

Receptive knowledge of intensifying compounds: Belgian French-speaking learners of Dutch and English

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Cogling8

Outline

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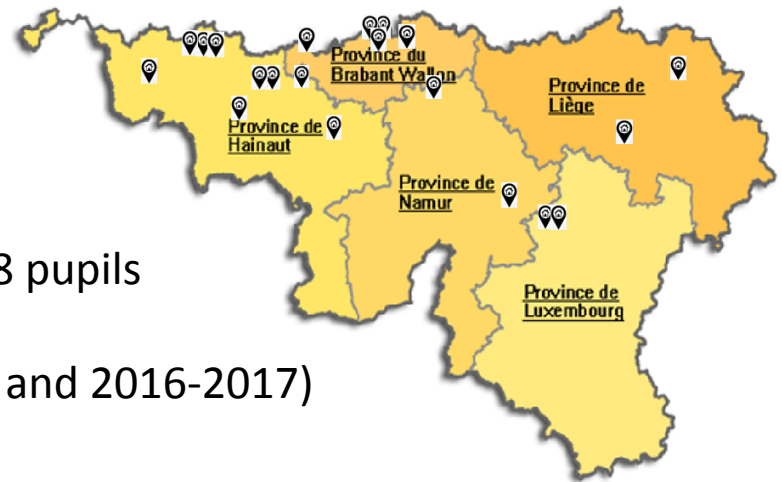
1. Introduction

1.1. Multidisciplinary research project on CLIL (Hilgismann et al. 2017)

A large-scale and longitudinal study:

13 primary schools, 9 secondary schools = 928 pupils

followed during two school years (2015-2016 and 2016-2017)



	CLIL Dutch	Non-CLIL Dutch	CLIL English	Non-CLIL English
Primary school pupils (455)	175	71	103	106
Secondary school pupils (473)	141	114	104	114

1.2. Intensifying constructions

- Previous research focused on intensifying adverbs
(Granger 1998; Lorenz 1999; Hoeksema & Kortering 2011; Pérez-Paredes & Díez-Bedmar 2012)
- Intensification can be expressed cross-linguistically by several morphological and syntactic constructions (Ito & Tagliamonte 2003; Hoeksema 2011, 2012; Rainer 2015; Hendrikx et al. 2017, 2019; Van der Wouden & Foolen 2017)

1.3. Intensifying compounds

- Focus on intensifying compounds as instances of collocational specialization
 - Collocations: conventionalized, frequently recurring word combinations (Gyllstad 2007)
 - English *brand-new*, *crystal clear* and Dutch *bloedmooi* ‘lit. blood beautiful’
- Significant relation between general vocabulary knowledge and knowledge of collocations (Koya 2005; Gyllstad 2007)
- However, advanced L2 learners encounter more difficulties learning collocations than learning simple lexical items (Bahns & Eldaw 1993; Arnaud & Savignon 1997)

1.4. Acquisition of intensifying compounds

Intensifying compounds may be difficult to acquire by foreign language learners:

- Intensifying compounds are productive in English and in Dutch, but not in French
- Collocational specialization
- Not often subject to explicit instruction in foreign language teaching

2. Research hypotheses

2.1. Hypotheses (1)

We expect

- i) that **CLIL students will score higher** on the multiple-choice test on intensifying compounds compared to their peers in the non-CLIL track

- ii) that the **more frequently** an intensifying compound occurs **in a reference corpus** (and hypothetically in the target-language input of the learners), **the more learners** will **recognize** the compound in the multiple-choice test

2.1. Hypotheses (2)

- iii) that the **duration of target-language learning** is positively associated with the learners' knowledge of intensifying compounds
- iv) that **extracurricular target-language input** is positively associated with the learners' receptive knowledge of intensifying compounds
- v) that learners' who have a **well-developed productive and receptive vocabulary** will have a greater receptive knowledge of intensifying compounds

3. Method and data

3.1. Participants

9 Secondary schools

	English	Dutch	Total	Percentage
Non-CLIL	97	112	209	47.72
CLIL	96	133	229	52.28

3.2. Multiple-choice test

- The multiple-choice test consists of 10 short gap sentences
- One of the three answer options is idiomatic
- The test includes frequent and infrequent intensifying compounds
- The sentences and the answer options appear in a random order

He was ... drunk and behaved really badly.

blind

fast

rock

*ice-cold, brand new, soaking wet,
crystal clear, world wide, blind
drunk, paper-thin, razor-sharp,
wide awake, dead easy*

Later word ik hopelijk ... rijk.

