# Universal Screening Within an RTI Framework
## Recommendations for Classroom Application

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The use of universal screening within the Response to Intervention (RTI) framework has received renewed attention as a result of recently implemented state-specific dyslexia legislation (see the National Center on Improving Literacy https://improvingliteracy.org/state-of-dyslexia for more information) and the most recent authorization of Individuals with Disabilities Education Act (IDEA). Early identification of students at risk for reading difficulty and disabilities including dyslexia allows for early intervention and prevention of later academic struggle or even failure. An increasing number of states have enacted legislation requiring school districts to adopt and implement data-driven processes and procedures to accomplish this goal (i.e., RTI and Multi-tiered Systems of Support [MTSS]). Within this framework, a student's response to evidenced-based effective general education instruction and early intervention and prevention methods is key.

### Using the Simple View of Reading as a Foundation

Universal screening tools typically include a battery of assessments that measure the specific skills most strongly associated with the development of reading proficiency over time. These skills fall into the broader components of the Simple View of Reading (SVR; Gough & Tunmer, 1986), a framework that has successfully guided the field of reading research for several decades. This framework posits reading comprehension as the product of proficient decoding and language comprehension skills (i.e., RC = D X LC). The processes involved in both word recognition and language comprehension contribute simultaneously to an individual's ability to understand what they have read. Weaknesses in either one or both domains would result in impaired reading comprehension. Therefore, it is critical that universal screening assessments are adept at measuring the risk of failure for developing these skills.

Within the domain of word recognition, this might include skills such as phonological awareness, letter knowledge, decoding, and word reading fluency. The domain of language comprehension is more dynamic and complex, which makes it more challenging to capture by way of universal screening. Consequently, this domain is often a missing piece within many screening tools, prompting teachers to supplement with other types of assessments that provide information about the skills in question.

The SVR framework also provides important insights into broad classifications of reading ability and disability. Using the two components of the SVR (i.e., decoding and language comprehension), we can represent four broad profiles of reading within a 2x2 table (see Figure 1). Understanding the SVR and the three profiles of reading disability is important for successful interpretation of the results of a screening battery and identification of reading deficits.
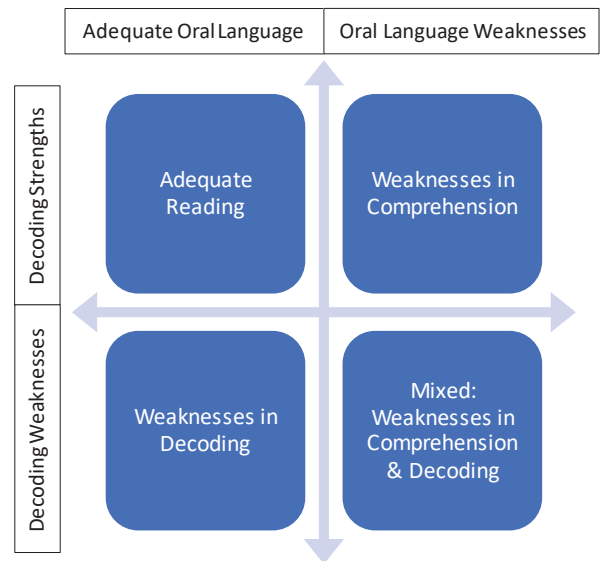


Figure 1: 2x2 categorical representation of the Simple View of Reading

Within the RTI/MTSS framework, universal screening can accomplish three goals: 1) Identify students who may need additional support or intervention to succeed in the general education environment, 2) Monitor student progress in the general education setting, and 3) Identify children at greatest risk of developing significant reading difficulties. The screening process is an essential component of effective general education, RTI, and special education programs. Therefore, it is important for educators to have a sufficient understanding of the purpose and functions of screening tools and their role within a broader assessment framework. The purpose of this article is to provide an account of the questions, concerns, and challenges educators may encounter when implementing universal screening within an RTI framework. A case study approach will be used to guide readers through the process of effectively using, interpreting, and applying information provided by universal screening measures.

