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Spanish Language Proficiency and the Academic Gap between Children of Immigrants and Native Students in Spain: Evidence from a Case Study

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Spanish Language Proficiency and the Academic Gap between Children of Immigrants and Native Students in Spain: Evidence from a Case Study

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Abstract

Spanish language proficiency is often suggested as a factor in explaining the lower academic achievement of immigrant students in Spain. However, the absence of research that simultaneously measures both variables among immigrants and natives has prevented the Language Deficit Hypothesis from being tested. This paper aims to filling this gap through a case study (n=1,461). Results show that Spanish proficiency significantly affects academic achievement. However, and after controlling for social origin, we find that the explanatory capacity of the knowledge of Spanish variable on the disadvantage of the children of immigrants is partial and small. This is due to the fact that most of the children of immigrants show a high proficiency level in Spanish, which causes a compositional effect. The composition of this student body, with high percentages of youths coming from Spanish-speaking countries, born in Spain and others with more than five years living in this country, help to explain this result.

Keywords: academic achievement, immigration, language proficiency, Spanish, Spain.

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Dominio del Español y Desigualdad en el Rendimiento Académico entre Hijos de Inmigrantes y Nativos: Resultados de un Estudio de Caso

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Resumen

El déficit en el conocimiento del español es uno de los factores más recurrentes para explicar el inferior rendimiento académico de los hijos de inmigrantes en España. Pero la inexistencia de estudios que midan simultáneamente ambas variables hace que la hipótesis de la desventaja lingüística apenas haya sido empíricamente analizada. Este trabajo pretende contribuir a cubrir este vacío mediante un caso de estudio (n=1,461). Los resultados muestran que el dominio del español afecta significativamente al rendimiento del alumnado. Sin embargo, y una vez controlado el efecto del origen social, la capacidad explicativa del dominio del español sobre la desventaja general de los hijos de inmigrantes es parcial y pequeña. Ello se debe a que la mayoría de los hijos de inmigrantes muestran un nivel lingüístico alto en español, lo cual provoca un efecto composición. Los elevados porcentajes de alumnado originario de países hispanohablantes, de nacidos en España y de otros con más de cinco años residiendo en este país, ayudarían a explicar este resultado.

Palabras clave: rendimiento académico, inmigración, dominio del idioma, español, España.

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roficiency in the language of the host society is one of the classic factors studied with regard to the integration of immigrants. Its relevance is explained by the fact that language performs at least three functions in these processes (Esser, 2006): (1) it constitutes a medium to ensure communication and mutual understanding in the multiple transactions and relations that take place on a daily basis; (2) it is a resource that can be used to access other resources; and (3) it performs a symbolic function by helping to generate the feelings of belonging, identity and social distinction that give rise to group differentiation. All of this can be fully extrapolated to the sphere of education; hence the language factor is considered to be integral to the socio-educational integration of the children of immigrants, in general, and particularly in terms of academic performance. In light of the academic deficit often found among children of immigrants (Heath, Rothon & Kilpi, 2008; OECD, 2019; Waters, Heath, Tran & Boliver, 2013), it is unsurprising that differences with regard to proficiency in the school language are repeatedly seen as an important explanatory factor. Hence the careful attention commonly paid by the education systems of immigration host countries to the issue of language.

The same has also occurred in Spain since the demographic change seen in classrooms as a result of the boom in immigration that took place between the late 1990s and 2008 (Miyar, 2020). Since then, numerous studies, using different indicators, have documented in the case of Spain the lower academic performance and achievement recorded among students of immigrant parents (see, e.g., Álvarez-Sotomayor & Martínez-Cousinou, 2020; Rahona & Morales, 2013 for literature reviews), and others have reported on their lower level of proficiency in the school language (Huguet & Janés, 2013; Navarro, Huguet, Sansó & Chireac, 2012; Vila, 2011). Furthermore, since then, many different perspectives have been taken – within political, school and academic circles – to examine the relationship between the language proficiency of these students and their integration in terms of performance and achievement.

Within the political sphere, from the outset, Spain's different self-governing regions placed a strong emphasis on teaching the language of instruction among the measures aimed at these students (Rahona and Morales, 2013). Within schools, levels of proficiency in said language have

also been highlighted as the element that generates the greatest concern with regard to this demographic transformation (Navarro et al., 2012). And within the academic sphere, since the late 1990s, a large body of research has examined this linguistic issue (García Castaño, Rubio & Bouachra, 2015). Much of this research argues that the Language Deficit Hypothesis (hereinafter LDH) is central to explaining the lower academic performance found among the children of immigrants (see, e.g., Navarro et al., 2012; Fullana, Besalú & Vilá, 2003; Bullejos, 2002; Siguan, 1998; Díaz-Aguado Baraja & Royo, 1996). Very few studies play down the importance of this factor. The main arguments they put forward are that the children of immigrants usually learn Spanish quickly (Carabaña, 2006) - a conclusion contradicted by other studies (Navarro Huguet & Sansó, 2014) - or that other variables have equal or greater weighting (Fernández Sierra & Sánchez Morán, 2003). Furthermore, it should be taken into account that language would not be an obstacle - or not to the same extent, at any rate - for students from Spanish-speaking countries, who represent an important percentage within the total for this country.