‘Later I will hopefully become ... rich.’

roet

schat

honds

*stokoud, bloedheet, spekglad, keihard,
peperduur, muisstil, pijlsnel, schatrijk,
beresterk, beeldschoon*

3.3. Predictor variables

Outcome variable: **receptive knowledge of intensifying compounds**
A one-decimal score between 0 and 1 (10 items in multiple-choice test)

Predictor variables:

Target language exposure variables

- CLIL
- Number of years target language learning
- Current informal contact with the target language outside the classroom

Measures of vocabulary knowledge

- Receptive vocabulary
- Productive vocabulary

Control variables

- Non-verbal intelligence
- Socio-economic background

3.4. Number of years TL instruction

	English		Dutch	
	Non-CLIL	CLIL	Non-CLIL	CLIL
<i>n</i>	96	96	103	135
Mean	5.00	6.23	7.73	9.30
St. dev.	2.20	3.01	2.48	2.53

In Dutch, the difference between CLIL and non-CLIL students is significant ($U=4569.5$, $z=-4.6$, $p<0.05$).

3.5. Extra-curricular TL contact

- How often do you use English / Dutch on the Internet?
- How often do you speak English / Dutch outside school?
- How often do you hear English / Dutch outside school?
- Do you have any contact with English-speakers / Dutch-speakers outside school or home?

Scale from 1 to 5 (never – rarely – sometimes – often – very often) Cronbach's alpha .78

	English		Dutch	
	Non-CLIL	CLIL	Non-CLIL	CLIL
<i>n</i>	100	100	108	137
Mean	3.02	3.42	2.05	2.54
St. dev.	0.09	0.08	0.07	0.07
	$U=3455.0, z=-2.9, p<0.05, r=-0.21$		$U=4386.0, z=-4.3, p<0.05, r=-0.27$	

- CLIL learners more informal TL contact than non-CLIL learners
- L2 English learners more informal TL contact than L2 Dutch learners

3.6. Productive vocabulary knowledge

Measure of Textual Lexical Diversity: “mean length of sequential word strings in a text that maintain a given TTR value” (McCarthy & Jarvis 2010: 385)

		English		Dutch	
		Non-CLIL	CLIL	Non-CLIL	CLIL
MTLD Productive vocabulary	<i>n</i>	82	84	80	133
	Mean	65.63	78.42	64.36	83.06
	St. dev.	2.22	1.93	2.10	1.72

English: $U=1668.0$, $z=-4.1$, $p<0.05$, $r=-0.32$

Dutch: $U=1880.0$, $z=-6.7$, $p<0.05$, $r=-0.48$

CLIL students have a significantly greater productive vocabulary than non-CLIL students

3.7. Receptive vocabulary knowledge

Peabody Picture Vocabulary Test, Fourth Edition (PPVT-IV) (Dunn & Dunn 1997)
Peabody Picture Vocabulary Test-III-NL (PPVT-III-NL) (Schlichting 2005)

		English		Dutch	
		Non-CLIL	CLIL	Non-CLIL	CLIL
PPVT-IV/ PPVT-III-NL Receptive vocabulary	<i>n</i>	74	90	95	130
	Mean	109.11	148.28	91.96	128.28
	St. dev.	32.41	29.03	30.29	20.48

English: $U=1272.5$, $z=-8.0$, $p<0.05$, $r=-0.62$ Dutch: $U=1902.5$, $z=-9.1$, $p<0.05$, $r=-0.61$

CLIL students significantly greater receptive vocabulary knowledge than non-CLIL students

