

Universitat de Lleida

Language attitudes in a multilingual and multicultural context. The case of autochthonous and immigrant students in Catalonia

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Doctoral Dissertation

**LANGUAGE ATTITUDES IN A
MULTILINGUAL AND MULTICULTURAL
CONTEXT.**

**THE CASE OF AUTOCHTHONOUS AND
IMMIGRANT STUDENTS IN CATALONIA**

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JUSTIFICATION

Language attitudes represent a valuable construct in most language related research, being a key factor in language learning, interpersonal and intergroup dynamics, defining and expressing social identity, and language policies implementation. The pervasive importance of language attitudes has been reflected by the wide spread interest shown by researchers from various fields and the rich theoretical and empirical work conducted in this area.

Language attitudes are of special interest in areas where more languages are in contact. Such is the case of Catalonia, one of Spain's bilingual autonomous communities, where Catalan and Spanish have official status¹. To ensure that children become competent in both languages, an immersion model of education was implemented. Additionally, students also study foreign languages, among which English stands out due to its international role.

The Catalan educational system has been challenged by the large wave of immigration of the last decade, which brought an increase of 85.48% of the number of immigrant students enrolled in educational institutions across Catalonia (MECD, 2013a). Consequently, students of immigrant origin form a significant part of the population of learning age, as they account for 13.55% of all students. In order to respond adequately to their needs and help them achieve a good command of the languages spoken in Catalonia and integrate in the host society, specific educational and language measures are needed.

Lewis (1981) highlighted the relevance of attitudes in policy planning and implementation:

Any policy for language, especially in the system of education, has to take account of the attitude of those likely to be affected. In the long run, no policy will succeed which does not do one of three things: conform to the expressed attitudes of those

¹ In the Aran Valley county Aranese, a Gascon dialect of the Occitan language, also has official status alongside Catalan and Spanish.

involved; persuade those who express negative attitudes about the rightness of the policy; or seek to remove the causes of the disagreement. In any case knowledge about attitudes is fundamental to the formulation of a policy as well as to success in its implementation (Lewis, 1981: 262).

Thus, we come full circle and we reassert the undeniable importance of language attitudes held by immigrant students living in a multilingual context like Catalonia.

Therefore, the issue investigated is located at the intersection of three main fields: attitudes, immigration, and multilingual education (see figure 1). Theoretical foundations, methodological practices, and interpretation insights from all these fields, as well as the particularities of the Catalan context provide the bases, framework, and scaffolds of this work.

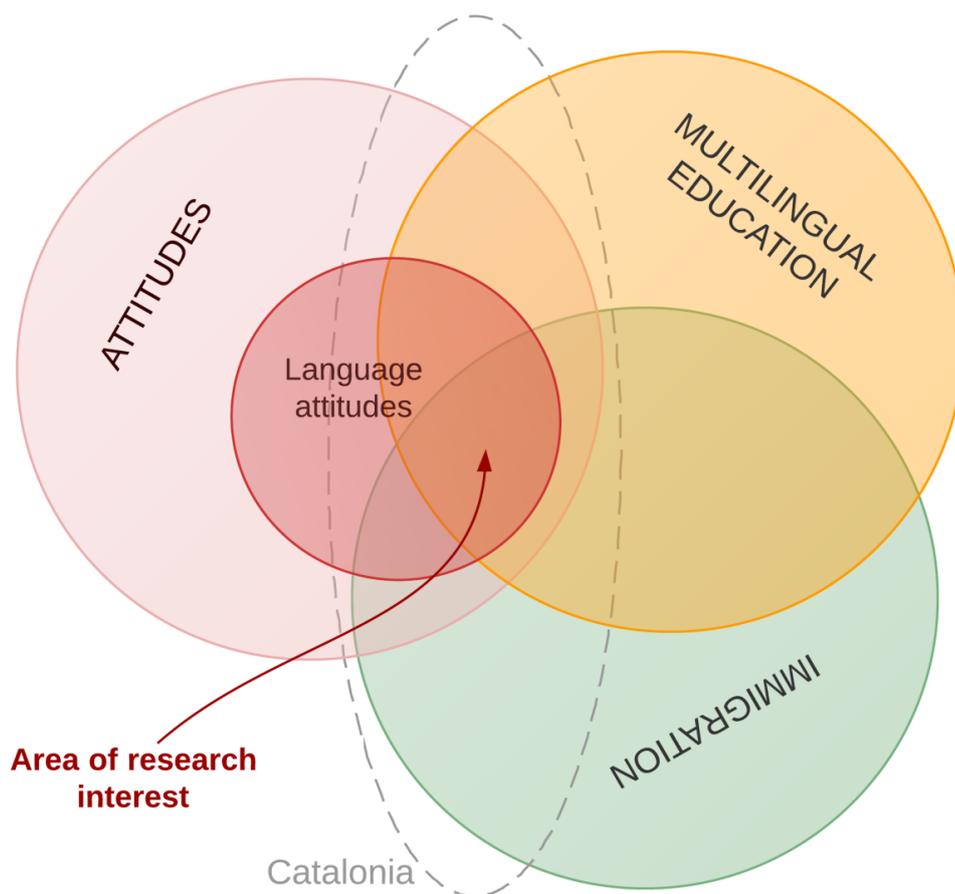


Figure 1. Area of research interest in relation with the main research fields

Starting from the premise there are essential differences between types of language attitudes depending on their objects, we suggest that the language attitudes research has generally followed four main paradigms, studies being focused on language evaluation (Sharp, Thomas, Price, Francis, & Davies, 1973; Baker, 1992), speaker evaluation (Lambert, Hodgson, Gardner, & Fillenbaum, 1960), language learning paradigm (Gardner, 1985), or other language related behaviors (MacIntyre, Dörnyei, Clément, & Noels, 1998). The present work subscribes to the language evaluation paradigm, as it investigated attitudes toward language in general.

The work is focused on the main factors that determine attitudes toward language and their change, in order to know how to foster positive attitudes and encourage favorable attitudinal change, which will contribute to the language acquisition and the social integration of students of immigrant origin.

The target group was represented by secondary education students, enrolled in the 2nd and 4th grades. The attitudes of young people are especially relevant since they “will likely determine the future of the language” (Chambers, 1995: 147). Moreover, the two-year levels were chosen because around 13-14 years of age there seems to be “a major structural shift in attitudes” (Baker, 1992: 135). Furthermore, the students in the 4th grade are at the end of the educational cycle.

With this final aim, in the next chapters we first describe the theoretical bases of the work, presenting the human migratory movements and their interplay with multilingualism and multilingual education (Chapter 1). Following, general attitude theory is introduced and theoretical and empirical literature regarding language attitudes is reviewed (Chapter 2).

The second part of the work is dedicated to two empirical studies. The first study examines the factors that influence attitudes toward language, being focused on identifying the main determinants. The second study analyzes attitude change using a longitudinal design, also aiming to identify the main factors that determine an improvement in attitudes toward language on a two-year period.

We begin the second part by establishing the objectives and hypotheses of the two studies, followed by a description of the methodology used to collect and analyse the data. The results of each study are organized in three sections. The first section contains

descriptive data regarding the attitudes toward languages and the attitude changes, respectively. The second one is focused on the individual effect of each of the variables investigated, while the third section presents a series of explanatory models that consider simultaneous all variables of interest, attempting to determine the most important factors in attitude formation and change.

FIRST PART:

THEORETICAL FRAMEWORK

1. HUMAN MIGRATORY MOVEMENTS AND MULTILINGUALISM

At the foundation of this chapter stands the complex interaction between migration and language, as migratory processes lead to increasing contact between different languages and their speakers. In the following chapters, we look at the evolution of migration and multilingualism in the last decades at three levels: worldwide, in Spain, and in Catalonia.

1.1. WORLDWIDE MIGRATORY MOVEMENTS AND MULTILINGUALISM

1.1.1. International migration

The phenomenon of migration has been extensively researched and documented. This chapter aims to present some theoretical and empirical data about migration that might help to place the present research project in context, as well as to understand the social framework behind its objectives. Therefore, we schematically outline some basic notions about the initiation, perpetuation, and consequences of international migration and we provide data that resumes the migration trends of the 21st century.

1.1.1.1. Theoretical approximation of migration

Migration has been inextricably interwoven into the rich fabric of human history, being a cardinal constituent of, among others, spread of culture and knowledge, colonialism, nation formation, and, ultimately, the development of the contemporary society.

Migration can happen under a variety of reasons and under many forms. Acknowledging the distinction between domestic and international movements, we focus on international migration. The United Nations, define an international migrant as “any person who changes his or her country of usual residence” (United Nations, 1998: 17). Several categories are encompassed under this term: foreigners admitted for education or training, foreigners admitted for employment, migrants for family reunification, migrants having the right to free establishment or movement, migrants for settlement, that have been granted the permission to stay for an unlimited period without being limited by the exercise of an economic activity (i.e., employment-based, family-based, ancestry-based, entrepreneurs and investors, foreign retirees), foreigners admitted for humanitarian reasons (i.e., refugees, asylum-seekers, foreigners granted temporary protected status, other), foreigners whose status is regularized (United Nations, 1998), situation that led Vertovec (2007) to underline the notion of ‘super-diversity’.

Migratory movements differed considerably across historical periods and geographical regions, reflecting the social, economical, political, demographical, and technological particularities of each spatial - temporal context. Seeing that a review of the historical migrations would be an endeavour too massive and beyond the purpose of the present work, we resolve to present concisely the distinctive characteristics of the current international migratory movement. As follows, today’s migration is marked by considerable economical, developmental, cultural, and demographic disparities between sending and receiving countries and/or areas. On the one hand, sending countries are the ones less developed, generally characterized by scarce capital and investments, leading to a limited demand of labour, coupled with large reserves of labour. On the other hand, receiving countries are those developed and more intensive in capital. Destination countries nowadays are less intensive in land than in the past, when immigrants set out for countries with vast free territories. Furthermore, contemporary international migration faces a contradiction between the ongoing demand for immigrant labour and the

perception of immigrants as an unwanted problem, amplified by the high rates of autochthonous unemployment (Massey, Arango, Hugo, Kouaouci, & Pellegrino, 1998).