What is certainly true is that in Spain, confirmation of the LDH is still very limited. In spite of the significant volume of research conducted to date with regard to this issue – much of which is speculative in nature –, there is still a considerable empirical gap in this regard. This has been highlighted by a recent systematic review of this literature (Álvarez-Sotomayor & Martínez-Cousinou, 2020). The main reason is the practical absence of studies that had simultaneously measured for the two principal variables at stake: proficiency in the school language and academic performance.

Taking these questions into account, and especially the gaps noted in the case of Spain, new evidence is required to determine whether Spanish language proficiency explains the lower academic results achieved by students from an immigrant background, and if so, the extent to which this is so.

This paper provides empirical evidence by means of a case study that was conducted in the municipality of Marbella (Malaga). The research aimed to analysing the factors and mechanisms that explain the academic disadvantage found among the children of immigrants in Spain. The data include measurements of the two variables analysed here: Spanish language

proficiency and academic performance. This makes it possible to tackle the aim of this article, which is to corroborate the LDH, in other words: whether the Spanish language proficiency deficit found among the children of immigrants substantially contributes to explaining their lower academic performance.

Although the results presented here cannot be extrapolated to Spain as a whole, their internal validity makes a contribution to the specialised literature in this field of study. They offer empirical information about the role of language proficiency as a conditioning factor in the academic performance of the children of immigrants in the Spanish context.

The article is organised into four sections. The first one contextualises the case study. In the second section we briefly review the state of the art related to the LDH and place it into the wider frame of the explanations that account for the academic gap between children of immigrants and natives. The third sets out the main methodological questions of the paper. The fourth section contrasts the validity of the language deficit hypothesis based on an analysis of the data compiled within this study. Finally, the last section sets out the main conclusions reached in this paper.

The Spanish Context: Immigration and Languages

Up until the beginning of the 1990s, Spain was still considered a country of emigration. But from the late 1990s until 2008, Spain experienced an unparalleled boom in immigration among OECD countries (Miyar, 2020). During this "prodigious decade of immigration" in Spain (Arango, 2009), the foreign population went from less than one and a half million to more than six million, drawn by the remarkable growth in the demand for work during that period; from 2% to 16% of the total working-age population.

Before the start of the great recession, the National Survey of Immigrants (ENI), conducted in 2007, offered the best picture of the composition of the immigrant population in Spain. Latin Americans (37.2%) and Europeans (31.6%) were clearly the largest groups, followed by Africans (13.1%). Immigrants from other regions accounted for 18% of the total (Reher & Requena, 2009). Regarding the linguistic composition, Spanish was the native language for 45% of immigrants, Indo-European languages for

19.4%, languages derived from Latin other than Spanish for 18.2%, Afro-Asian languages for 11.6%, Oriental languages for 1.4%, African languages 0.8%, and other languages 3.6%.

This demographic change significantly reached the education system, as shown in Figure 1. Foreign students represented 1% of the student body in the academic year 1997/98, whereas ten years later they accounted for 9.4%. This growth continued until 2008-09, when the share of foreign students peaked (9.8%). Then, the 2008 Great Recession led to a decline in the immigrant population, which affected the education system as well. This declining trend ended in 2016-17, when the percentage began to rise again. However, it should be noted that these statistics use the variable 'nationality'. Hence, they underestimate the share of children of immigrants, since they do not include those who have Spanish nationality.



Figure 1. Share of foreign students in the Spanish education system (non-university education)

Source: Non-university Education Statistics (*Estadísticas de enseñanzas no universitarias*), Spanish Ministry of Education.

Such a significant demographic change within the Spanish education system posed a major challenge. Consequently, Spain's self-governing regions began to design and implement several education policies aiming to responding to that new reality. Broadly speaking, many researchers detect a

patent contradiction between the discursive level and the level of the educational practice (see, e.g., García Castaño, Rubio & Fernández, 2018; Garreta, 2014; Jiménez-Delgado, 2016). Thus, while the discourse of policy makers and the rhetoric of the measures designed for this student body have been strongly influenced by the intercultural education model, the level of educational practice has been rather guided by the educational compensation and the assimilation models. More particularly, among all the kinds of policies designed and implemented, the creation of special-assistance classes for new immigrant students is the type of policy into which the greatest efforts have been poured (Rahona & Morales, 2013). These special classes are primarily devoted to teaching the official school language. That is also the case for the region where our case study is located (Andalucía), where Temporary Classes for Linguistic Adaptation (ATAL in its Spanish acronym) have been running for more than twenty years now.

