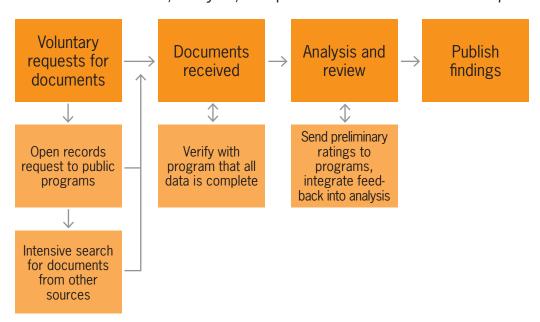
Elementary teachers need to understand and know how to teach the five components of reading science: (1) developing in their students awareness of the sounds made by spoken words (phonemic awareness); (2) systematically mapping those speech sounds onto letters and letter combinations (phonics); (3) giving students extended practice for reading words so that they learn to read without a lot of effort (fluency) — allowing them to devote their mental energy to the meaning of the text; (4) building student vocabulary, a skill closely associated with the final component; (5) developing their students' understanding of what is being read to them and eventually what they will read themselves (**comprehension**).

To assess if aspiring teachers are likely to acquire knowledge of these five components, NCTQ first reviews the required reading courses for each elementary program, an analysis each program is asked to verify. A team of reading experts — all professors and practitioners with advanced degrees and deep knowledge of how children learn to read — evaluate the syllabi for these courses. They review the planned lecture topics, assigned readings, assignments, assessments, and opportunities for practice. Every textbook that is required in these reading courses is also evaluated to assess if it accurately supports none, some, or all of the five components of scientifically-based reading instruction, and is based on consensus research.

Together, these experts are not just looking for passing mentions of the five essential components. For example, a reference to any of the five components in the stated objectives for a course is considered insufficient evidence. They look for clear evidence of *dedicated course time* as well as *measures to hold teacher candidates accountable* for learning each component.

Every program is given the opportunity to provide extensive input on the analysis several times before publication. This includes a confidential review of their preliminary score with the option of submitting additional evidence for analysis. For this edition of the *Teacher Prep Review*, approximately 15 percent of the sample chose to provide further attestation, a cooperative process that led to scoring updates for 60 percent of those programs.

Process of collection, analysis, and publication for the Teacher Prep Review



How a program earns an A

To earn an A on the Early Reading standard, programs must demonstrate coverage of all five components, each of which must figure prominently in the required reading coursework. Programs are deemed to provide adequate coverage of a component if at least two of the three criteria below appear in a single course:

- 1. Explicit and repeated instruction on each of the five components
- 2. Support for instruction with high-quality textbooks that accurately detail established principles of scientificallybased reading practices
- 3. Opportunities for teacher candidates to demonstrate mastery through in-class assignments, tests, and instructional practice

Programs drop a full letter grade for each component that is not adequately addressed. A more detailed description of the scoring methodology, including the rubric used to evaluate each component, is available here.9

Here are some examples of how a course could be found to provide sufficient coverage of a component:

- Readings that accurately present the content with two or more lectures dedicated to the component
- Readings that accurately present the content and the requirement of instructional practice in the component
- Two or more lectures and a test dedicated to the component
- Two or more lectures and assignments dedicated to the component

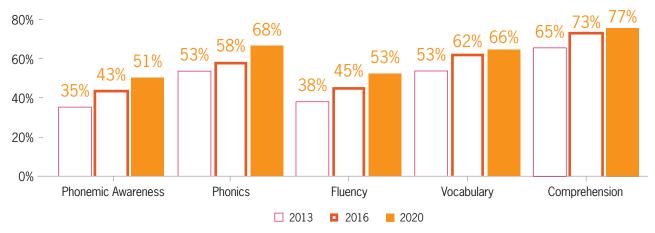
Note: The data contained in this report are accurate as of publication, January 27, 2020. As NCTO continues to engage with programs on their data, program scores and national summary data may be updated. The most up-to-date program scores and national data can be found on the Teacher Prep Review Database: www.nctg.org/review/standardDetails/Early-Reading.



