

**The Varying Relationship Between Perceived Oral and  
Written Mother Tongue Proficiency and Academic  
Performance in Native Multilingual Students at their  
Secondary School and University**

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Does knowing more than one language make  
people smarter?

# Multilingualism and Academic Performance

- Studies focusing on multiple academic measures in which the multilinguals appear to outperform their monolingual peers (e.g. Peal and Lambert (1962), Vangsnes et al (2017), Covács (2009), etc.)
- Studies pointing out the links between the status of being multilingual and achievements in concrete academic areas:
  - Farrel (2011) – positive correlation between students’ proficiency in both Maltese and English and their achievements in physics and mathematics,
  - Kuo & Anderson (2012) – positive effects of early bilingualism on learning a new language, specifically phonological regularities in it,
  - Dawe (1983) – bilingualism enhancing mathematical aptitude.

What makes multilingual students perform better academically?

# Three Perspectives from Which Academic Achievement Advantage Linked to Multilingualism Is Explained in Current Research

Cognitive



Cultural

Transitional

# Cognitive Perspective

- **Cognitive perspective:** better inhibition control than monolinguals have resulting from the multilinguals constantly suppressing the other languages they have a command of and which they do not use at the moment (Dagenbach & Carr, 1994; Bialystok and Martin, 2004, etc.), or other executive functions such as working memory or shifting,
- **Cultural perspective:** multilingualism viewed as a communicative mechanism through which ethnic beliefs and values are communicated preserving the cultural capital,
- **Transitional perspective:** stresses transitional effects of native bilingualism on academic performance instead of viewing them as permanent or long-lasting Mouw and Xie (1999) depending on the parents' use of their own mother tongues.

# Cummin's (1976) Threshold Hypothesis

An individual must reach a certain level of multilingualism to be able to benefit from it in the form of a cognitive advantage.

# Aims of the Study

- Is there any relationship between native multilingual university students' oral and written proficiency as they perceive it in the language they spoke with their mothers and their academic performance during their secondary and university studies?
- If a correlation were to be found, can it be related to Cummin's (1976) threshold hypothesis and Mouw's and Xie's (1999) transitional perspective.



# Method

- 53 native multilingual students (41 females and 12 males, all second-generation immigrants),  $M_{\text{age}} = 24.28$  years,  $SD_{\text{age}} = 5.95$ , age range: 19-52 years,
- enrolled either in the primary school teacher-training program or a secondary school teacher-training one at the Södertörn University, Stockholm, Sweden,
- VG-G-U grading scale (as most Swedish universities do):
  - VG = “passed with distinction”,
  - G = “passed”,
  - U = “failed”.
- the grades (around 30 per student per educational level) assigned the values of 4, 2 and 0 approximating the method used for calculating GPA, with the highest grade assigned the value 4, the middle one 2, and the fail grade 0,

# Method

- student's proficiency in the language originally spoken with their mother marked on the Likert scale of 1-5 with 1 representing “extremely bad” and 5 “extremely good” using a questionnaire,
- the grade averages and marked proficiencies compared using the Pearson bivariate analysis.

# Data Analysis and Results - Secondary School Grade Average

Pearson bivariate analysis

Group	Proficiency Average	Grade Average	Correlation Coef.	<i>P</i> value
(Bi-) multilinguals – oral proficiency	4.17 (SD = .91)	2.70 (SD = .39)	.27*	< .05*
(Bi-) multilinguals – written proficiency	2.85 (SD = 1.60)	2.70 (SD = .39)	.41*	< .01*

# Data Analysis and Results - University Grade Average

Pearson bivariate analysis

Group	Proficiency Average	Grade Average	Correlation Coef.	<i>P</i> value
(Bi-) multilinguals – oral proficiency	4.17 (SD = .91)	2.01 (SD = .53)	-.02	.86
(Bi-) multilinguals – written proficiency	2.85 (SD = 1.60)	2.01 (SD = .53)	.05	.71

# Conclusion

- Statistically significant low and moderate degree positive correlations were found between the perceived oral and written proficiencies in the languages spoken by the students with their mothers and their performance at the secondary school. Cummin's (1976) threshold hypothesis, according to which an individual must reach a certain level of multilingualism to be able to benefit from it in terms of their cognition, can be an explanation.
- No such correlation was found for their university studies, though. A possible explanation for this phenomenon can be found in Mouw's and Xie's (1999) transitional perspective – knowing several languages might be beneficial for second-generation immigrants in terms of their academic performance as long as their parents do not yet speak the language of the country they have immigrated into. Most students mentioned waning use of the languages originally spoken with their mothers due to Swedish taking over this role later in their lives.

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