Various theories explaining the emergence of migration have been proposed. One of the first theories, *neoclassical economics* viewed migration as the result of individual decisions made in the pursuit of income maximization. Within this theory, there were two models: a macroeconomic one and a microeconomic model. According to the macro model, individuals chose to migrate due to differences in wage rates between countries, whereas in the micro model the decision is based on the existent differences in expected earnings, which are the product of earnings and employment rates (Borjas, 1989). Challenging this perspective, *the new economics of migration theory* replaced the individual as the decision-making unit with the household or family unit, which aim to minimize risks (Keely, 2000). At the macro-level, *dual or segmented labour market theory* explained migratory movements as a response to the demand in the receiving countries for both highly skilled and lower skilled workers. (Keely, 2000; Massey, Arango, Hugo, Kouaouci, Pellegrino, & Taylor, 1993). Furthermore, *world systems theory* (Wallerstein, 1974) described migration as a natural consequence of the social, economic, and political changes inherent to the capitalist market penetration into developing countries or peripheral regions, or, in other words, as a result of the economical globalization (Massey, 2003; Massey et al., 1993).

After starting as a result of the previously mentioned reasons, international migration continues sustained by new conditions and causes. According to the *network or social capital theory*, migration costs and risks are reduced by the presence of family, friends and acquaintances in a destination country. Thus, the support provided by the migrant networks facilitates the migration process and increases the international flow (Massey, 1999). Additionally, as *institutional theory* states, for profit and humanitarian organizations emerge to sustain and promote the migratory movement. This way, migration becomes more independent of the initial causes. Finally, the *theory of cumulative causation* shows how each act of migration affects income distribution, land distribution, human capital distribution, agricultural organization, culture, and the social meaning of work, and all these changes of the social context lead to more migration (Keely, 2000; Massey, 1993).

Migration systems theory builds on the previous theories and aims to link all of them in a general perspective. Accordingly, it proposes that stable migration systems develop between countries or groups of countries. A migration system includes a core receiving region and a set of sending countries, characterized by large flows of migrants, exchanges of capital and goods (Jennisen, 2007; Massey, 1993).

These different explanations are neither exhaustive, nor mutually exclusive. Therefore, the causal processes of international migration probably work at multiple levels of analysis concurrently. Massey (2003) exemplifies how the different theories can serve to explain the evolution of migration in a specific region, which can transform from a sending country into a receiving one:

During the initial phases of emigration from any sending country, the effects of market expansion, market failure, social networks, and cumulative causation dominate in explaining the flows, but as the level of out-migration reaches high levels and the costs and risks of international movement drop, movement is increasingly determined by international wage differentials (neoclassical economics) and labour demand (segmented labour market theory). As economic growth in sending regions occurs, international wage gaps gradually diminish and well-functioning markets for capital, credit, insurance, and futures come into existence, progressively lowering the incentives for emigration. If these trends continue, the country ultimately becomes integrated into the international economy as a developed, capitalist society, whereupon it undergoes a migration transition: net out-migration progressively ceases and the nation itself becomes a net importer of labour (Massey, 2003: 16).

As Keely (2000) notes, these theories do not clearly explain forced migration determined by persecution of war dangers, nor do they take into account the political factors working on facilitating or restricting migration. Advance on the latter is made by Massey's (1999) analysis of the role of state in the migration processes, following which he delineates some future trends of international movement. Specifically, the author expects migration to continue and to expand throughout the world. As an answer to the growing migration, main receiving countries tend to amplify the severity of their restrictive immigration policies, especially addressing immigrants from poorer regions. Nonetheless, the

efficiency of these restrictive policies is uncertain, considering that “migration patterns often resist policies intended to mould them according to plan” (Gold & Nawyn, 2013: 1).

1.1.1.2. International migration in numbers

In 2010, the estimated number of international migrants worldwide was 214 million, an increase of 58 million since 1990 and of 35 million since 2000. As a result, migrants represent 3.1% of the total population (Appave & Laczko, 2011; United Nations, 2008, 2011).

With an estimated number of international migrants of 70 million, in 2010, Europe hosts the largest number of international migrants, being followed by Asia with 61 million and Northern America, where 50 million migrants lived.

At country level, it can be observed that a little more than half of the global migrant stock resides in ten countries, as it can be seen in table 1.

On the first place, there is the United States of America that hosts 20% of the total number of international migrants, followed by the Russian Federation and Germany, both hosting more than ten million immigrants. Saudi Arabia, Canada, France, United Kingdom, Spain, India, and Ukraine follow on the list, as each one houses between five and seven million immigrants.

The growth in migrant stock in the last decade was concentrated in nine countries, which accounted for 67% of the overall increase. The United States of America registered the highest increase of almost 8 million, corresponding to 23% of the total growth. On the second place, Spain received 13% of the total population that migrated in the 2000 – 2010 decade. Italy, Saudi Arabia, United Kingdom, Canada, Syrian Arab Republic, Jordan, and the United Arab Emirates each have gained more than one million migrants (see table 2).

Furthermore, looking at the net migration it can be noticed that more developed regions, such as Northern America and Europe have been gaining population due to positive net migration, while Asia and Latin America and the Caribbean have been losing population due to negative net migration.

Table 1. The ten countries with the highest number of international migrants in 2010

Rank	Country	International migrants		
		Number of migrants (thousands)	Percentage of country's population	Percentage of world's migrants
1.	United States of America	42 813	13.5	20.0
2.	Russian Federation	12 270	8.7	5.7
3.	Germany	10 758	13.1	5.0
4.	Saudi Arabia	7 289	27.8	3.4
5.	Canada	7 202	21.3	3.4
6.	France	6 685	10.7	3.1
7.	United Kingdom	6 452	10.4	3.0
8.	Spain	6 378	14.1	3.0
9.	India	5 436	0.4	2.5
10.	Ukraine	5 258	11.6	2.5

Source: United Nations, Department of Economic and Social Affairs, Population Division (2011). International migration report 2009: A global assessment.

Accordingly, during the first decade of this century, the United States, Spain, and Italy were the top net immigration countries, while the top net emigration countries were Mexico, China, and Pakistan (United Nations, 2011).

Looking at the situation of the European Union, on 1 January 2012, there were 50.2 million foreign-born residents, corresponding to almost 10% of the total population. Among these 17.2 million were from other EU member states, whereas 33 million were born in a non-EU country (European Commission, 2013a).

Looking at the situation of the European Union, on 1 January 2012, there were 50.2 million foreign-born residents, corresponding to almost 10% of the total population. Among these 17.2 million were from other EU member states, whereas 33 million were born in a non-EU country (European Commission, 2013a).

Table 2. Countries with the largest increase in international migrant stock in the world, 2000 – 2010

Rank	Country	Increase in migrant stock (2000 – 2010)	
		Number of migrants (thousands)	Percentage of the increase in total migrant stock
1.	United States of America	7 999	23
2.	Spain	4 625	13
3.	Italy	2 342	7
4.	Saudi Arabia	2 152	6
5.	United Kingdom	1 662	5
6.	Canada	1 647	5
7.	Syrian Arab Republic	1 282	4
8.	Jordan	1 045	3
9.	United Arab Emirates	1 007	3

Source: United Nations, Department of Economic and Social Affairs, Population Division (2011). International migration report 2009: A global assessment.

During 2011, an estimated 3.2 million people immigrated to one of the EU-27 member states, among which 1.7 million came from a country outside the EU and 1.3 million changed their residence from another member state (European Commission, 2013b).

In absolute terms, the top receiving countries were Germany, hosting 9.9 million foreign-born persons, the United Kingdom (7.6 million), France (7.4 million), Spain (6.5 million), and Italy (5.4 million). On the other side, Liechtenstein, Iceland, and Bulgaria were the countries with less immigration, housing fewer than ten thousands immigrants.

Figure 2 presents the distribution of the foreign-born population across the 27 member states of the EU (European Commission, 2013c).

The top origin countries of immigrants residing in an EU state were Romania and Turkey, with more than 2.3 million emigrants each. Morocco, with 1.9 million of its citizens living in EU, is the third sending country, followed by Poland, with 1.6 million emigrants living within the EU territory (European Commission, 2013a).

