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# Mother Tongue and School Failure in a Multilingual Country

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## Abstract

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Spain is a multilingual country where three additional official languages coexist (Catalan, Basque and Galician) with the state language (Spanish). The high costs of translation impose that policy makers are permanent negotiating which percentage of information should be provided in each language. Against this background, the language in the field of education is a controversial topic. In this research we focus on how students' mother tongue, as an ethnic attribute, determines their school performance. Our results confirm that there is a premium for those students whose mother tongue is Catalan, and that living in those communities where Basque and Galician are spoken, affects also positively the academic performance. backgrounds, improved school readiness would increase their math achievement.

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**Keywords:** languages, school, adolescents



Spain is a multilingual country where four official languages coexist: Spanish, Catalan, Basque and Galician<sup>1</sup>. Spanish Constitution (1978) recognizes the importance of preserving the Spanish cultural heritage by promoting the knowledge of all official languages. In theory, the basis of the Spanish democracy provides enough instruments (legal and economical) to guarantee the bilingualism; nonetheless the harmony among official languages is not always easy. For example, the high cost of translations -written and oral- in two languages is so expensive that policy makers are permanent negotiating which information should be provided in each language.

The phenomenon of multilinguism is of general interest around the world. For example, in the European Union, there are 23 official languages, and about 60 other indigenous and non-indigenous languages<sup>2</sup>. Consequently, many of the European countries are multilingual. For example, 56% of the Belgium citizens point out Dutch as their mother tongue, 38% French and 0.4% German (European Commission, 2006).

Against this background, the language in the field of education is a controversial topic. In fact, the realities in the schools are far away from the reclamation of bilingual classrooms, and not only because of the restraint resources. From the positive experience of multilingual classrooms in Taiwan, it is drawn as main conclusion that multilingualism is only achieved by these students to come to value other languages spoken in their classes (Huang, 2005). In Spain, there is resistance to the real recognition of other cultures when there is a double majority looking for ethnic domination (for example, the hegemony of Spanish versus the hegemony of Catalan). As Oller, Vila and Zufiaurre (2012) research in many Catalonian schools, students have diverse identities, cultural backgrounds and linguistic competences. Diversity can be associated with stereotypes and prejudices shaping teachers and learners behaviour. This prejudice leads to contradictions between legal texts, pedagogic orientations and curricular designs (Garreta-Bochaca, 2006).

On one hand, sociolinguists have long recognized that language as a social construct is elusive in its firm definitions (criteria to define a language in relation to overlapping varieties). On the other hand,

language has a symbolic identity and distinctiveness value by its nations, communities and individuals. These different meanings are translated into different attitudes which oscillate from the “flexible bilingualism” point of view, which bilingualism flourishes as a practice, to opposite perspective which argues for “language separation” (Creese, Blackledge, Barac, Bhatt, Hamid, Wei, Lytra, Martin, Wu and Yagcioglu, 2011).

Under an individual perspective, students who attend schools that give classes in their mother tongues will have fewer difficulties in learning than those who need to translate the information due to, for instance, lower richness of vocabulary or poorer understanding (Worswick, 2004). In addition, our mother tongue influences the way we think, and consequently, how we associate with other people (Hately, 2005). Because we look forward to being accepted in our social environments, we tend to get closer to people who speak the same language. Students will feel more comfortable in schools where most people share the same mother tongue (Chiswick and Miller, 1994).

Next to the empirical evidence about the learning problems related to language diversity, there is also empirical evidence about the benefits of multilingualism. MacKinnon (2000) finds evidence that in Montreal, Anglophones and Francophones gained from bilingualism on average earnings, overall in the 1960s. For the particular case of Catalan, there is empirical evidence about the existence of a significant positive Catalan premium for people who speak and/or write Catalan. This premium, next to an integration feeling, will promote that younger generations prefer to speak Catalan than Spanish (Rendon, 2007).