2020 National Findings

1. Programs have increased their coverage of all aspects of the science of reading, a trend that has persisted through each edition of the Teacher Prep Review.

Traditional program coverage of each of the five reading components, 2013-2020



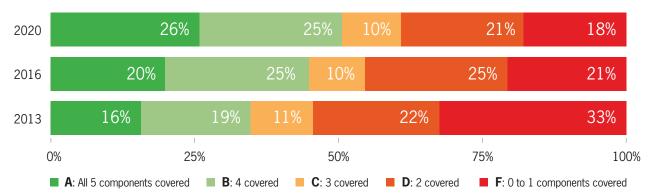
NOTE: The data shown here for 2013 include both the original 594 programs published in 2013 and the additional 275 programs reported in 2014, for a total of 869 programs. All of the data for those two releases were collected between 2011 and 2014. The 2016 data represent data on 1,011 programs collected between 2015 and 2016, but were again published in two releases (undergraduate elementary in 2016 and graduate elementary in 2018). Data for the 2020 release for 1,047 programs were collected in 2018 and 2019.

Compared to the first Teacher Prep Review, at least 10 percent more programs now provide adequate instruction in each of the five components of scientifically-based reading. However, phonemic awareness, the first skill children must master if they are to become successful readers.¹⁰ remains the least likely to be taught in a program's coursework. Barely half of programs (51 percent) cover it adequately. Teachers are not any more likely to learn the importance of fluency (the ability to read without effort), with only 53 percent of programs providing adequate coverage of that component.

2. In its approach to reading preparation, the field of teacher education is at an inflection point, with the momentum favoring the science of reading.

For the first time, more than half of all traditional programs earn an A or a B by providing adequate instruction for at least four of the five components. This represents a 6-point increase since the 2016 edition and a 16-point increase over the 2013 edition.

Distribution of traditional program grades, 2013-2020



NOTE: The Teacher Prep Review included 869 programs in 2013; 1,011 programs in 2016; and 1,047 programs in 2020. The previous practice of scoring some programs as "pass" or "fail" in lieu of a letter grade when scored with less complete information has been eliminated, with programs earning a "pass" now earning a B and programs earning a "fail" earning a D. This change was applied retroactively to previous editions so that the table above provides an in-kind comparison of all editions of the Teacher Prep Review. Due to rounding, some years add to 101 percent.

3. The science of reading now prevails in undergraduate programs, with a clear majority now earning an A or B. However, graduate programs are stagnant.

Undergraduate programs have improved their coverage of scientifically-based reading instruction since NCTQ first began to examine them, with 57 percent now earning an A or B. This steady growth represents a 10-point improvement when compared to 2016 and an 18-point increase over the 2013 *Teacher Prep Review*.

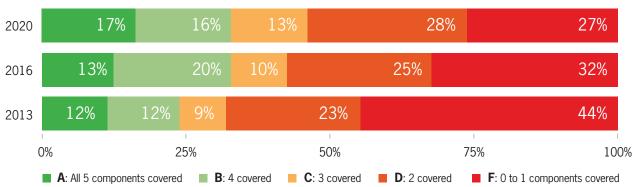
Distribution of grades, undergraduate programs, 2013-2020



NOTE: The Teacher Prep Review included 654 programs in 2013; 820 programs in 2016; and 775 programs in 2020.

Graduate programs improved slightly from 2013 to 2016, but have since stagnated.¹¹ While a greater percentage of graduate programs earn an A in 2020, the percentage of programs earning the top two grades is unchanged from 2016. It is important to note that this is due in part to graduate programs that are appearing in the *Teacher Prep Review* for the first time, which on average score below programs that have appeared in previous editions.