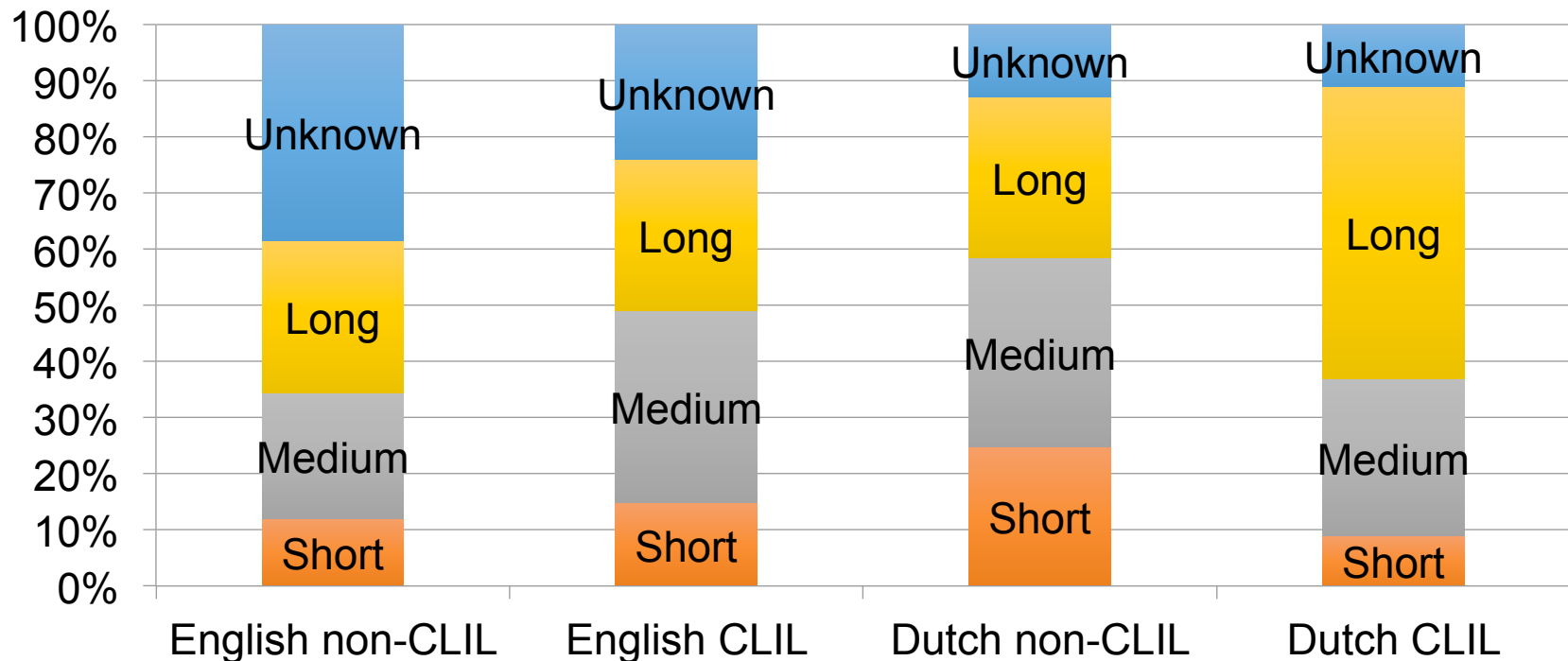
3.8. Non-verbal intelligence

	English		Dutch	
	Non-CLIL	CLIL	Non-CLIL	CLIL
<i>n</i>	94	96	105	136
Mean	41.82	43.67	42.41	46.04
St. dev.	7.78	6.21	7.97	6.90

CLIL students have a significantly higher non-verbal intelligence, this difference is only significant in Dutch CLIL/non-CLIL: $U=4825.0$, $z=-3.3$, $p<0.05$, $r=-0.21$

(Raven, Court & Raven 1998)

3.9. Mothers' education: proxy for socio-economic status



CLIL students have a significantly higher socio-economic status, this difference is only significant in Dutch CLIL/non-CLIL: Dutch: $U=3995.0$, $z=-4.3$, $p<0.05$, $r=-0.28$