Against this background, we analyze the influence of students’ mother tongue, as an ethnic attribute, on school failure. We particularize the research into the Spanish society with data drawn from the Spanish National Survey on Drug Use among School Population (2004). Our sample is constituted by 25 521 individuals aged between 14 and 18 years. According to this survey, 35% of young people aged between 14 to 18 years old live in a Community where two official languages coexist. Catalan is the most spoken co-official language as mother tongue; 23% of high-school students live in the Catalan area, and 70% of them have Catalan as mother tongue. Catalan is followed in size importance by Basque; 6% of the students live in the Basque area, and

35% of them have Basque as mother tongue. Galician is in the last place with 5% of the students living in the Galician area and 11% of them having Galician as mother tongue.

Regarding school performance, we observe in table 1 that the highest percentage of students who have repeated at least one academic year is for the Spanish area (33%), followed by the Galician area (28%), the Basque area (26%) and the Catalan area (26%). Mother tongue accentuates the differences.

**Table 1: Distribution of school performance by mother tongue.**

Geographical area	Language	N	%	No school repetition		School repetition	
				N	%	N	%
Spain	Spanish	20 606	80.7	13 868	67.3	6 738	32.7
	Other	4 915	19.3	3 737	76	1 178	24
	Total	25 521	100.0	17 605	69	7 916	31
Catalan Area	Spanish	1 764	29.5	1 235	70	529	30
	Catalan	4 221	70.5	3 185	75.5	1 036	24.5
	Total	5 985	100.0	4 420	73.9	1 565	26.1
Basque Area	Spanish	1 036	65.2	722	69.7	314	30.3
	Basque	554	34.8	447	80.7	107	19.3
	Total	1 590	100.0	1 169	73.5	421	26.5
Galician Area	Spanish	1 105	88.8	786	71.1	319	28.9
	Galician	140	11.2	105	75	35	25
	Total	1 245	100.0	891	71.6	354	28.4
Spanish Area	Spanish	16 701	100.0	11 125	66.6	5 576	33.4

Catalan area considers students who live in Catalonia, Valencia and Balearic Islands, that is, where Catalan and Spanish coexist as official languages. Basque area considers students who live in Basque Country and Navarre, that is, where Basque and Spanish coexist as official languages. Galician area considers students who live in Galicia, that is, where Galician and Spanish coexist as official languages. Spanish area considers students who live in communities where Spanish is the only official language.

Source: Spanish National Survey on Drug Use in the School Population (2004).

Native Spanish speaker students have the highest rate of school failure. Among them, those who live in the Spanish area keeps the highest percentage rate of school failure, followed by those who live the Basque area (30%), the Catalan area (30%) and the Galician area (29%). The greatest gap on school performance is found in the Basque area; whilst 30% of the native Spanish speaker students have repeated at least one academic year, only the 19% of the native Basque speaker students have failed. The differences keep in 6 percentage points for the Catalan area and 4 percentage points for the Galician area. One interesting detail from table 1 is that all students who live in the Spanish area have Spanish as mother tongue, what implies that the inter-regional migratory movements of families with co-official languages as mother tongue are reduced.

In spite of growing investments on public educative centres, students who attend private schools or private schools under public basis still obtain better academic results. In fact, depending on the community of residence and mother tongue, students are not only more or less likely to fail, but also to attend private or public schools. The percentages show at table 2, reveal that 61% of the students who live in the Spanish area attend public schools, 34% a private schools under public basis and 5% a private schools. In the Catalan and Basque areas, there are fewer students attending public schools and more students attending private schools under public basis. The differences become more noticeable for students whose mother tongue is Spanish, and in special, for the Basque area. For the Galician area is of particular interest the high percentage of students who attend private schools if their mother tongue is Spanish (15%).

These first statistics (tables 1 and 2) offer a first glimpse of the reality, and represent a starting point before estimating the school performance by controlling for demographic characteristics, socio-economic status, mother tongue and geographical area of residence.

