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Immigrant Bilingualism in Spain: An Asset or a Liability?

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Abstract

This study contributes to the ongoing debate about bilingual advantage and examines whether bilingual immigrant youths fare better, as well as, or worse academically than the matching group of monolinguals. Using data from Spain, where close to half of immigrants speak Spanish as their native language, we found no evidence of costs of bilingualism: bilingual youths did benefit from their linguistic skills. Their advantage, however, manifested itself not uniformly across discrete outcomes, but in a direct trajectory toward higher educational attainment. Bilingualism neutralized the possible negative effect of ethnic origins and extended the positive effect of high parental ambition. Implications for theory and practice are discussed.

When, in 1992, Kenji Hakuta described bilingualism as a “talent” and a “valuable gift” (Hakuta 1992, 2), he aptly summarized the prevailing scholarly views about the benefits of individual bilingual proficiency. Following the groundbreaking study by Peal and Lambert (1962), the once powerful narrative of bilingualism as a language handicap and a source of mental confusion was critiqued on methodological grounds and its validity was challenged (see Peal and Lambert 1962 and Portes and Rumbaut 2014 for an extensive review of previous studies on this topic). Correcting for the methodological shortcomings of earlier research, Peal and Lambert matched monolingual and bilingual participants on socioeconomic status, age, and sex, school system and even schools, and accounted for different degrees of bilingual proficiency. This new methodological design brought about unexpected results that, as the authors accurately noted, “constitute[d] a clear reversal of previously reported findings” (Peal and Lambert 1962, 20).

The new results characterized fluent bilinguals as benefiting from their “wider experiences in two cultures” that provided them with “advantages which a monolingual does not enjoy” (Peal and Lambert 1962, 20). In particular, the authors asserted that a bilingual’s life in two languages “seems to have left him with a mental flexibility, a superiority in concept formation, and a more diversified set of mental abilities” (1962, 20). Although Peal and Lambert cautioned that correlation depicted in their study should not be confused with

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causation, and the causal relationship between individual bilingualism and intelligence could go in either direction, the study set the stage for the new era of bilingualism research.

The current literature on bilingualism consistently reaffirms Peal and Lambert's findings. Reviewing years of research on the relationship between bilingualism and cognitive development, Bialystok (2011, 233) wrote that "in controlled studies of cognitive performance across the life span, bilinguals consistently outperformed their monolingual counterparts". Bialystok (2011) suggested that bilinguals' continuous attention to, choices between, and control over their competing languages in accordance with the social context significantly enhanced their performance on both verbal and nonverbal tasks. Although the mechanisms for bilingual advantage remained unclear, the pattern of the effects – observed in studies with children, younger and older adults, as well as Alzheimer's patients – provided compelling evidence for the positive and significant relationship between the bilinguals' ordinary life experiences and their cognitive development (Bialystok 2011, 233).

The literature further suggests that fluent bilinguals possess not only greater cognitive flexibility, but also stronger coping and adaptation skills. Using longitudinal data to establish a clear causal relationship, Portes and Hao (2002) showed that, compared to monolinguals, bilingual children of immigrants in the United States reported less conflict with their parents and stronger identification with their family regardless of the parents' English language ability. Moreover, compared to monolinguals and limited bilinguals, fluent bilinguals had higher average self-esteem and educational aspirations (Portes and Hao 2002).

The practical benefits of knowing several languages are noteworthy as well. Studies conducted in the United States showed that, among immigrants and their children, bilinguals' proficiency in English was associated with higher educational achievement (Suárez-Orozco and Suárez-Orozco 2001; Portes and Rumbaut 2001), greater socioeconomic prospects (Chiswick and Miller 2007; Stolzenberg and Tienda 1997), and higher self-esteem (Powers and Sanchez 1982; Rumbaut 1994). At the same time, the young bilinguals' knowledge of their ethnic languages increased their receptivity to parental guidance and decreased the probability of academic problems, parent-child conflict, and lower self-esteem (Rumbaut 1994; Portes and Rumbaut 2001; Schechter and Bayley 2002; Zhang 2008). In a study of Chinese- and Korean-origin adolescents, Boutakidis and colleagues (2011) found positive associations between youths' ethnic language proficiency and respect for parents, as well as higher quality of communication with fathers, regardless of parental English proficiency. Zhou and Bankston (1998) reported that in those Vietnamese American families where parents emphasized school success, adolescents' ethnic language proficiency was associated with higher educational aspirations and better academic performance regardless of the family's socioeconomic status.

It could be said that cognitive and psychosocial benefits of bilingualism, including immigrant bilingualism, are no longer a novelty. In fact, the notion of bilingual advantage is so prevalent in the current literature that it obscures considerations of possible costs of bilingualism and the effects of those costs. In their 1999 study of language and academic achievement among children of immigrants, Mouw and Xie warned about the shortcomings of this "blanket" approach, which, the authors noted, claimed that "fluent bilinguals *always*

have an advantage over other students because of either the cognitive or cultural benefits of being bilingual” (1999, 249; *italics in original*). This warning is not unfounded.

In the same article that radically reframed bilingualism as an “asset”, Peal and Lambert cautioned that it could be “psychologically difficult to belong to two communities at once, to identify to the same extent with two groups which are culturally different” (1962, 19). Similarly, in the same article that emphasized the costs of monolingualism, Snow and Hakuta (1992) cited the potential costs of bilingualism: fluent bilinguals may identify differently in different languages, raising suspicion about their loyalties and doubts about their willingness to integrate into the dominant language and culture of their host country.

Indeed, as early as in the 18th century, Benjamin Franklin expressed concerns about delayed linguistic assimilation among German immigrants in Pennsylvania. In his May 9, 1753 letter to Peter Collinson, a British member of Parliament, he wrote that “few of their children in the Country learn English; they import many Books from Germany” (Franklin 1992, 19). Franklin feared that unless the German migration flow could be turned to other colonies, German immigrants would “soon so out number us, that all the advantages that we have will not, in My Opinion, be able to preserve our language, and even our government will become precarious” (Franklin 1992, 19). Contemporary public opinion in the United States echoes these sentiments, with fluency in a foreign, and especially Spanish, language often being equated with immigrants’ ethnic allegiances and seen as a considerable detriment to their integration (Citrin et al. 1990; Wiley and Lukes 1996; Lippi-Green 2013). Not surprisingly, in his controversial book *Who Are We?* (2004), Huntington described the shift toward English as a common good and a prerequisite for national unity – a view widely advocated by the U.S. English movement¹.

The implied connection between ethnic language maintenance – which is integral to immigrant bilingualism – and delayed immigrant assimilation presents a direct challenge to the notion of bilingual advantage and could, according to Esser (2004), lead to a particular cultural outcome in both new and classical immigrant nations. It could make immigrants and policy makers reconsider the relative value of bilingualism and dominant language proficiency for immigrant integration and question whether the advantages of bilingualism, if any, are worth the costs. Assuming that immigrants and their children account for these considerations when choosing between assimilative and ethnic goals, Esser (2004) proposed that, under normal circumstances, immigrants would be more motivated to invest in the receiving-country capital, particularly formal education and language, and would recognize that their ethnic capital “is clearly less efficient than receiving-country capital” (Esser 2004, 1135). In other words, immigrants should be motivated to integrate into their host society – a

¹The linguistic context of the European Union may appear strikingly different. With twenty-four official languages, and a number of semi-official and minority languages, linguistic diversity is a normal European condition, resulting in language policies that are mostly concerned with “recognition”, “self-respect”, and “honour” of language communities (Kraus 2008, 101). Not all languages are equal, however. Kraus (2008, 100) emphasizes that immigrant languages are generally considered to be a part of immigration – and, more specifically, immigrant integration – policies. As a result, relevant language programs tend to be less concerned with institutional protection of immigrant languages and more with encouraging and facilitating immigrant integration into the mainstream – the mainstream that increasingly privileges English, French, and, to a lesser extent, German as the *de facto* “working” languages of the EU institutions (Kraus 2008, 120).

proposition implying that bilingual immigrants will either have no comparative advantage or will fare worse than comparable dominant language monolinguals.

