

Research to Action:
Improving K-3 Literacy Instruction for
Students with Learning Differences
Executive Summary

March 2020



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Oak Foundation partnered with Education First to research efforts to improve K-3 literacy, with special attention to students with learning differences

Who we are

Oak Foundation commits its resources to address issues of global, social and environmental concern, particularly those that have a major impact on the lives of the disadvantaged. With offices in Europe, Africa, India and North America, Oak Foundation makes grants to organisations in approximately 40 countries worldwide.



Oak Foundation's Learning Differences Programme (LDP) believes that together we can build a world in which schools unlock the creativity and power of every young person, especially the most marginalized, and equip them to shape more just and equitable communities.

The LDP focuses on equity as a proactive strategic approach that accounts for structural differences in power, opportunities, burdens, and needs to design targeted responses that improve outcomes and close gaps.

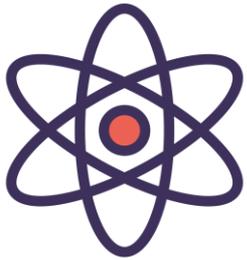
Education First is a seasoned team of trusted advisors to the leaders responsible for delivering what many Americans want most: public education that effectively prepares students for success in college, careers and a world of constant change. We devote our energy and expertise to improving opportunities for all children, especially students from low-income families and students of color.



education**first**

Oak Foundation's Learning Differences Programme supports efforts to improve K-3 literacy instruction, particularly for students with learning differences who also experience additional adversity due to racism and poverty

The opportunity



The Learning Differences Programme is particularly interested in opportunities for **improving early (K-3) literacy instruction, particularly for students with learning differences who also experience additional adversity due to racism and poverty.**

Oak Foundation aims to contribute to this work by **helping the field build educator knowledge and skill in the science of learning and early literacy.** We **focus particularly on educators' initial preparation and ongoing development as well as high-quality instructional materials and support.**

Why this deck



Across the U.S., there is a renewed focus on improving students' early literacy, especially given stagnant reading scores across the nation. **We offer this resource to help funders and others in the education sector make decisions to meet the challenge of improving early literacy for all students, particularly those who have learning differences, ensuring they have access to effective instruction and materials to support their reading acquisition.**

Education First originally developed this landscape scan in January 2020 for the Oak Foundation to support its early literacy investments and adapted the scan in March 2020 as a public resource.

This scan explores potential levers and highlights opportunities for the education sector to support effective early literacy instruction

Key questions this scan seeks to answer:



The science of reading, learning differences and equity

What does the research say about how children learn to read and about effective teaching practice for reading instruction in the early grades, specifically for students with learning differences and those furthest from opportunity?



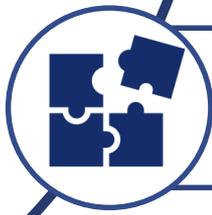
Systemic levers for change in education

What are the key areas where important shifts in the education system are needed to better to serve all students, and specifically for students with learning differences and those furthest from opportunity, in learning to read proficiently?



Bright spots

What promising practices, approaches or models for implementing effective reading instruction currently exist in the field, specifically to support students with learning differences and those furthest from opportunity?



Strategies for the field

What are the high-potential strategies and solutions to improve K-3 literacy instruction, specifically for students with learning differences and those furthest from opportunity?

Education First conducted online research, interviewed education leaders and experts and facilitated a convening to inform this landscape scan

Research methodology

Literature review

Preliminary research

Conducted a high-level review of **publicly available reports, scholarly articles and other materials** to understand the science of reading and effective reading instruction in kindergarten through 3rd grade.

Selection of areas for deeper research

Reviewed potential levers for change and **selected three levers for deeper research** (education preparation, professional development and curricula).

In-depth research

Interviews

Conducted in-depth phone interviews with **22 leaders in early literacy, educator preparation, professional development and curricula**, including funders, researchers, policymakers and practitioners.

Online Research

Reviewed additional **publicly available reports, scholarly articles and other materials** to complement the information provided by interviewees and fill any gaps in our knowledge of the field.

Convening + Final analysis

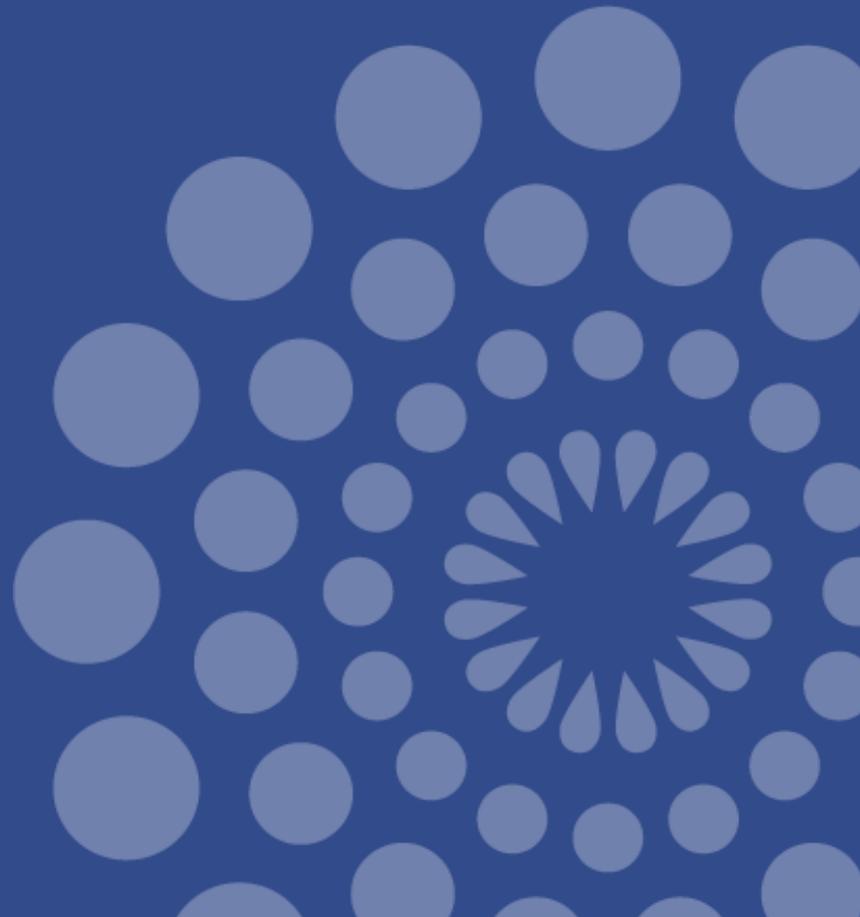
Expert Convening

Convened a group of **diverse stakeholders to review a draft of this deck and discuss high-potential levers and solutions** to improve K-3 literacy.

