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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Abstract

The paper describes a study involving 53 Swedish native multilingual students the objective of which was to investigate the relationship between their mother tongue oral and written proficiency as they themselves perceive it and their academic performance at two educational levels, i.e. secondary and tertiary. The study compares the students' grade averages with the data obtained through questionnaires targeting their language proficiency and mother tongue use. The results show that while there is a positive correlation between the students' degree of perceived proficiency (both written and oral) in the language originally spoken with their mother and their academic performance at their secondary school, this correlation seems to disappear once they enroll in their university studies. The paper discusses two of the possible reasons for this phenomenon on the background of threshold hypothesis and transitional perspective. According to these, native multilinguals benefit from their multilingual condition academically only when they reach a certain level of proficiency in the language(s) they use and only until their parents complete their linguistic assimilation in the country they have immigrated into.

Keywords: *native multilingualism, academic performance, oral/written proficiency, secondary/tertiary education, threshold hypothesis, transitional perspective*

1. Introduction

Over the last few decades, multilingualism has been associated with a positive effect on school performance. Apart from studies focusing on multiple academic measures in which the multilinguals appear to outperform their monolingual pears (e.g. [13], [14], [5], etc.), there are also those that point out the links between the status of being multilingual and achievements in concrete academic areas. Farrel's [9] research, for instance, indicates a positive correlation between students' proficiency in both Maltese and English and their achievements in physics and mathematics. The positive effects of early bilingualism on learning a new language, specifically phonological regularities in it, has been recorded by Kuo & Andreson [10] while Dawe [8] documented bilingualism enhancing mathematical aptitude.

1.1 Cognitive, Cultural, and Transitional Perspectives

Mouw and Xie [12] present three perspectives from which the academic achievement advantage stemming from multilingualism is explained in current research: cognitive, cultural, and transitional. The cognitive perspective research, which most of the aforementioned studies fall into, ascribes multilingual subjects' academic performance advantage to better executive functioning resulting from the special conditions that multilinguals are exposed to due to their use of several languages. The executive functions in which multilinguals appear to outperform their monolingual counterparts are inhibition control, where multilinguals' better performance is believed to result from them constantly suppressing the other languages they have a command of and which they do not use at that particular moment ([7]; [3], etc.), monitoring, and shifting ([1]; [11], etc.).

On the other hand, the cultural perspective research views multilingualism as a communicative mechanism through which ethnic beliefs and values are communicated from immigrant parents to their children. Such studies emphasize that multilingual groups prosper academically by deliberately preserving their cultural values ([15]; [4], etc.).

Mouw and Xie [12], studying first- and second-generation Asian Americans' academic performance, also propose transitional perspective, according to which "bilingualism is important for immigrant children's academic achievement because it prevents a language gap from emerging between them and their parents" (p. 238). The hypothesis also stresses transitional effects of bilingualism on academic performance instead of viewing them as permanent or long-lasting. As the authors point out, the native-language use has a positive effect on school achievement as long as the Asian parents are not proficient in English and virtually no effect if they are proficient in it. In this respect, the transitional perspective should not be looked upon as diametrically different from the cultural one since it also views the use of immigrant parents' mother tongue with their children as a means of transfering cultural and social capital as well as a tool for transcending cultural bounderies, albeit it considers this effect only transitional.

Finally, one more factor related to multilingualism identified by some studies as the one affecting academic performance is the degree of language proficiency (e.g. [2]). This finding appears to be in line with Cummins' [6] threshold hypothesis claiming that an individual must reach a certain level of multilingualism to be able to benefit from it in the form of the cognitive advantage described above.

2. Aim of the Study

The aim of the study this paper describes was to find out whether there is any relationship between native multilingual university students' perceived oral and written proficiency 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, another aim was to find out whether it can be related to Cummin's [6] threshold hypothesis and Mouw's and Xie's [12] transitional perspective.

