CASE STUDY

Learning to Read Doesn't End in Third Grade:

Supporting Older Readers' Literacy Development with a Validated Foundational Skills Assessment

Rebecca Sutherland, Mary-Celeste Schreuder, and Carrie Townley-Flores

Learning to Read Doesn't End in Third Grade: Supporting Older Readers' Literacy Development with a Validated Foundational Skills Assessment

Rebecca Sutherland, Mary-Celeste Schreuder, and Carrie Townley-Flores

Abstract

Chronically low reading proficiency rates in upper elementary, middle, and high school are a perennial education issue across the United States. Wang et al.'s 2019 investigation of the decoding threshold phenomenon introduced empirical evidence indicating that many older students struggle with reading comprehension because they have inadequate decoding skills. This finding points to a need for current, developmentally appropriate assessment of older students' foundational reading skills, from more advanced skills like morphology knowledge and multisyllabic word recognition, to basic skills like phonics knowledge and phonemic awareness, all of which contribute to older students' reading efficiency, accuracy, fluency, and comprehension of grade-level text. Older students' heterogeneous literacy learning profiles require accurate diagnosis of existing skills and areas of instructional need. The chapter includes a description of the ROAR (Rapid Online Assessment of Reading) a new, free computerized assessment of foundational literacy skills that is validated for use with K–12 students, as well as insights from a pilot initiative that supported middle and high school teachers to administer ROAR to their students and then use the assessment data for instructional planning and progress monitoring.

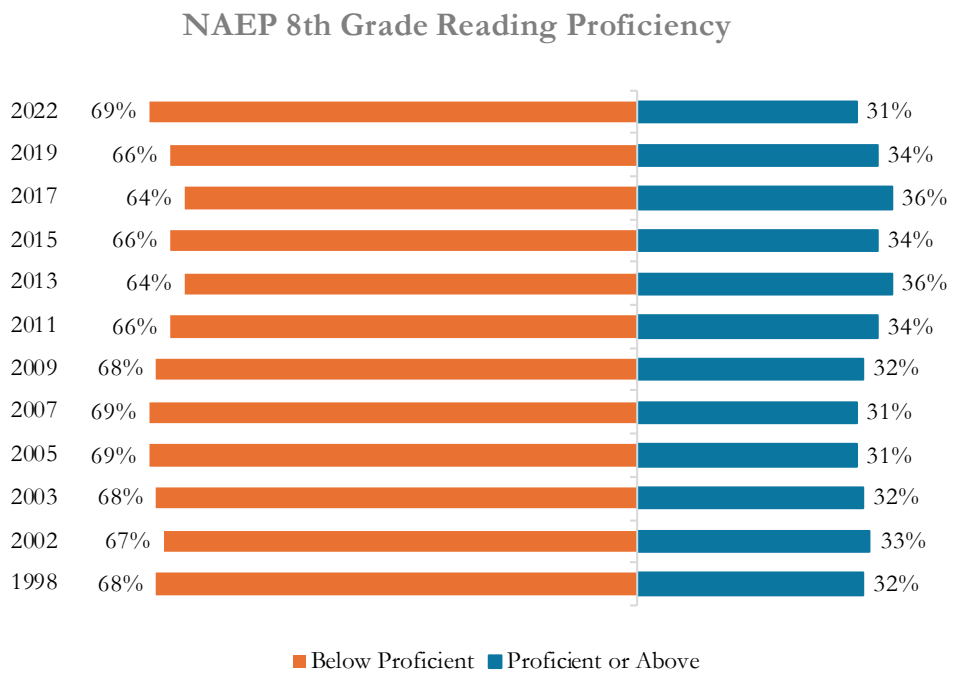
Introduction

Taking a Closer Look at Reading Proficiency Among Older Students

Literacy is the cornerstone of academic success for students in upper elementary, middle, and high school. Across subjects, older students are routinely expected to learn new material through independent reading (Solis, Kulesz, & Williams, 2022; Shapiro, Sutherland, & Kaufman, 2024). And yet, data from the National Assessment of Educational Progress (NAEP) Reading Assessment indicates that this is an unreasonable expectation for the majority of students in upper elementary, middle school, and high school. In 2022, only 33 percent of fourth-grade students and 31 percent of eighth-grade students scored at or above NAEP Proficient level, which is described as "solid academic performance and competency over challenging subject matter" (Nation's Report Card, 2022a & 2022b). These startlingly low reading proficiency rates among older students are also observed in state achievement tests administered annually in districts across the country (Achieve, 2018).

Low reading proficiency rates in upper elementary and secondary school are not a new problem; NAEP assessment data from the last thirty years show consistently flat proficiency rates stretching back to the 1990s (NAEP Reading: National Achievement-Level Results, 2022).

Figure 1. ***NAEP Proficiency Chart***



The ability to read independently for comprehension is an ultimate goal of reading instruction; students who do not test as "proficient" are likely to struggle to comprehend grade-level texts on their own. While the foundational reading skills of students in kindergarten through third grade are usually measured with dedicated benchmark assessments throughout the school year, in most districts and schools the available data about older students' reading abilities is typically confined to measures of comprehension coming from summative achievement tests administered one time each spring. Year after year, state achievement tests and other standardized tests like the NAEP confirm that sizable majorities of older students cannot read proficiently. Because they primarily measure reading comprehension, these tests offer scarce insight into *why* so many students can't comprehend what they're reading (Tighe & Schatschneider, 2014). In the absence of meaningful assessment data, teachers, parents, and students are left in the dark about what is holding them back from being able to read and comprehend the texts they encounter at school (Valencia & Buly, 2004).