**Table 2. Distribution of high-school students by mother tongue (%)**

		Public school	Private school	Private school under public basis	Total
Spain	Spanish	59.2	5.0	35.8	100.0
	Other	54.8	4.3	40.9	100.0
	Total	58.3	4.9	36.8	100.0
Catalan Area	Spanish	40.9	3.3	55.7	100.0
	Catalan	52.3	4.8	42.9	100.0
	Total	48.9	4.4	46.7	100.0
Basque Area	Spanish	33.8	1.3	65.0	100.0
	Basque	70.8	0.5	28.7	100.0
	Total	46.7	1.0	52.3	100.0
Galician Area	Spanish	63.4	14.7	21.9	100.0
	Galician	67.1	2.9	30.0	100.0
	Total	63.9	13.3	22.8	100.0
Spanish Area	Spanish	61.1	5.2	33.7	100.0

The rest of the paper is structured as it follows. In section 2 we describe briefly those researches focused on the language as a component of the human capital. In section 3 we describe the data base and empirical methodology. Section 4 is devoted to the results, and lastly, in section 5, we summarize the main conclusion and suggest policy implications.

### ***Language as ethnic attribute and as human capital***

The knowledge of languages is considered as a particular form of human capital. Capital because it represents an investment of time and economical resources, and human capital because it provides the individual with knowledge and skills useful for their social integration into the society.

For example, according to Peleato (2011) Two-Way Immersion or Dual Language Immersion programs in the county of Los Angeles (California) is based on the theory of linguistic minorities' integration with the dominant majority and through instruction in two languages to both groups that they become bilingual and develop attitudes of respect for other cultures.

Economic globalization has intensified not only the flows of goods and services, but also the flows of people moving from one country to another. One of the main consequences is that workers have to adapt themselves to multi-cultural and multilingual scenarios (Singh, 2002). Educative systems, in special Universities, play a key role to understand different laws, cultures, procedures and standards through the teaching of languages. Globalization must be present at the time to define which educative contents are useful for the future workers (Sahlberg, 2004).

In spite of the increasing efforts to improve educative systems, there is a generalized declination of educational standards. Although this declination is generalized; the reasons might differ considerably among countries. For example, in Pakistan educational standards are declining because the students have problems in learning in English, and there is a lack of educative material in Urdu (the official language). Because the knowledge of English depends on the acquisition capacity of the student's household, there are significant differences between students who attend private and public educative centres. To address inequity, public policies should be aimed at strengthening the English programs of public educative centres (Mansoor, 2003).

Teaching second languages has been a goal to most countries in the last decades, but new social realities impose new language needs. There are countries in which different communities speak different



language and coexist altogether, or there are countries in where there was traditionally one main official language but the arrival of immigrants is changing the social scenario. Bagna (2006) finds evidence that in Italy schools have become multilingual, not so much because of the proposed linguistic offerings, not so much because of the linguistic heritage of Italian-speakers which alternates among dialect, regional Italian and standard Italian, but mostly because immigrants have enhanced the contact between different linguistic and cultural heritages.

Regarding the link between immigration and educative inequity, international immigration tends to reduce regional disparities in education, whereas inter-regional migration tends to increase them (Coulombe and Tremblay, 2008).

In Spain, only the 6% of the students who attend Secondary Schools are immigrants, and near the half of them have Spanish as a mother tongue (Spanish Ministry of Education and Science, 2005). Teaching foreign languages (excluding English) is not yet a priority at high-schools, but dealing with the Spanish official languages. Between 1960 and 1970, there were intense inter-regional movements from the poor (Andalusia, Extremadura or both Castile, among others) to the rich communities (Madrid, Basque Country or Catalonia, among others) in the search of better jobs and higher salaries. From 1975, and overall from 1980, there is a decreasing in the migratory movements. The preferences of the migrants have changed according to the tendencies of most developed countries, and nowadays there are factors related to the quality of life (weather, quietness or the existence of facilities) among the main migratory determinants. Interregional movements are losing intensity, but intraregional movements are increasing (Lago and Aguayo, 2004).

