

Vocabulary in first year university students in Dutch and English: Breadth, depth and academic writing

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Theoretical Background

The number of undergraduate programmes taught in English at Dutch universities has grown rapidly in recent years. There are concerns, however, about the English language proficiency of incoming students, which may hinder their academic performance. The purpose of this study is therefore to examine the breadth and depth of first-year students' vocabulary knowledge in English, and their relationship to their academic writing performance. For comparison, vocabulary breadth was also measured for L1 Dutch.

The **English Vocabulary Size Test** (Beglar, 2010) bands 8-14 tests breadth: meaning recognition of low-frequency words.

The **Word Associates Test** (Read, 1993) tests depth: knowledge of collocations and semantic associations of adjectives.

The **Dutch Vocabulary Size Test** (Linger, 2018) tests breadth: meaning recognition of low-frequency words.

Research questions

- **RQ1:** What are the average scores on the Vocabulary Size Test, Word Associates Test and Vocabulary Size Test Dutch, and are there differences between programmes?
- **RQ2:** Are English vocabulary breadth scores correlated with English depth scores and Dutch breadth scores?
- **RQ3:** What is the relationship between vocabulary knowledge (breadth and depth), grammar knowledge, gender, degree programme, and academic writing?

Expected outcomes

- No differences between programmes expected.
- Correlation expected between breadth and depth, not between English and Dutch breadth.
- Students with a higher Grammar grade, WAT score, and VST score will also have higher grades for their Writing class. Gender and current degree programme may also affect Writing grades.

Materials and methods

Participants

- 168 students in a first-year Academic Writing course.
- Degree programmes: 31 Literature and Society (L&S), 47 Communication and Information Sciences (CIS), and 97 Computer Science/Information, Multimedia and Management (CS).
- Mean age = 19.7 (SD = 5.7)
- 81 male, 80 female, 7 unspecified
- 78 monolingual Dutch, 10 monolingual English, 2 bilingual Dutch/English, 9 English bilingual, 7 Dutch bilingual, and 62 other L1's (including bilinguals)

Materials

- **English breadth:** Vocabulary Size Test, bands 8-14
- **English depth:** Word Associates Test
- **Dutch breadth:** Vocabulary Size Test Dutch, bands 8-14
- **Academic Writing:** Grammar and Writing grades

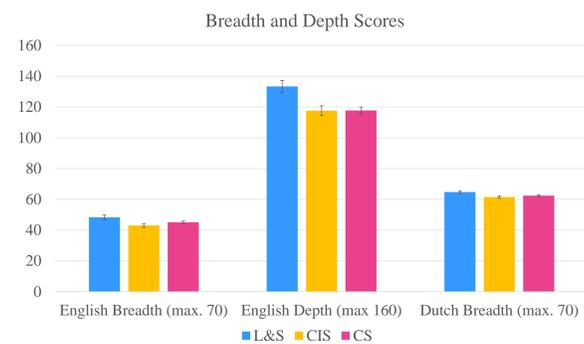
Analyses

- 1 hour during class
- Online tests

Results

RQ1: Test scores

- **English breadth:** effect of programme ($F(2,168)=3.69, p=.03$) → **L&S > CIS**
- **English depth:** effect of programme ($F(2,165)=6.49, p<.01$) → **L&S > CIS; L&S > CS**
- **Dutch breadth:** no group differences ($F(2,68)=3.98, p=.02$) → **L&S > CIS**



RQ2: Correlations between vocabulary test scores

- **English breadth – English depth** ($n = 169$): $\rho = .54^{***}$
- **English breadth – Dutch breadth** ($n = 71$): $r = .22$ n.s.

RQ3: Vocabulary knowledge and academic writing

- Subset of 66 students: 26 L&S, 40 CIS
- 56 female, 10 male
- Forced-entry model: **adjusted $R^2 = .51$** , ($F(5,60) = 14.41, p < .001$)
- Writing grade (max. 10): 7.3 (0.9)
- Grammar grade (max. 10): 7.8 (1.6)
- Writing grades were predicted by the students' Grammar grades, current degree programme, and English breadth scores; NOT by gender or English depth score.

Coefficients of the forced-entry regression model for the writing grades

	B	SE B	β	t	p
Constant	4.96	.77		6.43	.00
Grammar grade	.18	.05	.32	3.54	.00
Gender ^a	-.29	.19	-.14	-1.52	.13
Current degree programme ^b	-.77	.18	-.41	-4.25	.00
VST score	.04	.01	.32	2.84	.01
WAT score	.00	.01	.04	.31	.75

^a Gender: 1 = male, 2 = female; ^b 1 = CIS, 0 = L&S

Conclusions

- RQ1:** Average scores are reasonably high; L&S students consistently have highest scores
 - High overall scores may be due to self-selection of students in English-language programmes
 - High L&S scores may be due to amount of exposure to English through reading, and/or exposure to a different range of texts
- RQ2:** Students with larger English vocabulary breadth also have greater depth of knowledge
 - Breadth and depth develop in parallel?
 - English and Dutch breadth are not related
 - No general effect of language exposure, interest or aptitude
- RQ3:** Writing scores were predicted by breadth test scores, degree programme, and Grammar grade, not by depth and gender
 - Depth has no unique contribution over breadth
 - Grammar knowledge also predicts writing grades

Further research can show how test scores compare to L1 speaker scores and if the scores of students in English-language programmes are higher than in Dutch-language programmes.

References

- Beglar, D. (2010). A Rasch-based validation of the Vocabulary Size Test. *Language testing*, 27(1), 101-118.
- Linger, N. (2018). *Woordenschattoetsing bij gevorderde tweedetaalleerders: Een vervolg op de Woordenschattoets Nederlands*. Master's thesis, Vrije Universiteit Amsterdam.
- Read, J. (1993). The development of a new measure of L2 vocabulary knowledge. *Language testing*, 10(3), 355-371.

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