How to account for this collective blindspot? The dearth of up-to-date, accurate measurements of older students' foundational reading skills can be connected to long-held assumptions about how students learn to read (Houck & Ross, 2012). The National Reading Panel's (2000) five pillars of literacy (phonemic awareness, print concepts, phonics/word recognition, fluency, and comprehension) describe the foundational literacy skills that *early* elementary students need in order to both decode and comprehend grade-level texts, reflecting the belief that, "in [grades] K–3 children are learning to read, and in [grades] 4–12 children are reading to learn" (Chall, Jacobs, & Baldwin, 1990). This truism accurately describes Tier I literacy *instruction* in most U.S. schools: explicit instructional support is provided to help the youngest students acquire and apply the early foundational skills that allow them to read and comprehend text up through third grade, and then explicit decoding instruction stops.

But does this instructional norm align with most students' literacy learning needs? At first glance it might seem to since, among older students, research shows that the relationship between reading comprehension and those early decoding skills diminishes; older students' reading comprehension has been found to be more strongly associated with their language comprehension, vocabulary, and background knowledge (Lonigan, Burgess, & Schatschneider, 2018). Why would teachers waste precious class time on unnecessary explicit decoding instruction? Indeed, Share's (1995) Self-Teaching Hypothesis proposes that, once students have mastered sound-letter correspondences and the essential phonics skills of segmenting and blending, they should be able to independently apply their knowledge to learn novel words. In this view, proficient readers are able to decode and learn unfamiliar words by attending to the order of letters, using their understanding of how the letters map onto oral speech. Until recently the prevailing belief among both researchers and educators has been that students who have mastered basic decoding skills do not need further explicit decoding instruction in order to read and comprehend independently. Accordingly, most upper elementary and secondary schools do not routinely test their students' ability to decode grade-level text.

Crucially, both the Self-Teaching Hypothesis and the broader belief that children learn all the decoding skills they will need in K-3 treat "decoding skills" as a discrete, singular endeavor, with mastery of sound-letter correspondences and basic phonics being what's needed for students to successfully decode texts of increasing length, complexity, and difficulty. This perspective informs which decoding skills are measured in the tests of literacy knowledge that schools use to plan instruction and monitor progress. These tests have also been used by researchers to examine the relationship between decoding ability and independent reading comprehension. Widely used tests such as DIBELS ® (Dynamic Indicators of Basic Early Literacy Skills) assess foundational skills

like phonological awareness, rapid automatized naming, alphabetic principle, single-word recognition, and oral reading fluency (University of Oregon, 2018–2019). Such tests provide rich detail about students' early decoding skills. However, the observed disconnect between *early* decoding skills and *older* students' grade-level reading comprehension may well be an artifact of a failure to recognize that there are more advanced decoding skills which older students must bring to bear as they progress to more complex text.

Emerging evidence indicates that early decoding skills, on their own, are necessary but insufficient for older students to achieve and maintain grade-level reading proficiency with texts of increased complexity. A groundbreaking 2019 study utilized an unusual dataset consisting of measurements of upper elementary, middle, and high school students' foundational literacy skills that included not only the standard suite of basic decoding skills that K-3 reading screeners usually test but also more sophisticated skills that are usually not taught (or assessed) in early elementary grades, like morphology knowledge (Wang, Sabatini, O'Reilly, & Weeks, 2019). These more sophisticated skills are instrumental for decoding more difficult text that students encounter after third grade. Wang et al's analysis revealed a *decoding threshold*, a consistent relationship between older students' expansive decoding skills and their grade-level reading comprehension. Across grades, students whose assessed decoding abilities were below a threshold value tended to have low comprehension scores, while students whose decoding skills were higher than the threshold value on the assessment tended to have stronger (and more variable) comprehension scores (Wang et al., 2019).

Variability in comprehension scores among students who are past the decoding threshold indicates that mastery of basic *and* advanced decoding skills is not a silver bullet that will transform all striving readers into proficient readers who can comprehend grade-level text; some students need support in other critical areas. But, the Decoding Threshold Hypothesis asserts that without adequate decoding skills, older students will not be able to independently read and comprehend grade-level text. This approach was replicated in 2024 with a larger dataset, and the same consistent relationship between students' decoding skills and their ability to comprehend grade-level text was observed (Wang, O'Reilly, & Sutherland, 2024). With growing evidence that, in English, decoding skills continue to undergird reading comprehension beyond third grade, it is time to reconsider how we approach both reading instruction and assessment for older students.

The case for foundational skills assessment in upper elementary, middle, and high school