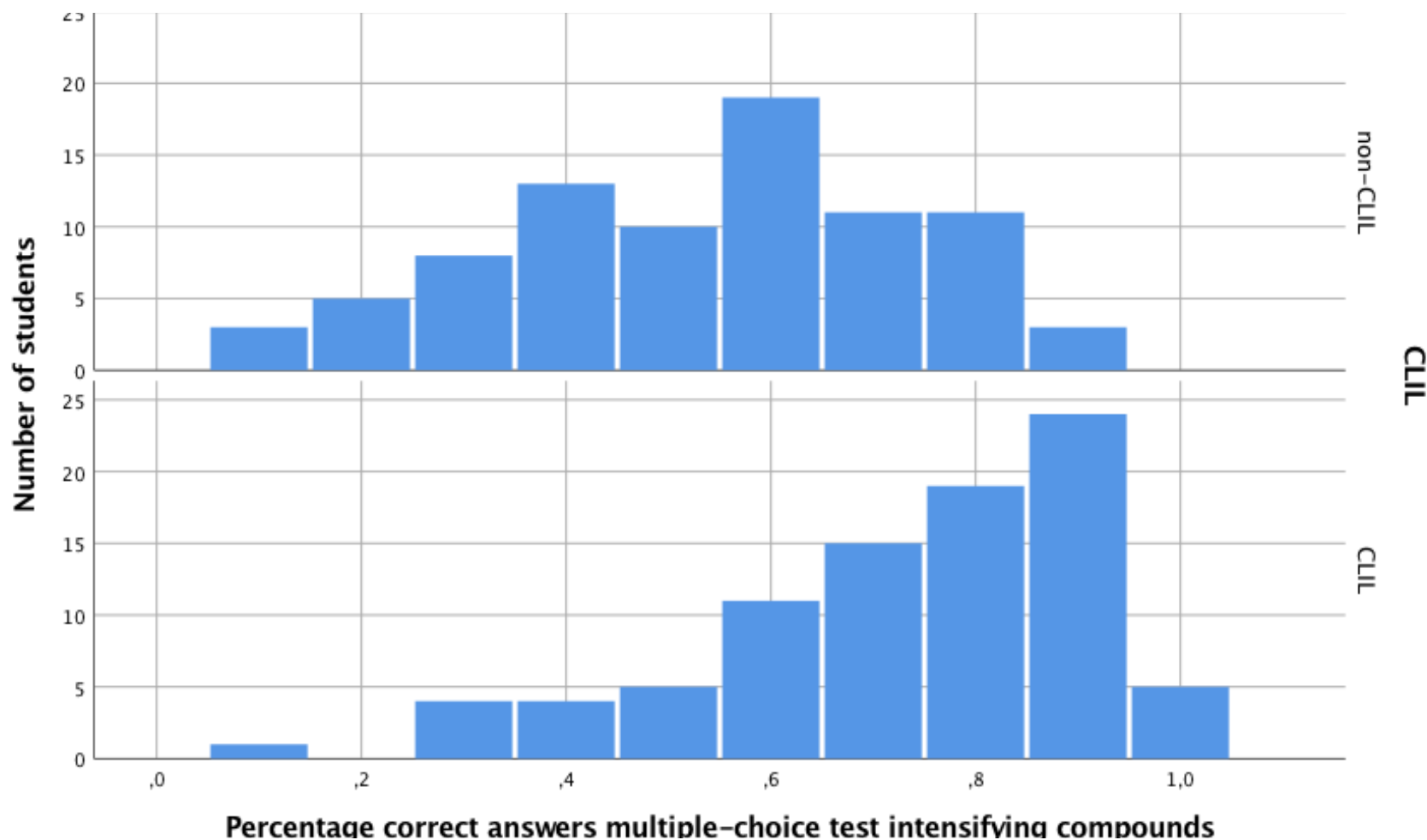
3.10. Pearson correlation between control variables and outcome variable

	English		Dutch	
	Non-CLIL	CLIL	Non-CLIL	CLIL
Receptive knowledge intensifying compounds				
Non-verbal IQ	<i>n</i> =71 0.088 (<i>p</i> >0.05)	<i>n</i> =86 0.093 (<i>p</i> >0.05)	<i>n</i> =75 -0.201 (<i>p</i> >0.05)	<i>n</i> =129 0.073 (<i>p</i> >0.05)
Mother's education level	<i>n</i> =83 -0.026 (<i>p</i> >0.05)	<i>n</i> =88 0.013 (<i>p</i> >0.05)	<i>n</i> =81 -0.100 (<i>p</i> >0.05)	<i>n</i> =134 0.141 (<i>p</i> >0.05)