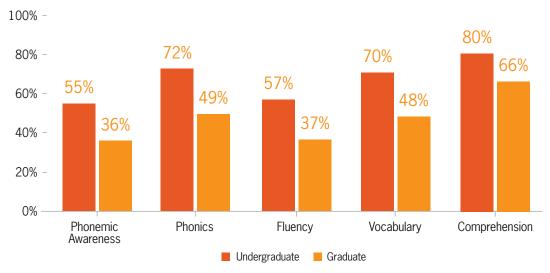
Distribution of grades, graduate programs, 2013-2020



NOTE: The Teacher Prep Review included 215 programs in 2014; 194 programs in 2016; and 272 programs in 2020. Due to rounding, some years add to 101 percent.

When looking at coverage of the five components, the differences between undergraduate and graduate programs is pronounced. On average, there is a 20-point difference in the percentage of programs addressing each component.

Comparison of coverage of reading science by program type



NOTE: 775 undergraduate programs and 272 graduate programs were reviewed in 2020. The limited sample of graduate programs reflects the availability of initial certification programs at the graduate level.

Why the stark difference between undergraduate and graduate ratings? Two factors would seem to provide plausible explanations, but neither presents a clear answer. It is the case that graduate programs dedicate only two courses on average to reading instruction, compared to three courses on average by undergraduate programs. However, when two-course graduate programs are compared to two-course undergraduate programs, a meaningful difference in scores still persists (with undergraduate programs covering an average of three reading components, compared to just two for their graduate counterparts).

It is also true that undergraduate and graduate reading courses are frequently taught by different faculty. However, this fact does not fully explain how undergraduate programs adequately cover an average of about one additional component consistently more than their graduate counterparts on the same campus.

The different scores earned by programs operating on the same campus speak to a broader issue NCTQ reported on in 2015, finding little commonality on a range of factors, including selectivity in admission, coursework choices, and significantly different approaches taken by individual professors on the same topic.12

4. For programs that want to improve their reading instruction, models of excellence exist.

Exemplary undergraduate programs

Fifteen undergraduate elementary programs earn not just an **A**, but an **A**+ for exemplary coursework. These top-performing programs stand out because they fully satisfy the three evaluated criteria for all five components.

AR Arkansas Tech University NC Lenoir-Rhyne University FL Florida International University OH University of Akron

FL University of Florida TN East Tennessee State University ID Lewis-Clark State College TX East Texas Baptist University LA Nicholls State University **UT** Dixie State University MA Gordon College UT Utah State University MS Delta State University WV Marshall University

MS University of Mississippi

Programs in **bold** also appeared on this list in the previous edition of the *Teacher Prep Review*.

Consistently high-performing undergraduate programs

Since 2013, 32 undergraduate programs have earned an A under the Early Reading standard in each edition of the Teacher Prep Review.

AR Southern Arkansas University NC University of North Carolina at Charlotte

AR University of Arkansas at Monticello NE Peru State College CA California State University – Bakersfield NY Keuka College CO Colorado State University – Pueblo OH University of Dayton **OK** Langston University CT Eastern Connecticut State University

DE University of Delaware OK Oklahoma Panhandle State University

FL Florida State University OK Oklahoma State University Northwest Florida State College PA Neumann University GA University of West Georgia TX Texas A&M University

TX University of Texas at El Paso LA Grambling State University

LA Northwestern State University of Louisiana UT Dixie State University MA Gordon College VA Longwood University MS Delta State University VA Norfolk State University

MS Mississippi University for Women VA Regent University MS University of Mississippi WV Concord University

MS William Carey University WV Marshall University

Exemplary graduate programs

No graduate program earned an A+.

Consistently high-performing graduate programs

Six graduate programs have earned an **A** under the Early Reading standard in each edition of the Teacher Prep Review.