Esser's proposition obviously contradicts the findings of a uniform bilingual advantage in previous research, and it is this contradiction that calls for further examination. Perhaps the costs of bilingualism are harder to detect empirically than its benefits. Bilingual speakers who have experienced and recognized the costs of bilingualism would be more likely to invest in the host-country language, as proposed by Esser, and give up their other languages accepting that "assimilation is the price of success" (Lippi-Green 2013, 333). In that case, the costs of bilingualism will be expressed in the language shift toward monolingualism, documented by extensive scholarship around the world (Fishman 1966; Gal 1979; Schecter and Bayley 2002; Okita 2002; Burck 2005; Portes and Rumbaut 2014).

Alternatively, the concept of bilingual advantage itself may require reexamination. Due to the overlap between bilingual and dominant language proficiency, the findings of uniform bilingual advantage could be at least partly attributed to the bilinguals' proficiency in the dominant language of their host country rather than to their ethnic language proficiency or bilingualism *per se*. In their 1999 study of bilingualism and academic achievement of first- and second-generation Asian Americans in the United States, Mouw and Xie indeed found no support for bilingual advantage and concluded that the benefits of youths' ethnic language use – and, by extension, of bilingualism – are transitional and "almost entirely contingent on the parents' lack of English-language proficiency" (1999, 250). Although a number of studies – notably Portes and Hao (2002) and Boutakidis et al. (2011) – challenged this conclusion and reaffirmed the importance of ethnic language maintenance and bilingualism, the question about the nature and extent of bilingual benefits merits further consideration.

The present study aims to answer that question. For that purpose, it capitalizes on the social and linguistic context of one country, Spain. With a large proportion of its immigrants speaking Spanish as their native language, Spain permits a closer examination of the potential costs and benefits of immigrants' bilingual proficiency as distinct from their proficiency in the dominant language. More specifically, the study asks: What is the role of bilingualism in immigrant youths' adaptation outcomes in Spain? Do bilingual immigrant youths fare better, as well as, or worse academically than children of immigrants who are monolingual in Spain's official languages? What explains those differences, if any?

For the sake of brevity, we use the conventional hypothesis about a uniform bilingual advantage as the starting point for our analysis. In line with past research, we expect that bilingual children in Spain would benefit from their linguistic skills. We hypothesize that, controlling for national origin and socio-demographic characteristics, children of immigrants proficient in Spain's official languages *and* a foreign language will perform better academically than their counterparts proficient only in Spain's official languages. According to this hypothesis, bilingual speakers should show higher educational ambition, including educational aspirations and expectations, and higher educational attainment, including enrollment in advanced studies and average grades. Furthermore, the effect of bilingualism on educational attainment should be both direct and indirect, through educational ambition.

The next section situates this hypothesis within the present social and linguistic context of Spain.

LANGUAGE AND IMMIGRATION IN SPAIN

The historical transformation of Spain into an immigrant nation has been remarkable and fast. Traditionally a nation of emigrants, Spain sent millions of its citizens first to its colonies in Latin America and then, in the post-World War II period, as immigrant workers to Northern Europe. Following the transition to democracy in the 1970s and the new Spanish Constitution of 1978, the application to and then integration into the European Common Market and the European Union in 1986, Spain experienced notable economic growth, which eventually led not only to the decline of out-migration, but also to new immigration and return of millions of former emigrants (Calavita 2005; Cachon 2009).

According to the National Institute of Statistics of Spain (*Instituto Nacional de Estadística* – INE), Spain’s foreign-born population grew from about 542,000, or 1.3 percent of the total population in 1996, to 5.7 million, or 12.1 percent, in 2012. In the 2011 Spanish Census, immigration accounted for over 60 percent of population growth between 2001 and 2011 (Spain in Figures 2013). The 2007 National Immigrant Survey (*Encuesta Nacional de Inmigrantes* – ENI) showed that over a third of all Spain’s immigrants originated in Latin America (37.2%), followed by Europe (31.6%), Africa (13.1%) and other regions (18%) (Reher and Requena 2009). Close to 45 percent of immigrants reported Spanish as their native language; followed by Indo-European languages (19.4%); non-Spanish languages derived from Latin (18.2%); Afro-Asiatic languages (11.6%); Far Eastern languages (1.4%); African languages (0.8%); and others (3.6%) (Cifras INE 2009).

As Zapata-Barrero (2013) points out, although Spain’s immigration originated in social, economic, and political changes in the 1990s, immigration as a social issue did not come to the fore of political and public debates until the 2000s. The quick pace of change caught Spanish government and society generally unprepared to manage this growing cultural diversity, leading to a more immediate and pragmatic reaction to immigration and its impact. This “practical philosophy of diversity management” was formulated as “questions and answers” to the experiences of the “day-to-day governance of immigration” (Zapata-Barrero 2013, 9). Over time, it crystallized into an active “problem- and conflict-driven policy”, less defined by preconceived theoretical or ideological considerations (Zapata-Barrero 2013, 10). Perhaps as a result of this practical approach, foreign languages – together with skin color and religion – have been singled out as informal markers of difference in Spanish society, implicitly connecting immigrant youths’ origins and future opportunities.

The connection is far from simple, however. On the one hand, recent studies conducted in Spain, and especially in Catalonia, demonstrate that the state’s exclusivist “monolingual and monocultural agenda” is losing its hold (Pujolar 2007, 71). Multilingualism and cosmopolitanism are becoming a more prevalent framework in daily interactions, especially among young people (Woolard and Frekko 2013). In her extensive research of languages and group identity in Catalonia, Woolard observed a clear shift from a highly symbolic and consequential choice to speak Castilian or Catalan in the early 1980s (Woolard 1989) toward

insignificance of language choice for in-group solidarity and identification in the early 2000s. Both cross-sectional and longitudinal data (Woolard 2009 and Woolard 2013, respectively) as well as studies with larger samples (see, for example, Pujolar and González 2013) demonstrate this trend. These findings can be specific to Catalonia and to the Catalan language, yet the processes driving them – increased mobility and linguistic and demographic diversity as a result of globalization (Pujolar and González 2013) as well as personal development and experiences over the life course (Woolard 2013; Pujolar and González 2013) – apply similarly to other languages and to bilingual and multilingual scenarios in Spain and in other nations. Arguably, these processes facilitate bilingualism and set the ground for bilingual advantage.

Nonetheless, the same scholars are cautious in their prognosis. Although there is noticeable change in informal day-to-day interactions, public discourses and policy debates continue to follow the ‘one language–one people–one nation’ ideology, especially in state institutions such as schools (Woolard and Frekko 2013; Martin-Jones 2007). Moreover, attention is increasingly shifting toward the divide between Spaniards (Castilian, Catalans, or other groups) and immigrants from outside of Spain (Pujolar and González 2013). By representing immigrant youths – including Spanish-speaking students from Latin America – as ‘deficient’ and ‘disadvantaged’, teachers and school administrators devalue students’ native languages and dialects and reinforce the legitimacy of ‘pure’ local Spanish, thereby potentially limiting, erasing, or even reversing bilingual advantage of immigrant youths (Martin Rojo 2010; Moyer and Martin Rojo 2007; Martin-Jones 2007).

