



# Dyslexia & Reading Difficulties

## Executive Summary

Dyslexia is a common linguistic learning disorder related to problems with word decoding during reading due to difficulties with the processing of word sounds. Early reading interventions are effective at improving reading ability in those with dyslexia. In 2016, [SB 638](#) created the Legislative Task Force on Dyslexia and modified RSMo § [167.950](#) to include requirements related to dyslexia. These requirements include dyslexia and reading difficulty screening in public schools, requiring that two hours of in-service training on dyslexia be made available to teachers, and requiring that schools provide classroom support. Several bills have been introduced during the 2022 legislative session that would expand requirements related to reading and enact many of the recommendations made by the Dyslexia Task Force ([HB 1556](#), [HB 1980](#), [SB 681](#), & [SB 1076](#)).

## Highlights

- There is a scientific consensus that early interventions for those with reading difficulties are important and the most effective at improving reading ability.
- The most effective reading interventions tend to be structured around reading instruction by trained individuals in one-on-one or in small group settings.
- On a national assessment, 34% of Missouri 4<sup>th</sup> grade students scored Proficient or higher in reading. Additionally, there were gaps in reading scores between racial and socioeconomic groups.

## Limitations

- The large number of reading interventions covering different grade levels can make it difficult to determine which is the most effective. Many have been shown to be effective by well-designed studies.

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## Research Background

### Reading Disorders and Interventions

There are two types of reading disorders for those with average intelligence: those that involve problems with word decoding (dyslexia) and those involving reading comprehension (which is much rarer and sometimes referred to as hyperlexia).<sup>1</sup> Because people with dyslexia commonly have reversal errors in letter shapes or letter orders, dyslexia is often mistakenly thought of as a visual disorder. Dyslexia is related to problems with word decoding due to difficulties with the processing of word sounds.<sup>2</sup> Dyslexia is heritable, so people with dyslexia are more likely to have dyslexic children.<sup>3</sup> However, genetics is just one of several factors that can cause the

disorder.<sup>2</sup> Dyslexia is a very common learning disorder and, although there is no cure for the underlying condition, dyslexic individuals can develop skills that improve word decoding.

### The Importance of Early Interventions

There is a scientific consensus that early interventions for those with reading difficulties are important and the most effective for improving reading ability.<sup>4</sup> It is recommended that treatment for reading difficulties be started before a diagnosis of dyslexia is made.<sup>2</sup> Additionally, effective reading interventions can have relatively low costs and provide lasting improvements when implemented by specially trained teacher aides.<sup>5</sup> Untreated dyslexia may lead to low academic performance, which is a strong predictor for dropping out of high school.<sup>3,6</sup>

### Types of Reading Interventions

There are many different programs, products, practices, and policies related to education. The large number of reading interventions covering different grade levels can make it difficult to determine which is the most effective. Many have been shown to be effective by well-designed studies. To help educators, policy-makers, and parents know which programs are evidence-based, the Institute of Education Sciences (within the U.S. Department of Education) created the [What Works Clearinghouse](#) (WWC). The WWC lists types of learning interventions with summaries of the evidence for effectiveness. There is evidence that early parental involvement in exposing children to books at a young age at home is related to reading ability.<sup>7</sup> The most effective reading interventions tend to be structured reading instruction by trained individuals in one-on-one or small group settings.<sup>8</sup>

### **Reading Proficiency of Missouri Fourth-Grade Students**

According to a 2019 National Assessment of Education Progress (NAEP) assessment, 34% of Missouri 4<sup>th</sup>-grade students scored Proficient or higher in reading.<sup>9</sup> These results were similar to national averages, though it should be noted that reading proficiencies vary substantially by school across the state. Additionally, there are gaps between the scores of White and Black students in Missouri, with White students scoring ~10% higher on average than Black students.<sup>9</sup> Differences also exist between socioeconomic groups, with students qualifying for the federal free and reduced-price lunch program scoring ~13% lower on average than students not in this group. Finally, suburban schools had significantly higher reading scores than urban and rural schools. See our Science Note on [Education Opportunity Gaps](#) for more information.

### **Dyslexia Legislation**

Forty-seven states, including Missouri, have some form of legislation related to dyslexia.<sup>10</sup> As of 2016, Missouri law (RSMo § [167.950](#)) requires that screenings for dyslexia and related disorders be conducted in all public and charter schools. It also requires [practicing teacher assistance programs](#) in each school district to offer two hours of in-service training (training during the school year) on these topics to practicing teachers, and each charter school to offer the same to

all teachers. In 2017, the Legislative Task Force on Dyslexia recommended, in its legislatively mandated [report](#), that every student in grades 1–3 be screened for dyslexia within 30 days of the beginning of the school year.<sup>11</sup> Kindergarteners were recommended to be screened twice; once by January 31st and once more at the end of the school year. The Task Force also recommended that two hours of teacher in-service training be required, not just offered, and that teacher preservice (training before the school year) also include training on “the effective principles of reading”. Finally, the Task Force recommended that the Department of Elementary & Secondary Education provide guidance to schools on classroom support including “best practices, support materials, technology resources and appropriate training”.<sup>11</sup>

Several bills have been introduced during the 2022 legislative session that would expand requirements regarding dyslexia and reading difficulties in school districts and charter schools ([HB 1556](#), [HB 1980](#), [SB 681](#), & [SB 1076](#)). The bills share many similarities including changing the term “reading intervention plan” to “reading success plan,” and requiring such plans be made for students demonstrating reading deficiencies. They all also require, as suggested by the Legislative Task Force on Dyslexia, that K–4 students (K–3 in [SB 1076](#)) be assessed for reading ability within the first 30 days of each school year. All of the bills also repeal a requirement (RSMo § [167.645](#)) that reading assessments be given within 45 days of the end of the 3rd grade unless students have demonstrated reading at their grade level or above. Further, a requirement that students not be promoted to the 5th grade if they do not read at a 3rd grade level at the end of a required remedial reading-focused summer school would be repealed.

## References

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