Nonetheless, after the migratory boom of the first decade of this century, presently, in some parts of the world the migratory cycle entered a stagnant phase or even of reduction

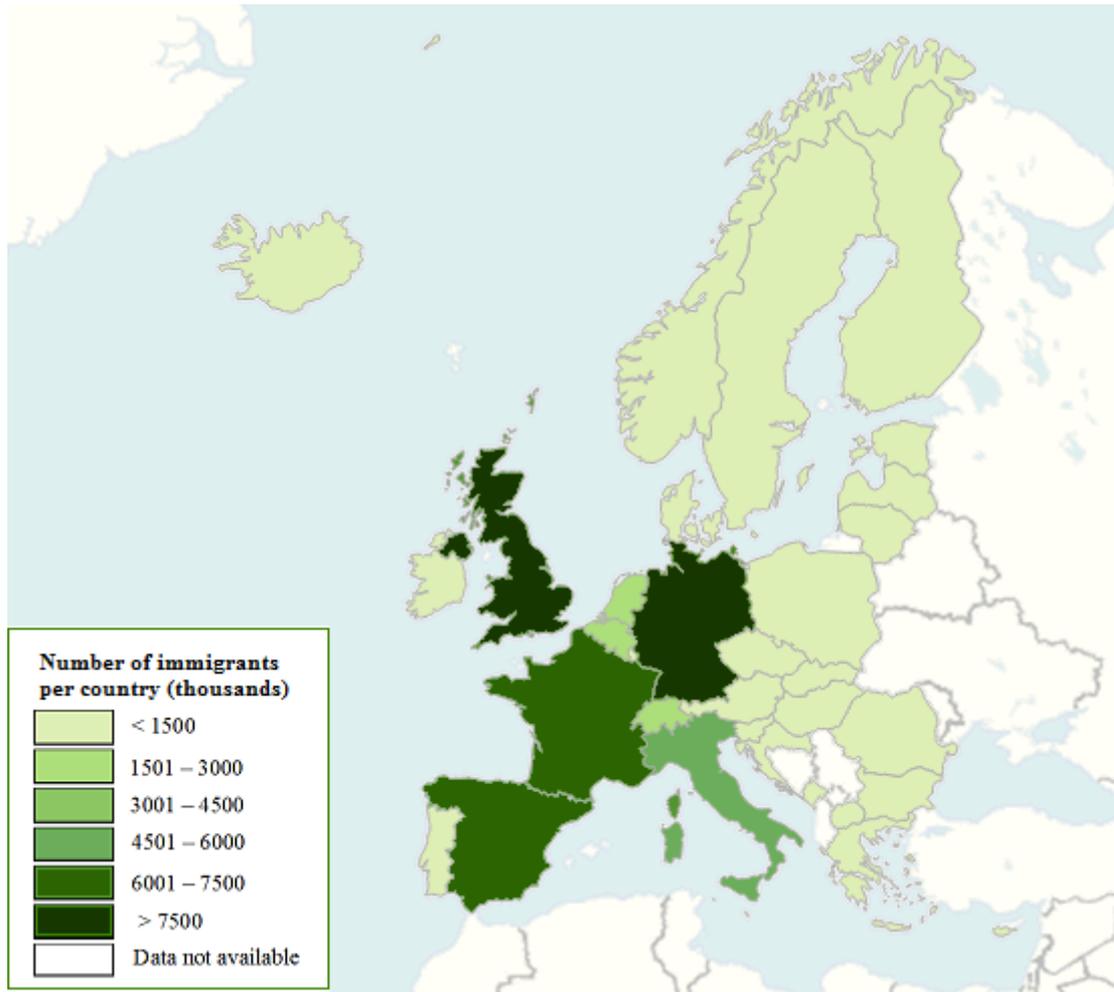


Figure 2. Distribution of the foreign-born population in EU-27 in 2012. Own elaboration based on Eurostat data (2013)

1.1.1.3. Consequences of international immigration

Immigration assuredly has profound effects on both the receiving and sending societies, as well as on the migrants themselves (Massey & Taylor, 2004). These international movements “facilitate the transmission of ideologies and identities, political and cultural practices, and economic resources” (Gold & Nawyn, 2013: 2), and, as a result, strongly affect almost every aspect of life. For starters, there are demographic effects, as international movement influences the size, structure, and distribution of the population. There are also political effects, reflected in the various laws and policies implemented by each country, as well as global declarations of human rights and international conventions. Furthermore, diet changes, access to health services and safer or more dangerous work translate into health consequences of migration.

Economically, researchers mainly analyzed the effects of immigration on wages, unemployment, and income distribution. However, there is disagreement regarding immigration’s impact on the labour market. There is a widespread belief that immigration determines a reduction of work opportunities for the autochthonous and negatively affects native wages, which has received some confirmation from Borjas (1994, 2003) in the United States of America. However, other researchers have not found sufficient evidence of a general negative effect of immigration on native unemployment or wages in US (Altonji & Card, 1991; Card, 2005), Germany (Brücker and Jahn, 2008), or UK (Dustmann, Fabbri & Preston, 2005). Concerning Spain, Carrasco, Jimeno, and Ortega (2008) used alternative data sets to estimate the labour market effects of immigrants and did not find support of a negative impact on either employment rates or wages of autochthonous workers, confirming thus the results obtained a decade earlier by Serrano, Duce, and José (1997). Fernandés and Ortega (2008) found that, in the decade 1996-2006, the Spanish labour market managed to assimilate the immigrants, whose unemployment rates decreased in five years to lower levels than those of autochthonous residents. However, there was a tendency for immigrants to have more temporary jobs for which they were overqualified.

Also of great importance, there are the substantial cultural transformations that inevitably occur while both autochthonous and immigrants adapt to each other. Religious, ethnic, familial, and gender practices, as well as identities, habits, language use are all altered because of the migration processes (Gold & Nawyn, 2013).

Furthermore, migration has linguistic consequences, fostering multilingualism. Thus, an increasing number of languages come into contact and traditional monolingual institutions are challenged by the population movements (Extra & Vallen, 1997; Extra & Yağmur, 2004). Additionally, on the long-term, new varieties of languages can emerge, through processes of pidginisation and creolisation (Kerswill, 2006). Language shift and death could appear due to the inability of language minority groups to foster identification and positive attitudes and to maintain the home as a secure domain of language use (Romaine, 2003). Meanwhile, migrants have to learn the language of the host society. Many of them also bring their families, raising their children in a multicultural and multilinguistic environment. Generally, children's bilingual development is not carefully planned by parents, but it represents an outcome of the sociocultural context (Hamers & Blanc, 2000).

Transformations are also required at educational level, as the educational system is required to adapt in order to receive successfully immigrant children and to answer efficiently to their particular needs.

Although not all of the outcomes are positive, international migration has and continues to provide resources for the receiving societies, economic and political support for the sending countries, sources of cultural enrichment, solutions for population ageing and decline, and as a result, it inevitably shaped the contemporary world.

In the following chapter, we look more closely at multilingualism, one of the most relevant consequences of migration, and the educational changes and measures entailed by the migratory movements and the spread of multilingualism.

1.1.2. Multilingualism and multilingual education

Following, after setting the stage by defining bilingualism and multilingualism, we review how, in the context of an undeniable cultural and linguistic diverse world, the image of bilingualism and multilingualism started to become more positive and how this is reflected at educational level. Therefore, we introduce various educational programs implemented to accommodate bilingual and multilingual children.

1.1.2.1. Defining bilingualism and multilingualism

Before going further into this chapter, it is useful to establish what bilingualism and multilingualism mean. First, one can speak about bilingualism and multilingualism at societal level or at individual level (Baker, 2006; Fishman, 1980; Siguán & Mackey, 1986).

At societal level, bilingualism describes the co-existence of two languages in a society (Baker, 2006). In this sense, Hamers and Blanc (2000) described three possible social patterns of bilingualism:

(a) *territorial bilingualism*, where each unilingual group resides in its own separate physical space (e.g., Belgium, Switzerland, Canada, etc.);

(b) *use of a language as lingua franca* between groups with different first languages (e.g., Tok Pisin in Papua New Guinea, Swahili in Eastern and Central Africa, French or English in other African countries);

(c) *diglossia*, where two languages are used in a complementary way. In other words, diglossia represents “an enduring societal arrangement, such that two languages each have their secure, phenomenologically legitimate and widely implemented functions” (Fishman, 1980: 3).

According to the original description of Ferguson (1959), the concept of diglossia differentiated between a high variety reserved for formal functions and a low variety confined to informal functions. Fishman (1972) specified the social domains corresponding to each language depending on its status. Thus, the high variety is used

mostly in the public area, in the employment and education domains, whereas the low variety is reserved for the private domains, such as family, neighbourhood and religion.

However, Platt (1977) argued that this dichotomy does not capture the situation of many multilingual societies and proposed the concept of *polyglossia*, where the languages used in a territory can be arranged on a continuum from high to low status and are used in particular domains or subdomains (Giles & Hewstone, 1982).

At individual level, a bilingual person can be defined as “the person that, besides his first language, has a similar competence in another language and is able to use one or the other in any circumstances with similar efficiency” (Siguán & Mackey, 1986: 17). A similar definition was provided by Skutnabb-Kangas (1981):

A speaker is bilingual who is able to function in two (or more) languages, either in monolingual or bilingual communities, in accordance with the sociocultural demands made on an individual's communicative and cognitive competence by these communities and by the individual herself, at the same level as native speakers, and who is able positively to identify with both (or all) language groups (and cultures) or parts of them (p. 90).

As Siguán admits, this is a strict definition, describing an ideal bilingualism, which is rather rare (Dewaele, Wei, & Housen, 2003). Moreover, these definitions include an implicit monolingual norm assumption. Several authors (Grosjean, 1985; Herdina & Jessner, 2002; Macnamara, 1969) disagreed with the native standard, explaining that “the bilingual is not the sum of two complete or incomplete monolinguals; s/he rather has a specific linguistic configuration characterized by the constant interaction and co-existence of the two languages involved” (Herdina & Jessner, 2002: 59).

Consequently, we prefer the wider definitions proposed by Appel and Muysken (1996), Grosjean (2010) and Weinrich (1953: 5) who described a bilingual person as someone who uses two languages alternatively in their everyday lives, allowing individuals with different linguistic abilities to be equally considered bilinguals.

For brevity and literature continuity, some authors prefer to use the term ‘bilingualism’ to encompass also ‘multilingualism’ (Baker, 2006; García, 2011). However, the phenomena related to bilingualism and those related to multilingualism differ in complexity

(Voorwinde, 1981: 25). Despite the lack of empirical evidence to prove it, multilingualism seems to be more intricate than bilingualism, as Cenoz and Genesee (1998) explained:

Multilingual acquisition and multilingualism [...] implicate all the factors and processes associated with second language acquisition and bilingualism as well as unique and potentially more complex factors and effects associated with the interactions that are possible among the multiple languages being learned and in the processes of learning them. Like bilingual acquisition and bilingualism, multilingual acquisition and multiculturalism are complex because they can occur simultaneously or successively, formally (through instruction) and naturally (outside school), and in childhood, adolescence, or adulthood. The socio-cultural status of each language along with the languages' respective roles and functions in society can contribute additional complexities (p. 16).

