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## What proportion of decodable words in a text is most beneficial for early reading instruction?

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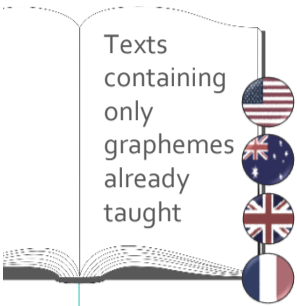
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# WHAT PROPORTION OF DECODABLE WORDS IN A TEXT IS MOST BENEFICIAL FOR EARLY READING INSTRUCTION?

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## Introduction



Texts containing only graphemes already taught

### Decodable text

What is the best practice?

**More** Juel & Roper (1985); Mesmer (2005)

**Less** Allor et al. (2013); Price-Mohr & Price (2019); Solity & Vousden (2009)

**Both** Ankrum (2021)

**?** Cheatham & Allor (2012); Jenkins et al. (2004); Slavin et al. (2009)

## Method

15 first grade teachers  
Phonics method

246 French students  
Mean age: 6.5

### Test 1

- Reading
- Phonological awareness
- Comprehension

Septembre 2019

### Collection of decodability rate

- Texts read by children
- Graphemes taught
- Calculation of the decodability rate with Anagraph (Rioux, 2018)

Every day for 10 weeks

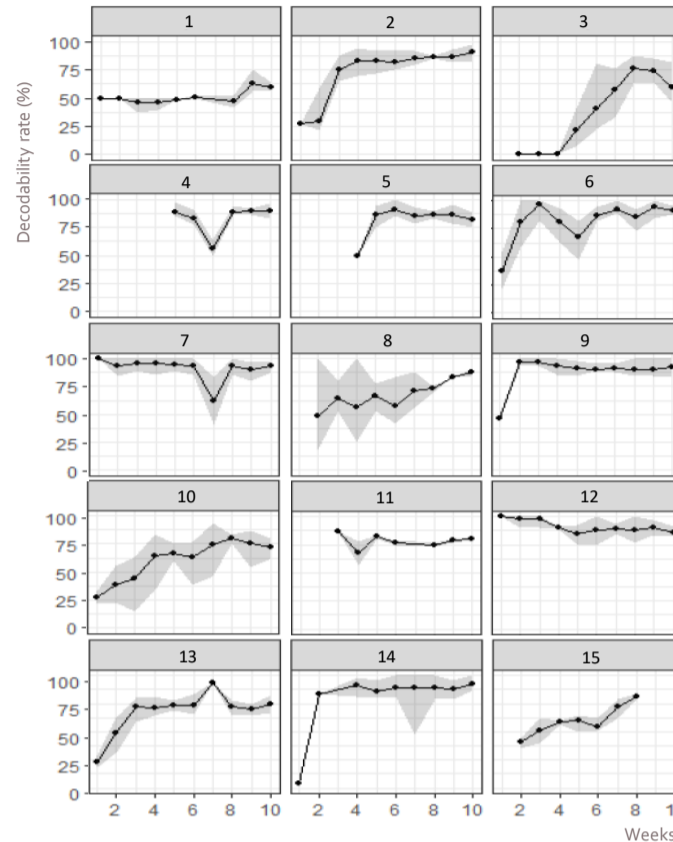
Novembre 2019

### Test 2

- Reading
- Phonological awareness
- Comprehension
- + Spelling

## Data analysis

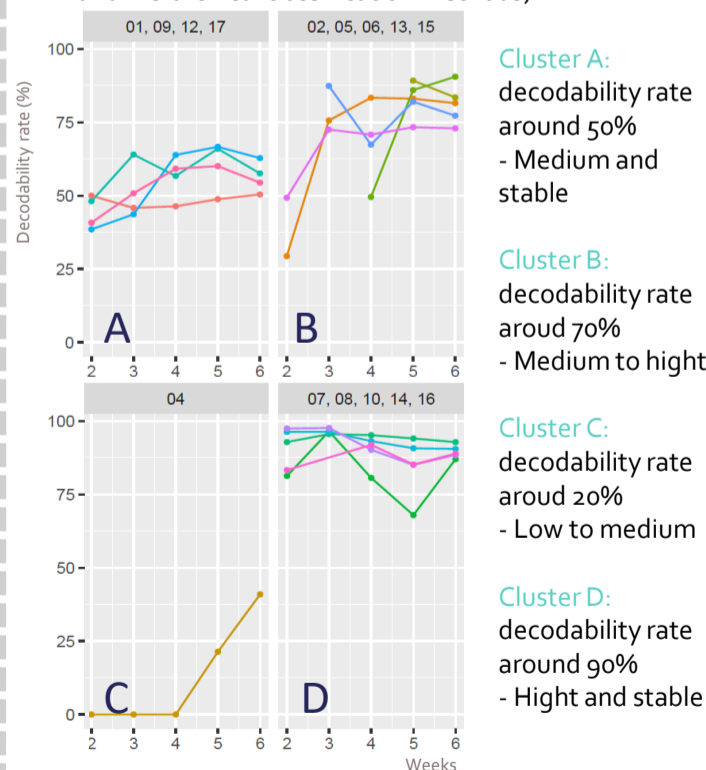
Figure 1. Decodability rate by weeks and by classes



Note. Each line represents the average decodability rate per week. The dispersion between the minimum and maximum decodability rate of the week is represented by the shaded area.

- Decodability rates increase over the weeks for each class