The ambivalent status of foreign languages and bilingualism in Spain mirrors the ambivalent promise of bilingualism itself described earlier in the paper. Immigrant bilingualism has a potential to either be a valuable resource and a benefit (according to the bilingual advantage hypothesis) or it could signal “otherness” and hence be a cost that bilingual speakers have to overcome (as proposed by Esser). Whether children of immigrants actually pay a price for bilingualism or reap its benefits can be evaluated by contrasting bilinguals’ educational outcomes with matching groups of official- and foreign-language monolinguals, as well as youths with limited proficiency in all their languages. Data from the Longitudinal Study of the Spanish Second Generation (ILSEG in its Spanish acronym) allow us to draw that comparison and to contribute to the current debate on immigrant bilingualism generally and bilingualism among children of immigrants in Spain in particular. These data offer a new perspective on the nature and effects of bilingualism, unattainable in previous research of immigrant linguistic adaptation in classical immigrant nations, such as the United States, Canada, or Australia.

METHODOLOGY

The Longitudinal Study of the Second Generation (ILSEG) is a product of a collaborative effort between university-based research centers in the United States and Spain. It represents the first such study of children of immigrants in Spain. Aiming to fill the gap in research on the second generation, ILSEG purposefully replicated the Children of Immigrants Longitudinal Study (CILS) in the United States. Like CILS, the new study called for interviewing representative samples of second generation youths in their principal areas of

concentration in Spain and following them over time. To this end, the researchers sought the approval and support of educational authorities in Madrid and Barcelona – the two largest immigrant-receiving cities in the country (OPI 2009). Having obtained it, the research team proceeded to draw random samples of secondary schools in each metropolitan area, stratified by school type (public or private) and by geographical location. Complete lists of schools were made available for this purpose by the respective educational authorities (*consejerías*).

The stratified sample design maintained the same sampling fraction by school type and by region within each metropolitan area, thus making the sample self-weighting with respect to the relevant universe (Kish 1967; Firebaugh 2008). Although the sample was not nationally representative, it allowed to examine experiences of the second-generation youths in the two metropolitan areas most heavily affected by the current immigration to Spain.

Within each school, all eligible students were included^{2,3}. Following CILS, “second generation” was defined as children with at least one foreign-born parent, whether born in Spain or brought to the country before the age of twelve. By convention, those born in Spain were defined as the second generation “proper,” while those brought at an early age from abroad were defined as the “1.5 generation” (Rumbaut 2004). Although most immigrant youths in Spain attend public schools, a significant minority were enrolled into state-sponsored, mostly Catholic affiliated, private schools⁴. Geographically, the sample was stratified by region to ensure that all schools in each metropolitan area were included. In total, 180 schools took part in the study: 101 in Madrid and 79 in Barcelona; of these, 111 were public schools and the rest were private.

Basic secondary education in Spain is compulsory and its students are, overwhelmingly, in their early adolescent years. These two features are methodologically convenient. First, they guarantee that a school-drawn sample will be representative of the respective age cohort, as almost all of its members are still at school. Significant school abandonment in later years gradually reduces the overlap between enrolled students and the respective age cohort. Second, by targeting the first three years of basic secondary school (ESO in its Spanish acronym), the researchers were able to reach a population of average age 13–14 that represented the universe of interest. The total baseline sample was 6,725: 3,375 in Madrid and 3,350 in Barcelona.

Approximately one year after completion of these surveys, the project undertook a new study of parents to complement the data obtained from their children. Letters were sent to the home addresses supplied by students with an attached parental questionnaire and then reminders were sent to parents not responding to the original letter. In total, approximately 700 usable questionnaires were obtained, a figure that represented less than half of the target sample for the parental survey. The project team then turned to telephone data supplied by students and spent the entire summer and part of the fall of 2010 calling home numbers in

²In accordance with the Spanish research consent procedures, the research team requested consent from school authorities and then from parents/guardians, when and where school authorities deemed such authorization necessary.

³Given the high level of proficiency in Spanish among children of immigrants in Spain, the survey was conducted in that language.

⁴These are known as “concerted” schools because they are state supported, but privately administrated.

Madrid and Barcelona. In total, interviews were completed with 1,843 parents, representing 28 percent of the original student sample.

Four years after the original 2008–09 survey, the follow-up was launched. Its purpose was to obtain information on a set of adaptation outcomes in the strategic school-to-work transition. Whereas surveys in early adolescence can capture background and psychosocial characteristics and point toward alternative adaptation paths, they do not guarantee actual outcomes. By age 17–19, however, such outcomes have started to crystallize, especially in a country like Spain where many youths quit study after basic secondary education in order to enter the labor market (Aparicio 2006; Gibson and Carrasco 2009). To investigate these different adaptation paths, the follow-up questionnaire covered a range of objective and subjective outcomes in the domains of educational and occupational attainment, family situation, legal status in Spain, marital status, indicators of downward assimilation, self-identity, social relationships, and goals for the future.

The follow-up survey took place sequentially in metropolitan Madrid and then in Barcelona. Neither school visits nor calling home numbers was particularly successful in locating most of the original respondents, as many students had abandoned school to enter the labor market. Prompted to search for alternative paths of retrieval, the research team turned to the Internet – specifically, the social network sites of “Facebook” and “Tuenti” – as usual spaces for the young generation’s networking in Spain these days. This Internet tracking effort significantly increased the number of located respondents and itself became a source of information about the activities, opinions, and plans of a sizable number of these youths.

Through these various means, including school visits, phone calls, and Internet tracking, the ILSEG field team succeeded in retrieving 3,811 cases or 73 percent of the original traceable sample by the end of fieldwork in November 2012 – a level that compares well with the CILS follow-up surveys in the United States, which retrieved 81.5 percent of the original sample in the first follow-up and 68.7 percent in the second. For comparison, national panels in the U.S. routinely secure data from 60 to 70 percent of original respondents.

Sample

The ILSEG sample design serves as a valuable resource for the current study. First, its focus on the communities of Madrid and Barcelona taps into Spain’s complex linguistic profile that includes several official languages – a necessary prerequisite for constructing an adequate measure of bilingualism. Second, the inclusion of youths’ and parental surveys provides a new perspective on the role of significant others in the adaptation experiences and outcomes of the second generation, including their bilingualism. Third, the ILSEG longitudinal design – a key feature – allows us to trace individual and collective change over time and establish clear causal relationships. Although average characteristics of student cohorts and collective changes can be investigated using repeated cross-sectional surveys of student populations, as done most notably with the OECD-sponsored Program for International Student Assessment (PISA), these surveys cannot capture individual change nor create the basis for causal models at that level.

The analytical design for the current study called for the inclusion of all three ILSEG datasets in the analysis: the 2008–2009 baseline survey, the 2010 parental survey, and the 2011–2012 follow-up survey. Accordingly, the working sample for the study was restricted to those respondents who answered all questions included in the analysis at the baseline and the follow-up. As a result, the final sample for the analysis included 2,391 student responses and 930 corresponding parental responses. Descriptive characteristics of this sample, broken down by student characteristics at the baseline and the follow-up, as well as parental characteristics, are available online in Table S1.

Measurement

Language Context and Language Categories—We begin by drawing a linguistic profile of our sample. All respondents in the sample were proficient in Spanish; 77 percent of them felt that their proficiency was high – that is, they could understand, speak, read, and write in Spanish “well” or “very well”; 33 percent were Spanish monolinguals. About half of the respondents (52%) were proficient in Spain’s co-official language, Catalan; 16 percent reported high proficiency and 0.5 percent were Catalan monolinguals. Furthermore, about half of the respondents (53%) were proficient in a foreign language; 15 percent reported high proficiency and close to 1.5 percent were foreign language monolinguals.