### Abbreviations

CBM: Curriculum-based measurement
MTSS: Multi-tiered Systems of Support

RTI: Response to Intervention
SVR: Simple View of Reading

## Universal Screeners and Their Benefits

*Ms. Smith teaches third grade in a public elementary school in an urban setting and typically has many students reading below proficiency. In the past, Ms. Smith mostly relied on running records and unit assessments aligned with the school's core curriculum to gauge students' strengths and weaknesses and inform reading instruction. This year, her goal is to learn how to make better use of the universal screener her school selected for identifying students at risk for reading difficulties. Ms. Smith wonders how universal screeners differ from other types of assessments she has used and what further information she will gain from the data.*

Universal screening measures are normed across populations and age groups to provide benchmarks and cut-points used for identifying varying levels of risk for developing reading difficulties. The level of risk identified for each student can help teachers plan for the type and amount of support they will need to gain proficiency. In comparison to other types of assessments, some major advantages of universal screeners are that they are essentially brief, easy to administer, and follow standardized procedures.

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Before universal screening gained attention as an essential component of assessment practice, other forms of classroom-based reading assessments were administered to determine students' level of reading or prereading ability. Some of these assessments continue to be used variably in schools throughout the nation. These include running records, tests of reading comprehension, program-specific tests, and state achievement tests. In contrast to universal screeners, these assessments lack the ability to detect risk of developing decoding and comprehension difficulties based on the SVR.

## Choosing Subtests to Guide Decisions

*After gaining some knowledge on the purpose and utility of universal screening measures, Ms. Smith is ready to administer the measures to her class. The screener includes a battery of subtests addressing a variety of reading skills. Ms. Smith wonders which skills are most important to assess and whether the results will be sufficient.*

Most commercially available screening tools include a battery of subtests for each grade level that assess the skills that are predictive of reading outcomes and are developmentally appropriate for specific stages of reading development. Depending on the grade level of the students, these skills may be more strongly correlated with reading performance. Although the assessment may measure different skills at different time points, information related to the development of both components of the Simple View (i.e., word recognition and language comprehension) should be collected at all grade levels.

It is important to consider the alignment between a screener's subtests and what the research shows regarding accurate classification of risk. A recent study conducted by Catts et al. (2015) demonstrated that a beginning-of-the-year kindergarten screening battery including letter naming, initial sound matching, rapid automatic naming, and nonword repetition adequately classified good and poor decoders at the end of first grade. At the first-grade level, Compton et al. (2010) replicated their 2006 finding that a beginning-of-the-year, first-grade screening battery including word reading fluency, phonemic awareness, rapid automatic naming, and expressive vocabulary adequately classified good and poor decoders at the end of second grade. The research on screening for language comprehension risk is not as prevalent. Figure 2 provides more information on what critical skills are currently recommended for screening in grades preK–3.

| Grade Level | Skills Recommended for Screening |
|---|---|
| PreK-K | Phonological awareness (blending and segmenting at the syllable, onset-rime, and phoneme levels) |
| | Rapid automatic naming |
| | Letter-sound knowledge |
| | Phonological memory (typically assessed through nonword repetition) |
| | Listening comprehension/oral vocabulary |
| 1 | Phoneme awareness (blending, segmenting, manipulation) |
| | Nonword repetition |
| | Listening comprehension/oral vocabulary |
| | Word identification fluency (real and pseudo-words) |
| | Oral reading fluency |
| 2 | Word identification fluency (real and pseudo-words) |
| | Oral reading fluency |
| | Reading comprehension |
| 3 | Word identification fluency (real and pseudo-words) |
| | Oral reading fluency |
| | Reading comprehension |

Figure 2: Chart of skills recommended for screening in grades preK-3, based on Petscher et al., 2019.

| | Additional Informal Diagnostic Assessments* for Intervention Planning and Progress Monitoring | | | | | |
|---|---|---|---|---|---|---|
| Strand of Reading<br>*Based on Scarborough, 2001* | CUBED:<br>Narrative Language Measures Listening<br>(PreK-3)<br>Reading (1-3) | CUBED:<br>Dynamic Decoding Measures<br>(PreK-2) | CORE:<br>Assessing Reading Multiple Measures<br>(K-3) | Qualitative Reading Inventory – 6<br>(QRI-6) | Phonological Awareness Screening Test (PAST)<br>(K-Adult) | A2i Online Assessments<br>(K-3) |
| **Language Comprehension** — Background Knowledge<br>(Facts, concepts, etc.) | ✓ | | | ✓ | | ✓ |
| Vocabulary<br>(Breadth, precision, links, etc.) | ✓ | | ✓ | ✓ | | ✓ |
| Language Structure<br>(Syntax, semantics, etc.) | ✓ | | | | | ✓ |
| Verbal Reasoning<br>(Inference, metaphor, etc.) | ✓ | | | ✓ | | ✓ |
| Literacy Knowledge<br>(Print concepts, genre, etc.) | ✓ | | ✓ | | | ✓ |
| **Word Reading** — Phonological Awareness<br>(Syllables, phonemes, etc.) | | ✓ | ✓ | | ✓ | ✓ |
| Decoding<br>(Alphabetic principle, spelling-sound correspondences) | ✓ | ✓ | ✓ | ✓ | | ✓ |
| Encoding<br>(Spelling) | ✓ | | | | | |
| Sight Recognition<br>(Familiar and high frequency words) | ✓ | ✓ | ✓ | ✓ | | ✓ |