In addition, people who immigrate voluntarily retained their identities, but at the same time, they and their children do not perceive learning the attitudes and behaviours required for school success as threatening, and generally encompass these behaviours. People who immigrate involuntary develop a new sense of social identity in opposition to the social identity of the receiving community. Voluntary immigrants frequently improve their quality of life by placing a high value on education (Ogbu, 1992). These processes of identity

construction demonstrate how social selves are produced in interaction through contestation and collaboration and how identities may be simultaneously chosen and imposed through language use (Lytra, 2009).

In this research, we focus on mother tongue as an ethnic attribute, and we differentiate it from the conception of language as human capital. Ethnicity is largely defined by culture, which includes the language in which culture is transmitted between generations. According to Dixon (2011) home factors which predict language preferences including these parents ethnic and culture background, other caretakers language, but also television language, mother's years of education and family income. In certain way, parents can choose the intensity in which their children learn the predominant language and the intensity of the transmission of their own language to their children. For the children, there is little choice about their mother tongues.

In the way that the language maintenance enhances the cultural heritage, official language should be preserved (Fishman, 1989). However, there is also empirical evidence that ethnic language proficiency and ethnic identity correspond to negative adaptation outcomes when integrating students in different backgrounds (Vedder, 2005). In fact, Spanish co-official language are strong predictors of national identity, and as we already stated, there are scarcely students whose mother tongue is a co-official language and live in autonomous communities where only Spanish is spoken.

Regarding the school centres, students, and specially minority students, who attend private schools may obtain better academic outcomes (Betts and Fairlie, 2001). From tables 1 and 2 we have stated that students who live in Catalan, Basque and Galician areas obtain better academic results. Students whose mother tongue is Catalan, Basque or Galician are more likely to attend public schools, whereas their counterparts whose mother tongue is Spanish are more likely to attend private schools or private schools under public basis. If private educative centres do a relative good job of teaching to students who do not speak the co-official language, then there are three arising issues: analysing why private school centres are better for people who do not speak the co-official languages in the communities where two official languages coexist, closing the existing economic gaps in private school

attendance for students whose mother tongue is Spanish in communities where two official languages coexist, and improving the quality of public schools in the communities where only Spanish is spoken.

In fact there is also empirical evidence that children whose parents are better educated, make more money, have higher-status job, and live in two-parent families achieve higher levels of education than do other children. In a socio-cultural perspective, factors related to the culture of ethnic groups (for example, ethnic segmentation of socio-economic trajectories as youths make their transition into labour force) explain in a great extend the school performance (Schmid, 2001).

## **Method**

### **Data base and empirical framework**

We have drawn a sub-population of 25 521 individuals from the Spanish National Survey on Drug Use in the School Population (2004). Consideration has only been given to those students whose ages fall between 14 and 18 years old. Descriptive statistics are provided in table 3.

The sample is equally distributed by gender. Around 86% of the students live with both parents. The percentages of fathers and mothers with college education are over 20%. Most differences are found in working status, 90% of fathers work and 63% of mothers do. Regarding school centres, 58% of the students attend public schools, 37% private schools under public basis, and the pending 5% private schools. The average available budget is close to 16 Euros per week.

In table 4 we can observe that on average, high-school students are satisfied with their education and lives. They are self-confident, know how to solve daily problems and consider themselves as easygoing. Although there are some substantial differences on school performance, native Spanish speaker students present homogeneous levels of satisfaction, independently from where they live. Main differences are based on mother tongues. Native Basque speaker students, followed by native Catalan speaker students, have the best levels of satisfaction, suffer less from stress and consider themselves

more able to overcome difficulties. However, they have the worst levels of self-confidence. Native Galician speaker students reported the worst values for all the categories, except for attitudes to stress.