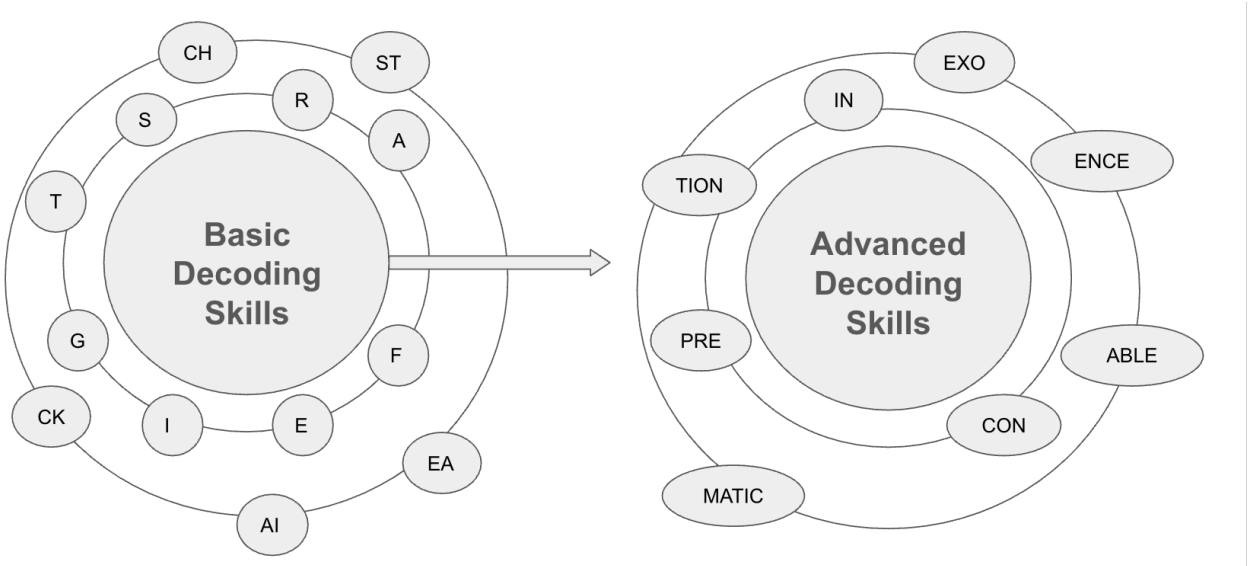
There is increasing heterogeneity in the learning profiles of older readers (Smith & Miller, 2018). To address this variability, a developmentally appropriate foundational skills screening assessment for older students that includes more advanced decoding skills can help teachers to identify and tailor effective instruction that will support individual students to achieve lasting reading proficiency. Accurate, current foundational skills assessment data will allow upper elementary and secondary teachers to differentiate reading instruction appropriately for students with a wide range of literacy support needs, e.g.,:

1. Some students may not have received adequate basic foundational reading instruction in early elementary grades, leaving them ill-prepared to independently read grade-level texts as they move into upper grades. Foundational skill screening assessments will allow educators to quickly identify such students for remedial support.

2. To read and comprehend grade-level texts older students must use more sophisticated decoding skills, including multisyllabic word decoding and knowledge of morphology (Nagy & Anderson, 1984; Tighe & Schatschneider, 2014). Texts in the upper elementary and secondary grades contain novel vocabulary that's often discipline-specific and abstract, along with longer sentences featuring more complicated syntax, and an increasing prevalence of multisyllabic words borrowed from other languages. Words from languages like Greek and Latin have different orthographic rules than what students typically learn in early elementary phonics instruction. Foundational skill screening that tests multisyllabic decoding and morphology knowledge will allow teachers to know which of their students have adequate basic decoding skills but still need explicit instructional support for decoding more complex grade-level text.

3. Students who cannot independently comprehend grade-level text, but have already demonstrated mastery of both basic and more advanced decoding skills, can be appropriately supported in other critical areas, e.g., vocabulary and background knowledge.

Figure 2. ***Basic & Advanced Decoding Skills Illustration***



When equipped with the right data that pinpoints where individual learning needs lie, upper elementary, middle, and high school educators can support their students to proficiently read and comprehend grade level text.

The remainder of this chapter will describe the development and features of the Rapid Online Assessment of Reading (ROAR), an online screening assessment of foundational literacy skills designed for students K–12, and early lessons drawn from The Achievement Network's (ANet) pilot initiative to implement the ROAR assessment to middle and high school students in Franklin County Schools (pseudonym)—a small urban district in the Northeast United States that has long struggled with low reading proficiency among its older students.

A Validated Foundational Skills Assessment for Older Readers: The Rapid Online Assessment of Reading (ROAR)

The Rapid Online Assessment of Reading (ROAR) emerged from more than a decade of research in Stanford's Brain Development & Education Lab on the neurobiological foundations of literacy overall, and in particular on the brain-based etiology of different subtypes of dyslexia. Identifying difficulties consistent with dyslexia requires measuring key foundational reading skills, which is why these skills are included in the ROAR Foundational Reading Skills Suite. It quickly became apparent that the initial set of ROAR assessments could have utility beyond the world of lab-based research, as they provide accurate, relevant measures of literacy skills that educators can directly use to plan instruction. With all subsequent research and development on ROAR being done in partnership with schools across the country, ROAR bridges the school, community, and lab. Leveraging the extensive literature on the cognitive neuroscience of reading development, the team responded to the needs voiced by school partners by developing an automated, lightly gamified online assessment platform that could replace the resource-intensive and time-consuming conventional approach of individually administering assessments that are scored based on verbal responses. The ROAR platform can assess an entire school system in the time typically required to administer an assessment to a single student. In ten minutes, a teacher can assess a classroom on word-level decoding and sentence reading efficiency to evaluate the risk for reading difficulties such as dyslexia. In 45 minutes, ROAR can provide a more detailed profile of strengths and areas needing support. ROAR can be administered to all students just once to screen for skill mastery, or multiple times throughout the year for progress monitoring of targeted skill areas. ROAR can be used across the grades, K–12, filling a gap in older grades where screening and progress monitoring for foundational reading skills is strongly needed but historically neglected due to a lack of time, resources, teacher training, and available assessments.

ROAR consists of a collection of measures, each designed to assess a specific domain of reading. Each measure can be run independently and returns scores to teachers in real time. ROAR is designed as a series of assessment modules that can be sequentially administered in one sitting or individually. ROAR assessment modules test students' foundational literacy skill knowledge, including:

- Phonemic Awareness
- Letter Naming
- Letter Sound Knowledge
- Phonics Knowledge (2026 release)
- Single Word Reading
- Sentence Reading Efficiency
- Morphology
- Syntax
- Inference
- Vocabulary

Core assessments are also available in Spanish. Across the country, the ROAR team is collaborating with schools to understand how foundational reading skills assessments in multiple languages may combine to support targeted intervention for multilingual learners including newcomers and long-term English learners.