Analytical Framework

Empirical literature has proven that, in order to explain the educational gaps between natives and immigrant students, we must consider a wide set of potential factors. We do not intend to review here all the factors and mechanisms underlined by the specialised literature, but rather we will focus specially on those that have been explored in the empirical section of this study. By doing so, we aim to providing a brief and general empirical framework which helps to understand the role that proficiency in the school language might have as *explanans*.

Some of these explanatory factors are shared between natives and immigrant students. This is the case of social origin, which effect operates through several mechanisms and is usually found to be the social factor that contributes the most to explain the educational gaps between both groups, both in Spain (Álvarez-Sotomayor & Martínez-Cousinou, 2020; Schnell & Azzolini, 2015; Zinovyeva, Felgueroso & Vázquez, 2013) and in the international level (Heath, Rothon & Kilpi, 2008; Levels, Dronkers & Kraaykamp, 2008; OECD, 2019).

Yet, like in other European countries (Heath, Rothon & Kilpi, 2008), in Spain social origin usually does not explain 100% of the variance (Álvarez-

Sotomayor & Martínez-Cousinou, 2016; Schnell & Azzolini, 2015; Zinovyeva, Felgueroso & Vázquez, 2013), which leaves room for other types of explanations. This is where the factors and mechanisms that affect particularly to the children of immigrants acquire relevance. They comprise the so-called ethnic explanations (Cebolla-Boado, 2008). Migration status (usually measured through length of residence in the host country, immigrant generation variables, or by distinguishing children of two immigrant parents from children of mixed couples), cultural differences, coethnic social networks, and several types of discrimination processes that may occur inside or outside schools are some of the most studied among them.

As previously stated, proficiency in the school language is also one of the main among these latter factors, and so the LDH one of the principal ethnic explanations used. The logic is clear: if proficiency in the school language is crucial for the educational development of every child, then it will be a differential element in the case of children whose parents are not native to that language. However, although it may seem obvious, the hypothesis must be tested taking into account some of the other aforementioned factors.

In countries with a stronger tradition of immigration than Spain (USA, UK and Canada, among others), this relationship has been analysed to a greater extent, although the findings are still not completely conclusive. Although the results of many studies imply a priori empirical support for the LDH (Stevens, 2014, p.1; Halle et al., 2012), others find that, having controlled for the effect of social origin and variables related with migratory status, the impact of the differences related to proficiency in the English language on academic results is minimal (see Schmid, 2001, p.79). This highlights the complex relationship between proficiency in the language of instruction and academic performance. There is a need to differentiate between the effect of language proficiency and the effect of other potential influential variables on performance (Halle et al., 2012), especially those linked to socioeconomic background. This is because: (1) the latter are repeatedly found to be among the most important conditioning factors on performance, for the population as a whole (Bukodi, Erikson & Goldthorpe, 2014; OECD, 2019) and for the immigrant population (OECD, 2019; Schnell & Azzolini, 2015; Heath et al., 2008); and (2) the children of immigrants are usually, on average, at a disadvantage with regard to these variables.

Concerning the Spanish case, it has been already argued that the LDH has been widely defended within both the political and the academic arena. Nevertheless, empirical studies that have tested this hypothesis are still scarce, as highlighted in a recent systematic review of this literature (Álvarez-Sotomayor & Martínez-Cousinou, 2020). Mainly because of reduced number of studies that have simultaneously measured for the proficiency in the school language and academic performance in this country. Therefore, although many studies have already analyzed and compared in Spain the proficiency of children of immigrants in the language of instruction (for literature reviews, see García Castaño, Rubio & Bouachra, 2015; Huguet & Janés, 2013; Navarro et al., 2012; Vila, 2011) and many others have done the same with their educational achievement (for literature reviews, see Álvarez-Sotomayor & Martínez-Cousinou, 2020; Álvarez-Sotomayor, Gutiérrez-Rubio, & Martínez-Cousinou, 2018; Rahona & Morales, 2013), very few studies have examined how the former type of variable affects the latter.

The most significant exception in this regard is the research by Portes, Aparicio & Haller (2016), a longitudinal study about the second generation of immigrants in Spain, which seeks empirical support for the theory of segmented assimilation in Spain. This study uses representative samples from the metropolitan areas of Madrid and Barcelona. Having first controlled for the effect of various relevant variables (gender, socioeconomic background, whether they were born in Spain, length of residence, years' schooling, number of study hours and parental structure in the home), it was found that self-perceived knowledge of Spanish significantly improves the likelihood that the children of immigrants will remain in school between the ages of 17 and 19, as well as their academic grades. In contrast, the language variable does not have a significant effect on the likelihood of the stage or track in which they are studying: the final two years of high school (bachillerato), vocational training or higher education (Portes et al., 2016, pp.157-165). Although these results are interesting, the main limitation regarding the subject of study put forward here is that the analyses were only conducted on samples of children of immigrants, taking sub-groups from

these samples as the reference group rather than a sample of native-born students. Hence, the question raised in this article remains unanswered.