**Table 3: Variables (Number of observations: 25 521)**

Variable	Description	Mean(St. Deviation)
SchoolPerformance	This variable takes the value 1 if the student has failed at least one academic year and 0 otherwise	0.3098 (0.4624)
Gender		
Male	This variable takes the value 1 if the student is male and 0 if female.	0.4924 (0.4989)
Female	This variable takes the value 1 if the student is female and 0 if male.	0.5076 (0.5011)
Age	This variable informs us about the age of the student.	15.7369 (1.0960)
Budget	Available weekly budget	16.2387 (17.2739)
School:		
PublicSchool	This variable takes the value 1 if the student attends to a public school and 0 otherwise.	0.5835 (0.6784)
PrivateSchool	This variable takes the value 1 if the student attends to a private school and 0 otherwise.	0.0485 (0.2150)
PrivatePublicSchool	This variable takes the value 1 if the student attends to a private school in public basis and 0 otherwise.	0.3680 (0.4822)
LivingBothParents	This variable takes the value 1 if the student lives with both parents and 0 otherwise.	0.8637 (0.3430)
FatherCollege	This variable takes the value 1 if the student's father has college studies and 0 otherwise.	0.2247 (0.4174)
MotherCollege	This variable takes the value 1 if the student's mother has college studies and 0 otherwise.	0.2028 (0.4021)
FatherWork	This variable takes the value 1 if the student's father works and 0 otherwise.	0.8991 (0.3011)
MotherWork	This variable takes the value 1 if the student's mother works and 0 otherwise.	0.6355 (0.4812)
Language		
Catalan	This variable takes the value 1 if the student's mother tongue is Catalan and 0 otherwise.	0.1655 (0.3716)
Basque	This variable takes the value 1 if the student's mother tongue is Basque and 0 otherwise.	0.0217 (0.1457)
Galician	This variable takes the value 1 if the student's mother tongue is Galician and 0 otherwise.	0.0054 (0.0738)
Spanish	This variable takes the value 1 if the student's mother tongue is Spanish and 0 otherwise.	0.8072 (0.3944)

We have also considered regional dummy variables. Catalan area includes Catalonia, Balearic Islands and Valencia Community. Basque area includes Basque Country and Navarre. Galician area includes Galicia. Other Autonomous Communities are considered under Spanish area.

Table 4: Mother tongue and youth development (Mean<sup>a</sup>).

	<b>Catalan area (N = 5 721)</b>		<b>Basque area (N = 1 543)</b>		<b>Galician area (N = 1 212)</b>		<b>Spanish area (N = 1 6154)</b>
	<b>Spanish</b>	<b>Catalan</b>	<b>Spanish</b>	<b>Basque</b>	<b>Spanish</b>	<b>Galician</b>	<b>Spanish</b>
<b>School Satisfaction</b>	3.03	3.13	3.12	3.59	3.04	2.90	3.07
<b>Life Satisfaction</b>	3.22	3.24	3.29	4.04	3.28	3.05	3.29
<b>Self-Confidence</b>	3.70	3.64	3.72	3.49	3.76	3.72	3.80
<b>Tranquility</b>	2.95	3.20	2.91	3.21	2.91	2.98	2.96
<b>Efficiency</b>	3.38	3.41	3.35	3.54	3.34	3.29	3.38

<sup>a</sup>School Satisfaction, Life Satisfaction, Self-Confidence, Tranquillity and Efficiency take values from 1 to 5 (1: Not at all – 5: Very much)  
Source: Spanish National Survey on Drug Use in the School Population (2004).

If individual attitudes are important to achieve higher educative goals, so they are the environmental backgrounds. Looking at the Gross Domestic Product per capita (GDPpc), Navarre and Basque country are the richest communities, only preceded by the community of Madrid. With GDPpc over the average, Catalonia and Balearic Islands are on the fourth and fifth position. Regarding educative investment, there are on average a computer every 12 students, a teacher every 8 students, 20% of the students receive an educative grant, and the average amount of money per grant is over 1 900 Euros per year. The endowment on education is considerably better than the average for students of Basque area. Against this background, it is not surprising that students who live in the Basque country have better school performance and higher levels of school satisfaction than other students. Another important characteristic drawn for the table 5 is that Autonomous Communities that share linguistic characteristics are more homogeneous than the Autonomous Communities in which only Spanish is spoken. For the relevance of this analysis, it would be more

more interesting to know the investment on education by school centres; however this level of detail is not available.