CA California State University – Bakersfield NC University of North Carolina at Charlotte

CA California State University – Dominguez Hills PA Cedar Crest College

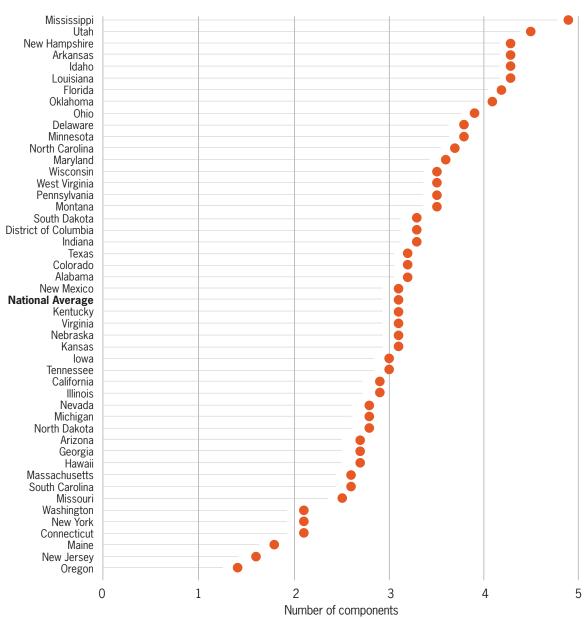
LA University of New Orleans WA University of Washington - Tacoma

A full listing of program scores can be found here. 13

5. There is substantial variation in adherence to reading science depending upon the state.

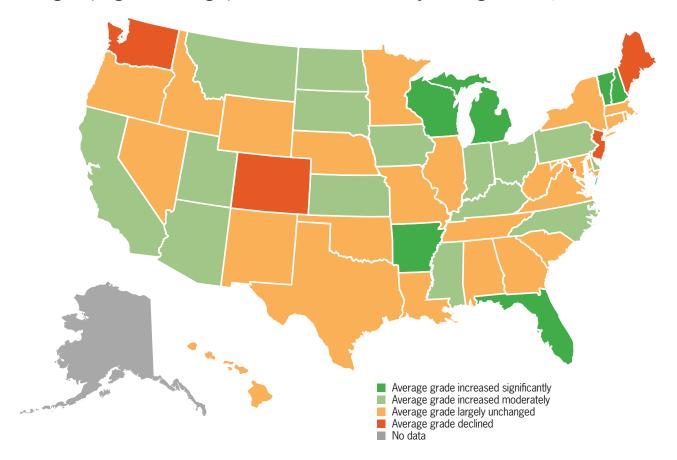
The 2019 data from the Nation's Report Card, known as NAEP (the National Assessment of Education Progress), found just one state with significantly improved fourth grade reading scores: Mississippi. The state's attention to teacher preparation in reading, alongside its investment in additional supports, such as literacy coaches, has been key to its success. In line with this collective commitment, for the second consecutive edition of the Teacher Prep Review, Mississippi programs earn the highest aggregate grade with nearly all 12 programs reviewed covering the five components.

Average number of components taught by traditional programs in each state



NOTE: Rhode Island, Vermont, and Wyoming are excluded due to having fewer than five programs in the sample, making a ranking problematic. The three Rhode Island programs averaged 3 components; the four Vermont programs averaged 3.5 components; and the two Wyoming programs (from a single institution) averaged 4.5 components. Additionally, the University of Alaska system was consolidated into a single institution in 2019. Without clear information about the coursework requirements for this new institution, Alaska was not included in this edition.

Change in programs' average performance under the Early Reading standard, 2016-202014

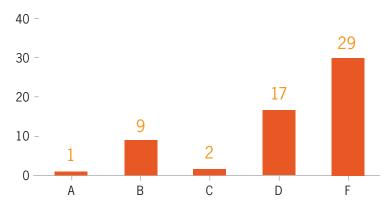


NOTE: The University of Alaska system was consolidated into a single institution in 2019. Without clear information about the coursework requirements for this new institution, Alaska was not included in this edition.

6. Because of their fast-track design, non-traditional (alternate route) programs are largely unable to prepare teachers to enter the classroom ready to teach reading.