The research findings presented by Calero et al. (2013), analysing a small sample of 4 and 5-year old children in Granada, do not support the LDH. These authors found no significant differences in terms of performance (recorded in six different areas) among the three groups analysed: pupils with native-born parents, pupils born in Spanish-speaking countries, and pupils born in non-Spanish-speaking countries. It should be noted, however, that the children of immigrants who took part in the study were all born in Spain.

Other than these two, the few studies that have simultaneously measured proficiency in the school language and academic performance (Díaz-Aguado et al., 1996; Siguan, 1998) present certain major weaknesses: relatively small samples, a failure to control for the possible effects of other relevant variables on performance, or the use of teachers' perceptions as an indicator of linguistic level (see Álvarez-Sotomayor & Martínez-Cousinou, 2020 for more details). Although many other studies have somehow addressed the relationship between proficiency in the school language and academic achievement in Spain among children of immigrants (for other literature reviews, see Huguet & Janés, 2013; García Castaño, Rubio & Bouachra, 2015; Navarro et al., 2012), they do so through methods that made possible to advance in other research objectives, but not in testing of the LDH.

Methods

Data and Methodology

This paper is rooted in a broader case study about the factors that affect the differential academic performance observed among the children of immigrants, with language proficiency being one of the studied variables.

The data have been compiled from a survey completed by the students themselves. Although this is not the ideal way of measuring performance, self-reported grades have repeatedly proved to be reliable, yielding high correlations with the official results and often achieving collinearity values (see the meta-analysis by Kuncel, Credé & Thomas, 2005). The survey was

aimed at all students in the third and fourth years (ideally, between 14 and 16 years old) of Spain's compulsory secondary education system (ESO) from all ten public secondary schools established in the municipality of Marbella (N=1,461). The mean age of the sample is 15 years old. 29.3% (426) of the sample are students from an immigrant background, defined, in accordance with the most widespread approach taken in the literature, as those with at least one parent born abroad (Portes et al., 2016). The remainder are native Spanish (both parents born in Spain).

A total of 45 national origins as well as Spanish are represented in the sample. Those of Moroccan origin make up the largest national sub-group (14% of all immigrant students), followed by Ecuadorian (11%), Argentinean (10%), French (7%), German (7%), Colombian (6%), British (4.5%), Ukrainian (3.5%) and Venezuelan (3.3%). The other national subgroups make up less than 3% of this student sample. In terms of concentration, the presence of children of immigrants in the two academic years analysed here is substantial in all the schools surveyed. They represent between 15 and 48% of total student numbers.

It should be noted that the survey does not reflect a sample population, but rather the entire student population studied (all students enrolled in the last two years of ESO in all the state-run secondary schools in the municipality of Marbella). The only students not encompassed by the survey were those who were absent from class when the survey was administered. Therefore, rather than a sample, it represents a census of the study population, which invalidates the need and the point of making statistical inferences, since in all cases the results are statistically representative of the universe they describe.

The survey was administered in May 2007, still within the so-called "prodigious decade of immigration" in Spain (Arango, 2009) and when the share of foreign students was about to reach its peak. As explained in the section dedicated to describe the Spanish context, it was also the time when intercultural rhetoric strongly permeated the discourse of policy makers and the educational administration, and when the classes for language adaptation (ATAL in the case of Andalusia) had already become the principal educational measure designed to responding to the challenge of the integration of children of immigrants. Therefore, the exploitation of these

data is especially valuable to contribute to the knowledge of the validity of LDH in this context and in a country where it has barely been tested.

Variables

As variables for academic performance (dependent), we analysed grades in *mathematics* and in *Spanish language and literature* (grade between 1 and 10 in both subjects in the most recently assessed term when the survey was conducted) and the *overall grade* (average of all grades obtained in the most recently assessed term).

The main independent variable was Spanish language proficiency, an index calculated on the basis of the responses given by the respondents to a question in which they were asked to rate from 1 to 5 (from 'very bad' to 'very good') their proficiency in this language with regard to the four different dimensions: comprehension, speaking, reading and writing. The index is calculated as the arithmetic mean of the scores assigned in the four dimensions. Cronbach's alpha coefficient between the four items is 0.85, which indicates a high level of internal consistency. Although the optimal way of measuring this variable is by means of an objective standardised test, previous linguistic research has consistently shown self-perceived language ability to be a reliable indicator of the actual knowledge possessed of a language (Hakuta, 1986; Stolzenberg & Tienda, 1997). Consequently, studies conducted into the magnitude of NELS and CILS in the US, or the replication of the latter in Spain, the ILSEG (Portes et al., 2016), have incorporated this indicator. Furthermore, in line with previous papers, we understand that self-perceived language proficiency not only reflects the subjects' mastery of that language but also their linguistic self-esteem (Bourdieu, 2014; Monteiro, 2012).