Pushing the frontier of reading assessment, the ROAR team is working alongside schools to research how the integration of rapid automatized naming, visual processing, and executive functioning measures alongside measures of foundational reading skills may support more targeted interventions for dyslexia and other reading issues.

Dedicated to the design principle of assessment quality, which includes utility, credibility, and making appropriate inferences, ROAR measures are designed to be user-friendly for both teachers and students. ROAR measures are also individually assessed for reliability, concurrent validity, and predictive validity. The ROAR Technical Manual provides these statistics by grade, race, ethnicity, gender, special education status, English learner status, and free lunch eligibility. ROAR measures are strongly correlated ($r > 0.8$) with gold-standard measures such as the Woodcock-Johnson, Comprehensive Test of Phonological Processing (CTOPP), Test of Word-Reading Efficiency (TOWRE), and Test of Silent Reading Efficiency and Comprehension (TOSREC) (Yeatman, Townley-Flores, et al., 2024; Yeatman, Tran, et al., 2024; Yeatman, Tang, et al., 2021; Gijbels, et al., 2024). These robust psychometric properties ensure that ROAR provides educators with reliable and equitable data to support informed decision-making and effective instruction across diverse student populations.

What should a district do to prepare for success when adopting a foundational reading skills assessment tool for older students?

Adopting a new assessment tool for older grades presents significant challenges. Teachers are already burdened with extensive classroom demands, a situation exacerbated by the pandemic (Jomuad et al., 2021). On average, older students spend 20–25 hours per school year taking state- and district-mandated assessments (Jimenez & Boser, 2021). This underscores the importance of adhering to the *principles of assessment in the service of learning*. Effective assessments should provide transparency for all stakeholders, offer actionable feedback to guide decision-making, and include clear next steps. Additionally, the design of an assessment must support the learner and demonstrate high quality and validity.

However, many districts seeking to assess foundational skills in older students face two key issues: they either use assessments that are not validated for middle or high school students or rely on tests that fail to measure the specific skills required for proficient reading, such as using comprehension assessments to screen for foundational skills. These missteps contribute to assessment and data overload for teachers, particularly when attempting to integrate new tools like ROAR into an already-packed schedule. ROAR addresses these challenges by offering a rapid and automated assessment that can evaluate an entire class in as little as ten minutes, minimizing disruption and maximizing efficiency.

Through ANet's experience piloting ROAR in middle and high schools, we have identified three critical challenges to addressing foundational reading skills in secondary schools. We believe every school/system leader should consider these challenges when adopting a foundational reading skills plan for older students:

- Creating teacher buy-in for a new assessment and intervention system
- Aligning on a multitiered goal-setting and communication plan across leadership in systems and schools
- Providing districts and schools support in analyzing and taking action on their data through professional development and selection of intervention curricula for students with the highest needs.

Challenge: Achieving Teacher Buy-in by Addressing Common Beliefs

One hurdle often encountered when adopting a new assessment tool is the beliefs of school leaders and teachers. The mindsets of the faculty and staff play a vital role in successful implementation (Laine & Tirri, 2023). When confronted with a new school initiative, there is frequent resistance to change stemming from comfort with current assessments, fear of the unknown, and concerns over the work involved (Lomba-Portela, 2022). While such resistance is understandable, developing a clear purpose for the assessment and interrogating teacher beliefs is crucial.

One belief that may prove to be a hurdle is the notion that early education and elementary teachers alone bear responsibility for supporting foundational skills. While reading must be taught in the younger grades, older students will always need this support as well. For the adoption of ROAR to take hold, teachers of older students must accept their own responsibility for their students' foundational reading skills.

Teachers may also believe that they will have to sacrifice to make room for new practices. Again, this is a valid concern. With any new initiative comes work and the requirement of making space in an already packed curriculum. That being said, if a strong enough purpose is built, teacher responsibility for the success of their students will take precedence over the challenge of making room for new types of instruction. Based on research, foundational skills strategies must be used in the tier 1 classroom, as well as in tier 2 and 3, with complex, grade-level texts (Swanson et al., 2017). Older students must not miss out on their general education classes in favor of interventions. Instead, they need both.

This then leads to a final hurdle—the mistaken belief that making a shift toward foundational skills strategies will be detrimental for students reading on grade level. In Anet's ROAR pilot work, we heard criticism from leaders about the consequences for proficient readers if foundational skills practices are implemented in the tier 1 classroom. This belief stems from the idea that proficient readers have nothing to learn from foundational skills practice and will stagnate if not intellectually pushed. In reality, foundational skills strategies are for all students, not just those who experience challenges with reading. For example, activities such as morphological word work and oral reading fluency practice not only support striving readers but also enhance the reading skills of those who are already proficient (James et al., 2021; White et al., 2021). Adopting an assessment tool, like ROAR, enables leaders and teachers to track this type of growth in all students.

Solution

Prior to adopting a new protocol for addressing foundational reading skills in older students, it is crucial to set aside time in professional development to build up teachers' knowledge of the assessment and develop their mindsets around their role in addressing these skills.

Developing buy-in must begin when stakeholders learn about the assessment's adoption. This involves clearly articulating the purpose and goals for the initiative, presenting the research behind the assessment's efficacy, and sharing success stories from other schools utilizing the assessment. In particular, testimonials are a powerful way to humanize the initiative and demonstrate its relevance to daily work and professional growth. When teachers understand the positive impact of the work, they will be more motivated to put forth the necessary effort for a new assessment.