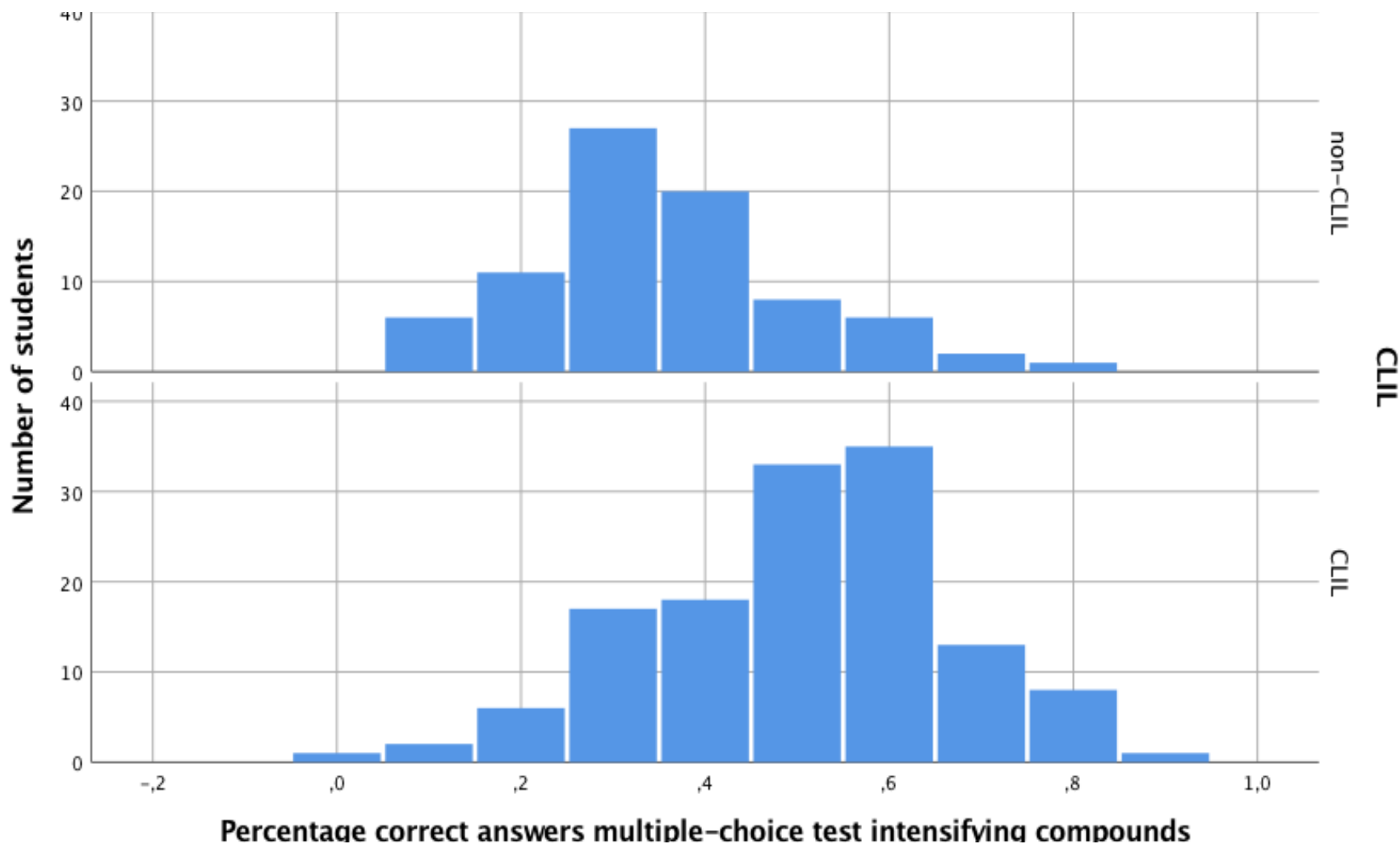
No significant correlations

4. Results

4.1. Percentage correct answers multiple-choice test (English)



4.2. Percentage correct answers multiple-choice test (Dutch)



4.3. Frequent compounds “easier”

Reference corpora:

The Leipzig English (United Kingdom) web text corpus of 926,766,504 words

The Leipzig Dutch web text corpus of 337,800,733 words

English:

brand new (1.207 per 100.000 words)

crystal clear and *paper thin* (0.004 per 100.000 words)

Dutch:

keihard (1.333 per 100.000 words)

beresterk (0.024 per 100.000 words)

Normalized frequency of the intensifying compounds in a reference corpus and the number of correct answers correlate positively

English non-CLIL $\rho=0.096^{**}$, $p=0.007$, $n=800$

English CLIL $\rho=0.082^{**}$, $p=0.015$, $n=879$

Dutch CLIL $\rho=0.153^{**}$, $p=0.000$, $n=1350$

4.4. Correlations English

	Receptive knowledge of intensifying compounds	<i>p</i>
CLIL	0.490**	0.000
Current informal contact with the TL	0.251**	0.001
Number of years of target-language instruction	0.242**	0.001
PPVT-IV (receptive vocabulary knowledge)	0.576**	0.000
MTLD (sixth year written productions)	0.543**	0.000

4.5. Correlations Dutch

	Receptive knowledge of intensifying compounds	<i>p</i>
CLIL	0.423**	0.000
Current informal contact with the TL	0.263**	0.000
Number of years of target-language instruction	0.275**	0.000
PPVT-III-NL (receptive vocabulary knowledge)	0.452**	0.000
MTLD (sixth year written productions)	0.314**	0.000

English (N= 144)	<i>B</i>	<i>SE B</i>	β	VIF	<i>p</i>
Block 1					
(Constant)	0.387	0.069			0.000
Number of years TL instruction**	0.018	0.006	0.228	1.044	0.006
Current informal contact with TL*	0.051	0.020	0.202	1.044	0.014
Block 2					
(Constant)	0.054	0.072			0.452
Number of years TL instruction	0.005	0.005	0.068	1.144	0.339
Current informal contact with TL			0.031	1.152	0.665
PPVT-IV**			0.353	1.330	0.000
MTLD**			0.343	1.243	0.000
Block 3					
(Constant)	0.031	0.071			0.658
Number of years TL instruction	0.005	0.005	0.070	1.144	0.316
Current informal contact with TL	0.002	0.018	0.007	1.172	0.923
PPVT-IV**	0.001	0.000	0.249	1.703	0.004
MTLD**	0.004	0.001	0.320	1.262	0.000
CI II *	0.090	0.034	0.212	1.538	0.010

$R^2=0.416$

Adjusted $R^2=0.394$

Note: $R^2=0.112$, $F(1,143)=8.883$ for Block 1. $\Delta R^2=0.274$, $F(3,143)=21.864$ for Block 2. $\Delta F=31.058$ ($p<.001$)** $p=0.000$. $\Delta R^2=0.029$, $F(4,143)=19.620$ for Block 3. $\Delta F=6.918$ ($p<.001$)** $p=0.000$.

Dutch (N= 179)	<i>B</i>	<i>SE B</i>	β	VIF	<i>P</i>
Block 1					
(Constant)	0.215	0.049			0.000
Number of years TL instruction*	0.012	0.005	0.181	1.110	0.016
Current informal contact with TL*	0.057	0.016	0.259	1.110	0.001
Block 2					
(Constant)	0.033	0.059			0.577
Number of years TL instruction	0.006	0.005	0.088	1.190	0.224
Current informal contact with TL*	0.038	0.016	0.175	1.191	0.016
PPVT-III-NL**			0.10	1.366	0.000
MTLD			0.01	1.357	0.237
Block 3					
(Constant)					0.717
Number of years TL instruction	0.005	0.005	0.076	1.201	0.292
Current informal contact with TL*	0.037	0.016	0.169	1.194	0.020
PPVT-III-NL*	0.001	0.001	0.235	1.792	0.008
MTLD	0.001	0.001	0.066	1.405	0.396
CLIL	0.054	0.031	0.150	1.705	0.083

$R^2=0.253$

Adjusted $R^2= 0.231$

Note: $R^2=0.129$, $F(1,178)=13.052$ for Block 1, $\Delta R^2=.110$ $F(3, 178)=13.709$ for Block 2. $\Delta F =12.640$ ($p< .001$)** $p=0.000$. $\Delta R^2=0.013$, $F(4, 178)=11.706$ for Block 3. $\Delta F=3.047$ ($p< .001$)** $p=0.000$.