Refined the research findings based on **input from the expert convening**.

Developed **recommendations for philanthropic investment** in light of the research findings.

2 | The need



Nationally, two-thirds of students in the U.S. are struggling to learn to read and to do so proficiently

NAEP 2019 scores reveal a decline in students scoring *proficient or above* in reading since 2017 with only...



35%

of 4th grade students scoring *proficient or above* in reading

And there are particularly stark disparities for students of color and students from low-income families

For example...

In the U.S., white male students are



3x

more likely to read proficiently
by 4th grade than their Black
peers



And even when controlling for income...

25%

of white boys from low-
income families

achieve reading
proficiency by 4th grade,
compared to

10%

of Black boys from
low-income families

The consequences for students are severe: Children who can't read well by the 4th grade are more likely to...



Have **behavioral and social problems**



Be **retained** and have to repeat a grade



Be involved with the **juvenile justice system**



Stay **poor readers** through high school



Drop out or not **graduate** high school

And the consequences are even more severe for students experiencing poverty, children of color and English Learners, who are also disproportionately placed in special education and removed from the general education classroom

Many students who experience challenges with reading have learning and attention issues

Learning and attention issues are brain-based differences that can take a variety of forms and can affect all aspects of life



Math



Reading



Writing



Organization

Students with learning and attention issues **struggle with one or more of these issues...**



Focus



Motor skills



Listening comprehension



Social skills

Overall, 1 in 5 students are estimated to struggle with learning and attention issues, but are not necessarily identified in school as having a disability



Students struggle with learning and attention issues

Early and accurate identification of learning disabilities in schools can set struggling students on a path for success. But **identification can be influenced by many factors—and too often is not happening early enough.**

For instance, signs of learning and attention issues get overlooked or misinterpreted, or some parents are hesitant to let schools “label” their child as having a learning difference.

For students of color and students experiencing poverty, the challenges of identification and getting the right supports may be even more acute

Researchers and policymakers have suggested that historically students of color and students experiencing poverty are far **more likely to be placed in special education** than their peers.

12%

of students below the federal poverty level are identified with a specific learning disability*

6%

of students at 400%+ of the federal poverty level are identified with a specific learning disability*

More recent research suggests that the problem may be more complex: students of color and students experiencing poverty **may be both over-identified and under-identified** and, as a result, **may not be getting supports and services they need.**

For example, a 2017 study found that...

44%

of the lowest achieving black boys are receiving special education services

74%

of the lowest achieving white boys are receiving special education services

*Under IDEA, children with disabilities in reading are categorized under the umbrella of 'specific learning disability' (SLD), which can also include dysgraphia and dyscalculia. However, in the absence of specific numbers on dyslexia, SLD is still a decent proxy for reading impairment, as 75–80 percent of children with SLD have deficits in language and reading.

Dyslexia is the most common reading-related learning difference, but there are other learning differences that can affect or even co-occur with dyslexia

Reading difference

Dyslexia

Dyslexia is a brain-based learning difference specifically affecting reading. Children with dyslexia may have difficulty with **word-level reading (decoding), spelling** and performing other skills related to the **use of printed language**.

Other learning differences that can affect reading

Attention deficit and hyperactivity disorder (ADHD)

ADHD is a neurodevelopmental condition that makes it hard to focus. It can also cause trouble with organization and executive function—particularly, **working memory**—which is needed for reading but not specific to it.

Slow processing speed

Slow processing speed means it takes longer to **take in information and respond to it**. Though it sometimes co-occurs with dyslexia (and ADHD), it is not specific to reading.

Dyscalculia

Dyscalculia makes **working with numbers and mathematical concepts** challenging. It sometimes co-occurs with dyslexia.

Dysgraphia

Dysgraphia makes the **physical act of writing** difficult and labored. It sometimes co-occurs with dyslexia.

With so many students struggling to read, those with dyslexia are often not identified for the extra support they need before the optimal intervention window ends



The Dyslexia Paradox

Most students with dyslexia are not identified until the 2nd or 3rd grade—but the interventions that typically follow are most effective at mitigating dyslexia when delivered in kindergarten and 1st grade.

“When schools produce kids who can’t read and spell, then you can’t find the five percent who are dyslexic.”*

—Dr. Timothy Odegard, Chair of Excellence in Dyslexic Studies, Middle Tennessee State University

*Estimates of the incidence of dyslexia vary, but most place the incidence of dyslexia between five percent and 17 percent of the general population.

Research suggests that the reading challenges students with dyslexia experience can be significantly mitigated with appropriate reading instruction in the early grades

Without assistance
until age nine or later...

75%

of these students will
struggle throughout their
entire school careers



If these students get the right
supports, with the right
intensity by 1st grade...

Majority

of these students can
eventually read on
grade level

3 | Key insights from the research

3a | The science of reading, learning differences and equity

Reading is not a skill that is naturally developed, like speaking— reading must be taught

In 2000, a Congressionally commissioned panel of reading experts (National Reading Panel) synthesized the scientific research on reading into a report identifying the most important components of reading development. Since then, the Institute of Education Sciences at the U.S. Department of Education has published additional research and findings to share what works to support early literacy (e.g., foundational skills to support reading for understanding). This section highlights key elements of this research.

Research shows the kind of instruction that children at risk for reading difficulties need would also benefit the vast majority of students, including those experiencing poverty and racism.