In addition to undergraduate and graduate programs, NCTQ evaluated 58 non-traditional programs in early reading. The analysis of non-traditional programs only considers the coursework that is required before candidates become teachers of record, under the operating principle that teachers need to have this knowledge from the start. These programs can also earn a passing score if their candidates have to pass a strong licensing test specific to reading, prior to entering the classroom as the teacher of record.

Distribution of grades, non-traditional programs



NOTE: 58 programs were reviewed in 2020.

The vast majority of non-traditional programs fail to provide adequate reading instruction or a passing score on a strong, reading-specific licensing test prior to their candidates becoming teachers of record. While many of these programs provide coursework in literacy, timing is a problem with their teachers already in classrooms.

Highest performing non-traditional programs

CA Alder Graduate School of Education: California Teacher Residency Program (the only program earning an A)

DC Urban Teachers (B)

LA Northwestern State University: Practitioner Teacher Program (B)

TX INSPIRE Texas: Educator Certification by Region 4 (B)

The full listing of these programs and their scores is available here. 15

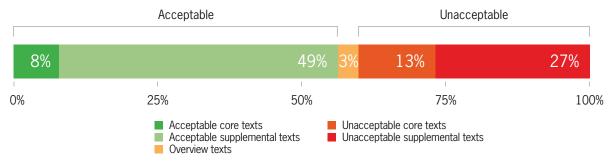
7. The use of textbooks that reflect the science of reading is increasing.

Every required textbook is reviewed for its coverage of the science of reading. The process of reviewing a book follows these steps:

- 1. The reviewer first ascertains if the text can be used either as a 'core' text (covering all five of the components, as well as analyzing how the text approaches assessment and strategies for struggling readers), or as a 'supplemental' text (appropriate for teaching one or a combination of the components, but not all).
- 2. The reviewer then determines if the content defines and presents a component in light of the science, shedding old unproven practice and advancing a depth of knowledge not only about how students learn to read, but specifically how to teach students to read – not just guide, encourage, or support.
- 3. References are perused for primary sources, researchers, and trusted peer-reviewed journals that present the consensus around the science of reading.

Among the 725 textbooks required by programs reviewed in this edition, 40 percent are **inadequate** for the purposes of teaching the science of reading. Many texts still hold onto unproven practices, including references to authentic running record, and strategies for word solving. Some still include long-discredited three cuing systems for decoding, or promote the use of 'cloze reading' to teach students to guess words that would fit.¹⁶

Distribution of ratings for texts used in reading courses



NOTE: Following the textbook review process, the 725 textbooks found in this edition are distributed into five categories. Overview texts are those that accurately summarize scientifically-based reading research, but do not focus on reading instruction.

While the number of textbooks used in reading courses remains exceptionally high (still seven times higher than the number used to teach elementary mathematics), there has been a significant decrease in the number of texts used by the full sample of programs, 130 fewer texts since the last Teacher Prep Review. The decrease could well be a healthy sign that teacher education may be achieving more consensus for the preparation of teachers in reading.

Exemplary texts covering all five elements of effective reading instruction

Listed below are 10 textbooks found in our analysis that comprehensively and rigorously cover the scientific basis and instructional elements of the five essential components of effective reading instruction. Also included are four texts that have not been found in reading courses, but should be strongly considered for literacy instruction.

