

The relationship between surface dyslexia and arithmetic skills

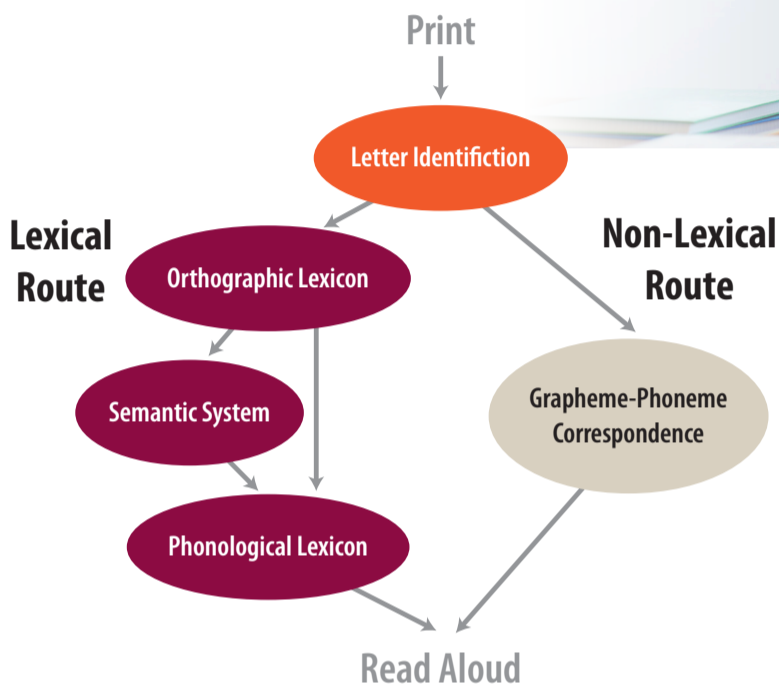
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ARC CENTRE OF EXCELLENCE IN COGNITION AND ITS DISORDERS

What's the issue?

Building off the Reading Training Study by McArthur, et al. (2013, 2015), researchers at the ARC Centre of Excellence in Cognition and its Disorders examined the relationship between subtypes of dyslexia and arithmetic skills.

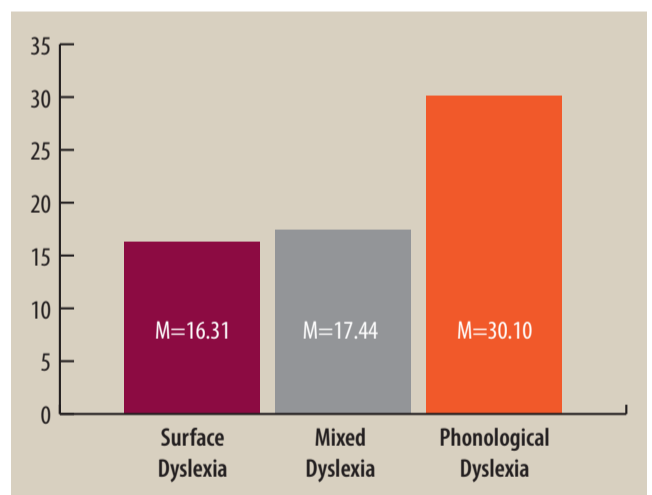


What's known?

Struggling readers are often classified under different types of dyslexia depending on how they process print. Students who have a specific problem with lexical reading are classified as surface dyslexic. Students who have a specific problem with non-lexical reading are classified as phonological dyslexic. Children who struggle with both routes have been referred to as mixed dyslexics.

How do dyslexic students perform on arithmetic measures?

Readers identified with surface dyslexia and mixed dyslexia had significantly lower arithmetic scores compared to peers identified with phonological dyslexia.



How can this inform practice?

Practitioners should be mindful that students identified with surface or mixed dyslexia may be at-risk for arithmetic problems in early grades.

What's next?

Researchers hypothesize that the relationship between surface dyslexia and arithmetic difficulties might be explained by a higher-level underlying deficit to store representations in long term memory. To test this hypothesis, future research will include more specific arithmetic measures.