



**HAL**  
open science

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

Cynthia Boggio, Marie-Line Bosse, Céline Pobel-Burtin, Valérie Perthué,  
Maryse Bianco

### ► To cite this version:

Cynthia Boggio, Marie-Line Bosse, Céline Pobel-Burtin, Valérie Perthué, Maryse Bianco. What proportion of decodable words in a text is most beneficial for early reading instruction?. British Dyslexia Association's International Conference 2021, May 2021, Oxford, United Kingdom. hal-03245270

**HAL Id: hal-03245270**

**<https://hal.science/hal-03245270>**

Submitted on 1 Jun 2021

**HAL** is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

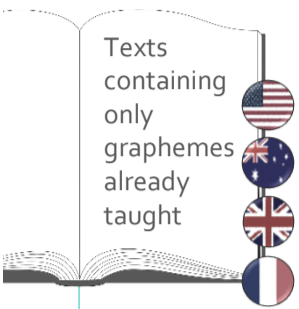
L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

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

Cynthia Boggio<sup>1,3</sup>, Marie-Line Bosse<sup>1</sup>, Céline Pobel-Burtin<sup>2</sup>, Valérie Perthué<sup>3</sup> & Maryse Bianco<sup>2</sup>

<sup>1</sup> Univ. Grenoble Alpes, CNRS, LPNC, 38000 Grenoble, France; <sup>2</sup> Univ. Grenoble Alpes, LaRAC, 38000 Grenoble, France; <sup>3</sup> Editions Hatier, 75006 Paris, France.

## Introduction



### 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

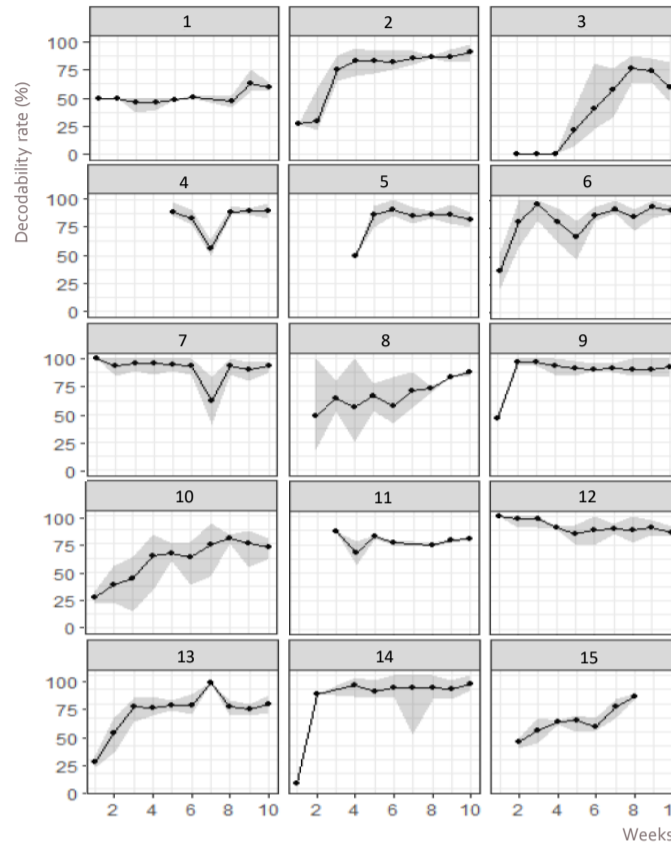
Novembre 2019

### Test 2

- Reading
- Phonological awareness
- Comprehension
- + Spelling

## Data analysis

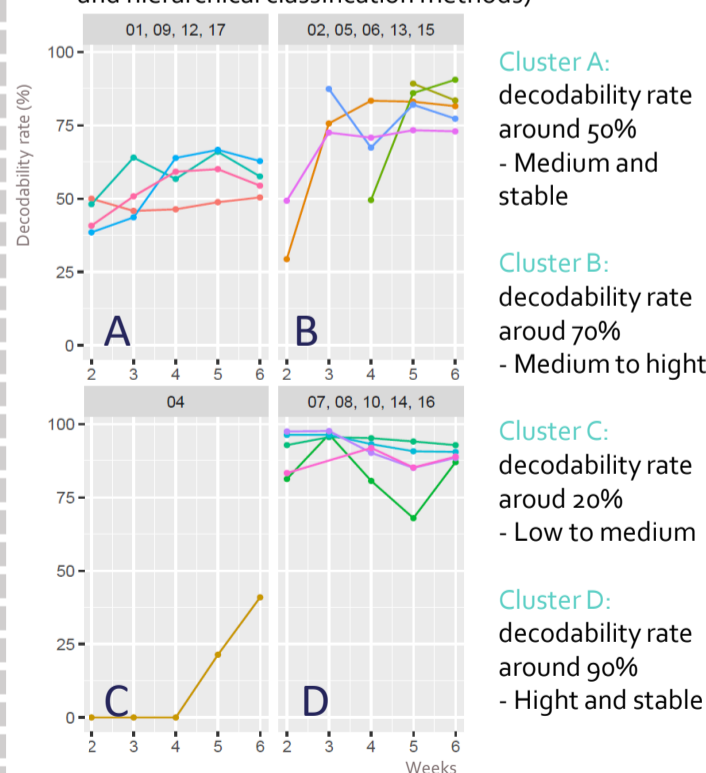
Figure 1. Decodability rate by weeks and by classes