Migratory generation is a dichotomous variable that, for multicollinearity reasons, is only included in the descriptive analyses conducted. The category 'second generation' is defined, in line with much of the specialist literature (see, e.g., Portes et al., 2016), in a broad sense. It encompasses the children of immigrants born in Spain, as well as those who were born in a different country but who came to Spain at a young age. Previous research highlights the importance of the age at which subjects are integrated into the host

country's education system in their subsequent academic achievement (Álvarez-Sotomayor, 2011, p.24). Hence, here the term 'second-generation immigrants' refers to children who were born to immigrants in Spain and those who arrived in Spain aged 5 or under, before the start of compulsory schooling. The term 'first generation' includes the children of immigrants who were born outside of Spain and those who arrived in Spain after the age of 5.

As for the *origin of the student*, two categorisations are used. The first, used only in the descriptive analyses, distinguishes between students originally from Spanish-speaking countries and those from non-Spanishspeaking countries. When conducting multivariable analyses, a distinction is made between: native Spaniards (with both parents born in Spain), Latin Americans (who make up 44% of the immigrant student population), Western Europeans (25%), Moroccan (14%) and a group of students from other less developed countries —'other students from LDC'— (14%) largely made up of natives from Eastern European countries (including former Soviet Union countries) and a small group of Asian countries. Immigrant students who do not fit in with any of these four groups (those from highly developed countries outside of Western Europe, and a small group for whom their country of origin is unknown) are included in a residual category ("other"), which makes up 4% of the whole, and thus their analysis was disregarded. The use of this categorisation, instead of the same national origin, is justified by the need to avoid problems derived from conducting analyses on sub-populations with a very small number of cases. When defining these categories, the criteria took into account the geographical area and size of the groups, which, it was established, should be no fewer than 50 observations

Finally, different control variables were taken into account in the multivariable analyses. We first controlled for the effect of *age* and *gender*, both of which have been demonstrated to be relevant. Afterwards, we controlled for the following variables related to the social origin of the students:

ISEI, as an indicator of the socioeconomic status of the home. It is
defined as the highest score achieved by the parents in the
International Socioeconomic Index of Occupational Status. This

index is used extensively to measure the occupational status of the parents.

- Parental level of education: highest level of education attained by both parents.
- Three indicators were considered with regard to cultural capital (Bourdieu, 1997). Extra-curricular cultural lessons are measured through three dichotomous variables that reflect whether the subject regularly attends music lessons, or other artistic or cultural lessons (painting, dance, photography, theatre, film, etc.) or language lessons outside of school hours. Cultural activities are measured using three variables that capture between 1 ('never or almost never') and 5 ('several times a week') the frequency with which the student engages in cultural activities (going to museums, going to the theatre, and playing a musical instrument), and two variables about reading habits (the frequency with which the student reads books not related to school and their fondness for reading). The third indicator of cultural capital captures, using five dichotomous variables, the availability in the home of different education resources (a quiet place to study, computer, dictionary, calculator, and more than 50 books).
- Parental structure of the home was also used as a control variable with regard to the family environment to distinguish whether the student is from a one or two parent home.

Procedure

The municipality of Marbella was chosen as a relevant case study within the self-governing region of Andalusia on the basis of three aprioristic criteria (see Álvarez-Sotomayor, 2011):

- 1. The existence of a high proportion of foreign students enrolled in secondary education, the stage of education that was subject to analysis here.
- 2. The fact that these foreign students were geographically concentrated in a small number of secondary schools ten in this case so that they could be analysed whilst at the same time optimising time and research¹.
- 3. The existence of diversity in the national origin of these foreign students.

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We decided to choose the final two years of Spain's compulsory secondary education system (ESO) because this stage immediately precedes the most critical point in an individual's final educational pathway. At this time, they can choose to leave school and go straight into work, go onto vocational training, or complete the 'Bachillerato' and potentially go on to university.

The survey was completed on paper by students during one hour of class time in their own classrooms. The questionnaire applied can be viewed at Álvarez-Sotomayor (2011, p.365).

The SPSS programme was used to conduct all the statistical analyses. To test the LDH, multiple linear regressions were conducted using the ordinary least squares method.

Results and Discussion

Descriptive Analyses

Analysis of the composition of the immigrant students with regard to the variables *national origin* and *migratory generation* offers an approximate initial idea of the degree to which a lack of proficiency in the Spanish language can be a widespread academic obstacle for these students.

In relation to the first of these variables, 41% of the children of immigrants surveyed originate from countries where Spanish is also the primary language (see Table 1). This would exclude them from the group for which language would be a serious academic obstacle. However, it should be taken into account that several studies show that immigrant students from Spanish-speaking backgrounds also score significantly lower than nativeborn Spaniards in tests that measure linguistic competency in its academic dimension (Navarro et al., 2014), although the results of these studies should be taken with caution on account of the methodological limitations flagged by Álvarez-Sotomayor & Martínez-Cousinou (2020).

With regard to the second variable, out of the rest of these students, the majority (64%) are second-generation immigrants, an aspect that might not necessarily guarantee fluency in the language but certainly makes it highly

likely.