Figure 3: Chart of additional informal diagnostic and progress monitoring assessments aligned with Scarborough's (2001) strands of reading.

Screeners typically do not have the capability to pinpoint the underlying fine-grained skills that should be targeted for instruction. For this reason, universal screeners are only the first step in a more comprehensive assessment framework. Once generalized areas of risk are identified, educators must follow up with additional measures such as informal diagnostic assessments to gain more detailed information as to where to begin their instruction. Figure 3 displays a list of possible follow-up assessments to use for skills related to decoding and language comprehension.

*After administering the screener to each of her students, Ms. Smith is ready to begin the first step of her data analysis. She looks at the class report that displays the percentage of students in each risk category for each subtest measure (see Figure 4). Ms. Smith notices a significant number of her students scored as "At-risk" or "Some risk" on the Oral Reading Fluency and comprehension measures. Overall, Ms. Smith is concerned that the students in her class vary widely in their literacy skills, and she is unsure how to begin using this data to inform her instruction.*

A classroom report such as that shown in Figure 4 can be useful in providing a broad picture of class-wide trends. In addition to determining risk of reading failure, universal screeners can also provide insight into the efficacy of the Tier 1 core curriculum. When a significant proportion of students is not meeting benchmarks, it may be an indicator that Tier 1 instruction needs to be strengthened to better meet the needs of students.

| Beginning of Year Third Grade Data | | | | |
|---|---|---|---|---|
| **Screener Subtest** | At-Risk | Some Risk | Minimal Risk | Negligible Risk |
| Letter-Sound Fluency | 43% | 9% | 43% | 4% |
| Nonsense Word Fluency | 43% | 9% | 35% | 13% |
| Word Reading Fluency | 43% | 22% | 30% | 4% |
| Oral Reading Fluency - Accuracy | 35% | 22% | 43% | 0 |
| Oral Reading Fluency - Rate | 61% | 9% | 30% | 0 |
| Comprehension - Cloze Passage | 48% | 30% | 22% | 0 |

Figure 4: Example of aggregated data displayed on universal screening classroom report.

In this scenario, Ms. Smith should utilize the SVR to guide her thinking. Since reading comprehension problems can stem from problems in word recognition or language comprehension or both, she would do well to consider how her class is performing with prerequisite skills, even if it is assumed students have mastered them by this time. In fact, the data show more than half of her students indicate some level of risk in letter-sound fluency and nonword reading fluency, which suggests that many of her students would benefit from instruction that further supports these skills.

If the core curriculum proves to be inadequate, it would be important to seek out resources for evidence-based practices and build them into the existing curriculum. As students gain proficiency in these foundational skills, it is expected that their fluency and comprehension would also improve, which was Ms. Smith's first concern.

### Tailoring Approaches for Individual Students

*After identifying classroom-level trends from the screening data, Ms. Smith is ready to examine individual student reports. Ms. Smith has concerns about how to determine which of her students requires additional support beyond the level of Tier 1 instruction and what skills should be prioritized for differentiated instruction.*

There are several important considerations to be made at this step. First, students who display substantial risk should be identified and considered for additional assessment and intervention. These decisions are best made in the context of a school-based team of educators through carefully structured and consistent procedures. Next, the data can be used to determine a primary goal for instruction for individual students who will be monitored for a minimum of six weeks. Students with similar instructional goals should be grouped together to receive differentiated instruction. While this process can appear overwhelming, there are many existing tools that can support educators in the decision-making process.