Taking into consideration the different levels of complexity, as well as the possible differences among the processes involved in bilingualism and multilingualism, we consider preferable to not amalgamate these terms under the same label.

1.1.2.2. Evolution of the social image of bilingualism and multilingualism

Language diversity is generally defended based on the unequivocal importance languages have. First, languages express identity and mark regional or community membership. Second, languages represent repositories of history, since they comprise all the ideas, beliefs and values of the past (Baker, 2006), being thus “a living museum, a monument to every culture it has been a vehicle to” (Nettle & Romaine, 2000: 14). Third, as Fishman (1991) showed, languages are inseparably connected to their cultures. On the one hand, languages index and unfold cultures cognitively and emotionally through their particular vocabularies and figures of speech. On the other hand, besides being one of its symbols, languages also represents one of the sources of creation of culture. Forth, languages amplify human knowledge by containing specific views of the world, “ways of thinking and being, acting and doing” (Baker, 2006: 47). In this sense, “an informal Whorfianism tells us that every language interprets and presents the world in a somewhat different way that the unique wellspring of group consciousness, traditions, beliefs, and values are intimately related to a given variety” (Edwards, 2006: 29). Last, languages have an inherent interestingness that resides in their different sounds, vocabularies, and grammars (Crystal, 2000).

Various attempts were made to count and index all the languages in the world. The identification of the exact number proved impossible in the absence of a precise definition of a ‘language’. Criteria such as structural similarity, mutual intelligibility or social function did not prove effective in differentiating among languages, varieties and dialects (Skutnabb-Kangas, 1981, 2000). However, several estimations have been made. Moseley and Asher’s (1994) Atlas of the World’s Languages indexed 5900 languages, whereas the UNESCO Atlas of the World’s Languages in Danger of Disappearing (Wurm, 2001) estimated between 5000 and 6000 languages, and the 16th edition of Ethnologue (2009) counted 6,909 living languages.

Therefore, an approximated number of 6000 languages are spoken in around 200 independent countries (Publications Office of the European Union, 2012). The distribution of languages across the world is highly uneven, with over 70 percent of all languages located in only 20 states. Among these, nine countries - Australia, Brazil, Cameroon, India, Indonesia, Mexico, Nigeria, Papua New Guinea and Zaire - stand out

with more than 200 languages spoken within their territories. More than 100 languages are spoken in other 13 countries, among which are Philippines, Russia, USA, Ethiopia and Burma (Krauss, 1992).

Nonetheless, the ratio of number of languages to number of states indicates that most states count with more than one language, meaning that:

Bilingualism is present in practically every country of the world. In fact, it is difficult to find a society that is genuinely monolingual. Not only is bilingualism worldwide, it is a phenomenon that has existed since the beginning of language in human history (Grosjean, 1982: 1).

Moreover, the number of multilingual individuals surpasses the number of monolinguals (Baker, 2006; Tucker, 1998). As it results, monolingualism is rather “the exception, not the rule” (Hall, 2005: 223); although for a long time it was considered the norm, especially in Europe, where nation states used to “define themselves not in the least by the one (standard) language which was chosen to be the symbolic expression of their unity” (Auer & Wei, 2007: 1). In other words, being part of a nation meant speaking its language.

In the process of constructing the European nations, according to the ‘one nation-one language’ philosophy, many languages were excluded from administration, politics, education, and cultural life (Extra, 2007; Siguán, 2005). Similarly, colonial strategies implemented in North and South America, as well as in African countries, involved the replacement of local languages with the language of the respective colonial power. Multilingual settings were considered dangerous obstacles to achieving national unity and social cohesiveness. Usually labelled as regional or minority languages, these include languages that are:

i. traditionally used within a given territory of a State by nationals of that State who form a group numerically smaller than the rest of the State's population; and

ii. different from the official language(s) of that State;

it does not include either dialects of the official language(s) of the State or the languages of migrants (European Charter for Regional or Minority Languages, article 1, 1992).

The final decades of the 20th century marked a change of the European consideration of regional and minority languages, which progressed from exclusion toward acceptance, protection, and promotion of these languages.

However, the European treatment of regional languages varies significantly from one country to another. This heterogeneity is easily noticed in the linguistic policies that the European states implemented. Siguán (2005) identified five main types of policies that deal with language diversity.

(a) *Monolingualism* is specific to states such as Portugal and France that take into account only the state language identified as the national language.

(b) Other countries implement policies of *protection or tolerance of linguistic minorities*. These states, among which the United Kingdom and Holland are found, acknowledge the existence of regional language and adopt measures to protect them, but do not grant them any political rights.

(c) *Linguistic autonomy* is found in states that granted politic autonomy to territories where languages other than the national one are spoken. The respective territories can decide on their own linguistic policy and grant co-official status to the regional languages. Spain is the most representative example of a linguistic autonomic state.

(d) Further, *linguistic federalism* is typical of states with a federal structure, where each region has its languages and its linguistic policies. As in the case of Belgium and Switzerland, all languages are considered national languages.

(e) Finally, some countries, such as Luxembourg, grant statewide official status to two or more languages, implementing thus a form of *institutional bilingualism*.

Among the series of measures designed to maintain Europe's cultural heritage and traditions, the European Charter for Regional or Minority Languages (1992) specifically addressed the issue of regional minority languages. Although admirable for the progress entailed for regional languages, the charter explicitly excluded the languages spoken by immigrant groups. Many scholars argued that these languages represent another type of minority languages - called 'immigrant minority languages' –that have equal claims and should receive similar treatment (de Varennes, 2001; Edwards, 2004, 2007; Extra, 2007; Gardner-Chloros, 2007). Furthermore, Extra (2007) emphasized that immigrant and

regional minority languages share equivalent issues related to their status in social life and education, vitality, maintenance, shift, and their relation to ethnicity and identity.

Nonetheless, it was not until the beginning of this decade that the treatment of the languages spoken by the immigrant groups began to change, as the Civil Society Platform to Promote Multilingualism adopted the Policy Recommendations for the Promotion of Multilingualism in the European Union in 2011, recognizing their importance:

All languages that are in regular use by a community, whether territorial or Diaspora, are important and should be included in language policy; not just the official working languages of the European Union. This includes among others less-widely used languages, languages of immigrant communities, minority languages. This will help guarantee Europe's cultural diversity as well as the basic human rights of all citizens (European Commission, 2011: 6).

The treatment of immigrant languages also varies greatly from one country to another. Edwards (1994) identified three types of linguistic integration of the immigrant population:

(a) *the assimilationist model* that aims toward monolingualism, attempting to construct a homogenous society by encouraging immigrants to adopt the language and the culture of the host society.

(b) *the linguistic difference model*, according to which the linguistic communities are separated and possibly have parallel institutions.

(c) *the multicultural model* that sustains a shared participation of the different linguistic groups. This model has two varieties. The regional type is based on the concept of consociational democracy that seeks non-discrimination, equal treatment and maintenance and promotion of the identity of linguistic minorities. It is usually achieved through territorial subdivisions and multilateral agreements of political representation. The second variety, the sociocultural type has a broader scope and is based on the protection and promotion of the linguistic identity of minorities, enabling and promoting the creation of parallel institutions in their languages (schools, media, civic associations, etc.), and the guarantee of an equal status in the public sphere. It also promotes multilingualism in education and the media in order to ensure effective communication in the public sphere.

To resume, so far we have seen how, after initially rejecting them, Europe started to embrace minority languages. Additionally, this trajectory toward greater acceptance and promotion of language diversity includes not only minority languages, but also foreign languages. In this sense, the European Commission advocates multilingualism, promoting favorable attitudes toward languages and multilingualism and encouraging EU citizens to become competent in their mother tongue and at least two other community languages.

While our attention focused on Europe, acceptance of language diversity is not a European phenomenon, but a global one. The charters and conventions adopted in the last two decades (e.g., Universal Declaration on Linguistic Rights, 1996; Universal Declaration of Cultural Diversity, 2002; Promoting language learning and linguistic diversity. An action plan 2004—06, 2003) denote that a new positive perspective on language diversity began to develop and expand worldwide.

Obviously, the expansion of language diversity encompasses the advancement of multilingualism, as well as positive changes of its perception. The numerous studies that invalidated many incorrect beliefs about the negative consequences of multilingualism at individual level also contributed to the aforementioned evolution. In this sense, Edwards (2003) pointed:

Older ideas that bilingualism meant a splitting of finite cognitive potential or, worse, a diminution of intellectual capacities, have long since been retired by research, to be replaced by the view that bilingualism does not mean loss; indeed, some have argued that increases in linguistic repertoire correlate with heightened sensitivity, enhanced cultural awareness, perhaps even greater cognitive flexibility and all-round nous (Edwards, 2003: 28).

Although some misconceptions regarding multilingualism still exist, as well as “a deep-seated and widespread fear” of it (Baetens Beardsmore, 2003: 10), in the wake of increased possibilities of becoming multilingual, a new image of multilingualism as a resource and a necessity is gradually taking shape. It seems that people started to recognize that “in a multilingual world it is obviously more efficient and rational to be multilingual than not” (Fishman, 1978: 47).

Additionally, international communications, businesses, travel, migration and a planetary economy are leading to the creation of a global village and the augmenting of bilingual population (Baker, 2006; 2007, Heller, 2000; House, 2003).

English has quickly spread, holding some kind of special status in over seventy states and being the most frequently learnt foreign language (Crystal, 2003). For instance, in the European Union, besides being the first language of 13 percent of the population, English is also the most spoken foreign language. Even more, in 19 European countries English was reported as being the second known language after the mother tongue (Eurobarometer, 2012). Thus, it is of no surprise that English gained the status of international lingua franca (Crystal, 2003; House, 2003, 2008; Lasagabaster, 2003, 2005). The importance of English is reflected in the numerous language attitude studies published. Highly favorable attitudes toward English were found in a variety of contexts across the world, such as Belgium (Dewaele, 2005), Hungary (Csizér & Lukács, 2010; Dörnyei & Csizér, 2002; Kormos et al., 2008), Hong Kong (Lai, 2011), Malaysia (Ting, 2003), and South Africa (Hilton, 2010).