Taking both these data into account, it could be deduced that the number of students who, a priori, would have insufficient knowledge of Spanish is substantially reduced. Specifically, according to this initial estimation, it could be said that only around a fifth of the total number of immigrant students would in theory have to deal with the language barrier critically, as first-generation immigrants from non-Spanish-speaking countries (see Table 1). This proportion might even be lower bearing in mind that an important number of first-generation students arrived in Spain between the ages of 6 and 10 (34%), and, therefore, would have been living in Spain for between five and ten years. It is highly likely that these adolescents would no longer present deficits in their knowledge of the Spanish language, since this would be around the length of time required by immigrant school pupils to reach the same level as their native-born peers in the academic aspects of the language, according to several studies focused on Spain (Navarro et al., 2012).

Table 1
Percentages of students according to migratory generation and their origin in Spanish-speaking countries

		Gene	Total		
		1st generation	2nd generation	Total	
Immigr. from NON-Spanish-speaking	% of row	36.4	63.6	100.0	
countries	% of total	20.4	35.7	56.1	
Immigr. from Spanish-speaking	% of row	81.3	18.8	100.0	
countries	% of total	33.6	7.7	41.3	
Immigr. of unknown origin	% of total	0	2.6	2.6	
Total	% of row	54.0	46.0	100.0	
10001	% of total	54.0	46.0	100.0	

Authors' own

A second descriptive approach to this matter is provided by the *Spanish language proficiency index*. Firstly, the results show that, in general, students that come from an immigrant background estimate that they possess a fairly high level of Spanish, with a score of 4.65 for the whole group, and 4.54 for the group from non-Spanish-speaking countries. Crossing this variable with the national origin of the students reflects that those whose

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background is from non-Spanish-speaking countries and those who are not second generation, in general, have the weakest grasp of the language (see tables 2 and 3). First-generation Moroccan immigrant students (3.88), by a long way, consider themselves to have a low level of Spanish, although the group of 'other students from LDC' presents a lower total average (4.44). This is largely due to the lower proportion of second-generation immigrants.

Table 2
Spanish language proficiency according to group of origin and migratory generation

	Spain	West Europe	Latin America	Morocco	Students other LDC	Rest immigr	Total immigr	Total non- Spanish- speaking
1 st Genera	_	4.37	4.73	3.88	4.28	3.92	4.55	4.19
tion 2 nd		(0.57) 4.78	(0.45) 4.84	(0.74) 4.79	(0.67) 4.60	(0.80) 4.72	(0.59) 4.76	(0.66) 4.74
Genera tion	-	(0.35)	(0.33)	(0.43)	(0.51)	(0.43)	(0.40)	(0.41)
Total	4.71 (0.43	4.66 (0.46)	4.75 (0.43)	4.52 (0.68)	4.44 (0.61)	4.59 (0.56)	4.65 (0.46)	4.54 (0.58)
)							

Note: Standard deviation in brackets.

Authors' own

Table 3
Spanish language proficiency among immigrant students according to the length of their residency in Spain and their national origin (Spanish-speaking / non-Spanish-speaking)

		National origin				
< 2 years	2-3 years	4-5 years	6-9 years	≥ 10 years	Spanish- speaking	Non- Spanish- speaking
4.20	4.48	4.59	4.72	4.59	4.78	4.54
(0.74)	(0.60)	(0.53)	(0.46)	(0.49)	(0.40)	(0.58)

Note: Standard deviation in brackets.

Authors' own

In contrast, Latin American and second-generation immigrant students

claim to have a higher level of proficiency in Spanish. In general, both groups consider themselves to have a 'very good' level (all score themselves higher than 4.5), putting them on a par with native-born Spanish students, which would entail full linguistic integration. Meanwhile, with the exception of Latin Americans, who score higher, first-generation immigrants believe they have 'good' Spanish (around 4), which would suggest that their integration is one rung further down. In any case, looking at the 'total' mean values for each group of origin, the differences observed with regard to native-born Spanish students are minor. Furthermore, if we take into account the length of their residency in Spain, we see that the children of immigrants who have been living in the country for more than four or five years have a perceived level of Spanish that is on a par with that of native-born Spanish students (Table 3). Therefore, the groups in relation to which the matter of language would not be, a priori, a critical element for their academic integration (students from Spanish-speaking countries, second-generation immigrants, and first-generation immigrant students who have been living in Spain for more than four or five years), also hold this perception: that they would not be at a disadvantage with regard to Spanish proficiency.

Table 4
Bivariate correlations between Spanish language proficiency and three variables of academic performance

		Overall	Grade in	Grade in
		grade	language	mathematics
Spanish language proficiency	Pearson's r	0.287	0.259	0.105
(n=only immigrant students)	n	386	382	382
Spanish language proficiency (n= immig. students of Spanish-	Pearson's r	0.309	0.305	0.165
speaking origin)	n	226	223	223
Spanish language proficiency	Pearson's r	0.192	0.175	0.73
(n=total students)	N	1,381	1,352	1,350

Authors' own

The bivariate correlations (Table 4) show that self-evaluation of Spanish language proficiency is associated strongly and positively with the three variables of academic performance (dependent). The next step is to measure

its effect on these variables and, especially, on the differences between them among the children of immigrants and native-born Spaniards, once other relevant explanatory variables are taken into account.