After buy-in is established, teachers also need training to learn to administer the assessment and analyze the data. If the school does not have a recurrent and designated time for teacher professional learning, it may prove difficult to provide the information necessary to successfully adopt a new foundational reading skills assessment.

Vignette

In the early phases of ROAR's development in Franklin, we struggled to recruit ELA leaders and teachers in the pilot. This was in part due to challenges with communication, but it also stemmed from an underdeveloped purpose. Teachers believed their older students were struggling with reading, but did not see themselves as part of the solution. Instead, they expressed that change first needed to happen at the district level before anything could alter in classrooms. While the district aspired to highlight ROAR's potentially positive impact on student reading outcomes, it was too little too late. Further eroding teacher buy-in, we found that many teachers struggled to administer ROAR due to a lack of effective training; this then led to longer proctoring times and frustration. Training for ROAR may have felt like an unnecessary burden for teachers upfront, but in the long term, it would have alleviated unnecessary snags in the adoption process.

Learning from this, in our second year of the ROAR pilot, we planned a series of professional learning sessions. When starting any new initiative in an educational context, ongoing professional development and support are essential. In fact, professional development is one of the most powerful tools districts have to enhance teacher effectiveness (Hirsh, 2017). For a strong implementation of an assessment, professional learning must happen regularly and be structured around the latest research and most relevant content (Savitz et al., 2024). In the ROAR pilot, we offer up to five professional development sessions focused on ROAR data. Ideally, these sessions are conducted in person with school leaders and teachers, but they can also be offered virtually. The sessions follow a specific schedule tied to the administration of the ROAR assessment. The first professional learning session takes place at the beginning of the school year before the initial ROAR assessment administration. It provides information about older students and foundational skills instruction in middle and high school, as well as a kick-off to the ROAR assessment where we establish a strong purpose for the initiative. The subsequent PL sessions occur 2–4 weeks after each ROAR administration, allowing leaders and teachers time to review the data and formulate questions before engaging in the PL. During these PL sessions, we analyze the data sets and determine the necessary next steps for instruction and intervention to support students. Specific strategies are taught that teachers can immediately implement, and they then bring their classroom experiences and data back to the next PL. As a result, professional learning becomes a collaborative community where participants share their challenges, successes, and artifacts from the implementation cycles of foundational skills strategies for their students.

Challenge: Objectives and Communication Alignment Between System-Level and School-Level Leaders

A strong rollout of a new assessment can substantially influence the acceptance and sustained utilization of such assessment. This involves alignment between district and school leaders on the overall objectives and goals for the adoption and use of the assessment. From our experience with rolling out ROAR in ANet's pilot programs, some district leaders struggle to understand the purpose of different types of literacy assessments, and they use these assessments interchangeably, resulting in inappropriate data application. According to the principles for assessment, assessments should be transparent, with a clear evaluation process and purpose. As an example, a comprehension assessment, such as NWEA MAP Growth, should not be used to determine which students need foundational skills support. In much the same way, ROAR should only be used to screen students for potential gaps in their foundational literacy skills, not to diagnose the discrete skills needing extra support. Once leaders understand the purpose of the assessment, they can then set specific, measurable objectives and goals to guide the implementation process. To align and develop these strong goals, leaders should ask themselves:

- Who is the intended audience for the assessment?
- How will we use the assessment data to drive instructional decisions and support students? What do we expect others, such as teachers, to do with the data?
- When do we expect to see measurable student growth on the assessment, and what targeted instructional strategies will we implement to get there?

Collaborating on the answers to these questions moves leaders one step closer to a smooth implementation of the new assessment. However, goals are not enough to create alignment between the district and school leaders and teachers; communication between a variety of stakeholders also requires attention.

Solution

In the first year of assessment adoption, it is important to establish a working group comprising district leaders, ELA instructional specialists, and teachers who are tasked with developing a strong communication plan for the assessment implementation. This involves strategically determining the sender and audience for each type of communication, selecting the most effective methods for communication, and establishing a timeline. Importantly, the core message of each communication must be clear and specific, providing the right information at the right time. By involving multiple stakeholders in the communication process through the working group, the messaging around the new assessment is not top-down; rather, it is a collaborative effort among colleagues, fostering a shared responsibility for the successful adoption of the assessment.

Vignette

In our first year working in Franklin, we failed to develop a strong communication plan, resulting in haphazard messaging about the purpose of the ROAR assessment. Consequently, school leaders were skeptical about ROAR and saw it as just one more item on their already overburdened "to-do" list. In Franklin's second year, we learned from the challenges of Year 1 and created a working group as described above. Thus far, this has led to a smoother rollout and an enthusiastic reception by school leaders and teachers who understand the purpose and promise of ROAR and subsequent interventions in their middle and high schools.

Challenge: Analyzing the Data and Acting on It

Data must never be for the sake of data collection. As is mentioned in the principles for assessment, the feedback from an assessment must lead to actionable insights for teachers and educational stakeholders that result in the betterment of student learning. For this to take place, educators need support to engage with novel data. One common challenge for secondary educators is determining feasible instructional moves they can take to support their students based on assessed areas of need. The root of this issue harkens back to the research on secondary ELA teachers needing to be trained in reading instruction and receiving minimal professional development in supporting their older striving readers (Moats, 2020). Without the knowledge of evidence-based instructional moves to enhance reading, teachers are left to fend for themselves, armed with comprehension strategies that will not move the needle for students who are scoring below the decoding threshold (Wang et al., 2019). Teachers also need time and support to turn the data into actionable insights that help them make instructional decisions. These instructional decisions are usually differentiated into tiers of support, with tier 1 support happening at the classroom level, tier 2 in small groups, and tier 3 the most targeted, intensive, and often one-on-one support.