**Table 5: Economic differences by Autonomous Communities.**

	N. =25 521	N. of students per computer 2003	% of students with grants 2003	Average grant 2003 (Euros)	N. of students per teacher 2003	GD Ppc 2004 (Euros)
<b>Spanish area</b>						
Andalusia	2 464	20.5	37.0	2 872	9.7	15 203
Aragon	1 757	9.1	17.1	2 086	7.7	20 980
Asturias	584	9.2	14.0	1 088	6.2	16 975
Canary Islands	835	14.6	18.3	1 141	8.1	18 130
Cantabria	1 478	11.1	13.6	1 060	6.8	19 125
Castile La Mancha	860	10.5	16.3	1 980	8.5	15 525
Castile Leon	983	9.8	67.7	6 368	6.9	18 493
Extremadura	1 693	2.9	32.6	3 205	8.5	13 070
Madrid	3 033	12.5	18.8	1 696	9.9	25 816
Region of Murcia	1 468	12.2	23.2	1 805	9.0	16 572
Rioja	975	8.6	1.0	76	8.0	21 357
Ceuta and Melilla	568	12.8	6.5	508	9.0	17 657
<b>Catalan area</b>						
Balearic Islands	1 795	14.6	8.5	747	8.5	22 234
Catalonia	2 831	10.0	12.1	772	9.2	23 563
Valencia	1 362	13.5	6.7	520	7.8	18 362
<b>Basque area</b>						
Basque Country	990	6.0	28.4	7 917	6.8	24 626
Navarre	600	8.4	26.0	2 776	6.7	24 711
<b>Galician area</b>						
Galicia	1 245	13.7	15.1	1 173	6.6	15 853
<b>Mean</b>		11.6	20.3	1 984	8.4	19 801

Sources: Spanish Public Expenditure on Education (2003) and Spanish Regional Accounts (2004).

### **School individuals' performance predictive equation with exogenous variables**

School failure is the result of individual performance (skills and attitudes), which it is highly determined by the social environment. To understand the determinants of students' school performance, we include a set of individual characteristics (gender, age or preferences) and a set of social variables (mother tongue as an ethnic attribute, family characteristics, school centre and community of residence).

We first specify a reduced form equation for the school performance. The equation determining school performance for individual  $i$  is:

$$SchoolFailure_i = Individual_i\gamma + Family_i\lambda + School_i\alpha + MotherTongue_i\beta + Community_i\delta + u_i$$

where  $SchoolFailure_i$  equals 1 if the student  $i$  has repeated any academic year, and 0 otherwise,  $Individual_i$  is a row vector of individual characteristics (gender, age and available budget),  $Family_i$  is a row vector of household characteristics (household composition, and parents' working status and educative levels),  $School_i$  is a row vector of school characteristics (school ownership and percentage of classmates whose mother tongue is a co-official language),  $MotherTongue_i$  is a row vector of Spanish official languages,  $Community_i$  is a row vector of geographical areas, and  $u_i$  is a disturbance term. Lastly,  $\gamma$ ,  $\lambda$ ,  $\alpha$ ,  $\beta$  and  $\delta$  include all the parameters of the model.

We estimate the equation of individual school performance using a linear probability model (Probit Model). We report estimates for the whole sample and for students who live in Catalan and Basque areas. The reasons why we repeat the estimation selecting students who live in Catalan area are because they represent the largest community where two official languages coexist and because Catalan is the most spoken co-official language as mother tongue. The reason why we repeat the estimation selecting students who live in Basque area is because they have the greatest difference on school performance by mother tongue.

We do not consider the variables related to school centers as an endogenous explanatory variable because parents are scarcely free to decide about which school they want to send their children. In fact, it is rather difficult to transfer a student to a different school center, in case parents decide to move to a different neighborhood. Private schools are expensive, so the percentage of students who attend these schools is low (5%). The selection of public or private schools in public basis lies on location variables that constantly change according to the demand, the presence of brothers/sisters attending the school and free vacancies. In practical terms, the students are selected by the school centers.