Considered in terms of the number of languages – and as depicted in Table S2 – about 18 percent of the respondents reported low proficiency in all of their languages; 35 percent were monolingual in one language (the majority in Spanish); 30 percent were proficient in any two languages (including highly proficient in at least one of them); 13 percent were proficient in three languages (including highly proficient in one or two of them); and, finally, 4 percent were fluently trilingual.

Spain’s multilingual profile (also reflected in the ILSEG sample) that combines Spanish as the official language, several co-official and recognized languages, as well as a variety of foreign languages, is not unusual for Europe and other parts of the world. It differs, however, from the linguistic profile of the United States. To account for this difference, we had to diverge from the bilingualism measure used by the Children of Immigrant Longitudinal Study in the United States that combined knowledge of English and one foreign language. Instead, we constructed a new variable that combined ILSEG data about respondents’ proficiency in Spanish, Catalan, and a foreign language.

More specifically, the newly constructed bilingualism measure utilized data from the respondents’ Spanish, Catalan, and foreign language proficiency indices – each defined as a summated scale of self-reported ability to speak, understand, read, and write the language⁵. Given our interest in bilingualism not only as a cognitive, but also as a psychosocial

⁵Reviewing past research on validity of linguistic self-assessment, Skutnabb-Kangas (1981, 1998) concluded that “[s]elf-assessment seems to be a fairly reliable way of measuring bilingualism” and could be especially favored among sociologists due to the decisive influence of these self-perceptions on individual language choices and language behavior generally (1981, 200). Nonetheless, Skutnabb-Kangas acknowledged the importance of interpreting self-assessments with care: linguistic self-assessments tap into the social and subjective nature of language skills and depend on the social context of language use. Studies indeed show that linguistic self-assessments correlate with context-dependent perceptions of personal language proficiency (Chiswick and Miller 1998) as well as with attitudes toward one’s languages (Hakuta and D’Andrea 1992) and toward one’s bilingualism generally (Fishman and Terry 1969).

phenomenon that could shape immigrant youths' integration into Spanish society, the study called for a bilingualism measure that explicitly distinguished proficiency in Spain's official and co-official languages (Spanish and/or Catalan) from proficiency in a foreign language. Moreover, a substantial overlap between youths' proficiency in Catalan and Spanish – over 95 percent of Catalan speakers in our sample were fluent in Spanish – suggested that a substantive distinction between the effects of the two languages on educational outcomes would be difficult to establish.

The four categories of the bilingualism variable thus included: “Language impaired” (coded 1)⁶, “Foreign language monolingual or dominant” (coded 2), “Official language(s) monolingual or dominant” (coded 3), and “Official language(s) *and* foreign language bilingual or limited bilingual” (coded 4). “Monolingual or dominant” elements of the variable indicated that a respondent had high proficiency in one language and knew one or even two other languages, but his/her proficiency in those languages was low. This is different from “limited bilinguals”, who had high proficiency in one or both official languages and a medium proficiency in a foreign language. To avoid clutter, hereafter the categories are labeled as “Language impaired” (1), “Foreign monolingual” (2), “Official monolingual” (3), and “Bilingual” (4). Their respective characteristics are reported in Table S3 online.

Socio-demographic Characteristics of Language Categories—We now turn to the socio-demographic profiles of the newly defined language categories. We found that gender had no impact on the likelihood of immigrant youths falling into any specific language category. That likelihood was influenced by the youths' national origin, place of birth, city of residence, type of school attended, and family socioeconomic status, as shown in Table 1.

Children of immigrants from Latin America naturally spoke Spanish, with over half of respondents from Chile, Peru, Bolivia, Argentina, Colombia, Ecuador, the Dominican Republic, and Venezuela falling into the “official monolingual” category. In contrast, youths of European or North American background were more likely to be bilingual, with over half of Romanian and Bulgarian-origin youths falling into this category. Respondents of Asian origins were present in all language categories: about one third of Chinese-origin respondents and a quarter of Filipino youths were bilingual, but a comparable proportion were categorized as “language impaired”. Finally, youths of Middle-Eastern or African origin – and, more specifically, Moroccan-origin respondents – were likely to fall into the “bilingual” or “official monolingual” categories.

The disposition toward bilingualism or monolingualism was associated not only with national origins, but also with Spanish nativity. Among youths born in Spain, 46 percent were monolingual in the official languages and 43 percent were bilingual. In contrast, among

⁶Some readers may object our use of the term “language impaired”. It is, however, a common term in education policy and research. The Florida Department of Education web site (fldoe.org), for example, provides the following definition: “Language impairments are disorders of language that interfere with communication, adversely affect performance and/or functioning in the student's typical learning environment, and result in the need for exceptional student education.” Our intention for using this term, therefore, is to reflect the challenges that students may face due to their self-perceived limited proficiency in all of their languages.

foreign-born youths, 50 percent were official monolinguals, 26 percent were bilinguals, and close to 20 percent fell into the “language impaired” category.

Monolingualism was more prevalent in Barcelona, whereas bilingualism was stronger in Madrid. Among Madrid residents, 44 percent were bilinguals, and 37 percent were official monolinguals. In contrast, in Barcelona, only 13 percent were bilinguals, but a striking 62 percent fell into the “official monolingual” category. These results may appear counterintuitive – after all, Barcelona is the capital and the largest city of the autonomous community of Catalonia, a region with two official languages. The reason for these results lies in the definition of immigrant mono- and bilingualism. The case of Barcelona illustrates our definition of immigrant monolingualism, which categorizes youths who speak one or more of Spain’s official and co-official languages but no foreign languages into the “official monolingual” category.

Bilingualism was more prevalent in public schools. Although the proportion of language impaired and foreign monolingual students was similar in both types of school, the proportion of bilingual speakers was higher in public rather than (predominantly Catholic) private schools (38% compared to 19%, respectively); the proportion of official monolinguals followed the reverse pattern. Importantly, this prevalence of bilingual speakers among public school students did not imply their lower socioeconomic status. With family SES measured as a standardized sum of father’s and mother’s education and occupation, the data suggest that bilinguals tend to come from higher-SES families compared to the other language categories⁷.

DESCRIPTIVE ANALYSIS

We now turn to the analysis of educational outcomes to evaluate whether there is a hypothesized bilingual advantage among children of immigrants. Table 2 depicts psychosocial and objective educational outcomes broken down by our four language categories. We begin with psychosocial outcomes, including educational aspirations and expectations, which have been shown to play a significant role in the educational trajectories of children of immigrants (Portes and Rivas 2011).

ILSEG measured youths’ educational aspirations and expectations using questions that could be translated as: “What is the highest level of education that you ideally aspire to attain?” and “What is the highest level of education that you think you can realistically expect to attain?” Response categories for both aspirations and expectations included: 1) Complete compulsory secondary education (ESO in English); 2) Complete baccalaureate or middle-level vocational training; 3) Complete superior-level vocational training or a college certificate; 4) Complete university degree or post-graduate degree. To take into account both aspirations and expectations, we constructed a new variable “educational ambition” – a composite index equal to the average of both items and ranging from 1 to 4. Expectations

⁷The explanation for this result is that Latin American immigrants, by reasons of culture and tradition, tend to be more attracted to private Catholic schools than other groups and also tend to have a lower average family socioeconomic status. Immigrants from Eastern Europe and elsewhere tend to avoid private Catholic schools and, instead, send their children to public schools.

and aspirations were then transformed into dichotomous variables coded 1 for high goals (university or post-graduate degrees), and 0 otherwise.

