

RESEARCH BRIEF ✦ PEER-REVIEWED PUBLICATION

# Core5 Can Effectively Differentiate Instruction for Reader Profiles

## Key Findings

- Core5 performance in the Fall could be used to distinguish between students classified as poor decoders and poor comprehenders.
- Differences in Core5 accuracy compared to typical readers resolved in the Spring for most students.
- Poor decoders improved from the 18<sup>th</sup> percentile to the 31<sup>st</sup> percentile in oral reading fluency on aimsweb.
- Poor comprehenders improved from the 13<sup>th</sup> percentile to the 36<sup>th</sup> percentile in reading comprehension on aimsweb.

## Introduction

The Simple View of Reading (Hoover & Gough, 1990) is a framework commonly used to guide assessment and subgrouping of students into different *reader profiles* (Catts, Hogan, & Fey, 2003). In this framework, students who struggle in both word reading and comprehension are labeled as having a mixed deficit. Students who struggle with word reading but have a relative strength in comprehension are labeled poor decoders, while students who have relatively good word reading but poor comprehension are labeled poor comprehenders. For this study, performance on aimsweb® – a commonly-used progress monitoring tool – was used to categorize students into one of the reader profiles.

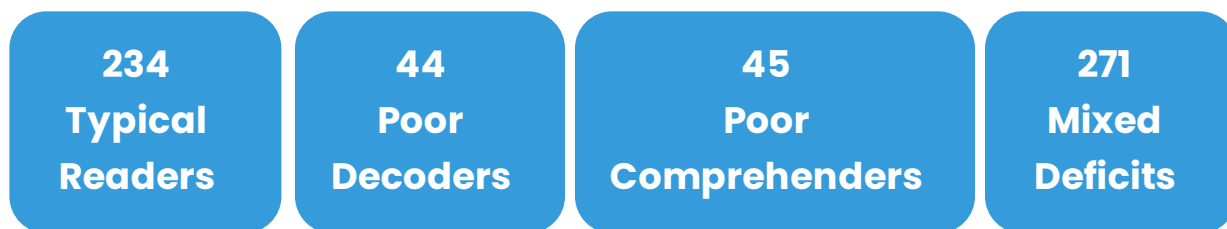
The aim of *differentiated instruction* is to modify the focus or format of instruction to address the needs of students with differing reading profiles. Many teachers and schools have turned to blended learning to provide differentiated instruction. The technology-based portion of a blended learning program with its automated data collection and ongoing progress monitoring is quite suited to support differentiated instruction. In addition, edtech programs can provide a systematic scope and sequence for reading skill acquisition as well as targets for additional offline instruction. A central goal of this study was to determine how well Core5 as a blended learning program could be used to support differentiated instruction.

To accomplish this goal, this study employed a three-step process. First, students were classified into one of the reader profiles based on their performance on aimsweb. Second, performance within Core5 was examined separately for students with different reader profiles. Lastly, the extent to which students with different reader profiles made gains on aimsweb by the end of the school year was evaluated.

## Study Design

Participants were students who took part in a statewide initiative to improve reading outcomes in elementary schools. They were third grade students who used Core5 with fidelity for one school year. Third grade was chosen because it is a critical period when students shift from “learning to read” to “reading to learn,” and when many struggling readers are identified (Chall, 1996).

The Reading Curriculum-Based Measure (R-CBM) and the Reading Maze Test (Maze) from aimsweb were administered to students in the Fall and Spring of the 2014–2015 school year. The R-CBM is a test of oral word reading fluency, and Maze is a test of reading comprehension. Any students who performed above the 40<sup>th</sup> percentile and below the 85<sup>th</sup> percentile on both subtests were classified as typical readers. Students who scored below the 25<sup>th</sup> percentile on the R-CBM and above the 40<sup>th</sup> percentile on the Maze were classified as poor decoders, while students who scored above the 40<sup>th</sup> percentile on the R-CBM and below the 25<sup>th</sup> percentile on the Maze were classified as poor comprehenders. Lastly, students who performed below the 25<sup>th</sup> percentile on both subtests were classified as having mixed deficits. The number of students who fell under each reader profile are shown here:



To assess performance in Core5 for students with different reader profiles, key Core5 activities were selected to create performance domains that aligned with the Simple View of Reading. Sight Words and Phonics were combined to form a Word Reading Domain, while Vocabulary and Comprehension were used to create a Comprehension Domain.

## Results

### **Core5 performance in the Fall could be used to distinguish between students classified as poor decoders and poor comprehenders.**

Students classified as poor decoders or who have mixed deficits achieved significantly lower accuracy scores in Core5’s Word Reading Domain than students classified as typical readers. Poor comprehenders and students with mixed deficits scored significantly lower than typical readers in Core5’s Comprehension Domain.

## **Differences in Core5 accuracy compared to typical readers resolved in the Spring for most students.**

Poor decoders and poor comprehenders did not differ from typical readers in terms of accuracy on Core5 activities in both the Word Reading Domain and Comprehension Domain. However, typical readers significantly outperformed students with mixed deficits in both domains.

## **Poor decoders improved from the 18<sup>th</sup> percentile to the 31<sup>st</sup> percentile in oral reading fluency on aimsweb.**

On the R-CBM subtest of aimsweb – which measures oral word reading fluency – students with all reading profiles made significant gains from Fall to Spring except poor comprehenders. Poor decoders increased from the 18<sup>th</sup> percentile to the 31<sup>st</sup> percentile. Students with mixed deficits increased from the 12<sup>th</sup> to the 18<sup>th</sup> percentile and typical readers increased from the 60<sup>th</sup> to the 63<sup>rd</sup> percentile.

## **Poor comprehenders improved from the 13<sup>th</sup> percentile to the 36<sup>th</sup> percentile in reading comprehension on aimsweb.**

On the Maze subtest of aimsweb – which measures reading comprehension – both poor comprehenders and students with mixed deficits made significant gains from Fall to Spring. Poor comprehenders increased from the 13<sup>th</sup> percentile to the 36<sup>th</sup> percentile, and students with mixed deficits increased from the 10<sup>th</sup> percentile to the 21<sup>st</sup> percentile. The performance of poor decoders declined from the 52<sup>nd</sup> percentile to the 40<sup>th</sup> percentile.

## **Want to Learn More?**

If you would like more information about this study, please see the full article published in the peer-reviewed journal *Reading and Writing*. For additional information or updates on research related to Core5, please contact [research@lexialearning.com](mailto:research@lexialearning.com).

## References

Catts, H. W., Hogan, T., & Fey, M. E. (2003). Subgrouping poor readers on the basis of individual differences in reading-related abilities. *Journal of Learning Disabilities, 36*(2), 151–164. <https://doi.org/10.1177/002221940303600208>

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