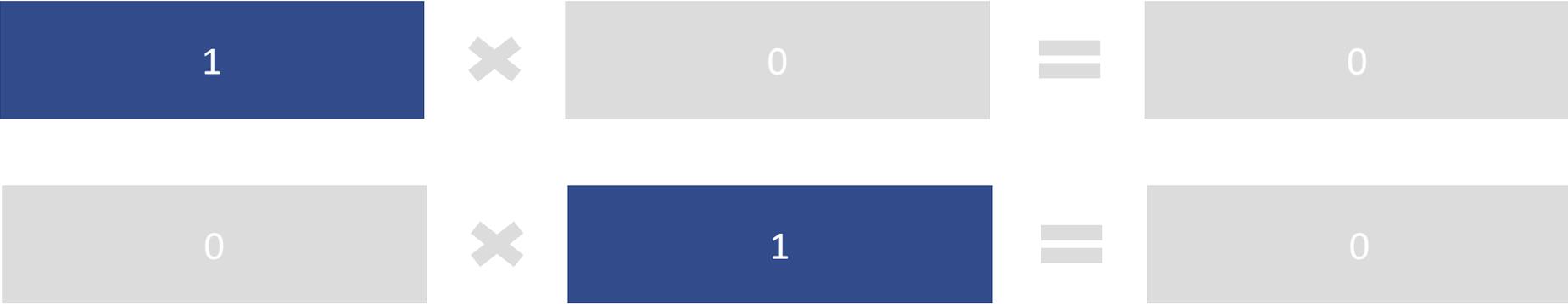


Reading for understanding is an equation that depends on both acquiring language and learning to access that language through print

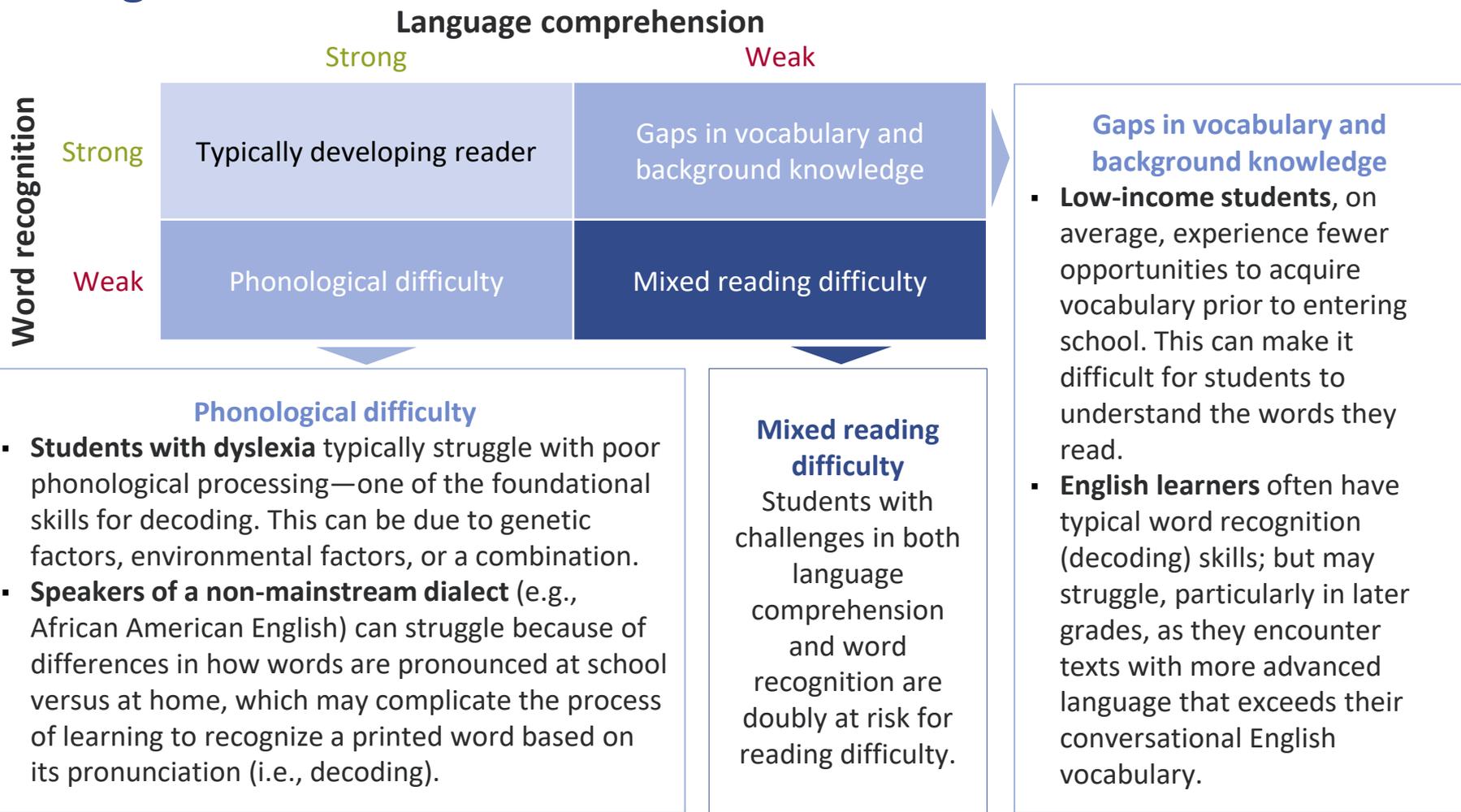
A framework called the “**Simple View of Reading**” summarizes what science has confirmed over many decades about what children need to read with understanding: language comprehension and word recognition.



It follows that children who have gaps in either language comprehension or word recognition will struggle to read:

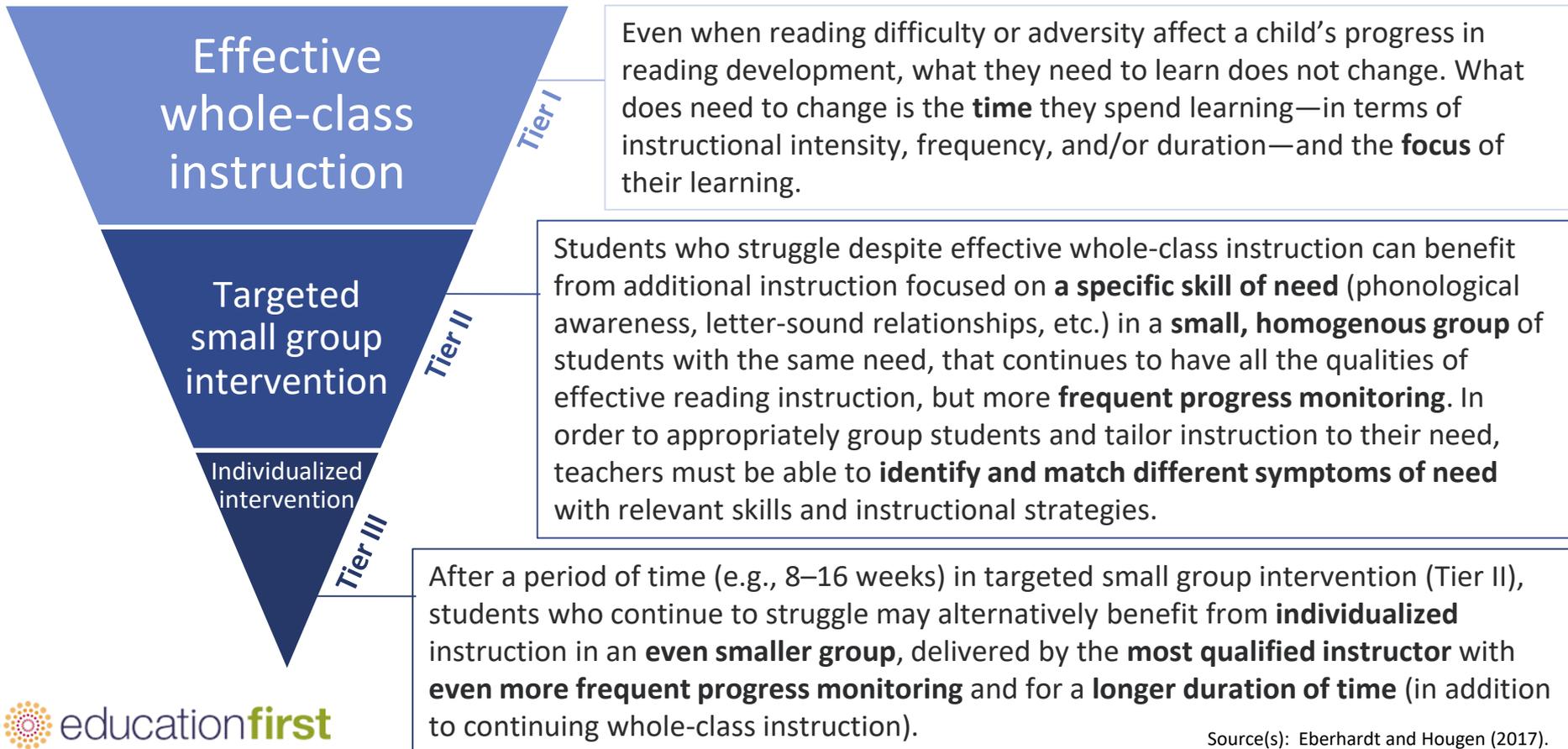


Students with phonological difficulties and/or gaps in key vocabulary and background knowledge are at greatest risk—those with dyslexia, who speak different dialects, are from low-income families and/or are English learners



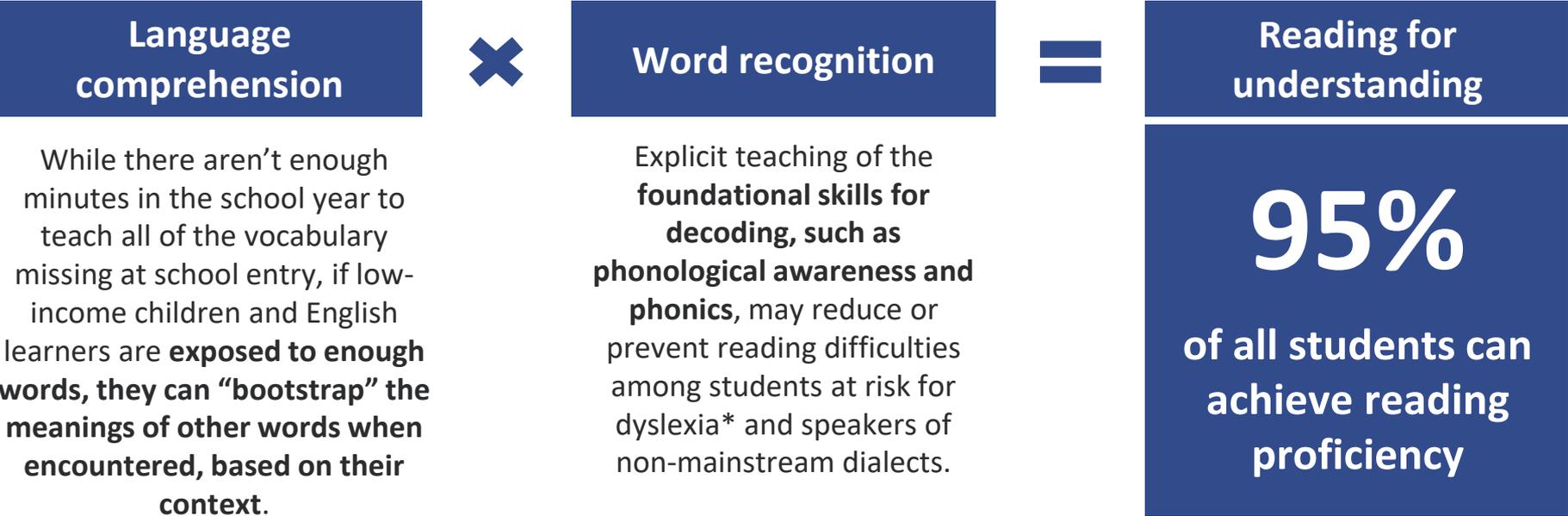
In addition to receiving effective whole-class instruction, these students can benefit from more intensive, frequent and targeted intervention

Even when a teacher uses an **effective approach as the first line of instruction with the whole class**, some children will still struggle with word-level reading. Fortunately, studies of interventions for children who need additional support have surfaced **practices that can be effective when layered onto effective whole-class instruction**.



Research indicates that nearly all students—even most of those at risk for reading difficulties—can learn to read proficiently with appropriate instruction (e.g., tiered, explicit instruction)

Scientists estimate that **instruction based on reading science**—that is, instruction that builds knowledge and vocabulary (language comprehension) while also teaching all of the foundational skills for decoding (word recognition)—**can lead 95 percent of students to become proficient readers.**



*Research notes that a small share of students with dyslexia have been found not to respond to interventions that are otherwise broadly effective. Scientists indicate an ongoing need for research specifically focused on these “non-responders.”