As hypothesized, bilinguals were more likely than other categories to report high educational aspirations, with 75 percent of them aiming to receive a university or post-graduate degree. They were followed by official and foreign monolinguals (67% and 64%) and language impaired respondents (54%). Educational expectations repeated this pattern, although at a lower level, with 67 percent of bilinguals expecting to complete university or post-graduate degrees, compared to lower levels among the other language categories. The observed differences in aspirations and expectations translated into a significant difference in the newly constructed “educational ambition” variable: bilinguals reported the highest average ambition score (3.01), followed by official monolinguals (2.79), foreign monolinguals (2.70), and language impaired respondents (2.54).

The higher educational ambition of bilingual respondents is likely to be a reflection of loftier educational goals by their parents. Bilinguals’ parents reported the highest aspirations for their children: 86 percent of them aimed at a university or post-graduate degree (in contrast to “less than college” goals), compared with about 80 percent among parents of foreign and official monolinguals, and 74 percent among parents of language impaired youths. Parental realistic expectations for their children followed a similar pattern. Combining the two predictors into a single index of parental ambition, parents of bilinguals reported higher educational ambition score than parents in any other language category. To complete the picture, 87 percent of fluent bilinguals reported that some or most of their friends had university plans – a level comparable to that of the other language categories.

Differences in educational ambition across the language categories can be expected to correspond to diverging objective outcomes, including current school enrollment, level of studies followed, and average grades, jointly representing educational attainment. Overwhelmingly, ILSEG respondents were enrolled in school by the time of the 2012 follow-up survey. School enrollment did not, however, imply enrollment in advanced type of studies – university or post-graduate programs. The data in Table 2 show that bilinguals fared well in the Spanish educational system. At the time of the follow-up survey, bilinguals were most likely to pursue advanced studies (67%), compared to foreign monolinguals (56%), official monolinguals (48%), and language impaired respondents (43%).

Average grades followed a similar pattern: bilinguals received the highest average grades by the time of the follow-up survey (6.55), followed by foreign monolinguals (6.36), official monolinguals (6.22), and language impaired respondents (6.07).⁸ The differences in types of academic enrollment and average grades observed across groups translated into a difference in overall educational attainment: bilinguals reported the highest level, followed by foreign monolinguals, official monolinguals, and language impaired respondents.

Results of this descriptive analysis support our original hypothesis and conform to the finding of a uniform bilingual advantage in previous research. Despite being a possible

⁸Grades in Spain are assigned on a scale from 1 to 10. ILSEG data on average grades are based on self-reports by respondents in the follow-up survey.

marker of cultural differences, bilingualism appears to be associated with higher educational aspirations and expectations, as well as advanced studies enrollment and better grades. The differences cannot be attributed solely to proficiency in Spain's official languages, since bilinguals consistently surpass the levels of the official-language monolinguals. Next, we examine whether these differences hold when other potential determinants of educational outcomes enter the picture.

MULTIVARIATE ANALYSIS

This section capitalizes on the longitudinal design of the ILSEG dataset and examines causal relationship between language skills and educational outcomes. More specifically, the data about language proficiency were collected when respondents were on average 14, whereas educational outcomes were ascertained four years later. Results are presented in four tables describing relationships between bilingual skills and the educational outcomes discussed in the previous section: educational aspirations, educational expectations, current type of studies, and average grades. To evaluate how stable the bilingual advantage is, the analysis introduces a set of possible confounding factors, including age, gender, place of birth, national origins, family socioeconomic status, school type, friends' university plans, and parental ambition. For clarity of interpretation, "European and North American origins" and "bilingual" were defined as reference categories throughout the analyses.

Results reported in Table 3 generally reaffirm previously observed relationships: bilinguals are significantly more likely to report high educational aspirations compared to the other language categories, including monolinguals in Spain's official languages. With a minute exception of Model III, the effect remains strong and significant even after other factors enter the analysis. Thus, as a starting point, we find support for the hypothesized bilingual advantage.

Table 4, however, complicates the picture. Results show that bilinguals are more likely to have high educational expectations compared to the other language categories, but only before parental ambition is introduced into the model. Once parental ambition enters the equation, the difference between bilinguals and official monolinguals becomes non-significant (although it remains significant relative to the remaining categories).

The interpretation of these results requires further clarification. First, our analysis in Model IV of Table 4 pits the effect of bilingualism against the powerful effects of parental ambition *and* a reduced sample size; both contribute to the observed non-significant difference between educational expectations of the two language categories. It is not surprising that the original effect of bilingualism could be in part attributed to parental ambition: as the descriptive analysis above shows, the same parents who foster bilingualism also tend to have higher ambition for their children. Parental ambition and youths' bilingualism, therefore, could be two consecutive steps in a more elaborate sequence of immigrant youths' development. As a result, once parental ambition is accounted for, the net effect of bilingualism diminishes or disappears. This substantive explanation is complemented with a statistical one. Because a reduction in sample size diminishes the statistical power of coefficients, the observed result may also be a consequence of a sharp reduction in sample

size due to the inclusion of parental data. Notably, the direction of the reported coefficient is consistent with the original hypothesis and, with a larger sample, it would be significant⁹.

Second, in the U.S. context, where monolingual speakers of English are often perceived as more assimilated, a similar result could be interpreted as indicating that bilinguals' level of expectations is comparable to those of the most assimilated group. In the context of Spain, however, this interpretation could be misleading. Immigrant youths who are monolingual in Spanish are not necessarily better assimilated – they may simply have origins in a Spanish-speaking nation. Thus, rather than suggesting that bilinguals have expectations comparable to those of the most assimilated language category, results indicate that bilinguals have expectations comparable to those of Spanish/Catalan-speaking monolingual youths.

The next two tables present the relationship between bilingualism and objective educational outcomes. Table 5 depicts the effect of bilingual proficiency on the probability of enrollment in advanced studies. The results add yet another dimension to the emerging picture, and show that once family socioeconomic status, school type, friends' university plans, as well as parental ambition are included into the model, the difference between bilingual and foreign-monolingual youths becomes non-significant (although it remains significant relative to the remaining language categories). The effects of significant others – friends' university plans and, once again, parental ambition – are especially noteworthy in this model.

Finally, Table 6 reports the effect of bilingual proficiency on average grades. The results indicate that when family socioeconomic background is controlled for, the difference between average grades of bilinguals and foreign monolinguals becomes non-significant. When parental ambition enters the picture in Model IV, the difference among all but the “language impaired” category becomes non-significant. The similarity across the three language categories indicates that bilinguals do not have a clear advantage in terms of their grades. It is also possible, however, that results in Model IV are subject to the same caveat noted above: the combined effect of parental ambition and a sharp reduction in sample size.

Throughout the analyses in Tables 3–6, we subjected the effect of bilingualism to the dual challenge of other powerful predictors of educational attainment as well as reduced statistical power in models controlling for parental ambition. Despite these challenges, our results consistently show that bilingual immigrant youths do not suffer a penalty: nowhere in the analysis were bilinguals' outcomes significantly lower than those of the other categories. Nonetheless, our support for the original hypothesis is only partial. Although bilingual youths surpassed others in their educational aspirations, their realistic expectations and objective educational outcomes overlapped with the other language categories, especially when parental ambition was accounted for.

Taken as discrete outcomes, these results paint an inconclusive picture. Viewed as a pattern, however, they redefine bilingual advantage. No other language category outperformed bilinguals, and the bilinguals' scores matched or exceeded those of the best performing language categories for each of the examined outcomes. Bilinguals had the highest

⁹Our estimate is that a hypothetical sample of 2,391 cases would yield a standard error of 0.043 and a z-value of 4.49, statistically significant at $p < 0.001$.

aspirations, felt confident that those aspirations were achievable, and were on the path toward achieving them through advanced studies. In other words, their advantage manifested itself not uniformly across discrete outcomes, but in a distinctly direct trajectory toward higher educational attainment. It is in the context of these findings that we now turn to the final step in our analysis and examine the causal mechanisms of this redefined bilingual advantage.