We have not introduced the percentages of classmates who speak a co-official language as explanatory variables in the estimation for the whole sample, but in the estimations for the Catalan and Basque areas. The reason why we have excluded this variable for the total sample is because for most students these variables are irrelevant, either they live a community where only Spanish is spoken, or they live in a community where, for example, Catalan is co-official language, but not Basque or Galician. Apart from the large number of ceros, there will be a strong correlation between mother tongues, percentages of students by mother tongues and communities of residence will mislead the estimated parameters.

## **Results**

This section is devoted to the presentation of the empirical results (see table 6). Regarding demographic characteristics, male and older students have higher rates of school failure. Economic variables bring to light that those students with higher budgets are more likely to have repeated any academic year, except for students who live in Catalan area, for whom, this parameter is not statistically significant. There is also empirical evidence that in relation to students whose school is public, attending private educative centres reduces the probability of failing in 33% for the whole sample and in 75% for the students who live in Basque area. In the same way, attending private schools under public basis reduces the probability of failing in 8% for the whole sample and in 27% for the students who live in Basque area. If the student's father and mother have college education, the student will



have better academic performance. The influence of parents' educative levels is greater for the Basque area and lower for the Catalan area. In relation to the father working status, if the father works, the student is less likely to fail. For students who live in Catalan or Basque area, the estimated parameters of these variables are not statistically significant.

Those students whose mother tongue is Catalan are less likely to fail than the students whose mother tongue is Spanish. The estimated parameters for Basque and Galician capture the same predisposition, however the results lack of statistical significance. The result for Catalan vanishes when we consider students who live in the Catalan area. There is also no empirical evidence about how the concentration of student whose mother tongue is Catalan and Basque influences the student's school performance.

**Table 6: School performance (Probit models).**

	TOTALN=25 521		CATALAN AREAN=5 985		BASQUE AREAN=1 590	
	Mfx	P-value	Mfx	P-value	Mfx	P-value
<i>Male</i>	0.3046	0.00	0.2104	0.00	0.3885	0.00
<i>Female a,b,c</i>	--	--	--	--	--	--
<i>Age</i>	0.7207	0.00	0.8061	0.00	0.8830	0.00
<i>Budget</i>	0.0067	0.00	-0.0010	0.61	0.0125	0.04
<i>Budget2</i>	0.0000	0.00	0.0000	0.40	-0.0001	0.17
<i>PublicSchool a,b,c</i>	--	--	--	--	--	--
<i>PrivateSchool</i>	-0.3345	0.00	-0.0706	0.48	-0.7541	0.05
<i>PrivateSchoolPubli</i>	-0.0809	0.00	-0.0597	0.17	-0.2693	0.00
<i>LivingBothParents</i>	-0.2313	0.00	-0.2274	0.00	-0.4204	0.00
<i>FatherCollege</i>	-0.3808	0.00	-0.2172	0.00	-0.4535	0.00
<i>MotherCollege</i>	-0.4250	0.00	-0.2901	0.00	-0.5859	0.00
<i>FatherWork</i>	-0.0841	0.01	-0.0845	0.25	0.0328	0.83
<i>MotherWork</i>	0.0044	0.83	-0.0044	0.92	-0.1104	0.24
<i>Spanish a</i>	--	--	--	--	--	--
<i>Catalan</i>	-0.2901	0.00	-0.0216	0.73	--	--
<i>CatalanClassMate</i>	--	--	0.4397	0.51	--	--
<i>Basque</i>	-0.0438	0.61	--	--	-0.1780	0.25
<i>BasqueClassMates</i>	--	--	--	--	1.1742	0.41
<i>Galician</i>	-0.0478	0.72	--	--	--	--
<i>SpanishArea a</i>	--	--	--	--	--	--
<i>CatalanArea</i>	0.0353	0.35	--	--	--	--
<i>Catalonia</i>	--	--	-0.4223	0.00	--	--
<i>BalearicIslands</i>	--	--	0.2688	0.00	--	--
<i>ValenciaCommunit</i>	--	--	--	--	--	--
<i>BasqueArea</i>	-0.1148	0.02	--	--	--	--
<i>BasqueCountry</i>	--	--	--	--	0.4375	--
<i>Navarra c</i>	--	--	--	--	--	--
<i>GaliciaArea</i>	-0.1947	0.00	--	--	--	--
<i>Pseudo-R 2 (%)</i>	26.9		26.0		37.2	
<i>Estimated</i>	31.0		31.0		25.5	

a Variables of reference for the first two columns.

b Variables of reference for the first two columns.