Exemplary texts covering all five elements of effective reading instruction

Title	Authors	Number of Courses Using Text
Teaching Reading Sourcebook (Core Literacy Library)	Honig, Bill; Diamond, Linda; Gutlohn, Linda	94
Teaching Reading in the 21st Century: Motivating All Learners	Graves, Michael; Juel, Connie; Graves, Bonnie; Dewitz, Peter	21
Locating and Correcting Reading Difficulties	Cockrum, Ward; Shanker, James	16
Report of the National Reading Panel: Teaching Children to Read – Reports of the Subgroups	National Reading Panel	16
Multisensory Teaching of Basic Language Skills	Birsh, Judith; Carreker, Suzanne	13
Intervention Strategies to Follow Informal Reading Inventory Assessment: So What Do I Do Now?	Caldwell, JoAnne Schudt; Leslie, Lauren	11
How to Plan Differentiated Reading Instruction: Resources for Grades K-3	Walpole, Sharon; McKenna, Michael	7
Creating Literacy Instruction for All Students in Grades 4-8	Gunning, Thomas	6
Direct Instruction Reading	Carnine, Douglas; Silbert, Jerry; Kame'enui, Edward; Tarver, Sara	5
Essentials of Assessing, Preventing, and Overcoming Reading Difficulties	Kilpatrick, David	5
Intensive Reading Interventions for the Elementary Grades	Wanzek, Jeanne; Al Otaiba, Stephanie; McMaster, Kristen	0
Becoming a Professional Reading Teacher: What to Teach, How to Teach, Why it Matters	Aaron, P.G.; Joshi, R. Malatesha; Quatroche, Diana	0
Fundamentals of Literacy Instruction & Assessment PreK-6	Hougen, Martha; Smartt, Susan	0
Handbook of Reading Interventions	O'Connor, Rollanda; Vadasy, Patricia	0

The 10 most commonly used texts in teacher prep coursework earning a "not acceptable" rating

Title	Authors	Number of Courses Using Text
Literacy for the 21st Century: A Balanced Approach	Tompkins, Gail	235
The Reading Strategies Book: Your Everything Guide to Developing Skilled Readers	Serravallo, Jennifer	91
Reading and Learning to Read	Vacca, Jo Anne; Vacca, Richard; Gove, Mary; Burkey, Linda; Lenhart, Lisa; McKeon, Christine	72
Language Arts: Patterns of Practice	Tompkins, Gail	70
Literacy in the Early Grades: A Successful Start for PreK-4 Readers and Writers	Tompkins, Gail; Rodgers, Emily	70
The Next Step Forward in Guided Reading: An Assess-Decide-Guide Framework for Supporting Every Reader Grades K-8	Richardson, Jan	54
Guided Reading, Second Edition: Responsive Teaching Across the Grades	Fountas, Irene; Pinnell, Gay	47
Phonics They Use: Words for Reading and Writing	Cunningham, Patricia	46
Classrooms That Work: They Can All Read and Write	Cunningham, Patricia; Allington, Richard	40
All Children Read: Teaching for Literacy in Today's Diverse Classrooms	Temple, Charles; Ogle, Donna; Crawford, Alan; Freppon, Penny	34

The full list of textbooks and their ratings can be found here. 17



Conclusion

While it is heartening to see progress being made by teacher prep programs to ensure aspiring teachers are learning the method of reading instruction that is most likely to yield the highest number of successful readers, we cannot ignore the roadblocks that persist. Half of programs continue to omit key components of the science of reading. Equally as pernicious is the lack of tools provided to teachers that are necessary to teach this method once they enter the classroom. We will squander these advancements made by teacher prep if we do not provide teachers with curriculum, texts, and assessments that reflect evidence-based reading instruction. The progress is too slow when we consider what is at stake: the future of our nation's youth, particularly that of our students of color.

Educational inequity experienced by children of color or those who are economically disadvantaged may be the most significant educational challenge in the United States, and it knows no boundaries. Inequities rear their heads as much in a child's kindergarten experience as in the experiences of those who walk — or don't walk — across the commencement stage. While providing teachers with the knowledge to teach reading is not in and of itself the full solution, it is the one great contribution the nation's higher education institutions can make.