A SYNTHETIC MODEL FOR THE RELATIONSHIP BETWEEN BILINGUALISM AND EDUCATIONAL ATTAINMENT

The following structural equation model builds on the logic of the Wisconsin model of Status Attainment – a model most relevant to the purpose of this study. The Wisconsin model postulates significant effects of gender, age, parental ambition, and friends' educational plans on youths' educational attainment. Similarly, it emphasizes educational ambition as one of the most powerful predictors of educational and occupational attainment – a pattern supported by a long research tradition dating back to the U.S. studies in the 1960s (Sewell et al. 1969; Sewell and Hauser 1972) and subsequently backed by findings in other countries (Portes et al. 2010). Yet neither the original Wisconsin model nor its successors included bilingual proficiency as a predictor. At least in Spain, it might well be an important addition.

More specifically, our synthetic model accounts for the relationship among ethnic origin, bilingualism, educational ambition, and educational attainment. As noted before, bilingualism in Spain is more prevalent among Eastern European, Asian, and African and Middle Eastern children of immigrants – that is, among youths, who could be perceived as different. We propose that bilingualism neutralizes the possible negative effect of ethnic origins and extends the positive effect of parental ambition through bilinguals' distinct developmental process. As suggested previously, higher parental ambition could foster youths' bilingualism, which, in turn, could enhance youths' own educational ambition and, thereby, lead to higher attainment.

The model's exogenous variables include gender, family origin, family socioeconomic status, and public school enrollment. Due to relatively small age differences among respondents and the relatively unstable effects of age and place of birth observed in the multivariate analyses, age and place of birth are excluded. The primary endogenous predictors are bilingualism, friends' university plans, parental educational ambition (measured at the baseline), and youths' educational ambition (measured at the follow-up). The outcome variable – educational attainment – is a composite index of school enrollment, type of studies, and average grades, all coded as dichotomous.¹⁰

The model in Figure I is fairly parsimonious, employing only 26 out of 40 available degrees of freedom. Accordingly, the Tucker Lewis Index (TLI) is 0.829 and the Steiger's root mean square error of approximation (RMSEA), which takes into account the model's fit as well as

¹⁰The sum is divided by 3 so the final index ranges from 0 (lowest) to 1.

parsimony, is a satisfactory 0.056. This positive diagnostics indicate that the model presents a concise and compelling synthesis of the study's key findings.

More specifically, the results reaffirm that immigrant bilingualism in Spain has ethno-linguistic roots and could be driven by the necessity to assimilate linguistically. Although the Spanish of Latin America may differ from the Spanish of Spain, and might be less useful in the Catalan-centered educational system of Barcelona (Newman et al. 2013), it still remains a helpful tool for linguistic adaptation – a tool that immigrants from other regions may not possess initially and have to acquire. Similarly, the finding of the powerful effect of parental ambition in fostering youths' bilingualism agrees with the results reported earlier. Additional analysis omitted here showed that parental ambition was not directly affected by the immigrants' region of origin, thus pointing to its distinct role in bilingual development. Less expected – based on the results of multivariate analyses – is the strong positive effect of public school enrollment: the prevalence of bilingual students in public schools increases the probability of individual bilingualism, possibly by making it a natural and socially accepted part of daily life.

The effect of family socioeconomic status is less conclusive. On the one hand, youths from higher SES families are more likely to be bilingual, potentially benefiting from their families' financial stability and resources. Their parents are also more likely to set high educational goals, thus fostering youths' bilingualism indirectly. Nonetheless, the synthetic model shows that the direct effect of family socioeconomic status on youth's bilingualism is weaker than the direct effects of region of origin or parental ambition. According to these results, at least in Spain, higher socioeconomic status may provide a favorable environment for bilingual development, but it does not replace the important influence of ethnolinguistic origins and parental ambition.

Finally, the results show that youths' bilingualism has a strong and significant effect on final educational attainment. As hypothesized, the effect is two-fold: bilingualism is associated with higher educational ambition *and* attainment, thus having both indirect and direct influences on final educational attainment. These effects – broadly corresponding to psychosocial and cognitive benefits of bilingualism observed in previous research – remain significant even when other strong influences, including gender¹¹, parental ambition, and friends' university plans¹² are controlled for.

The model provides evidence that bilingualism neutralizes the possible negative effect of ethnic origins and extends the positive effect of high parental ambition on final educational attainment. This process is facilitated by the bilingual environment on public schools and is not fully pre-determined by family socioeconomic status. Ironically, this conclusion also

¹¹As predicted by the Wisconsin Model and throughout our analyses, male respondents were consistently less likely to report high educational ambition or attainment, illuminating the gendered nature of the educational process in Spain. Although these results may indicate that females are simply better students, they as well suggest that male respondents chose a career path different from higher education. When the secondary compulsory education is completed, labor market and income earning may become their new priority, thus reducing educational goals and achievement.

¹²The model shows that higher parental and friends' ambition lead to higher educational goals among respondents. The two effects are independent of each other, although both are affected by family socioeconomic status. Indeed, as shown by previous research, the similarity between adolescents and their friends is "just as likely to be a product of selection as it is an indicator of peer influence" (Dornbusch 1989, 248; also see Portes et al. 2010).

implies that youths of Latin American origin could be at a disadvantage in final educational attainment despite (or because of) the apparent ease of their linguistic adaptation in Spain.

CONCLUSION

We opened our study with these questions: What is the role of bilingualism in immigrant youths' adaptation in Spain? Would bilingual immigrant youths fare better, as well as, or worse academically than those monolingual in Spain's official languages? What explains these differences, if any? We framed our analysis as an investigation of costs and benefits of bilingualism, aiming to evaluate if there was a bilingual advantage across educational outcomes, if it was distinct from the ability to function effectively in the host-country language, and if it was uniform.

We found no evidence of penalties for bilingualism. Bilingual youths consistently performed as well as or better than immigrant youths in the other language categories. Bilingual youths also appeared to follow an adaptation path distinct from those of the official language monolinguals or the other language categories. Their bilingual advantage, however, manifested itself not uniformly across discrete outcomes, but in a direct trajectory toward higher educational attainment. Youth's bilingualism neutralized the possible negative effect of ethnic origins and extended the positive effect of high parental ambition.

This view of bilingual advantage as a wholistic experience that crystallizes over time and across a range of outcomes echoes the previous findings of the nature of bilingualism in general. Fishman and Terry (1969), for example, observed that bilinguals' self-reports of linguistic behavior corresponded to their "overall self-perceptions as a bilingual" – such as verbal fluency across social domains and life experiences – rather than to their "minute by minute sociolinguistic performance" (1969, 648). Although Fishman and Terry focused on defining bilingualism, their conclusions about bilingual behavior as "wholistically perceived and normatively interpreted" (1969, 636) carry over to our conclusions about bilingual advantage as a trajectory rather than a set of discrete outcomes. Similarly, in 1962, Peal and Lambert proposed that the value of their research was in "shifting emphasis from looking for favorable or unfavorable effects of bilingualism on intelligence to an inquiry into the basic nature of these effects" (1962, 21). This insight remains valuable today.