- In the first weeks, the rates are very diverse across the classes
- After 9 weeks, the gap reduces and the rate concentrates between 70 and 90%
- To facilitate the analyses, a grouping of similar classes is necessary

Figure 2. Grouping of classes by clustering (by Kmeans and hierarchical classification methods)



Mixt model:

$g\text{lm}er(\text{Score T2} \sim \text{cluster} + \text{decodage T1} + \text{comprehension T1} + \text{phonologie T1} + (1|\text{Class}) + (1|\text{Item}), \text{family} = \text{binomial}, \text{df\_T2})$

## Results

After controlling the variability of initial student level, classes and items.

Figure 3: Reading measure

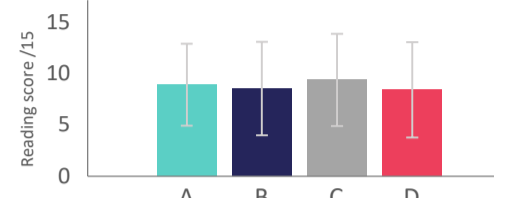


Figure 4: Phonological awareness measure

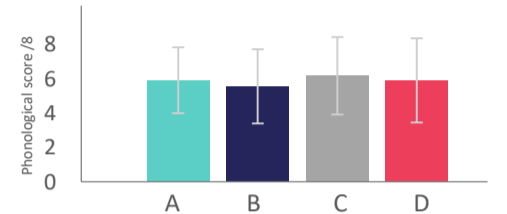


Figure 5: Spelling measure

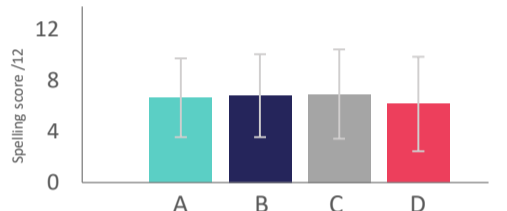
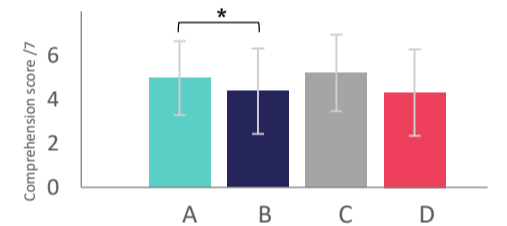


Figure 6: Comprehension measure



→ Measures of **reading**, **phonological awareness** and **spelling** : No significant effect of the cluster variable.

→ Measure of **comprehension** : Students in cluster A performed significantly better than students in cluster B.

## Conclusion

- High variability of mean percentage of decodable text across classes

- Three patterns of decodability emerged:



- Patterns do not significantly affect

- Reading
- Phonological awareness
- Spelling

- Patterns might affect the comprehension performance in line with Price-Mohr & Price (2019): less decodable texts would promote comprehension.

→ Further studies are needed to confirm these results.

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