

Comparison of the effect of learning to read in English or in Dutch on the acquisition of the French orthographic code in French-speaking children attending immersion school programs

Florence BINAMÉ ^{a,b}, Charline GUYON ^b & Martine PONCELET ^b

^a Fund for Scientific Research FNRS, Belgium

^b Department of Psychology : Cognition and Behaviour, University of Liege, Belgium

INTRODUCTION

In the French Community of Belgium, most of the children attending bilingual immersion school programs learn to read in the immersion language before learning to read in their native language.

Across languages, there are considerable variations of the orthographic consistency, i.e. the way in which phonology is represented in orthography. On one part of the continuum of the orthographic consistency there are shallow orthographies (e.g., Dutch, Finnish) which are based on consistent one-to-one mappings between phonemes and graphemes, and on the other side, there are deep orthographies (e.g., English, French) which include inconsistent one-to-many mappings (Seymour & al., 2003).

Consequently, reading acquisition occurs earlier in shallow than in deep orthographies because it is easier for children to learn highly consistent letter-sound correspondences. In the same way, the degree of orthographic consistency also seems to mediate the rate of learning to spell so that it is more difficult for children to learn about the graphemic representation of phonemes when these can have different spellings (Caravolas, 2004, Goswami & al., 2005).

AIM OF THE STUDY

To test the contrasted hypothesis that, among children in the beginning of reading acquisition, firstly learning to read and spell in :

- a **transparent orthography** such as **Dutch** would promote the acquisition of the more opaque French spelling
- a **very opaque orthography** such as **English** would not facilitate the acquisition of the opaque French spelling

METHOD

Participants

182 French-speaking children attending bilingual immersion school programs

	Third Graders	Fourth graders
Control group	N = 31	N = 38
English immersed children	N = 28	N = 30
Dutch immersed children	N = 27	N = 28

The two experimental groups were matched with controls on a vocabulary test (EVIP) and on a non verbal intelligence test (matrices of Raven)

Tasks

Assessment of the acquisition of the French orthographic code with :

- 1) Ortho 3 (BELEC) (to assess general spelling skills)
- 2) Words dictation (to assess the use of PGC)
23 consistent words and 112 inconsistent words
- 3) Non-words dictation (to assess the use of PGC without lexical reference)
23 consistent non-words and 85 inconsistent non-words

Material

Selection of **94** target phoneme-to-grapheme correspondences of French used in the words and the non-words :

- 16 consistent graphemes = only one-to-one mapping possible
- 78 inconsistent graphemes = one-to-many mappings possible

Scoring

Three different scores :

- 1) Target grapheme (consistent or inconsistent) of words and non-words
- 2) Orthographic form of the words
- 3) Phonological form of the non-words

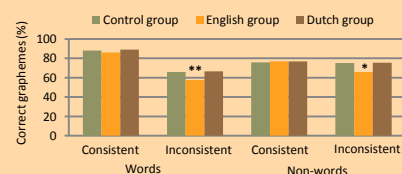
CONTACT

BINAMÉ Florence
 University of Liege - Department of Psychology : Cognition and Behaviour
 Boulevard du Rectorat, B33, 4000 Liège - BELGIUM
 E-mail: Florence.Biname@ulg.ac.be

RESULTS

Third graders

1) Target graphemes



Consistent graphemes :

no main effect of group

Words : $F(2,83) = 0.95, p=0.39$

Non-words : $F(2,83) = 0.08, p=0.91$

→ Control = Dutch = English

Inconsistent graphemes :

main effect of group :

Words : $F(2,83) = 4.88, p < 0.01$

Non-words : $F(2,83) = 3.43, p < 0.05$

→ Control = Dutch > English

2) Orthographic word forms and phonological non-word forms

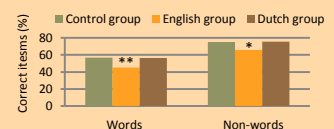
Words and non-words :

main effect of group :

Words : $F(2,83) = 4.88, p < 0.01$

Non-words : $F(2,83) = 3.43, p < 0.05$

→ Control = Dutch > English



Fourth graders

1) Target graphemes (consistent and inconsistent)

No main effect of group : Control = English = Dutch

2) Orthographic word forms and phonological non-word forms

No main effect of group : Control = English = Dutch

DISCUSSION

The degree of orthographic consistency of the immersion language seems to have an influence on the later acquisition of the French spelling

→ Contrary to learning to spell in English (very opaque orthography), learning to spell in Dutch (more transparent orthography) enhances a facilitation effect on the acquisition of the French orthographic code by the transfer of the phonological recoding process.

English immersed children beginning the acquisition of the French orthographic code appear to develop basic phonological recoding skills which permit them to spell correctly consistent French graphemes but which do not seem enough to produce correct French inconsistent graphemes as well as Dutch immersed children.

Nevertheless, English immersed children can reach to master the French orthographic code as well as Dutch immersed children from the fourth grade, highlighting that they can rapidly catch up their disadvantage which is only temporary.

REFERENCES

- Caravolas, M. (2004). Spelling development in alphabetic writing systems: a cross-linguistic perspective. *European Psychologist*, 9 (1), 3-14.
- Seymour, P., Aro, M., & Erskine, J. (2003). Foundation literacy acquisition in European orthographies. *British Journal of Psychology*, 94, 143-174.
- Ziegler, J., & Goswami, U. (2005). Reading acquisition, developmental dyslexia, and skilled reading across languages: a psycholinguistic grain size theory. *Psychological Bulletin*, 131 (1), 3-29.