> *As with any assessment, there is a possibility of measurement error that may result in scores that do not accurately reflect a student's abilities.*

### Recognizing Shortcomings in the Process

*Ms. Smith notices a student is shown as at risk in Nonsense Word Fluency, but negligible risk in all other subtests including those that require higher-level skills. Ms. Smith has read with this student several times and never noticed a decoding issue. Additionally, this student is engaged and successful at working independently. Ms. Smith wonders if the data are accurate.*

As with any assessment, there is a possibility of measurement error that may result in scores that do not accurately reflect a student's abilities. Errors may occur during administration, recording, or scoring procedures. Additionally, a student's degree of physical, emotional, or mental well-being may interfere with performance during testing. Therefore, it is important to be mindful of these possibilities and make efforts to minimize them. These efforts may include double scoring with a colleague or adjusting testing periods to times when students are most alert and engaged. If questions about the accuracy of the data still remain, then it is best to either re-administer the screener as protocol allows, or follow up with additional assessments of the skill in question.

Although screeners are powerful and effective assessment tools, they are not without imperfections. Errors may occur in classifying who is and who is not at risk of reading failure. To minimize classification errors, some researchers suggest a two-staged approach to universal screening (Catts, 2015; Compton et al., 2010). In the first stage of this approach, all students are screened with an initial measure or group of measures that are research-based indicators of reading achievement, allowing for a generous cut-point to determine risk. In the second stage, students who are flagged as at risk after this initial screen are assessed with additional measures. Instead of immediately placing at-risk students in intervention, focused instruction is delivered with frequent progress monitoring for a minimum of six weeks. At the end of the progress monitoring period, the additional data should provide more evidence as to which students truly require tiered intervention.

It is also important to recognize that screeners may in fact uncover skill deficits that have previously gone unnoticed. It may be possible that a student does in fact have a deficit in lower-level skills even when assessments of higher-level reading skills such as reading fluency and comprehension show negligible risk. In some cases, a student may have developed compensating skills and strategies that mask an underlying deficiency, which can sometimes make it difficult for teachers to identify. Once again, the use of follow-up assessments such as informal diagnostic measures is a necessary addition to the assessment process to both confirm and pinpoint specific areas of need.

### Implementation and Monitoring

*Now that Ms. Smith has finalized her instructional planning, she is prepared to implement instruction. She understands the importance of monitoring her students' progress along the way and wonders what constitutes best practices for tracking their growth.*

Progress monitoring is another essential component of the assessment process. Data collected from consistent progress monitoring can help educators determine a student's rate of growth and whether they are on track to meet instructional goals. They are also used to evaluate the effectiveness of

instruction and whether adjustments should be made. Most screening tools also have progress monitoring capabilities. For example, curriculum-based measurements (CBMs) such as the Oral Reading Fluency assessment can be used as both a screening and progress monitoring tool. Furthermore, a CBM can provide information as to whether a student is meeting broader, grade-level benchmark goals. Additionally, an informal diagnostic measure that can capture smaller, incremental changes in learning can provide a better picture of how much a student is responding to instruction.

The frequency of progress monitoring will depend on a student's level of risk. Students who are at high levels of risk for reading failure should be assessed more frequently, with progress monitored every 1–2 weeks to adjust instructional changes as needed. For students showing moderate levels of risk, progress monitoring should occur every 2–3 weeks. Students who demonstrate minimal or negligible risk on universal screening may be fine with continued monitoring through regular screening practices that occur three times a year.

Many packaged screening tools have software programs that can graph a student's progress over time. Some of these programs allow educators to enter specific goals that can then be represented as an aim line, or the expected line of trajectory from the student's initial score to the designated goal. This goal can be the benchmark for the next testing period, or an individualized goal. If a school's chosen screener does not include a graphing function, there are several free resources available online, including the National Center on Intensive Intervention (https://intensiveintervention.org/resource/student-progress-monitoring-tool-data-collection-and-graphing-excel).

## Advancing Literacy

*Ms. Smith has gained a better understanding of the role of universal screening as a critical component of assessment within an RTI framework. This understanding will allow her to interpret universal screening data more effectively, and in conjunction with other assessments, help her to make well-informed instructional decisions.*

Universal screening is a critical first step in prevention-based approaches such as RTI. Within these approaches, schools can more efficiently identify students who require additional support and provide evidence-based interventions that address an individual's needs early on before academic failure occurs. Teachers who understand the purpose and limitations of universal screeners are positioned to help their students become competent readers with the potential to have thriving academic careers.

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