The global expansion of English sparked a series of controversies regarding the threats it represents. Due to its ascendancy in international communication, business, technology and research, English was accused of undermining the learning of other languages and of posing a threat to linguistic and cultural diversity (Henry & Apelgren, 2008; Phillipson, 2001; Phillipson & Skutnabb-Kangas, 1999; Skutnabb-Kangas, 2000). The process of language globalization was referred to as ‘Englishism’, ‘Anglocentricity’, and even more, as ‘language genocide’ (Skutnabb-Kangas, 2001).

On the opposite side, there are authors defending the role of English as ‘lingua franca’. House (2008) argues that English represents a “useful tool for interlingual and intercultural communication” (p.79) and its use will not lead to the elimination of multilingualism. On the contrary, “the very spread of English can motivate speakers of other languages to insist on their own local language for identification, for binding them emotionally to their own cultural and historical tradition” (House, 2003: 561).

Following its globalization and wide spread use, English lost its connection with a specific community and culture (Skutnabb-Kangas, 2000) and gained instead an association with the global culture (Csizér & Kormos, 2008).

In conclusion, there have been worldwide and European movements toward greater protection and promotion of minority languages. Additionally, theoretical and empirical evidence of the positive consequences of multilingualism has been accumulating. Thus, the numerous advantages of bilingualism and multilingualism have started to be acknowledged. As a result, social and individual multilingualism are being increasingly promoted instead of monolingualism, previously considered the best option for achieving national unity and good education results. All this is reflected by the language attitudes people hold, which are becoming increasingly more positive and which, in turn, foster the spread and development of multilingualism. Nonetheless, there is still considerably more work to be done and further improvements are required (Baker, 2006, 2007; Baetens Beardsmore, 2003; Extra, 2007; Skutnabb-Kangas, 1981).

All these changes in the perception and treatment of multilingualism have repercussions at educational level, as multilingual education programs are implemented to help children maintain their minority languages, learn the languages of the host society or learn foreign languages.

Consequently, following we present the role played by bilingualism and multilingualism in education and the various types of bilingual and multilingual education developed and implemented.

1.1.2.3. Multilingual education

The diverse linguistic settings, cultural and social characteristics and language policies are reflected mainly at education level. Various bilingual and multilingual education programs were implemented all over the world.

By bilingual education, many scholars and professionals understood any education that involved bilingual children (Baker, 2006; Skutnabb-Kangas, 1981, 1995). Nonetheless, the true nature of bilingual education resides in using more than one language to educate (Baker, 2006). Similarly, Siguán and Mackey define bilingual education as “an education system where two languages are used as medium of instruction, of which usually, although not always, one is the first language of the students” (1986: 62). A more detailed description is offered by García (2011) who understands by bilingual education:

any instance in which children’s and teacher’s communicative practices in school normally include the use of multiple multilingual practices that maximize learning efficacy and communication; and that, in so doing, foster and develop tolerance towards linguistic differences, as well as appreciation of languages and bilingual proficiency (García, 2011: 5).

Summarizing, for an education program to qualify as bilingual it has to use the two languages as a medium of instruction (García, 2011; Hugué, 2003; Hugué & Madariaga, 2005).

Analogous to bilingual education, multilingual education refers to those “educational programs in which more than two languages are taught and academic instruction are presented through more than two languages” (Nunan & Lam, 1998: 117).

Bilingual education was analyzed intensively and extendedly and numerous typologies of models and programs² of education for bilingual children were proposed. The classifications usually captured the sociolinguistic realities through variables such as types of children, language(s) of the classroom, language(s) of the home and of the community, status of the language(s), linguistic and educational goals and ideological

² Hornberger (1991) pointed out the distinction between models and programs. Following Trueba (1979), models are discerned as a function of their linguistic, cultural and societal objectives, while programs are described in terms of children’s and teachers’ characteristics and program structure. The education models are larger, higher level categories, implemented through various types of programs.

orientations, social and linguistic outcomes (Baker, 2006; Freeman, 2007; García, 2011; Hornberger, 1991; Hugué & Madariaga, 2005).

Following an extensive analysis of the distribution of languages in a four dimensional environment (home-school-area-nation), Mackey (1970) identified 90 varieties of bilingual schooling. Another classification was proposed by Skutnabb-Kangas (1981, 1995) who described four main categories: segregation, submersion, maintenance, and immersion. Fishman's (1976) focused on three models of bilingual education that respect the aforementioned requirements of using the two languages as mediums of instruction: the transitional or compensatory models, the maintenance models, and the enrichment models, whereas Baker (2006) described ten types of programs for bilingual children depending on the typical type of children, the language of the classroom, the societal and educational objectives and the aims in language outcome, which he organized in three categories describing 'monolingual', 'weak', and 'strong' forms of education for bilinguals. The typologies of Fishman (1976), Skutnabb-Kangas (1981), and Baker (2006) are presented in table 3.

Accordingly, a general agreement regarding the classification of educational programs for bilingual children has not been achieved yet, as there are several differences between the classifications proposed. One of the first aspects to be noticed is that Baker's (2006) classification includes more programs than the other two. This is due in part to the fact that Fishman only described bilingual education models. Another interesting difference concerns the classification of transitional education programs, which were catalogued as a separate category by Fishman, included among the weak forms by Baker, and considered a type of submersion education by Skutnabb-Kangas (1981).

Lambert (1974) distinguished between *additive* and *subtractive* bilingualism based on its outcomes. Specifically, additive bilingualism does not determine any negative effect on the L1, while subtractive bilingualism is detrimental to the L1 (Hugué, Vila, & Llorca, 2000).

Table 3. Educational models and programs for bilingual children

Educational models and programs			Characteristics (based on Baker, 2006)			
Baker (2006)	Skutnabb-Kangas (1984)	Fishman (1976)	Type of children	Language of the classroom	Language outcome	
Strong forms	Immersion	Immersion	Enrichment	Language majority	Bilingual with emphasis on minority language	Bilingualism
	Mainstream bilingual	-	Enrichment	Language majority	Two majority languages	
	Two way/ Dual language	-	Enrichment	Mixed	Minority and majority languages	
	Maintenance/ Heritage language	Maintenance	Maintenance/ Language shelter	Language minority	Bilingual with emphasis on minority language	
Weak forms	Mainstream with foreign language teaching	-	-	Language majority	Majority language with FL lessons	Limited bilingualism
	Separatist	-	-	Language minority	Minority language (out of choice)	
	Transitional	Submersion	Transitional	Language minority	Moves from minority to majority language	Relative monolingualism
Monolingual forms	Submersion (Structured immersion)	Submersion	-	Language minority	Majority language	Monolingualism
	Submersion with withdrawal classes	Submersion	-	Language minority	Majority language with 'pull-out' lessons	
	Segregationist	Segregation	-	Language minority	Minority language (forced, no choice)	

Schooling in a second language can have additive or subtractive effects depending on three main factors: the social status of the students' first language, the pedagogical methods used, and the motivation and attitudes toward the language of instruction (Artigal, 1989). As it follows, on one side, the development of the children's L1 will not suffer if the respective language is a majority one and is present in the daily context, outside school. On the other side, if the L1 is a minority language and the children feel that their language and culture are not valued, the acquisition of the L2 might hinder the development of the L1. Moreover, to help bilingual development it is necessary to use adequately pedagogical methods and techniques that guarantee a meaningful learning. Positive attitudes toward both languages are also extremely important for the success of an additive bilingual education.

After seeing some of the most important and known typologies of educational programs for bilingual children, we focus the main programs that comply with bilingual education requirements and add to this list some examples of trilingual education programs.

1.1.2.3.1. Bilingual education models and programs

As mentioned previously, among the models and programs described so far, only those that use two languages as medium of instruction represent bilingual education. Since the classification proposed by Fishman's (1976) focused only on these models, we use the labels he proposed to describe into more detail the main models of bilingual education.

1.1.2.3.1.1. The transitional or compensatory models

The transitional or compensatory models address language minority children, who have to be transitioned to the majority language as soon as possible. These students are seen as having a 'deficit' in the majority language (Huguet & Madariaga, 2005). Moreover, their first language is considered a problem that has to be surmounted, an impediment of their functioning in the society, leading accordingly to the 'language as problem' orientation (Freeman, 2007). The objective of transitional bilingual education is language shift (Hornberger, 1991). The programs comprised in these models generally start teaching in the L1 and gradually introduce the L2 until it replaces the L1 and mainstream education can be followed. Consequently, monolingualism is promoted. At social level, the

transitional models aim toward social incorporation and assimilation (Baker, 2006; Hornberger, 1991). They have been frequently implemented in the United States.

1.1.2.3.1.2. Maintenance or heritage language models

Maintenance or heritage language models are designed to maintain and develop children's minority language alongside the majority language, fostering bilingualism. Among the main goals are "strengthened cultural identity and the affirmation of ethnic groups' civil rights" (Hornberger, 1991: 222). Both minority and majority languages are used in the classroom, although the time allocated to each varies among programs. Generally, at least half of the curriculum is dedicated to the minority language. The reasoning in this case is based on the assumption that since the majority language enjoys a wide presence in the everyday life, in shops, public institutions and media, the focus has to be placed on the minority language at school in order to achieve bilingualism. Furthermore, most of the students have the minority language as L1, although some L2 speakers will also join the programs.

Participation in these programs is usually optional (Baker, 2006). Maintenance programs were implemented in Wales, Sweden, Scotland, and Spain.

1.1.2.3.1.3. Enrichment models

The enrichment models target the whole society, language majority and language minority speakers alike, pursuing that all students become competent in the languages of the territory (Huguet & Madariaga, 2005). The principal aims consist of language development, cultural pluralism and social autonomy of cultural groups (Hornberger, 1991). Enrichment models of bilingual education encompass (a) immersion programs, directed to language majority speakers; (b) two-way or dual language bilingual education programs, which are designed for balanced numbers of language majority and language minority speakers, and (c) bilingual education in majority languages.