For completing the analysis of the mother tongue, we have also included the linguistic area where the student lives. Meanwhile there is no empirical evidence about the influence of living in the Catalan area in relation to living in the Spanish area, the results bring to light that those students who live in the Basque area and Galicia are less likely to fail. For the students who live in the Catalan area, there is empirical evidence that those who live in Catalonia fail less than the students who live in the Valencia Community, whereas the students who live in Balearic Islands fail more. For the students who live in the Basque area, the students who live in the Basque Country are more likely to fail than the students who live in Navarre.

Lastly, we conclude with a brief analysis of the estimations' fit goodness. The estimated probabilities are close to the real ones. For the total sample and Basque area, estimated probabilities of failing are slightly undervalued, whereas for the Catalan area, this probability is overvalued in 4 percentage points. In the same way, the exogenous variables explain the 37% of the school performance for the students who live in the Basque area, the 27% for the total sample and the 26% for the students who live in the Catalan area.

### **Discussion and Conclusions**

Spanish policy makers need to address important educative challenges: new social realities generated by higher flows of immigrants and the coexistence of four official languages. To solve the problem of integration, other countries have implemented successfully social campaigns that encourage communities to understand the value of interacting with other cultures, which includes their languages. In multilingual countries, the challenge is even greater, because the predominance of an official language has to lead space to other co-official languages.

Our results suggest that in those communities where two official languages coexist, students get better academic results. Whereas there is a premium for those students whose mother tongue is Catalan, there is also a premium for those students who live in Basque area and Galicia. Catalonia, Basque Country and Navarre are among the richest Spanish communities along with Madrid, so better academic results

might be derived from the fact that the schools in these areas are better, being this statement specially true for Basque Country and Navarre. Students whose mother tongue is Catalan, Basque or Galician are more likely to attend public schools, whereas their counterparts whose mother tongue is Spanish are more likely to attend private schools to overcome additional difficulties arising from the bilingualism.

For further research, we suggest analysing the role of mother's educational levels and school management. It is important to understand how educative achievements are determined by school characteristics along with regional particularities. We also consider necessary to study the differences in quality among school centres to close the gap of social inequalities among population groups. As Hornberger and Link (2012) suggest nowadays, our schools have to offer new spaces for innovative programs and practices that recognize and value the mobile diversity of communicative repertoire and bilingual literacy practice of students and their families. From this perspective: García and Sylvan (2011) propose seven principles that support dynamic plurilingual practices in instruction: heterogeneity, collaboration, learner centeredness, language and content integration, language use from students up, experiential learning and local autonomy and responsibility.

It would be also useful to have available data about students' knowledge of languages, so we could control the estimations by the students' knowledge of official languages, and not only by their mother tongues. This knowledge is mediated by socioeconomic students' background but also by motivation and attitudes towards languages (Saravia and Bernaus, 2008).

This research is devoted to mother tongue and school achievement in Spain, but this topic implies to clarify a number of issues close related, involving multi/biliteracy development, socioeconomic and linguistic capital, minority/majority language status, mother-tongue support, home-school continuities and linguistic identity (Riches and Curdt-Christiansen, 2010).

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### **Notes**

<sup>1</sup> For questions of simplicity, we refer to Baque, Catalan and Galician as co-official languages. When we include Spanish in the list, we will refer to them as official languages.

<sup>2</sup> Non-indigenous languages: Languages from other parts of the world spoken by immigrant communities in the EU such as Turkish in Germany or Indian languages in the United Kingdom.

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