Does that mean, then, that the gifts of bilingualism are worth the costs? Our answer is a cautionary yes. If bilingual advantage is defined as a trajectory rather than a set of discrete outcomes, then our study provides compelling evidence for bilingual advantage in education in Spain. This advantage holds even against the backdrop of the generally ambivalent attitude toward foreign languages and bilingualism in the classroom, as described by Martin Rojo (2010). Given our findings and echoing Martin Rojo's (2010) observations, greater recognition of and engagement with students' native languages as a valuable resource could enhance the learning process and benefit both individual students and the educational system as a whole.

A trickier question is whether and how bilingual advantage in education could be reproduced in the labor market. It is tempting to propose that immigrant bilingualism will be particularly

welcomed by Spanish society, where the low foreign-language endowment of native Spaniards has been recognized as a barrier to their labor and social mobility within the European Union (Minder 2011). Yet, as Isphording (2013) reports, even in Spain, not all foreign languages are rewarded equally, and wage premia extend primarily to foreign languages that are in high demand and low supply, such as English and French – languages that are rather uncommon among children of immigrants and in the ILSEG sample. The nature and extent of bilinguals' labor market advantage may depend on the continued de-ethnization of sociolinguistic environment in Spain and on – highly unlikely (Pujolar and González 2013) – depoliticization of languages. Embedded in local and global economy and politics, the possibility of bilingual advantage in the labor market remains a question for future research.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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Figure 1.

A synthetic model of educational attainment among children of immigrants in Spain.

Table 1

Socio-demographic characteristics of children of immigrants in Spain across language categories, with goodness-of-fit statistics¹.

Characteristics	Language categories				Total (n)
	1 Language impaired	2 Foreign monolingual	3 Official monolingual	4 Bilingual	
Age, Mean	13.8	13.7	13.7	13.9	13.8
Gender:			(n=2,391; F-ratio = 4.48 ^{**})		
Female, %	17.6	4.4	47.8	30.1	100.0 (1,252)
Male, %	18.3	3.7	50.9	27.1	100.0 (1,139)
Origin by region:			(n=2,391; Chi ² = 3.85, n.s.)		
Europe, N. America, %	11.9	8.9	26.4	52.8	100.0 (394)
South & Central America, %	18.5	0.6	61.0	19.9	100.0 (1,560)
Asia, %	25.4	20.0	23.8	30.8	100.0 (185)
Africa, Middle East, %	18.2	5.9	31.7	44.0	100.0 (252)
Place of birth:			(n=2,391; Chi ² = 467.80 ^{***})		
Spain, %	9.5	1.2	46.5	42.8	100.0 (327)
Elsewhere, %	19.3	4.5	49.8	26.4	100.0 (2,064)
Place of residence:			(n=2,391; Chi ² = 49.56 ^{***})		
Barcelona, %	19.6	5.1	62.3	12.9	100.0 (1,174)
Madrid, %	16.3	3.0	36.7	43.9	100.0 (1,217)
School type:			(n=2,391; Chi ² = 288.62 ^{***})		
Public, %	16.5	4.0	41.6	37.9	100.0 (1,270)
Private, %	19.6	4.1	58.0	19.0	100.0 (1,121)
Family SES, Mean ²	-0.11	0.01	-0.001	.17	0.03

Characteristics	Language categories				Total (n)
	1	2	3	4	
	Language impaired	Foreign monolingual	Official monolingual	Bilingual	
(n=2,391; F-ratio = 14.31 ^{***})					

¹ Goodness-of-fit statistics (Chi² and F-ratio) indicate whether there is a statistically significant difference between the expected frequencies and the observed frequencies across language categories.

² Standardized sum of father's and mother's education and occupation.

* p<0.05

** p<0.01

*** p<0.001

Source: Longitudinal Study of the Second Generation in Spain (ILSEG 2008–2012)

Table 2

Educational outcomes of children of immigrants in Spain by language categories, with goodness-of-fit statistics¹.

<i>Characteristics</i>	Language categories				Total
	1 Language impaired	2 Foreign monolingual	3 Official monolingual	4 Bilingual	
Educational Aspirations:					
University or post-graduate degree, %	53.8	63.9	67.1 (n=2,391; Chi ² = 55.66 ^{***})	75.4	67.0
Educational Expectations:					
University or post-graduate degree, %	42.0	48.4	56.4 (n=2,391; Chi ² = 68.86 ^{***})	66.8	56.5
Educational Ambition, Mean ²	2.54	2.70	2.79 (n=2,317; F-ratio = 29.35 ^{***})	3.01	2.80
Parental Educational Aspirations:					
University of post-graduate degree, %	74.4	81.6	79.7 (n=933; Chi ² = 9.89 [*])	86.0	80.8
Parental Educational Expectations:					
University of post-graduate degree, %	56.9	57.9	59.5 (n=933; Chi ² = 17.17 ^{**})	72.7	63.1
Parental Educational Ambition, Mean ³	0.72	0.76	0.74 (n=930; F-ratio = 6.53 ^{***})	0.87	0.78
Friends' university plans:					
Some or most to attend university, %	82.7	79.4	85.4 (n=2,391; Chi ² = 6.80, n.s.)	87.2	84.2
Current type of studies:					
University of post-graduate degree, %	42.9	55.7	47.8 (n=2,391; Chi ² = 84.81 ^{***})	67.1	52.8
Average Grade	6.07	6.36	6.22 (n=2,391; F-ratio = 15.81 ^{***})	6.55	6.30
Educational Attainment, Mean ⁴	0.60	0.70	0.64	0.74	0.66

Characteristics	Language categories				Total
	1 Language impaired	2 Foreign monolingual	3 Official monolingual	4 Bilingual	
(n=2,391; F-ratio = 38.70 ***)					

¹ Goodness-of-fit statistics (Chi² and F-ratio) indicate whether there is a statistically significant difference between the expected frequencies and the observed frequencies across language categories.

² Educational ambition is an index equal to the average of educational aspirations and expectations; ranges from 1(lowest) to 4.

³ Parental educational ambition is an index equal to the average of parental educational aspirations and expectations for their children; ranges from 0 (lowest) to 1.5.

⁴ Educational attainment is a composite index of the dichotomous variables school enrollment, current type of studies, and average grades; ranges from 0 (lowest) to 1.

* p<0.05

** p<0.01

*** p<0.001

Source: Longitudinal Study of the Second Generation in Spain (ILSEG 2008–2012)

Table 3

Determinants of high educational aspirations¹ among children of immigrants in Spain.

<i>Predictors</i>	I.		II.		III.		IV.	
	Coef ²	z	Coef ²	z	Coef ²	z	Coef ²	z
Language impaired	-0.589	-7.37***	-0.588	-7.05***	-0.530	-6.24***	-0.523	-3.76***
Foreign monolingual	-0.330	-2.35*	-0.332	-2.26*	-0.279	-1.87	-0.675	-2.88**
Official monolingual (Bilingual is a reference)	-0.244	-3.78***	-0.252	-3.64***	-0.213	-3.00**	-0.271	-2.30*
Age			-0.072	-3.16**	-0.058	-2.44*	-0.090	-2.23*
Gender (male)			-0.501	-9.21***	-0.503	-9.15***	-0.487	-5.34***
Place of birth (Spain)			0.135	1.51	0.071	0.78	-0.114	-0.74
Origin by region:								
Latin America			-0.017	-0.21	0.024	0.28	-0.080	-0.55
Asia			-0.061	-0.50	-0.047	-0.38	-0.019	-0.09
Africa and Middle East (Europe and N. America is a reference)			-0.200	-1.87	-0.056	-0.50	-0.138	-0.78
Family SES ³					0.244	5.66***	0.084	1.16
School type (public) ⁴					0.009	0.15	-0.070	-0.72
Friends' university plans ⁵					0.215	2.82**	0.127	1.01
Parental educ. ambition ⁶							0.552	5.32***
R ² = 0.02			R ² = 0.05		R ² = 0.07		R ² = 0.10	
N=2,391			N=2,391		N=2,391		N=930	

¹University graduate and/or post-graduate degree.