Endnotes

- The 2019 NAEP results find 35 percent of fourth grade students to be "below basic" on the reading assessment. In 1998, 42 percent of fourth graders received the same designation. While there has been improvement over the last 21 years, the nationwide average score on the fourth grade reading assessment is down for the second consecutive round of findings. U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2019 Reading Assessments. Retrieved December 16, 2019 from https://nces.ed.gov/nationsreportcard/subject/publications/stt2019/pdf/2020014NP4.pdf.
- lbid. While 53 percent of black students and 46 percent of Hispanic students scored at a "below basic" level on the 2019 NAEP, only 24 percent of white students could not reach the "basic" level. Even controlling for poverty, black children are about 50 percent more likely to score below basic than white children. For more on the link between third grade reading proficiency and school dropout rates, see the National Research Council, (1998), Preventing Reading Difficulties in Young Children, Edited by C. Snow, S. Burns, and P. Griffin, Committee on the Prevention of Reading Difficulties in Young Children. Washington, DC: National Academy Press.
- Rampey, B.D., Finnegan, R., Goodman, M., Mohadjer, L., Krenzke, T., Hogan, J., and Provasnik, S. (2016). Skills of U.S. Unemployed, Young, and Older Adults in Sharper Focus: Results From the Program for the International Assessment of Adult Competencies (PIAAC) 2012/2014: First Look (NCES 2016-039rev), U.S. Department of Education, Washington, DC: National Center for Education
- Torgesen, J. K. (2004). Preventing early reading failure. American Educator, 28(3), 6-9.; Torgesen, J. K. (1998). Catch them before they fall: Identification and assessment to prevent reading failure in young children. American Educator, 22(1-2), 32-39. Retrieved from: www.aft.org/sites/default/files/periodicals/torgesen.pdf.; Lyon, G. R. (1998). Overview of reading and literacy initiatives (Report to Committee on Labor and Human Resources, US Senate). Bethesda, MD: National Institute of Child Health and Human Development, National Institute of Health. Retrieved from: https://files.eric.ed.gov/fulltext/ED444128.pdf.; Vellutino, F. R., Fletcher, J. M., Snowling, M. J., & Scanlon, D. M. (2004). Specific reading disability (dyslexia): What have we learned in the past four decades?. Journal of Child Psychology and Psychiatry, 45(1), 2-40. Retrieved from: https:// onlinelibrary.wiley.com/doi/full/10.1046/j.0021-9630.2003.00305.x.
- In addition to early reading, NCTQ examines five other aspects of programs' preparation of new elementary teachers: admissions standards including academic aptitude, preparation in mathematics, alignment of content, coursework with elementary curricula, training in research-based classroom management strategies, and the quality of the clinical (student teaching) experience.
- See, for example, https://www.nctq.org/publications/What-Education-Schools-Arent-Teaching-About-Reading—and-What-Elementary-Teachers-Arent-Learning.
- Foundational Skills to Support Reading for Understanding in Kindergarten Through 3rd Grade, Institute for Education Sciences, Revised 2016.
- https://www.nctg.org/review/standardDetails/Early-Reading#learnMore.
- https://www.nctg.org/review/standardDetails/Early-Reading#howWeGraded.
- 10 Shaywitz, B. & Shaywitz, S.(1997). The Yale Center for the Study of Learning and Attention: Longitudinal and Neurobiological Studies.
- 11 Graduate programs are inclusive of both master's degree and post-baccalaureate programs not leading to a master's degree.
- 12 Greenberg, J., & Dugan, N. (2015). Incoherent by Design: What You Should Know about Differences between Undergraduate and Graduate Training of Elementary Teachers. National Council on Teacher Quality. https://www.nctg.org/publications/Incoherent-By-Design.
- 13 https://www.nctq.org/review/search/standard/Early-Reading.
- 14 Comparison between 2016 and 2020 scores only considers programs that were graded in both editions.
- 15 https://www.nctg.org/review/search/standard/Early-Reading.
- 16 A cloze passage presents sentences in which words are omitted and students are taught to guess a word that would fit. This ubiquitous practice is in direct conflict with how the brain actually interprets print. Seidenberg, M.S. (2013). The Science of Reading and Its Educational Implications. Language Learning and Development, 9, 331-360.
- 17 https://www.nctg.org/review/readingTextbooks.

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