(a) Immersion programs have their origins in the Canadian experiment conducted in the 1960s in Saint Lambert school located in Montreal (Lambert & Tucker, 1972). The students that participated were from English speaking families living in the French region

of Canada and, as a result of being taught completely in French from the beginning of their education, became highly competent in both languages, their results being equal or superior to the results of English monolinguals.

As Siguán and Mackey (1986) underlined, the success of the Saint Lambert experiment was in part due to the active support given by parents, who voluntarily participated. Moreover, the socio-cultural level of the participating parents was also a relevant factor, seeing that the parents were preoccupied with their children education and were able to provide them adequate linguistic models. Additionally, the fact that both languages were of high status also contributed to the success of the experiment.

Due to its positive results, immersion had been intensively studied to discover the ingredients required for the development of additive bilingualism. Accordingly, Swain and Johnson (1997) identified a number of core features of immersion programs:

1. The medium of instruction is the second language;
2. The curriculum of the immersion program is the same as the local L1 curriculum;
3. The development of the first language is supported by school;
4. The objective is additive bilingualism;
5. Exposure to the second language is largely confined to the classroom;
6. All students start with the same limited level of L2 proficiency;
7. Teaching staff is bilingual.

Furthermore, the success of an immersion programs depends largely on the language attitudes held by parents and children, as well as the attitudes of the respective society and the linguistic ideologies supported by the educational institutions and the policy makers.

Immersion programs differ among them in terms of the age at which the program starts and of the amount of time spent in immersion. The second language may be introduced in preschool – early immersion, during primary education, around nine years old – delayed or middle immersion, or at secondary level – late immersion. Early immersion includes two varieties: total immersion, starting with 100% of the instruction in the L2 and reducing it first by 20% in the second or third grade and later to 50% at the end of primary education, and partial immersion, which generally consists in an equal

distribution of the two languages that serve as medium of instruction (Arnau, 1992; Baker, 2006; Huguet & Madariaga, 2005).

Immersion bilingual education spread throughout the world. Programs were successfully implemented in Australia, the Basque Country, Catalonia, Finland, South Africa, and Wales.

(b) *Two-way or dual language bilingual education programs* attempt to have a balanced distribution of majority and minority language children in order to avoid the dominance of one of the languages that could lead to psychological imbalances and segregation and, thus, endanger the aim of bilingualism. Since a numerical balance is often difficult to accomplish, it is recommended to tilt towards minority language students and compensate thus the language imbalance of the society.

Baker (2006) extracts from literature a series of practices that have to be implemented to guarantee the success of dual language programs. It is necessary to grant equal status to the two languages of the school. The two languages may be used as medium of instruction for the same subjects as long as temporal and curricular boundaries are well established. The idea is to separate and compartmentalize the languages by using only one in each instructional period. Half semestrial, weekly or daily alternation can be used to distribute time (e.g. history can be taught in Spanish on Mondays and in English on Tuesdays). In addition, teaching staff, school landscape (corridor displays, posters, notice boards, etc.), as well as internal and external communication should be bilingual.

(c) *Bilingual education in majority languages programs* are usually implemented in multilingual societies or in contexts where the introduction of an international language is pursued. In this way, students learn the regional majority language and a second international language, as in the case of Brunei, where students learn Malay and English, and of Nigeria, where English and one of the national languages are taught in schools (Baker, 2006).

1.1.2.3.2. Trilingual education models and programs

Besides the bilingual models and programs described, in some regions multilingual education programs have been implemented. Further, we present several trilingual education models and programs that can be divided in two types: education programs where the three languages taught are languages of the region, with some type of official status, and education programs that include an international foreign language, such as English, besides the official languages of the territory.

1.1.2.3.2.1. Trilingual education models and programs based on regional languages

In some regions, where three or more languages are spoken, trilingual education models were implemented to help children develop spoken and written communicative competences in all the languages of the territory. Examples of such models can be found in the Grand Duchy of Luxembourg and in Aran Valley.

(a) A trilingual education model can be found in the *Grand Duchy of Luxembourg*, where almost all the inhabitants speak Luxembourgish (Letzeburgesch), German, and French.

Education is commenced in children's home language, Luxembourgish, which represents the sole medium of instruction in preschool and the first years of primary education. German is introduced as a subject in the first year of primary education and it begins to be used as medium of instruction, progressively replacing Luxembourgish, so that by the sixth grade German is the medium of instruction for most classes. French is introduced as a subject in the second semester of the second grade of primary education. Secondary education marks the switch from German to French, which gradually becomes the main language of instruction (Baetens Beardsmore & Lebrun, 1991; Lebrun & Baetens Beardsmore, 1993; Hoffmann, 1998).

Consequently, this education system "operates on the principle of introducing the child to schooling by means of the home L1, rapid transition to a genetically related L2, German, and a gradual switch to a genetically unrelated L3, French" (Beardsmore and Lebrun, 1991: 110). As a result, it succeeds in achieving trilingualism by combining features of transitional, maintenance and enrichment programs of bilingual education (Hoffman, 1998; Lebrun & Beardsmore, 1993).

(b) *Aran Valley*, a northwestern county of Catalonia, with three official languages: Spanish, Catalan, and Aranese – a Gascon dialect of the Occitan language-, also adopted a trilingual education model.

Children start learning in Aranese, which is the only language of instruction during the first years. Starting the third grade of elementary education, Spanish and Catalan are introduced. Each of the three languages is taught as a subject for two hours per week. The instruction of the other subjects is proportionally divided among Aranese, Catalan, and Spanish (Huguet, 2003; Lapresta & Huguet, 2006; Suïls, 2001).

The shift from a monolingual to a trilingual education was possible due mainly to the efforts of the community, especially of the teachers who translated, elaborated and adapted the didactic materials. Support was also received from several institutions, among which the Government of Catalonia, University of Lleida, and University of Toulouse (Lapresta, Huguet & Suïls, 2004).

1.2.3.2.1. Trilingual education models and programs that introduce a foreign language

The increasing importance of English as international lingua franca prompted the development of several projects of trilingual education that aim to introduce English as a medium of instruction in addition to the vehicular languages already used to teach in the respective state or region.

One such project, called ‘Early Multilingualism’ was developed in the Basque Country starting in 1991. The centers included in this project introduce classes of English from the second year of kindergarten (Cenoz, 2011). More recently, some schools have been using Euskera, Spanish and English as languages of instruction from the first year of kindergarten. Meanwhile, in secondary education, English has begun to be used as medium of instruction for several subjects (e.g., science, history of religion, natural science, computer science). The time allocated to English and its distribution differs from one program to another (Cenoz & Etxague, 2011).

A similar movement started in Catalonia, where the promotion of multilingualism translated into the Plan of Action for the Promotion of Third Languages (Pla d’Impuls a

les Terceres Llengües). The main application scheme is the Experimental Plan for Foreign Languages (Pla Experimental de Llengües Estrangeres –PELE), started in 2005. Correspondingly, several schools started to implement trilingual education programs, where English is introduced as a medium of instruction in the last cycle of primary education (Pérez-Vidal & Juan-Garau, 2011).

Other programs of multilingual education including English as a foreign language can be found in Finland, the Netherlands, Luxembourg, Italy, and Austria (Beetsma, 2001).

The trilingual education models and programs previously presented represent only a sample of the numerous and various multilingual education programs implemented across the world.

The next section describes the situation of Spain, a multilingual state with a rich cultural and linguistic diversity that has become one of the main immigrant receiving states of Europe.

1.2. SPAIN

The recent migratory flows to Spain have increased the number of languages spoken within the territory, adding the already rich linguistic landscape. Consequently, the educational and linguistics policies had to be adapted to the new settings. Further, we present briefly the migratory movements of the last decade and the characteristics of the education systems implemented in the bilingual autonomous communities.

1.2.1. Spain –multilingual state

Spain's multilingual character survived the process of politic and linguistic unification, being nowadays reflected in the country's language policy of linguistic autonomy (Siguán, 2005).

The 1978, Spanish Constitution marked the transformation of Spain from a highly centralized authoritarian regime into a democratic state that “guarantees the right to self-government of the nationalities and regions of which it is composed” (Spanish Constitution, Preliminary Title, §2). It enabled a process of devolution that lead to the creation of 17 Autonomous Communities and two autonomous cities (Ceuta and Melilla). The Constitution also granted official status to the some of the regional languages of Spain, acknowledging their cultural importance:

Preliminary Title

Section 3

(1) Spanish is the official Spanish language of the State. All Spaniards have the duty to know it and the right to use it.

(2) The other Spanish languages shall also be official in the respective Self-governing Communities in accordance with their Statutes.

(3) The richness of the different linguistic modalities of Spain is a cultural heritage which shall be specially respected and protected (Spanish Constitution, 1978).

(1983), the Balearic Islands (1986), and the Community of Navarre (1986). In addition, Aragon and Asturias acknowledge the existence of their own regional languages, but without granting them official status (Beardsmore, 1993; Huguet & Madariaga, 2005).

Nonetheless, taking into account the immigrant minority languages, nowadays almost 300 languages are spoken within Spain's borders (Idescat, 2012; Linguamón, 2013). Thus, the current sociolinguistic context has been shaped by the migratory processes of the last decade. These international movements are described in the following chapter.

1.2.2. Migration in Spain

In the current geographic relocation movements, Spain occupies a top position, having the second largest increase of immigrant population in the world for the first decade of the 21st century. Even more, in absolute numbers of immigrants hosted, Spain ranked 4th in the European Union and 8th in the world.