And the kind of instruction that children at risk for reading difficulties need, would also benefit the vast majority of students

With just 35 percent of U.S. 4th graders proficient in reading, it's clear that more students are struggling to read than just those with risk factors for reading difficulty.

Language comprehension



Word recognition



Reading for understanding

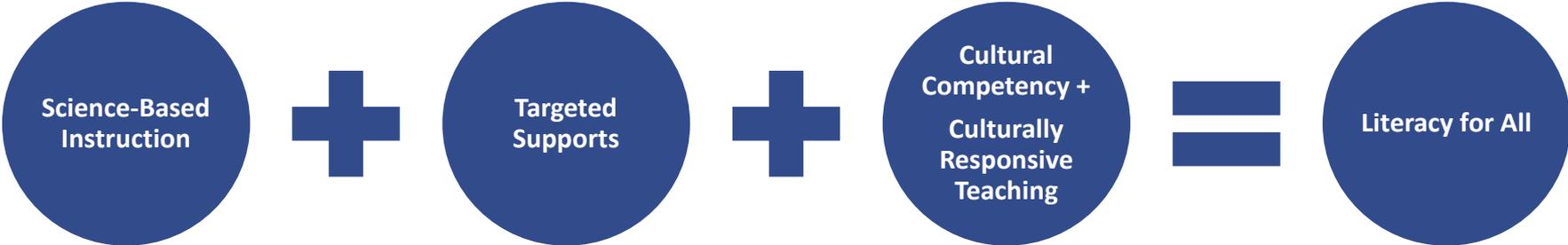
Building vocabulary and background knowledge means **restoring time to learning about science and social studies for all students**, from today's all-time low of just 35 minutes per day in K-3.

Unlike learning to speak, which happens naturally with exposure to speech, **learning to decode requires explicit teaching for most students.**

If all K-3 classrooms delivered science-based reading instruction, most children would have their best chance of learning to read proficiently.

Science-based reading instruction matters to all students—and is especially critical for students with dyslexia and those experiencing additional adversities (e.g., those experiencing racism).

While there is a dearth of research at the nexus of learning differences and SES, race and English learner status, cultural competency and culturally relevant teaching and materials matter



Instruction that builds knowledge and vocabulary (language comprehension) while also teaching all of the foundational skills for decoding (word recognition, effective whole-class instruction).

Additional instruction (small group or 1:1) focused on a specific skill of need, with frequent progress monitoring, and for a longer duration of time (Tier I or Tier).

Valuing diversity, being culturally self-aware, understanding the dynamics of cultural interactions, and designing curricula that incorporates students' lives.



Pedagogy that recognizes the importance of including students' cultural references in all aspects of learning, including instructional materials.

Enhanced opportunities for students to access reading materials resulting in equal outcomes for students, particularly for students with dyslexia, who are students of color, experiencing poverty and/or are English learners.

3b | Key elements and shifts in the education system

Based on reading science, a K-3 classroom where all children have their best shot at reading proficiently, has three related building blocks

A reading classroom with a basis in science

Teacher

Skilled reading teacher

*Curricula**

Focus on
foundational
skills

Focus on
building
knowledge +
vocabulary

- The curricula helps **build background knowledge and vocabulary** with carefully selected, culturally-relevant texts on related topics from various content areas, written at the level of typically developing readers in students' grade, and tasks that are cognitively rigorous for the age group.
- The curricula also helps build the **foundational skills** for decoding (e.g., phonological awareness and phonics) by supporting teachers to teach all skills explicitly and systematically, using diagnostic assessments to fill in student needs.
- Most importantly, a **skilled reading teacher** uses knowledge about reading development and instruction to deliver the curricula with fidelity and to supplement it appropriately, based on their particular students' needs. The teacher also understands his/her students and works to affirm and celebrate their identities.

*Some commercially available products include both a core literacy curriculum and a foundational skills curriculum, while others focus on one or the other and should be paired with a complementary product designed to plug in what it lacks in a seamless way.

However, this knowledge has not yet translated consistently into practice

Common instructional practices

Decoding

Phonics skills are usually taught but not emphasized, even for beginners. Teaching is **often not highly explicit or systematic**. Prerequisite skills may not be taught first.

Beginning readers usually read **leveled and predictable texts** (texts in which words are predictable based on sentence structure, repetition or pictures) that do not easily lend themselves to application of phonics skills. Partner reading and independent reading may be emphasized more than oral text reading with a teacher.

When students read text orally, teachers may overlook some errors, especially if they do not greatly alter meaning. Teacher feedback may emphasize **using context or pictures to guess** the unrecognized word (a debunked strategy called “three-cueing”) rather than consistent application of decoding skills.

Spelling is often not taught in an explicit or systematic manner. Students may learn lists of **spelling words that exemplify no particular phonics pattern** or spelling rule. Spelling program may be completely distinct from decoding program with different words in the two programs.