Multivariate Analyses

This section analyses the impact of Spanish language proficiency on the academic differentials presented by the different groups of origin.

To this end, three multiple regression models were created for each of the three dependent variables (see Table 5). The first (M1) shows these academic differentials once age and gender have been accounted for. The second (M2) measures the effect of the different variables considered pertaining to the family background: socioeconomic (socioeconomic status, parental level of education, and cultural capital variables) and parental structure. And the third (M3) adds proficiency in the Spanish language, which provides a picture of the effect of this variable once the previous variables have been accounted for.

As shown in previous publications that have exploited these same data (Álvarez-Sotomayor, 2011; Álvarez-Sotomayor & Martínez-Cousinou, 2016), the starting point is the empirical knowledge that all the groups of immigrants analysed have a lower level of academic performance than the average achievement of native students. Furthermore, we know that, when taking into account the variables relating to the family environment (M2). the relative differences reduce substantially for all the groups with the exception of Western Europeans, for whom they increase owing to the advantageous social position of their families with regard to the native students. In other words, the student's social background and the other control variables explain an important part of such disadvantages (for example, for 'overall grade', 60% of the differential for Latin Americans and Moroccans, and around 40% for the group 'other students from LDC'). Even so, these variables do not explain all the disadvantages faced, which suggests that another type of explanation – including language – could have a part to play.

Table 5
Regression analyses (MCO). Academic achievement, social origin, length of residency, and Spanish language proficiency

residency, dr	M1	M2	M3	M1	M2	M3	M1	M2	M3
VARIABLES	math.	math.	math.	lang.	lang.	lang.	O/all	O/all (B)	O/all (B)
	(B)	(B)	(B)	(B)	(B)	(B)	(B)	0/un (B)	Orum (B)
Origin (Ref: natives)	0.444	0.570	0.565	0.570	0.040	0.010	0.217	-0.495	0.474
W. Europe	-0.444	-0.570	-0.567	-0.570	-0.842	-0.818	-0.316	-0.495	-0.474
Latin America	-0.740	-0.478	-0.484	-0.627	-0.431	-0.469	0.381	-0.151	-0.178
Morocco	-0.796	-0.421	-0.421	-1.093	-0.870	-0.867	0.614	-0.246	-0.243
Other LDC	-0.060	-0.131	-0.140	-0.267	-0.324	-0.272	0.234	-0.145	-0.106
Other immigrants	-0.517	-0.620	-0.623	-0.659	-0.886	-0.900	0.139	0.016	0.006
Gender (Ref: Male)							0.422		
Female	0.129	0.126	0.121	0.718	0.543	0.512	0.433	0.375	.349
Age	-0.201	-0.154	-0.152	-0.397	-0.338	-0.327	0.265	-0.207	199
Socioeconomic status (HISEI)		0.014	0.014		0.008	0.008		0.007	.006
Parental level of educ. (Ref: no educ	./primary edu	cation)						
Secondary Ed.		-0.078	-0.80		-0.059	-0.072		0.048	.042
University Ed.		-0.014	-0.018		0.095	0.072		0.148	.135
Ed. resources in home									
Quiet place		0.228	0.226		0.223	0.213		0.245	0.234
Computer		0.217	0.203		0.431	0.351		0.328	0.269
Dictionary		0.193	0.193		0.100	0.105		0.337	0.336
Calculator		0.452	0.454		0.384	0.390		0.409	0.415
More than 50 books		0.340	0.337		0.238	0.218		0.260	0.243
Extra-curricular cultural	classes								
Music		0.057	0.056		0.608	0.610		0.478	0.479
Languages		0.316	0.317		0.343	0.347		0.352	0.355
Art		0.199	0.195		0.470	0.448		0.258	0.238
Cultural activities									
Going to theatre		-0.60	-0.062		0.123	0.113		0.029	0.023
Playing an instrument		0.161	0.160		-0.025	-0.029		0.015	0.012
Going to museums		0.246	0.248		0.163	0.173		0.228	0.236
Reading books not related to school		0.029	0.029		0.037	0.036		0.028	0.028
Love of reading		0.073	0.069		0.798	0.770		0.347	0.324
Two parent home		0.459	0.457		0.011	0.002		0.131	0.124
Spanish language proficiency			0.076			0.431			0.345
Constant	8.083	4.461	4.106	11.26	7.905	5.879	9.867	6.404	4.797
N	1.344	1.268	1.268	1.346	1.270	1.270	1.375	1.291	1.291
\mathbb{R}^2	0.026	0.105	0.105	0.086	0.196	0.203	0.067	0.215	0.224
A 41 2	0.020	0.105	0.103	0.000	0.170	0.203		0.213	0.227

Authors' own.

