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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

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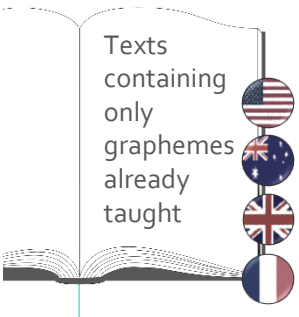
WHAT PROPORTION OF DECODABLE WORDS IN A TEXT IS MOST BENEFICIAL FOR EARLY READING INSTRUCTION?

Cynthia Boggio[1,3], Marie-Line Bosse[1], Céline Pobel-Burtin[2], Valérie Perthué[3] & Maryse Bianco[2]

[1] Univ. Grenoble Alpes, CNRS, LPNC, 38000 Grenoble, France; [2] Univ. Grenoble Alpes, LaRAC, 38000 Grenoble, France; [3] 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

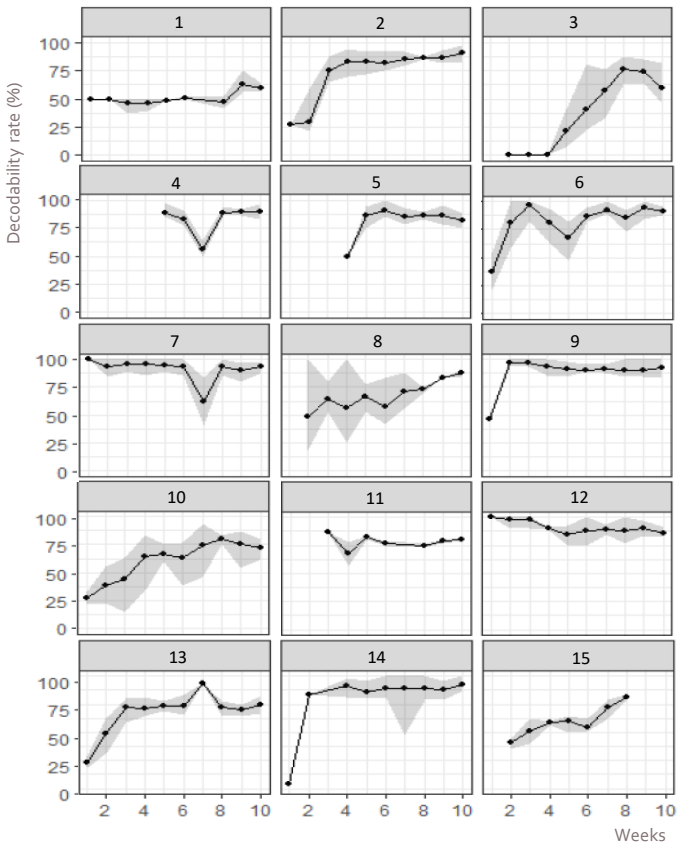
Novembre 2019

Test 2

- Reading
- Phonological awareness
- Comprehension
- + Spelling

Data analysis

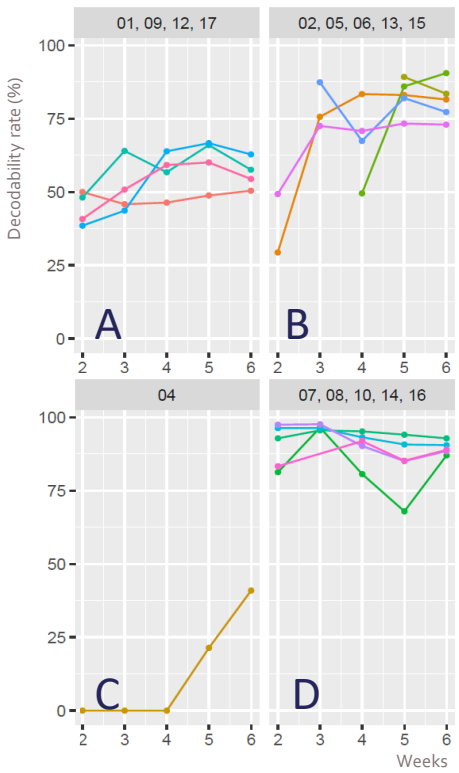
Figure 1. Decodability rate by weeks and by classes



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)



Cluster A: decodability rate around 50% - Medium and stable

Cluster B: decodability rate aroud 70% - Medium to hight

Cluster C: decodability rate aroud 20% - Low to medium

Cluster D: decodability rate around 90% - Hight and stable

Mixt model:

glmer(ScoreT2~cluster+decodageT1+comprehensionT1+ phonologieT1+(1|Class) + (1|Item), family = binomial, df_T2)

Results

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

Figure 3: Reading measure

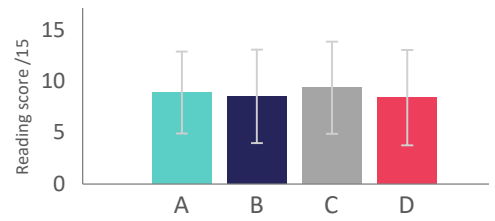


Figure 4: Phonological awareness measure

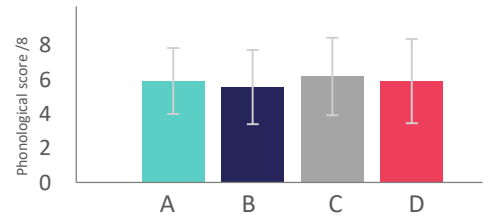


Figure 5: Spelling measure

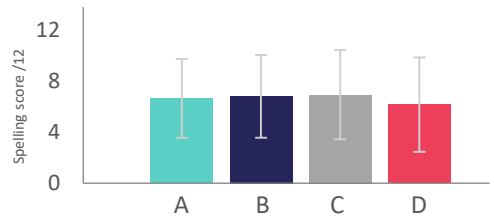
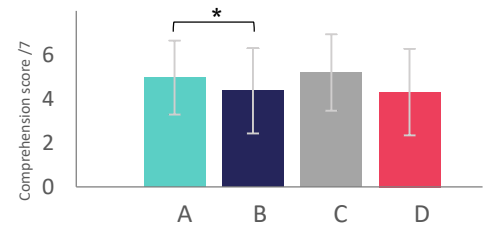


Figure 6: Comprehension measure



→ 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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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.