However, Spain only recently became a top receiving country. During the 1950s and 1960s, it was a sending country, with Spaniards moving especially to other European countries, such as Germany, France, or the United Kingdom, which were implementing guest worker programs. The direction of the international movement started to change in the 1980s, when, due to economic prosperity and decreased fertility, the number of immigrants started to surpass the number of emigrants. Spain's intake of immigrants increased rapidly, so that the number of immigrants admitted annually skyrocketed from 8000 in 1985-1989 to 449,000 in 2000-2004 and to 775,000 immigrants by 2005-2008 (United Nations, 2011).

During the first decade of this century, Spain increased its immigrant population with 4.6 million people (United Nations, 2011). This corresponds to a 10% increase of the proportion of foreign-born population to 14 % of the total population. The swift growth of the number of registered foreign residents since 2000 can be observed in figure 4. However, it is worth mentioning the data used by the Ministry of Employment and Social Security and the National Institute of Statistics (INE) counts foreigners with a residence permit. Besides them, around one million foreign-born persons obtained Spanish nationality, but could be considered part of the immigrant population (Arocena, 2011).

The number of naturalisations increased exponentially since 2000, so that 79,597 Spanish nationalities were granted in 2009. In the period from 2001-2009, approximately 440,000 people acquired Spanish citizenship (INE, 2009). The majority was from Spanish-speaking countries in South America and obtained the nationality based on legal residence, of which they need a period of two years (Kirchberger, 2009).

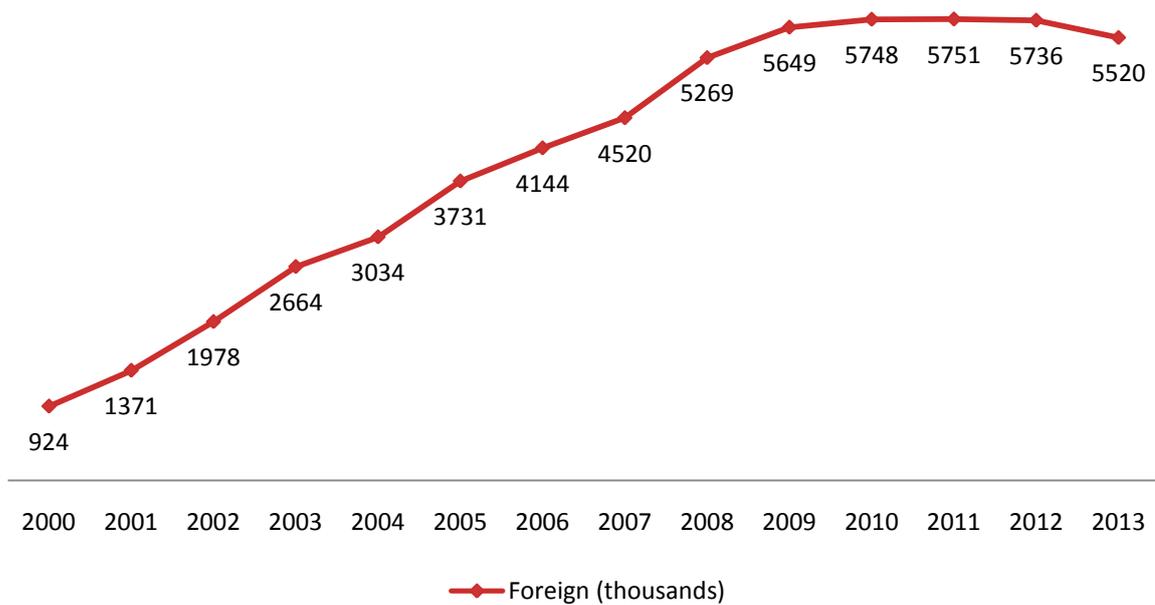


Figure 4. Evolution of the foreign population in Spain for the period 2000-2013. The values for 2013 are provisional (INE, 2012, 2013a).

The foreign population residing in Spain increased from just under a million in 2000 to a peak of 5.75 million in 2011. A slight decrease was noticed from 2011 to 2012, when the number of foreigners dropped with approximately 150,000 immigrants. A more pronounced decline took place in 2012, when 216,125 less immigrants were registered (INE, 2013a).

Consequently, on 1 January 2013 there were 47,059,533 residents in Spain, of which 41,539,400 Spanish citizens and 5,520,133 foreigners, corresponding to 11.7% of the total population (INE, 2013b).

Among the foreign population, 2,352,978 persons came from a European Union member state, whereas 3,167,155 persons relocated to Spain a non-EU country. The most

numerous groups were from Romania, Morocco, UK, Ecuador, and Colombia (INE, 2013a). Figure 5 presents the main sending countries, from where more than 100,000 persons immigrated to Spain.

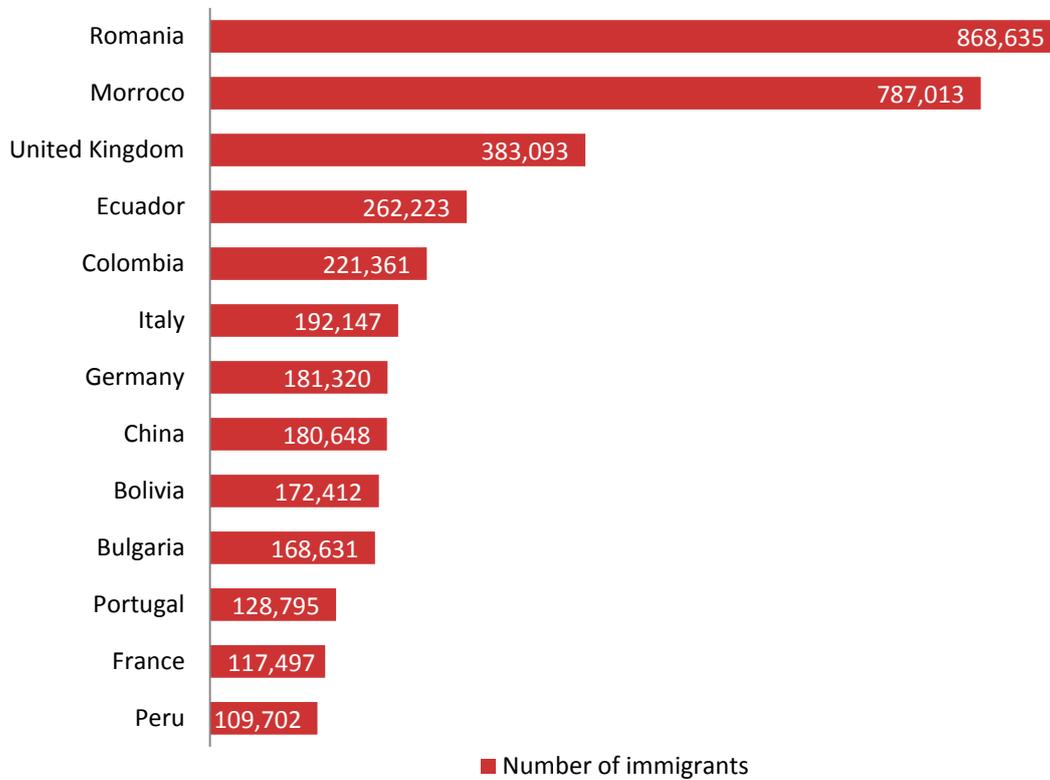


Figure 5. Foreign population by country of origin at 1 January 2013 (INE, 2013b)

Most of the foreigners are of working age, as the mean age is of 35 years and 58,8% of the foreign population are between 16 and 44 years-old. As for the rest of the foreigners, 15.5% are under 16 years of age, 19.2% are aged between 45 and 64 years, whereas 6.5% are older than 65 years. In addition, men accounted for 51.9% of the foreign population, being slightly more numerous than the women that represented 48.1% (INE, 2013a, 2013b).

Nonetheless, the immigrant population is not distributed uniformly across the state, differences appearing among autonomous communities and cities. In absolute numbers, with more than one million foreigners each, Catalonia (1,183,907) and Community of Madrid (1,009,926) count with the highest numbers of foreigners with residence permit. Following, Valencia (879,166) and Andalusia (743,620) also host large numbers of foreigners. La Rioja (46,185), Extremadura (42,318), and Cantabria (39,214) are the

communities with the smallest foreign populations, hosting less than 50,000 foreigners each. The autonomous cities Melilla (11,231) and Ceuta (5,657) also house around or less than 10,000 foreigners. Figure 6 presents the distribution of the foreign population across the autonomous communities.

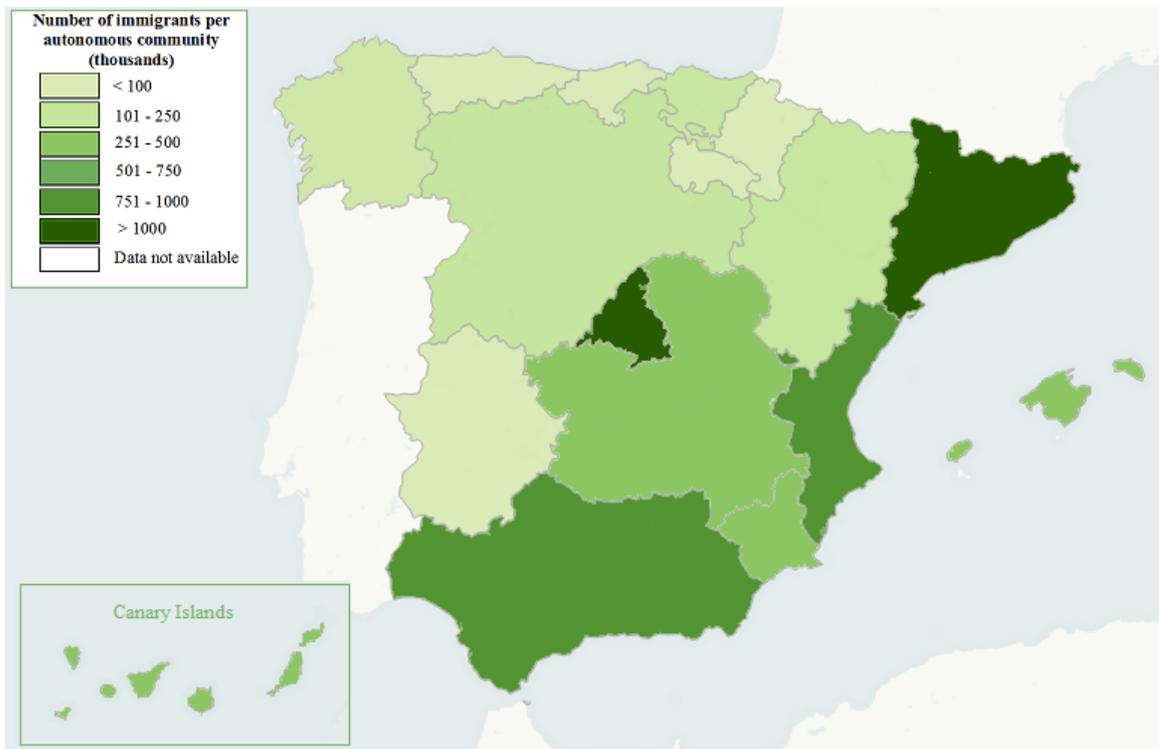


Figure 6. Distribution of the foreign population in absolute numbers across the autonomous communities. Own elaboration based on data from INE (2013a).