The third model allows this last variable to be examined by incorporating

Spanish language proficiency, showing that, even after accounting for social origin, this variable positively affects the three dependent variables. However, its effect on the academic differentials of the different groups of origin is very limited: inexistent in the case of mathematics and very minor and partial for the other two dependent variables. More specifically, the analyses show how, when Spanish language proficiency is added, only the disadvantages of two of the groups of immigrant students get narrower. Those faced by Western Europeans do so in a very minor way (4% in the overall grade and 2.4% in language), and those of the group of 'students from other LDC' more broadly (26% in the overall grade and 16% in language). It should be noted that this latter group is by far — with the exception of the Latin Americans — the group with the lowest proportion of second-generation immigrants in the analysed sample (Álvarez-Sotomayor, 2011).

Hence, Spanish language proficiency appears to have very little effect on the disadvantages analysed, much less so than social origin. On the one hand, these results are in line with those previous studies in the international arena that find that, when some other relevant variables like social origin are taken into account, the impact of the differences related to proficiency in the language on the analysed academic gaps is largely reduced (Schmid, 2001). On the other hand, these results corroborate the perceptions already made as a result of the previous estimation: that the weight of the language barrier with regard to the academic gap affecting immigrant students is limited by the fact that it is probably no more than a fifth of this population that is facing such a barrier in a more or less problematic way.

Conclusions

As with any immigration host country, in Spain, the issue of ensuring proficiency in the school language among the children of immigrants has been a major concern in school, political and academic circles. The main reason is the assumption that these students have a lower level of Spanish and that this is a key factor in their lower academic performance (language deficit hypothesis). However, this hypothesis has not been tested extensively in this country. The aim of this paper is, therefore, to contribute to this field

of study.

According to the data from the case study analysed, the explanatory capacity of the LDH is partial (pertaining to two groups of immigrant students) and relatively small. The language factor possesses very limited explanatory power regarding the general academic deficit found among the children of immigrants, once the effect of social origin has been controlled for. Even though Spanish language proficiency has shown itself to be a relevant variable for academic performance, the vast majority of these students possess a high level of linguistic competency in this regard. Hence, owing to a compositional effect, this conditioning factor does not affect their academic differential in relation to native-born students. The high percentage of students originating from Spanish-speaking countries, the substantial proportion represented by second-generation immigrant students, and the numbers of students living in Spain for more than five years are the main elements that explain this finding. Therefore, the language deficit hypothesis as an explanation for the general academic deficit found among these students would be refuted for the case study analysed here.

However, a great deal of effort would be required to corroborate this hypothesis within the context of Spain. Such efforts might, if possible, overcome the main limitations of this paper. In other words, on the one hand, research is needed that applies objective measures of the linguistic level of the students and official indicators of their academic performance, even though the reliability and validity of the instruments applied here have been proven by other studies. On the other hand, research is required that possesses a greater scope with regard to its external validity. This would allow us to ascertain the extent to which these results might be found in broader contexts, even in the country as a whole. In this regard, we acknowledge that the situation might differ significantly depending on the regional or local context, owing to the fact that the composition of this population in terms of migration status, length of residence and the share of students originating from Spanish-speaking countries can vary substantially between areas within the country, and owing also to other types of contextual differences (for instance, the linguistic features of the education systems implemented in regions with two official languages, like Basque Country, Catalonia or Valencia).

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In any case, although they are limited to the local context where the research was conducted, the results of this study question whether the role of the language factor as a conditioning element in the academic gap between native students and children of immigrants might have been over exaggerated during those early years when Spain first became a host country for immigration. In return, the question should be raised as to whether the social origin of students has received the right amount of attention from the outset, considering this factor has thus far proven to be the best social predictor of such gap according to international (Heath et al., 2008; OECD, 2010; 2019) as well as national studies (Schnell & Azzolini, 2015; Zinovyeva et al., 2013; Álvarez-Sotomayor & Martínez-Cousinou, 2020).

The above conclusion does not imply that linguistic educational measures as the ATAL – specifically designed for immigrant students – are useless, but rather that their transformative power for reducing the academic gaps of children of immigrants is limited. Consequently, they should be implemented together with others that contributed towards making the educational system more effective in correcting the academic inequalities related to the social origin of the students. Educational administrations should emphasize more the importance than these more generic measures may have to reduce the educational disadvantage of children of immigrants.

Notes

1 The effect of concentration of immigrant students in schools was proved not to affect the results of this study. This variable was defined as the proportion of children of immigrants in school. No significant correlations were found with any of the three dependent variables: grades in mathematics (ρ =0.44; p-value=0.108), in Spanish language and literature (ρ =-0.11; p-value=0.689) and the overall grade (ρ =0.000; p-value=0.996). Consequently, this variable was not included in the multivariate analyses. For more detail on the effect of this variable with these data, see Álvarez-Sotomayor (2011, p.216).

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