Solution

Students categorized as "Need Some Support" for foundational reading skills on the ROAR assessment require a blend of literacy instruction to develop their decoding and/or fluency skills; this involves tier 2 small group support. These students can be grouped based on their specific needs and provided with differentiated instruction during tier 1 class time (Rasinski, 2017). For instance, while some students work collaboratively to analyze the meaning of complex, multisyllabic words in their text, the teacher can 'push in' to support a smaller group of four to six students whose scores indicate a need for focused decoding instruction. During this push-in support, the teacher could work through the phonemes, syllabication, or morphology of the same words the other students are addressing in their peer groups. The selected students would receive more targeted teacher attention and the opportunity to practice and ask questions in a small group setting. The advantage of push-in support in middle and high school is that older students have greater autonomy and can work in their own groups with minimal supervision, freeing the teacher to support a select group (Jones, Conradi & Amendum, 2016).

Students categorized as "Need Extra Support" on ROAR should be placed in the right tier 3 intervention based on their area of need: decoding or fluency. However, this is not always easy in the secondary setting. As opposed to elementary, middle schools and especially high schools often lack the flexibility in their schedules for an intervention block. This is often due to the amount of credits students need to graduate, which doesn't take into account the potential need for foundational reading interventions. To address this issue, some schools have introduced a 'reading remediation' class that takes the place of students' tier 1 ELA class. However, this is not an acceptable solution. When older students are removed from tier 1 ELA instruction, they miss out on vital content learning as well as experience with grade-level complex texts. Older students need a blend of literacy learning while their decoding and/or fluency needs are addressed (Vaughn & Fletcher, 2021). We recommend system-level coaching to support district leaders in redesigning students' instructional time.

We also recommend that system-level leaders conduct an audit of the literacy intervention programs currently in use in their secondary schools. This process, coupled with insights from ROAR data, may reveal the need for higher-quality materials to support tier 3 interventions. Unfortunately, many available programs for older students are ill-suited, relying on overly simplified gamification and content that does not align with the maturity of teenage learners. To address this, districts must allocate resources to adopt instructional tools and materials that enhance decoding and fluency, which are essential components for meeting the needs of striving readers.

In many districts ANet partners with, multiple intervention curricula are implemented with little evidence from assessment data of their effectiveness. When these programs fail to meet students' needs, leaders must identify the most effective intervention curriculum for improving decoding and fluency in older students and collaborate with teachers to ensure its consistent implementation. This highlights the importance of not only selecting the right curriculum but also equipping teachers with the tools and support they need to adeptly analyze assessment data to make the best decisions about implementing intervention strategies and curricula.

Vignette

In the case of the ROAR assessment, data is relatively easy to understand once technical knowledge is built. In Franklin, we offered targeted training sessions to equip educators with the skills to utilize and analyze the ROAR data. These sessions were one hour in a virtual setting and facilitated by the ROAR lead and coaches from ANet. Educators were given time and support in accessing their school's data along with hands-on instructions for filtering data in numerous ways to offer more specific insights. For the analysis of data, ANet provided a protocol for moving through the data systematically in order to develop best practices for data interpretation. These virtual sessions allowed for collaboration between educators from different schools in order to share insights and discuss common challenges. Educators then dispersed into smaller breakout rooms to work one-on-one with their coach to organize their individual school's data and practice filtering, analyzing, and gleaning actionable insights. Even after these virtual sessions, coaches continued to work with their school leaders and ELA educators to practice data-driven decision-making for instructional change. Teachers must be aware that data analysis is simply the beginning of any new assessment implementation; it cannot solve the problem of unmet learning needs. Once data is collected and analyzed, action is needed to create any real and lasting change for student learning.

Conclusion

Supporting teachers to support older students' literacy development

Understanding the larger continuum of decoding skills that are required to read and comprehend texts of increasing length and difficulty, paired with assessment data that accurately measures older readers' foundational literacy skills, will reveal where students in upper elementary, middle, and high school need explicit reading instruction. However, the assessment data itself will not provide the instructional support that older students need. Foundational skill instruction that meets students' individual learning needs is only possible when teachers are trained and resourced to both engage with accurate, developmentally appropriate literacy assessment data and to use that data to identify and deploy appropriate instruction (Basma & Savage, 2023).

A majority of upper elementary and middle-school teachers currently report that they have not received relevant pedagogical training to support their students' literacy development; moreover, a large majority of teachers reported that they do not have adequate access to developmentally appropriate instructional resources to support older students (Shapiro, Sutherland, & Kaufman, 2024). Meeting older readers' unrecognized foundational literacy learning needs will require a paradigm shift in how we approach reading instruction—one that acknowledges the broader range of foundational skills students need to read and comprehend increasingly complex grade-level texts, while also providing teachers with developmentally appropriate training and resources. Decades of flagging reading proficiency rates point to the urgency of making this shift.

References

Achieve. (2018). *Proficient vs. prepared: Disparities between state tests and the 2017 National Assessment of Educational Progress (NAEP)*. https://www.achieve.org/files/Proficient%20vs.%20Prepared%20May2018_1.pdf

Applegate, A., Applegate, M., McGeehan, C., Gibbons, C., Norris, M., Doyle, K., & Romani, A. (2022). What has changed in state reading tests in 10 years? The NAEP study revisited. *Yearbook of the College Reading Association*, *43*, 113–126.