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

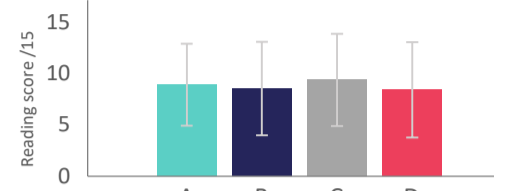


Figure 4: Phonological awareness measure

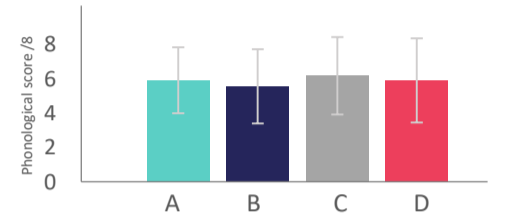


Figure 5: Spelling measure

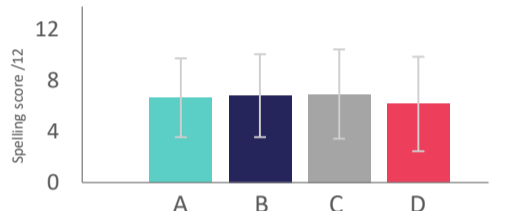
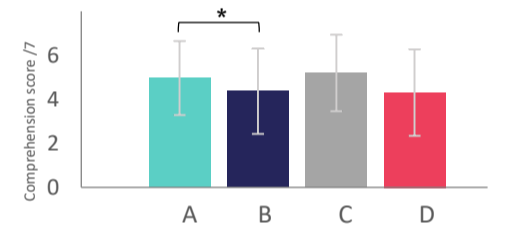


Figure 6: Comprehension measure



→ 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.

## References:

- Allor, J. H., et al. (2013). Teaching students with intellectual disability to integrate reading skills: Effects of text and text-based lessons. *RASE*, 34(6), 346-356.
- Ankrum, J. W. (2021). Complex Texts or Leveled Readers for the Primary Grades? Yes and Yes!. *Early Child Educ J*, 1-7.
- Cheatham, P., & Allor, H. (2012). The influence of decodability in early reading text on reading achievement. *Read Writ*, 25, 2223-2246.
- Jenkins, J. R., et al. (2004). Effects of reading decodable texts in supplemental first-grade tutoring. *Sci Stud of Read*, 8(1), 53-85.
- Juel, C., & Roper, D. (1985). The influence of basal readers on first grade reading. *Read Res Q*, 134-152.
- Mesmer, H. A. E. (2005). Text decodability and the first-grade reader. *Read Writ Q*, 21(1), 61-86.
- Price-Mohr, R., & Price, C. (2020). A comparison of children aged 4-5 years learning to read through instructional texts containing either a high or a low proportion of phonically-decodable words. *Early Child Educ J*, 48(1), 39-47.
- Rioux, J. (2018). La plateforme Anagraph, éléments de contexte et description. *La Lettre de l'AIERDF*, 64(1), 70-71.
- Slavin, R. E., et al. (2009). Effective reading programs for the elementary grades: A best evidence synthesis. *Rev Educ Res*, 79(4), 1391-1466.
- Solity, J., & Vousden, J. (2009). Real books vs reading schemes: A new perspective from instructional psychology. *EducPsychol*, 29(4), 469-511.

## Acknowledgment:

Funding for this project was provided by *Les Editions Hatier* and we thank them for their support. We sincerely thank F. Pittion, S. Wang, E. Montaut, A. Perinet and A. Leclercq-Samson for data analysis. Finally, we are very grateful to all the teachers and students who agreed to participate in this study. We would also like to thank the Academy of Grenoble for agreeing to support us in this project.