3. Method

The study was conducted on the cohort of 53 native multilingual students (41 females and 12 males, all second-generation immigrants), M_{age} = 24.28, SD_{age} = 5.95, age range: 19-52 years, enrolled in two primary school teacher-training programs and a secondary school teacher-training one at the Södertörn University, Stockholm, Sweden. 44 of them were native bilinguals (having a comand of either two native languages or one native language and Swedish adopted through social interactions at their pre-school and school age prior to reaching adolescence) and 9 native trilinguals (having a comand of two native languages and Swedish adopted through social interactions at their pre-school and school age prior to reaching adolescence).

The students' university grade averages were calculated from the grades they had received for their individual university courses in the past. As the institution the study was conducted in uses the VG-G-U grading scale (as most Swedish universities do), where VG stands for "passed with distinction", G for "passed" and U for "failed", the grades were assigned the values of 4, 2 and 0, respectively, for the sake of statistical processing. This model was chosen as it approximates the method used for calculating GPA, where the highest grade is assigned the value 4, the middle one 2, and the fail grade 0. It was the grades awarded for approximately the same number of courses and graded modules (around 30 per student) that were used for calculating the grade averages. If a student received multiple fail grades for the same course or module, these were included in the calculation as separate grades. The Pearson bivariate analysis was run on the data, the purpose of which was to find out whether there was any statistically significant correlation between the students' university grade averages and their perceived oral/written proficiencies in the language spoken with their mother.

The students' secondary-school averages were calculated in a similar manner, i.e. the highest grade was assigned the value 4, the middle one 2 and fail grade 0, except that these averages were based on all the grades the students gained for individual courses during their secondary school studies. The Pearson bivariate analysis was run on the data for the same purpose as in the case of the university grade averages.

The students were also asked to evaluate both their oral and written proficiencies in their mother tongues on the Likert scale of 1-5 with 1 representing “extremely bad” and 5 “extremely good” using a questionaire.

4. Analysis and Results

As one can see in Table 1, the Pearson bivariate analysis run on the data reveals statistically significant low and moderate degree positive correlations between the oral/written proficiencies and secondary school grade averages in the subjects involved in the study *(r = .27* and *r = 41* for the oral and written proficiencies, respectively). However, these correlations do not exist when it comes to the participants’ university grades (see Table 2).

Table 1: Self-Rated Oral and Written Proficiency – Secondary School Grade Average

Group	Proficiency Average	Grade Average	Correlation Coef.	*P* value
(Bi-) multilinguals – oral proficiency (n = 53)	4.17 (SD = .91)	2.70 (SD = .39)	.27*	< .05*
(Bi-) multilinguals – written proficiency (n = 53)	2.85 (SD = 1.60)	2.70 (SD = .39)	.41*	< .01*

* significant correlation

Table 2: Self-Rated Oral and Written Proficiency – University Grade Average

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

5. Discussion and Conclusion

As the research on the relationship between multilingualism and academic performance (mostly conducted among children) shows positive correlations between the two variables, the aim of the study this paper describes was to find out whether there is any relationship between the native multilinguals’ academic performance and their perceived oral and written proficiency in the languages spoken with their mothers. The goal was also to find out whether there are any indicators of this relationship developing over time since such a finding might be indicative of a varying effect of native multilingualism on school performance depending on, for instance, the varying intensity of exposure to the native language(s) in different periods of the students’ lives.

As the results of the analysis show, there are statistically significant low and moderate degree positive correlations between the variables when it comes to the students’ secondary school studies. A possible explanation for this phenomenon can be found in Cummin’s [6] 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. On the other hand, no correlation has been found between the variables regarding the students’ university studies. One of the possible explanations for the correlation differences found for different periods of the students’ lives can be Mouw’s and Xie’s [12] transitional perspective, which proposes that 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, i.e. when they still use only their mother tongue with them. The support for this conclusion can also be found in the fact that most students

mentioned in their questionnaires a gradually waning interaction with their mothers in the language the mothers spoke with them during their childhood due to Swedish gradually becoming a dominant language of their communication over time. Another factor assumed as resulting in the reduction of the students' exposure to their mother tongues at the time they start to study at the university might be that the students often move out of their parents' homes at that stage of their lives and thus their contact with their native languages starts to become limited.

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