Basma, B., & Savage, R. (2023). Teacher professional development and student reading in middle and high school: A systematic review and meta-analysis. *Journal of Teacher Education*, *74*(3), 263–278.

Chall, J. S., Jacobs, V. A., & Baldwin, L. E. (1990). *The reading crisis: Why poor children fall behind*. Harvard University Press.

Gijbels, L., Burkhardt, A., Ma, W. A., & Yeatman, J. D. (2024). Rapid online assessment of reading and phonological awareness (ROAR-PA). *Scientific Reports*, *14*(1), 1–16. https://doi.org/10.1038/s41598-024-51784-0

Houck, B. D., & Ross, K. (2012). Dismantling the myth of learning to read and reading to learn. *ASCD Express*, *7*(11). https://www.ascd.org/el/articles/dismantling-the-myth-of-learning-to-read-and-reading-to-learn

Hirsh, S. (2017). *Building professional development to support new student assessment systems*. Learning Forward. https://learningforward.org/wp-content/uploads/2017/08/building-professional-development.pdf

Institute of Education Sciences. (2022). *What Works Clearinghouse: Providing reading interventions for students in grades 4–9* (NCEE 2022–005). U.S. Department of Education, National Center for Education Evaluation and Regional Assistance. https://ies.ed.gov/ncee/WWC/Docs/PracticeGuide/WWC-practice-guide-reading-intervention-full-text.pdf

James, E., Currie, N. K., Tong, S. X., & Cain, K. (2021). The relations between morphological awareness and reading comprehension in beginner readers to young adolescents. *Journal of Research in Reading, 44*(1), 110–130. https://doi.org/10.1111/1467-9817.12316

Jimenez, L., & Boser, U. (2021). Future of testing in education: The way forward for state standardized tests. *Center for American Progress*. https://files.eric.ed.gov/fulltext/ED617055.pdf

Jomuad, P. D., Antiquina, L. M., Cericos, E. U., Bacus, J. A., Vallejo, J. H., Dionio, B. B., Bazar, J. S., Cocolan, J. V., & Clarin, A. S. (2021). Teachers' workload in relation to burnout and work performance. *International Journal of Educational Policy Research and Review, 8*(2), 48–53. https://doi.org/10.15739/IJEPRR.21.007

Jones, J. S., Conradi, K., & Amendum, S. J. (2016). Matching interventions to reading needs: A case for differentiation. *The Reading Teacher*, *70*(3), 307–316.

Laine, S., & Tirri, K. (2023). Literature review on teachers' mindsets, growth-oriented practices and why they matter. *Frontiers in Education*, *8*, Article 1275126. https://doi.org/10.3389/feduc.2023.1275126

Lomba-Portela, L., Domínguez-Lloria, S., & Pino-Juste, M. R. (2022). Resistances to educational change: Teachers' perceptions. *Education Sciences, 12*(5). https://doi.org/10.3390/educsci12050359

Lonigan, C. J., Burgess, S. R., & Schatschneider, C. (2018). Examining the simple view of reading with elementary school children: Still simple after all these years. *Remedial and Special Education, 39*(5), 260–273. https://doi.org/10.1177/0741932518764833

Moats, L. C. (2020). *Reading is rocket science*. American Federation of Teachers. https://www.aft.org/sites/default/files/moats.pdf

Nagy, W. E., & Anderson, R. C. (1984). How many words are there in printed school English? *Reading Research Quarterly*, *19*(3), 304–330. https://doi.org/10.2307/747823

National Reading Panel. (2000). *Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction*. National Institute of Child Health and Human Development.

National Center for Education Statistics. (2022a). *2022 reading state snapshot report: National and State—Grade 4 public schools*. Institute of Education Sciences.

National Center for Education Statistics. (2022b). *2022 reading state snapshot report: National and State—Grade 8 public schools*. Institute of Education Sciences.

National Center for Education Statistics. (2022). *NAEP reading: National achievement-level results*. https://www.nationsreportcard.gov/reading/nation/achievement/?grade=8#nation-achievement-overall

Opatz, M. O., & Kocherhans, S. (2024). Using a supplemental, multicomponent reading intervention to increase adolescent readers' achievement. *Journal of Adolescent & Adult Literacy, 67*, 294–302. https://doi.org/10.1002/jaal.1333

Rasinski, T. V. (2017). Readers who struggle: Why many struggle and a modest proposal for improving their reading. *The Reading Teacher, 70*(5), 519–524. https://doi.org/10.1002/trtr.1533

Savitz, R. S., Morrison, J. D., Brown, C., Aldrich, C., Kane, B. D., & O'Byrne, W. I. (2024). Secondary teachers' adolescent literacy efficacy and professional learning considerations. *Reading Research Quarterly*, *59*(1), 107–123. https://doi.org/10.1002/rrq.521

Shapiro, A., Sutherland, R., & Kaufman, J. H. (2024). *What's missing from teachers' toolkits to support student reading in grades 3–8: Findings from the RAND American Teacher Panel*. RAND Corporation. https://www.rand.org/pubs/research_reports/RRA3358-1.html

Share, D. L. (1995). Phonological recoding and self-teaching: Sine qua non of reading acquisition. *Cognition*, *55*, 151–218. https://doi.org/10.1016/0010-0277(94)00645-2

Smith, H. D., & Miller, S. D. (2018). Digging deeper: Understanding the reading and motivational profiles of students who do not demonstrate proficiency on state-mandated reading assessments. *Reading Psychology*, *39*(8), 855–878.