Comprehension

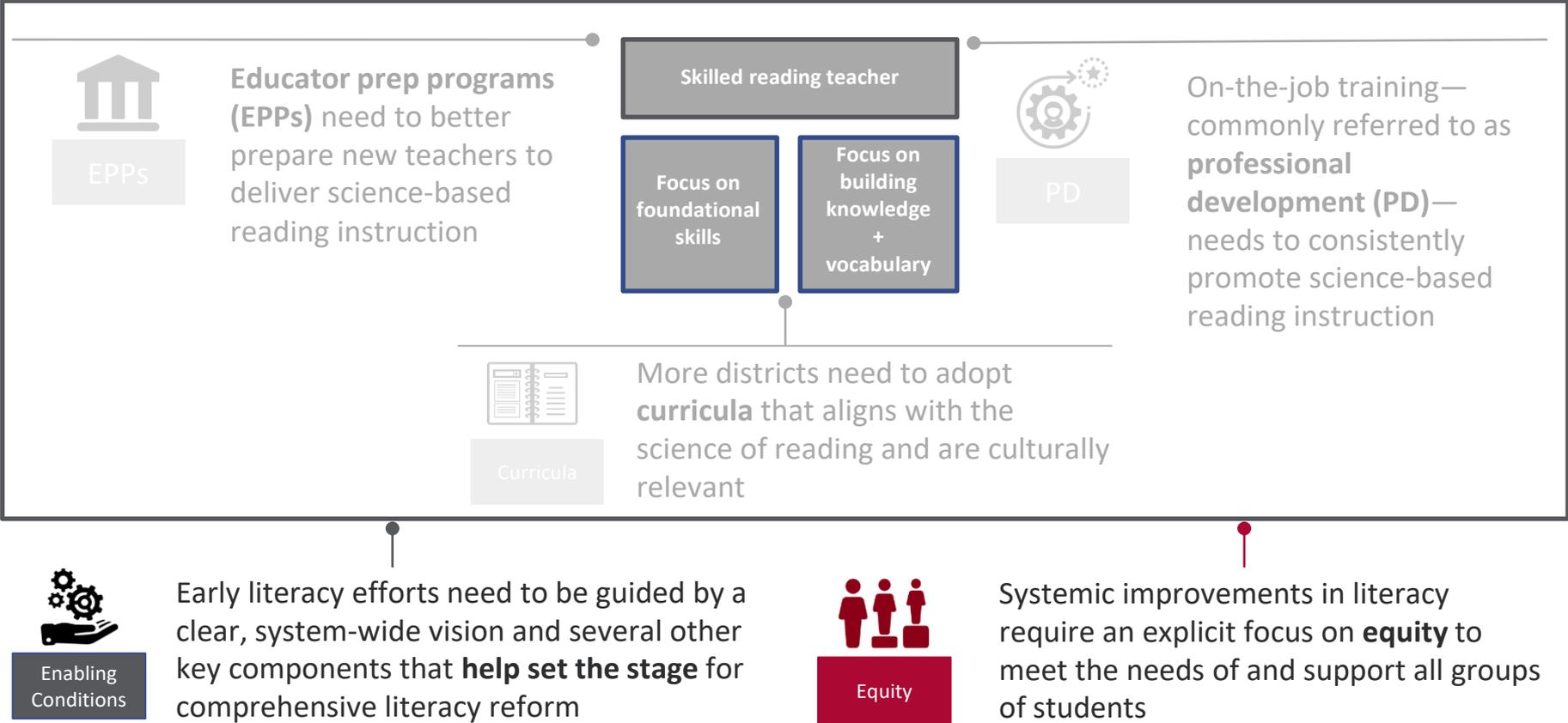
Generic comprehension strategies like summarizing, making inferences, and identifying the author’s purpose are emphasized more than carefully selected background knowledge and vocabulary. While some comprehension strategies are backed by science, students gains from strategy instruction diminish quickly. Students usually need sufficient background knowledge and vocabulary to understand what they’re reading before they can apply these strategies successfully.

“Teachers are using flawed reading practices not because they're ignorant, ill-prepared, or incompetent. They are doing it because... **they are being told to use them—usually by deeply trusted sources, like cherished mentors, colleagues, or the popular curriculum** sitting in their classrooms.” (Sawchuk, 2019)

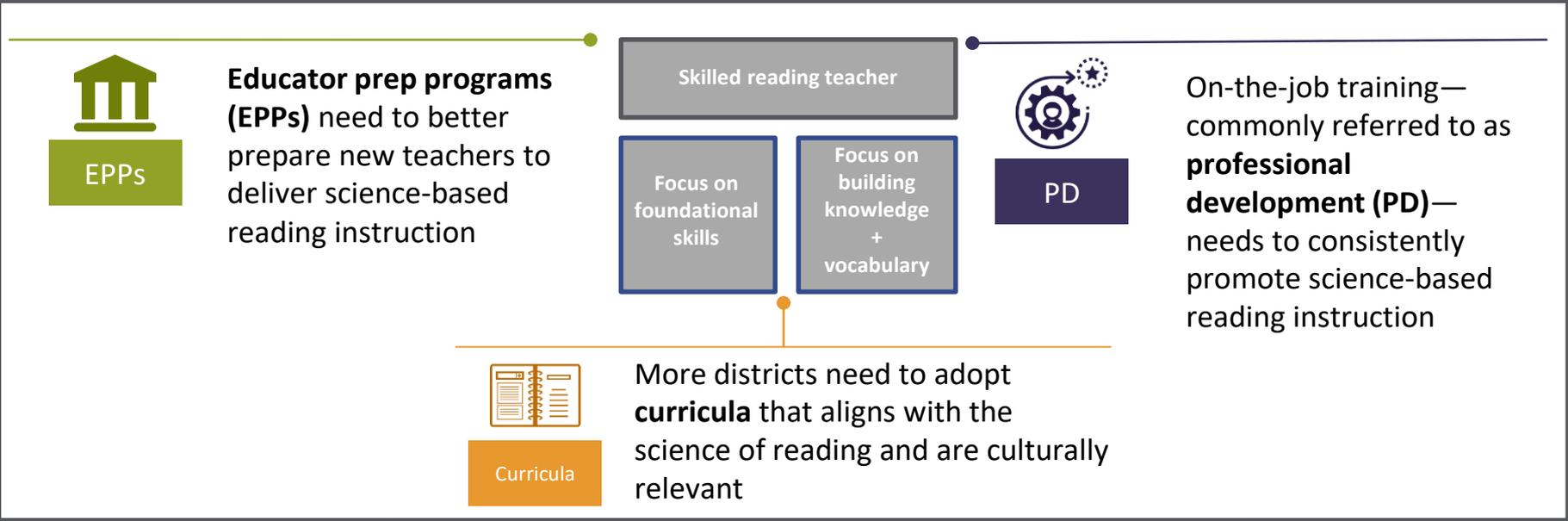
Our research elevates five key areas across the education system to better to serve all students in learning to read proficiently



Enabling conditions and equity are two cross-cutting components that are foundational to supporting these shifts



With enabling conditions and a focus on equity as underpinnings, shifts in three specific elements of the education system—EPPs, PD and curricula—would elevate and prioritize scientific, culturally relevant approaches to reading instruction in the classroom



Early literacy efforts need to be guided by a clear, system-wide vision and several other key components that **help set the stage** for comprehensive literacy reform