5. Discussion

5.1. Discussion (1)

- CLIL students scored significantly better on the multiple-choice test, in both target languages
- The multiple-choice test in English yielded more correct answers than the multiple-choice test in Dutch
- The significant correlations between the independent variables and the outcome measure are overall modest

5.1. Discussion (2)

- CLIL is not the only factor at work:
- English: CLIL, receptive and productive vocabulary
- Dutch: current informal contact with Dutch and receptive vocabulary
- See also Van Mensel, Bulon, Hendriks, Meunier & Van Goethem (in prep) on the effects of exposure to Dutch or English on overall written proficiency in the target language
- SLA research may benefit from a contrastive analysis of learners who share the same L1 but are learning different target languages

6. Conclusion

6.1. Conclusion

- CLIL students develop greater receptive knowledge of intensifying compounds
- Intensifying compounds that are more frequent are more likely to be recognized by the learners
- The acquisition of intensifying compounds is significantly related to overall vocabulary acquisition
 - For learners acquiring English, CLIL is a significant predictor as well
 - For the learners of Dutch, informal contact with the target language is a significant predictor besides vocabulary knowledge

7. References

References (1)

- Arnaud, P.J.L., & Savignon, S. J. (1997). Rare words, complex lexical units and the advanced learner. In J. Coady & Th. Huckin. *Second Language Vocabulary Acquisition: A Rationale for Pedagogy* (pp. 157-173). New York: Cambridge University Press.
- Bahns, J., & Eldaw, M. (1993). Should we teach EFL students collocations?. *System*, 21(1), 101-114.
- Dunn, L. M., & Dunn, L. M. (1997). *Peabody picture vocabulary test-III*. Circle Pines, MN: American Guidance Service.
- Granger, S. (1998). Prefabricated Patterns in Advanced EFL Writing: Collocations and Lexical Phrases. In A. Cowie (Eds.), *Phraseology: theory, analysis and applications* (pp. 145-160). Oxford: Clarendon Press.
- Gyllstad, H. (2007). *Testing English Collocations: Developing Receptive Test for Use with Advanced Swedish Learners*. (Published doctoral dissertation). Printed by Media-Tryck in Lund. ISBN: 978-91-628-7296-0.
- Hendrikx, I., Van Goethem, K., Meunier, F., & Hiligsmann, Ph. (2017). Language-specific tendencies towards morphological or syntactic constructions: A corpus study on adjective intensification in L1 Dutch, L1 French and L2 Dutch. *Nederlandse Taalkunde*, 3, 389-420.
- Hendrikx, I., Van Goethem, K., & Wulff, S. (2019, forthcoming). Intensifying constructions in French-speaking L2 learners of English and Dutch: cross-linguistic influence and exposure effects. *International journal of Learner Corpus Research*, 5(1).
- Hiligsmann, P., Van Mensel, L., Galand, B., Mettwie, L., Meunier, F., Szmalec, A., Van Goethem, K., Bulon, A., De Smet, A., Hendrikx, I., & Simonis M. (2017). Assessing Content and Language Integrated Learning in the French-speaking Community of Belgium: linguistic, cognitive and educational perspectives. *Cahiers du GIRSEF*, 109, 1-24. Retrieved from https://cdn.uclouvain.be/groups/cms-editors-girsef/demey/Cahier_109_final.pdf
- Hoeksema, J. (2011). Bepalingen van graad in eerstetaalverwerving. *Tabu*, 39(1/2), 1-22.
- Hoeksema, J. (2012). Elative compounds in Dutch: Properties and developments. In G. Oebel (Ed.), *Intensivierungskonzepte bei Adjektiven und Adverbien im Sprachenvergleich / Crosslinguistic comparison of intensified adjectives and adverbs* (pp. 97-142). Hamburg: Kovač Verlag.