Solis, M., Kulesz, P., & Williams, K. (2022). Response to intervention for high school students: Examining baseline word reading skills and reading comprehension outcomes. *Annals of Dyslexia*, *72*, 324–340. https://doi.org/10.1007/s11881-022-00253-5

Swanson, E., Stevens, E. A., Capin, P., Scammacca, N., Stewart, A., & Austin, C. (2017). The impact of Tier 1 reading instruction on reading outcomes for students in grades 4–12: A meta-analysis. *Reading and Writing*, *30*(8), 1639–1665. https://doi.org/10.1007/s11145-017-9743-3

Tighe, E., & Schatschneider, C. (2014). A dominance analysis approach to determining predictor importance in third, seventh, and tenth grade reading comprehension skills. *Reading and Writing*, *27*(1), 101–127. https://doi.org/10.1007/s11145-013-9435-6

University of Oregon. (2018). *Dynamic indicators of basic early literacy skills* (8th ed.). https://dibels.uoregon.edu

Valencia, S. W., & Buly, M. R. (2004). Behind test scores: What struggling readers really need. *The Reading Teacher*, *57*(6), 520–533.

Vaughn, S., & Fletcher, J. M. (2021). Identifying and teaching students with significant reading problems. *American Educator.* https://files.eric.ed.gov/fulltext/EJ1281906.pdf

Wang, Z., O'Reilly, T., & Sutherland, R. (2024). *Replicating the decoding threshold in ReadBasix®: Impact on reading skills development* (Research Memorandum No. RM-24–06). ETS.

Wang, Z., Sabatini, J., O'Reilly, T., & Weeks, J. (2019). Decoding and reading comprehension: A test of the decoding threshold hypothesis. *Journal of Educational Psychology, 111*(3), 387–401. https://doi.org/10.1037/edu0000302

White, S., Sabatini, J., Park, B. J., Chen, J., Bernstein, J., & Li, M. (2021). *The 2018 NAEP oral reading fluency study*. U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics.

Yeatman, J. D., Tang, K. A., Donnelly, P. M., Yablonski, M., Ramamurthy, M., Karipidis, I. I., Caffarra, S., Raikin, S. M., & Richie-Halford, A. L. (2021). Rapid online assessment of reading ability. *Scientific Reports*, *11*(1), Article 6396.

Yeatman, J. D., Townley-Flores, C., Wentzlof, K., Ma, W. A., Siebert, J. M., Fuentes-Jimenez, M., Saavedra, A., Murray, T. S., Bhat, K., Ramamurthy, M., & The ROAR Developer Consortium. (2024). *Rapid online assessment of reading (ROAR) technical manual*.

Yeatman, J. D., Tran, J. E., Burkhardt, A. K., Ma, W. A., Mitchell, J. L., Yablonski, M., Gijbels, L., Townley-Flores, C., & Richie-Halford, A. (2024). Development and validation of a rapid and precise online sentence reading efficiency assessment. *Frontiers in Education*, *9*, Article 1494431. https://doi.org/10.3389/feduc.2024.1494431

Study Group

About the authors

Rebecca Sutherland, Ed.D., is the Associate Director of Research at Reading Reimagined, a funded program of the Advanced Education Research and Development Fund, where she leads a portfolio of research projects investigating the root causes of reading struggles among older students and instructional resources designed to address them. Rebecca has worked with K–12 public education data for over two decades to generate actionable knowledge for state and local agencies, and nonprofit organizations. She has taught ESL and reading in public schools in Japan and New York, and adult literacy in New York and Massachusetts. Rebecca holds a doctorate in Human Development and Psychology from the Harvard Graduate School of Education, a masters degree in Educational Psychology from the New York University Steinhardt School of Education, and a B.A. in history from Barnard College.

Dr. Mary-Celeste Schreuder is the Director of Literacy at the Achievement Network (ANet), where she leads ANet's national rollout of the Rapid Online Assessment of Reading (ROAR) in collaboration with Stanford University. With 20+ years in education, including roles as a secondary ELA teacher, professor of teacher education, and literacy strategist, Mary has built deep expertise in adolescent literacy, assessment strategy, and writing pedagogy. She designs tools, leads professional learning, and equips coaches and system leaders to support striving readers through research-based, equity-centered solutions. Her scholarship has been published in journals like the *Journal of Adolescent & Adult Literacy*, and she holds a Ph.D. in Literacy, Language, and Culture from Clemson University.

Carrie Townley-Flores is the Director of Research and Partnerships for the Rapid Online Assessment of Reading (ROAR) at Stanford University. She holds a Ph.D. in Education Policy from Stanford. Her research focuses on reading assessment and related policies and practices that mitigate racial, ethnic, and economic inequality in the U.S. She joined the ROAR project with extensive experience working with schools, both in the classroom and in academic research-practice partnerships. Carrie taught English Language Arts at secondary schools in Michigan and New Hampshire and a primary school in Helsinki, Finland. She holds a B.A. in English and Education from University of Michigan.

About the Study Group

The Study Group exists to advance the best of artificial intelligence, assessment, and data practice, technology, and policy; uncover future design needs and opportunities for educational systems; and generate recommendations to better meet the needs of students, families, and educators.

Date of Publication
May 2026

Citation
Sutherland, R., Schreuder, M., & Townley-Flores, C. (2025). Learning to read doesn't end in third grade: Supporting older readers' literacy development with a validated foundational skills assessment. In E. M. Tucker, E. L. Baker, H. T. Everson, & E. W. Gordon (Eds.), *Handbook for assessment in the service of learning, Volume III: Examples of assessment in the service of learning.* University of Massachusetts Amherst Libraries.