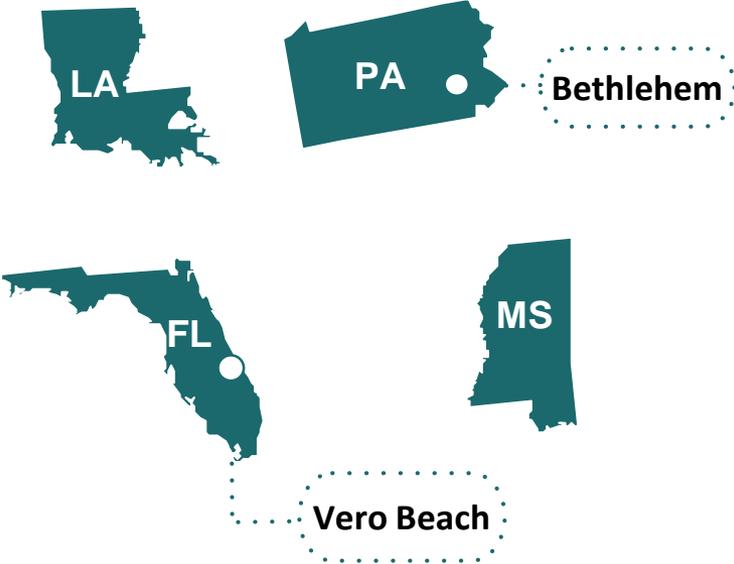


Systemic improvements in literacy require an explicit focus on **equity** to meet the needs of and support all groups of students

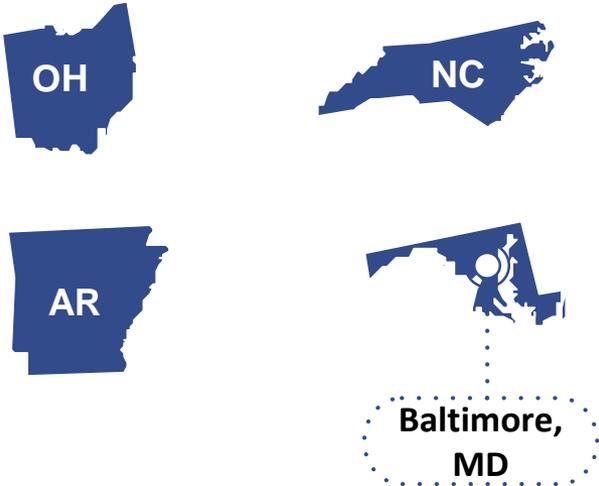
3c | Lessons learned from bright spots

Interviews with experts and lessons from eight select states and districts offer important insights about promising efforts underway

Effort has been in place long enough to produce gains



Effort began too recently to produce gains, but shows promising indicators



Lessons learned about how to create the enabling conditions for comprehensive literacy reform



Enabling
Conditions

- Several of the states we looked at established some form of **statewide plan**, based on a **comprehensive vision** for what **science-based reading instruction** looks like and the **system conditions** it requires, that gave **coherent direction across two or more drivers** of early reading instruction—EPPs, PD and/or curricula. Often these plans were **precipitated by state leaders**—state superintendents, state boards of education, and/or state university system leaders—with an awareness of reading science and a bent for systems thinking.
- Choices about PD and curricula typically live at the district level, making a **districtwide vision for science-based reading instruction** crucial. In all of the districts we looked at, leaders articulated a vision for how they would create system conditions for better reading instruction. In the best cases, these visions **cut across both PD and curricula**, ensuring that both drivers of instruction reinforce science-based practice.

The full landscape scan describes in further detail strategies states, districts and policymakers can use to create the overarching conditions for success.

Lessons learned about how to promote equitable practices and outcomes for all students



Equity

- Some states and districts **provided targeted resources to students who needed them most** by:
 - + Sending literacy coaches to their lowest performing schools;
 - + Allowing extended time for literacy; and/or
 - + Using a multi-tiered support system to help students struggling with reading.
- Additionally, some states **focused on increasing equitable access to high-quality materials for all students** by requiring or incentivizing the adoption of high-quality curricula at the local level, while some districts adopted a new science of reading-aligned curricula.

The full landscape scan describes in further detail strategies states, districts and policymakers can use to prioritize equity.

Lessons learned about how to support EPPs to better prepare teachers to deliver science-based reading instruction



EPPs

When it comes to shifting EPPs at scale, states are indispensable. Two conditions for success showed up across multiple states that addressed EPPs specifically:

- **EPP policy** that promotes reading science by **establishing baseline expectations** for teacher prep programs, tied to indicators of teacher proficiency in science-based reading instruction. For example:
 - + Reading science exams that teacher prep grads must pass to secure state licensure to teach
 - + Program approval standards that promote coursework and clinical experiences proven to produce effective reading teachers
- Support to build **EPP capacity** to deliver on policy requirements through their programming

The full landscape scan describes in further detail strategies states, districts and policymakers can use to strengthen EPPs to prepare teachers to deliver science-based reading instruction.

Lessons learned about how to support district efforts to improve early literacy through PD and curricula



PD



Curricula

Three conditions for success showed up across multiple systems that tackled PD, curricula or both:

- District leaders need support **to manage complex change** efforts, such as using best practices to change culture in schools and build educator skill
- **Principals who provide consistent support** to sustain early literacy efforts over time through allocation of instructional time and resources (e.g., budget, hiring, etc.)
- A system of **school-based coaches expert in early literacy** who help teachers apply professional development in their own classrooms using their own curricula, with tailored feedback/support

The full landscape scan describes in further detail strategies states, districts and policymakers can use to improve curricula and PD to support early literacy.

4 | Promising strategies and recommendations

Lessons learned from states and districts that have made significant strides point to several key strategies to improve reading instruction at scale



Enabling
Conditions

- Educate and empower policymakers to build the will for change
- Support and incent district leaders to establish a comprehensive vision for early literacy that aligns educators' initial preparation with curricula and PD



Equity

- Use an equity framework to guide systemic reforms and support early literacy for all students, particularly those furthest from opportunity



EPPs

- Use data and advocacy to push for policy change in licensure and educator preparation
- Build EPP faculty capacity and expertise to redesign coursework and clinical experiences