References (2)

- Hoeksema, J., & Korterink, J. (2011). Keus van bijwoorden van hoge graad: een vergelijking van studenten met VMBO-leerlingen. *Tabu*, 39(1/2), 23-37.
- Ito, R., & Tagliamonte, S. (2003). Well Weird, Right Dodgy, Very Strange, Really Cool: Layering and Recycling in English Intensifiers. *Language in Society*, 32(2), 257-279.
- Koya, T. (2005). *The Acquisition of Basic Collocations by Japanese Learners of English*. (Unpublished doctoral dissertation). Graduate School of Waseda University, Tokyo, Japan.
- Lorenz, G. R. (1999). *Adjective Intensification: Learners Versus Native Speakers: a Corpus Study of Argumentative Writing*. Amsterdam & Atlanta: Rodopi BV.
- McCarthy, P. M., & Jarvis, S. (2010). MTL-D, vocd-D, and HD-D: A validation study of sophisticated approaches to lexical diversity assessment. *Behavior Research Methods*, 42(2), 381-392. DOI: 10.3758/BRM.42.2.381
- Pérez-Paredes, P., & Díez-Bedmar, M. B. (2012). Intensifying adverbs in learner writing. In Y. Tono, Y. Kawaguchi & M. Minegishi (Eds.), *Developmental and Crosslinguistic Perspectives in Learner Corpus Research* (pp. 105-123). Amsterdam: Benjamins.
- Rainer, F. (2015). Intensification. In P. O. Müller, I. Ohnheiser, S. Olsen, & F. Rainer (Eds.), *Word-Formation: An International Handbook of the Languages of Europe* (pp. 1340-1351). Berlin/Boston: De Gruyter Mouton.
- Raven, J. C., Court, J. H., & Raven, J. (1998). *Progressive Coloured Matrices*. Oxford: Oxford Psychologists Press.
- Schlichting, L. (2005). *Peabody Picture Vocabulary Test-III-NL. Handleiding*. Amsterdam: Harcourt Test Publishers.
- Van der Wouden, T., & Foolen, A. (2017). A most serious and extraordinary problem. Intensification of adjectives in Dutch, German, and English. *Leuvense Bijdragen*, 101, 82-100.
- Van Mensel, L., Bulon, A., Hendrikx, I., Meunier, F., & Van Goethem, K. (in preparation a). Effects of input on L2 writing skills in English and Dutch CLIL and non-CLIL learners in French-speaking Belgium.
- Van Mensel, L., Hilgsmann, Ph., Mettwie, L., & Galand, B. (in preparation b). CLIL, an elitist language learning approach? A background analysis of English and Dutch CLIL pupils in French-speaking Belgium.

Thank you!
Merci!

Questions?

English

The temperature was ... cold.

ice

stone

frost

My clothes are ... new.

brand

pitch

stock

My coat is ... wet.

stark

pourring

soaking

The message is ... clear.

dead

crystal

mirror

She has a ... wide influence.

world

brand

country

He was ... drunk and behaved really badly.

blind

fast

rock

These walls are ... thin. You can hear everything said in the next room.

sheet

dead

paper

Be careful with that knife- it's ... sharp.

razor

blade

pitch

I was ... awake by six.

dirt

wide

rock

That exam was easy. I've certainly passed.

dead

bon

crystal

Dutch

Grootvader is ... oud. 'Grandfather is ... old.'

stok

piep

steen

De soep is ... heet. 'The soup is ... hot.'

steen

bloed

pik

De ijsbaan is ... glad. 'The icerink is ... slippery.'

stok

ijs

spek

Het bankje was ... hard. 'The bench was ... hard.'

kei

gloeiend

oer

Mijn computer was ... duur. 'The computer was ... expensive.'

spiksplinter

laaiend

peper

Tijdens de les was het ... stil. 'During the class it was ... silent.'

aal

muis

snik

Hij rende ... snel naar de finish. 'He ran ... fast to the finishing.'

ei

toren

pijl

Later word ik hopelijk ... rijk. 'Later I will hopefully become ... rich.'

roet

schat

honds

Mijn vader is ... sterk. 'My father is ... strong.'

spuug

barstens

bere

Het uitzicht is ... schoon. 'The view is ... beautiful.'

beeld

ziels

ape