²Probit regression coefficients.

³Standardized sum of father's and mother's education and occupation.

⁴Coded "1" for public schools and "0" for private schools.

⁵Coded "1" for "some or most friends have college plans" and "0" for "none".

⁶Parental educational ambition is an index equal to the average of parental educational aspirations and expectations for their children; ranges from 0 (lowest) to 1.5.

Source: Longitudinal Study of the Second Generation in Spain (ILSEG 2008–2012)

100

p<0.001

100

p<0.001

50
**
p<0.01

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Table 4

Determinants of high educational expectations¹ among children of immigrants in Spain.

Predictors	I.		II.		III.		IV.	
	Coef ²	z	Coef ²	z	Coef ²	z	Coef ²	z
Language impaired	-0.636	-8.10 ***	-0.613	-7.52 ***	-0.549	-6.62 ***	-0.364	-2.71 **
Foreign monolingual	-0.472	-3.46 **	-0.457	-3.20 **	-0.406	-2.75 **	-0.681	-2.89 **
Official monolingual (Bilingual is a reference)	-0.272	-4.42 ***	-0.267	-4.04 ***	-0.223	-3.29 **	-0.193	-1.75
Age			-0.073	-3.26 **	-0.059	-2.53 *	-0.084	-2.15 *
Gender (male)			-0.445	-8.44 ***	-0.448	-8.41 ***	-0.394	-4.50 ***
Place of birth (Spain)			0.252	2.92 **	0.188	2.14 *	0.054	0.36
Origin by region:								
Latin America			-0.022	-0.26	0.021	0.25	-0.124	-0.90
Asia			-0.069	-0.58	-0.054	-0.45	0.033	0.15
Africa and Middle East (Europe and N. America is a reference)			-0.147	-1.41	0.007	0.06	-0.083	-0.48
Family SES ³					0.254	6.33 ***	0.154	2.29 *
School type (public) ⁴					0.024	0.43	-0.001	-0.02
Friends' university plans ⁵					0.232	3.11 **	0.137	1.11
Parental educ. ambition ⁶							0.623	6.17 ***
R ² = 0.02			R ² = 0.05		R ² = 0.07		R ² = 0.10	
N=2,391			N=2,391		N=2,391		N=930	

¹ University graduate and/or post-graduate degree.

² Probit regression coefficients.

³ Standardized sum of father's and mother's education and occupation.

⁴ Coded "1" for public schools and "0" for private schools.

⁵ Coded "1" for "some or most friends have college plans" and "0" for "none".

⁶ Parental educational ambition is an index equal to the average of parental educational aspirations and expectations for their children; ranges from 0 (lowest) to 1.5.

Source: Longitudinal Study of the Second Generation in Spain (ILSEG 2008–2012)

100
p<0.001

100
p>d
**

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p>d
*

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Table 5

Determinants of current enrollment in advanced studies¹ among children of immigrants in Spain.

Predictors	I.		II.		III.		IV.	
	Coef ²	z	Coef ²	z	Coef ²	z	Coef ²	z
Language impaired	-0.621	-7.90 ***	-0.594	-7.19 ***	-0.514	-6.10 ***	-0.457	-3.36 **
Foreign monolingual	-0.299	-2.18 *	-0.266	-1.83	-0.192	-1.31	-0.319	-1.26
Official monolingual (Bilingual is a reference)	-0.496	-8.05 ***	-0.438	-6.57 ***	-0.365	-5.37 ***	-0.398	-3.59 ***
Age			0.236	9.72 ***	0.239	9.42 ***	0.282	6.56 ***
Gender (male)			-0.331	-6.22 ***	-0.329	-6.13 ***	-0.296	-3.35 **
Place of birth (Spain)			0.147	1.73	0.079	0.92	-0.009	-0.06
Origin by region:								
Latin America			-0.166	-2.00 *	-0.131	-1.56	-0.033	-0.24
Asia			-0.149	-1.27	-0.128	-1.09	0.123	0.60
Africa and Middle East (Europe and N. America is a reference)			-0.464	-4.36 ***	-0.326	-2.96 **	-0.259	-1.48
Family SES ³					0.175	4.62 ***	0.066	1.01
School type (public) ⁴					0.194	3.47 **	0.133	1.45
Friends' university plans ⁵					0.269	3.47 **	0.286	2.24 *
Parental educ. ambition ⁶							0.651	6.33 ***
<hr/>								
	R ² = 0.03		R ² = 0.08		R ² = 0.09		R ² = 0.13	
	N=2,391		N=2,391		N=2,391		N=930	

¹ University graduate and/or post-graduate degree.

² Probit regression coefficients.

³ Standardized sum of father's and mother's education and occupation.

⁴ Coded "1" for public schools and "0" for private schools.

⁵ Coded "1" for "some or most friends have college plans" and "0" for "none".

⁶ Parental educational ambition is an index equal to the average of parental educational aspirations and expectations for their children; ranges from 0 (lowest) to 1.5.

Source: Longitudinal Study of the Second Generation in Spain (ILSEG 2008–2012)

100

p<0.001

100

p<0.001

50
**
p<0.01

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Table 6

Determinants of average grades¹ among children of immigrants in Spain.

<i>Predictors</i>	I.		II.		III.		IV.	
	Coef ²	t	Coef ²	t	Coef ²	t	Coef ²	t
Language impaired	-0.074	-5.61***	-0.062	-4.75***	-0.053	-4.10***	-0.053	-2.40*
Foreign monolingual	-0.036	-1.31	-0.063	-2.14*	-0.055	-1.88	-0.098	-1.63
Official monolingual (<i>Bilingual is a reference</i>)	-0.055	-5.12***	-0.038	-3.42***	-0.032	-2.87**	-0.033	-1.83
Age			-0.011	-3.09**	-0.009	-2.56*	-0.013	-2.24*
Gender (male)			-0.051	-5.35***	-0.050	-5.35***	-0.053	-3.40**
Place of birth (Spain)			0.012	0.87	0.005	0.34	0.006	0.22
Origin by region:								
Latin America			-0.054	-3.70***	-0.049	-3.36**	-0.028	-0.94
Asia			0.021	1.12	0.024	1.25	0.060	1.65
Africa and Middle East (Europe and N. America is a reference)			-0.035	-1.87	-0.017	-0.87	0.045	1.22
Family SES ³					0.028	4.48***	0.025	2.42*
School type (public) ⁴					0.002	0.23	0.011	0.67
Friends' university plans ⁵					0.029	1.90	0.033	1.06
Parental educ. ambition ⁶							0.009	0.54
<hr/>								
	R ² = 0.01		R ² = 0.04		R ² = 0.06		R ² = 0.06	
	N=2,391		N=2,391		N=2,391		N=930	

¹ Average grades were logged to correct for a skewed distribution of the raw variable, which ranged from 0.7 to 10, with the mean of 6.3 and a standard deviation of 1.2.

² OLS regression coefficients.

³ Standardized sum of father's and mother's education and occupation.

⁴ Coded "1" for public schools and "0" for private schools.

⁵ Coded "1" for "some or most friends have college plans" and "0" for "none".

⁶ Parental educational ambition is an index equal to the average of parental educational aspirations and expectations for their children; ranges from 0 (lowest) to 1.5.

Source: Longitudinal Study of the Second Generation in Spain (ILSEG 2008–2012)

100
p<0.001

100
p<0.001

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p<0.001

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