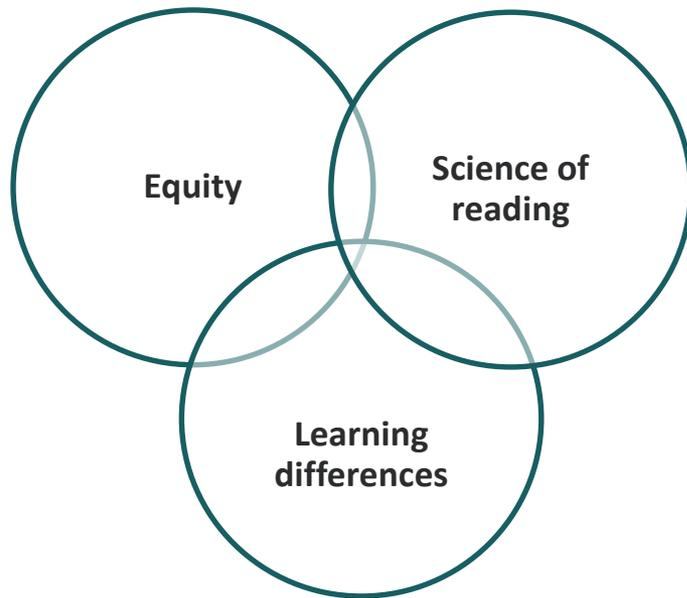
Curricula



PD

- Provide structures and supports to help district leaders build the will, skill and capacity for change
- Educate and partner with school leaders on the science of reading to build will and capacity for change at the school level
- Invest in high-quality coaching to support immediate changes in teacher practice

The strategies and recommendations in this scan represent some of the most promising efforts in the field; we know that any effort to support early literacy will require an integrated approach



This scan highlights ways the field can act on key system elements to improve early literacy, particularly for students with learning differences and those experiencing additional adversity due to poverty and/or racism.

Funders, in particular, are well-positioned to support the field to improve early literacy in ways that both integrate these system elements *and* that work at the intersections of the science of reading, learning differences and equity. For example:

- **Convene:** Bring system leaders, policymakers, practitioners and researchers together to better understand the research on early literacy, learning differences and equity—and learn from best practice
- **Educate:** Highlight the urgency of the issue and lift up bright spots through storytelling
- **Support:** Invest in stakeholders at multiple levels of the system to create the space for and implement best practice and create change

**We are committed to putting these ideas into action.
We hope you will join us.**

**To learn more about Oak Foundation's efforts to improve early literacy for students with learning differences, contact:
Julie.Kowal@oakfnd.org**

**Questions or comments about this scan? Please contact:
info@education-first.com**

5 | Appendix: Sources

Interviews

Early literacy researchers + experts

- **Timothy Shanahan**, Distinguished Professor Emeritus, University of Illinois at Chicago
- **Timothy Odegard**, Murfree Chair of Excellence in Dyslexic Studies, Center for the Study and Treatment of Dyslexia, Middle Tennessee State University
- **Julie Washington**, Chair, Department of Communication Sciences and Disorders, Georgia State University
- **Louise Spear-Swerling**, Professor of Special Education, Southern Connecticut State University
- **Munro Richardson**, Executive Director, Read Charlotte
- **Emily Hanford**, Senior Producer and Correspondent, APM Reports
- **Sarah Schwartz**, Reporter, Education Week

Educator preparation

- **Marion Gillis-Olson**, Dean, College of Education, Fayetteville State University
- **Ellen McIntyre**, Dr. Ellen McIntyre, Dean, College of Education, Health and Human Sciences, University of Tennessee
- **Jean Rohr**, Professor of Education & Director of the Center for Access and Success, Elon University
- **Ben Riley**, Founder and CEO, Deans for Impact
- **Graham Drake** (Managing Director, Teacher Prep Review) and **Bob Marino** (Expert Analyst, Teacher Prep Review), National Council on Teacher Quality

Professional development + curricula

- **Susan Atkins**, ELA Research and Design Specialist, TeachingWorks
- **Liz Woody Remington**, Co-Founder and Director of Professional Development, Learning Alliance
- **Kelly Butler**, CEO, Barksdale Reading Institute
- **Eric Hirsch** (Executive Director), **Lisa Potts** and **Stephanie Stephens** (ELA Leads), EdReports
- **Beth Anderson**, Executive Director, Hill Center

Policy experts

- **Paolo DeMaria**, State Superintendent, Ohio Department of Education
- **J.B. Buxton**, Member, North Carolina State Board of Education
- **Lindsay Jones** (President & CEO) and **Meghan Whittaker** (Director of Policy & Advocacy), National Center for Learning Disabilities
- **Kathleen Airhart**, Program Director, Special Education Outcomes, Council of Chief State School Officers
- **Johanna Anderson**, Executive Director, Belk Foundation

Convening Participants

- **Kathleen Airhart:** Program Director, Special Education Outcomes, Council of Chief State School Officers
- **Beth Anderson:** Executive Director, Hill Learning Center
- **Johanna Anderson:** Executive Director, The Belk Foundation
- **Alexis Bivens:** Program Director, Emily Hall Tremaine Foundation
- **Kelly Butler:** Chief Executive Officer, The Barksdale Reading Institute
- **Rupen Fofaria:** Storyteller, EdNC.org
- **Marion Gillis-Olion:** Dean, College of Education, Fayetteville State University
- **Crystal Gonzalez:** Executive Director, English Learners Success Forum
- **Eric Hirsch:** Executive Director, EdReports
- **Lindsay Jones:** President & CEO, NCLD
- **Ayanna Kilgore:** Cognitive Development Specialist, Georgia State University
- **John Pruette:** Senior Program Officer, Bill and Melinda Gates Foundation
- **Jean Rattigan-Rohr:** VP/Access and Success & Professor of Education, Elon University
- **Munro Richardson:** Executive Director, Read Charlotte
- **Alice Wiggins:** Senior Director, ELA, UnboundEd
- **Yael Ross:** Managing Director, Early Childhood & Elementary Education, Teach For America
- **Shayne Spalten:** Director, Education, Charles and Lynn Schusterman Family Foundation
- **Liz Woody-Remington:** Co-Founder and Director of Professional Development, The Learning Alliance
- **Alexis Yowell:** Research and Design Specialist, ELA, TeachingWorks, University of Michigan
- **Ila Deshmukh Towery:** Principal, Education First
- **Brinton Ramsey:** Senior Consultant, Education First
- **Bethiel Girma Holton:** Program Officer, Oak Foundation
- **Heather Graham:** Director, Oak Foundation
- **Julie Hill:** Program Assistant, Oak Foundation
- **Julie Kowal:** Program Officer, Oak Foundation
- **Caroline Turner:** Trustee, Oak Foundation
- **Alex Dreier:** Instructional Design, Friday Institute
- **Mary Ann Wolf:** Director, Professional Learning & Leading Collaborative, Friday Institute

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