With respect to the proportion of the foreign population in rapport to the total population of each autonomous community, the Balearic Islands register the highest percentage, as 20.1% of its population is of foreign nationality. Valencia (16.8%), Murcia (15.7%), Catalonia (15.3%), Melilla (15.1%), Community of Madrid (14.7%), Canary Islands (14.2%), La Rioja (13.7%), and Aragon (12.9%) follow, each surpassing the national average percentage of 11.7% foreigners of the total population (INE, 2013b).

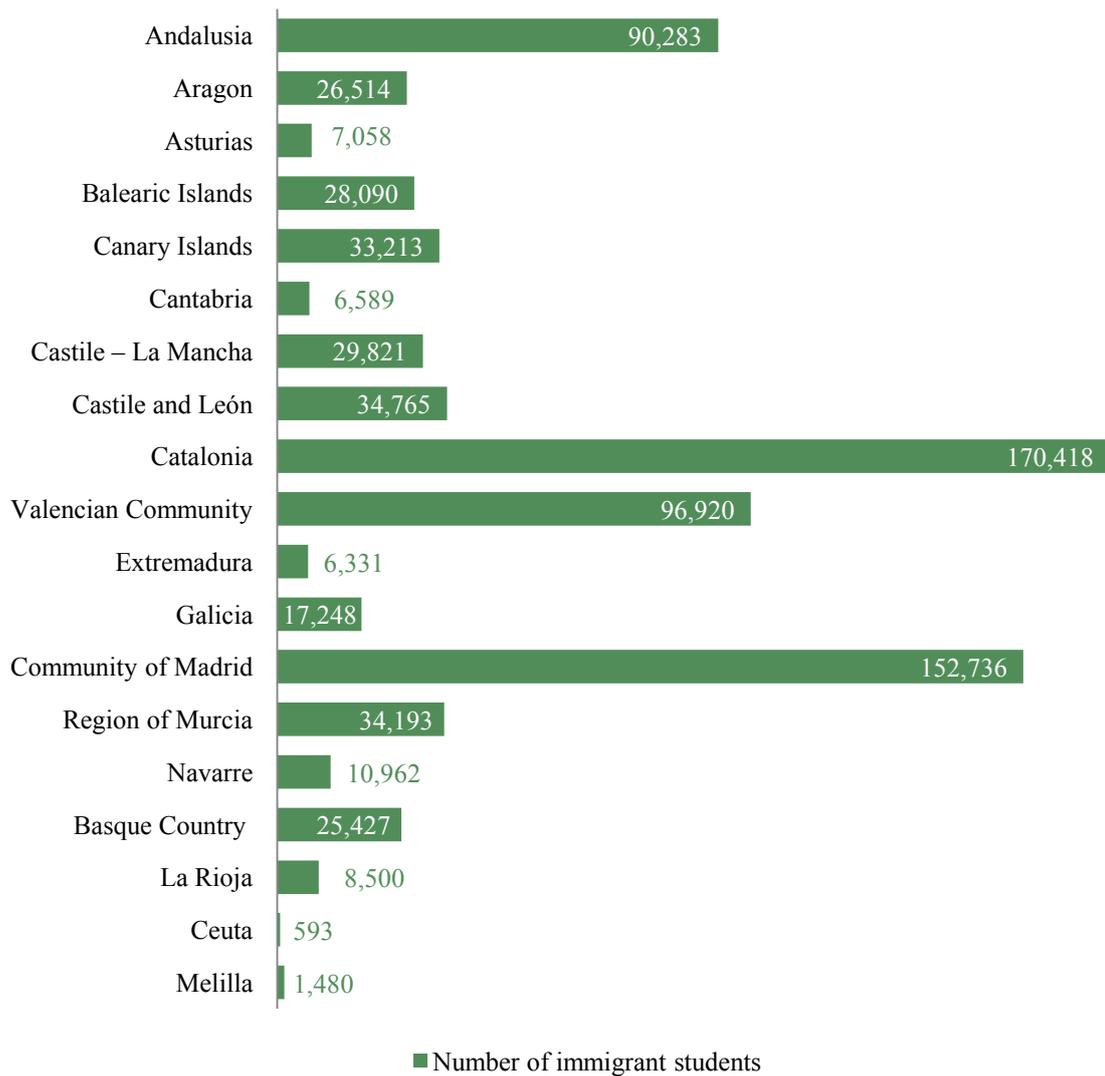


Figure 7. Number of immigrant students by autonomous community (MECD, 2013).

Regardless of their intentions to settle in Spain, many of the immigrants bring their families. Consequently, a considerably number of immigrant children is enrolled in the Spanish education institutes. At state level, during the academic year 2010-2011, there were 781,141 immigrant students studying at non-university levels of education. The autonomous communities that count with the largest numbers of immigrant students are Catalonia, Community of Madrid, and Andalusia (see figure 7). Regarding the percentage of immigrant students to the total student population, the highest percentages were found in La Rioja (16.5%), the Balearic Islands (15.6%), Catalonia (13.5%), and Community of Madrid (13.4%).

1.2.3. Multilingual education in the bilingual autonomous communities of Spain

Considering the linguistic diversity of Spain, augmented by the recent migration intake, the following sections address the linguistic and educational particularities of each bilingual Autonomous Community.

1.2.3.1. Aragon

Aragon is an autonomous community where three languages coexist: Spanish, the only language with official status, Aragonese, and Catalan. According to the Act of Use, Protection, and Promotion of Languages and Linguistic Modalities of Aragon of May 2013, Aragonese was renamed LAPAPYP, an acronym for ‘Lengua Aragonesa Propia de las Áreas Pirenaica y Prepirenaica’ (Aragon’s Own Language



of the Pyrenees And Pre-Pyrenees Areas), whereas Catalan was renamed LAPAO, acronym for ‘Lengua Aragonesa Propia de la Parte Oriental’ (Aragon’s Own Language of the Eastern Part).

Aragonese is spoken in the northern part of the region, more precisely in Western Ribagorza, Bal de Chistau, Bal de Bielsa, Pandicosa, Echo, Ansó and Somontano. Catalan is used in the easternmost area, called Franja de Ponent (Eastern Fringe) and which comprises the comarcas of Eastern Ribagorza, La Litera, BajoCinca, Bajo Aragón-Caspe, Bajo Aragón and Matarraña. The rest of the territory, which includes most of the provinces of Zaragoza and Teruel, represents monolingual Spanish domain (Huguet, Lapresta, & Madariaga, 2008; Huguet et al., 2008).

The existence of Aragonese and Catalan is recognized and protected by the Statute of Autonomy. The status of these two minority languages is reflected in the education system, the two languages being optional subjects.

According to the Cooperation Agreement signed in November 1986 by the Ministry of Education and Science and the Department of Culture and Education of the Diputación General de Aragón, children can learn Catalan for up to three hours per week if their parents specifically require it. There are around 4000 students in 40 schools attending Catalan classes (Huguet, Lapresta, & Madariaga, 2008).

Following another agreement between the mayors of several localities and the Department of Culture and Education, classes of Aragonese started to be offered in the academic year 1997/1998 on voluntary basis. However, various issues concerning teachers' work conditions, schedules, resources and students' transportation, impeded the development of teaching of Aragonese (Huguet, Chireac, Janés, Lapresta, Navarro, Querol, & Sanso, 2008).

The Language Act 10/2009 of December 22nd on the Use, Protection and Promotion of the Autochthonous Languages of Aragón gave the two minority languages a quasi-official status, due to the acknowledgement of the legal effect for their use at local and regional administration (Lopez, 2010).

When looking closely at the measures oriented toward education, it can be seen that the Act, despite guarantying the right to teaching of the minority languages, does not make their instruction mandatory, as in the case of foreign languages. Learning Aragonese and Catalan is voluntary. Moreover, there is no mention of teaching in the minority languages, which is neither prohibited, nor encouraged. Therefore, the Linguistic Act did not represented a facilitator for the development of bilingual education programs, as it was expected (Huguet, Lapresta, & Madariaga, 2008; Huguet et al., 2008).

The first organizational and curricular measures aimed at the reception and integration of immigrant students were adopted in 2001 through the Order of June 25, aimed at guaranteeing immigrant students the acquisition of basic communicative and linguistic competences and their incorporation into the local educational system (Alfaya & Muñoz-Repiso, 2005).

To carry on the development of these measures addressed to the immigrant population, the ‘Integral Plan for Immigration’ (‘Plan Integral para la Inmigración’) was adopted in 2004, and the ‘Integral Plan for Cultural Coexistence in Aragon 2008/2011’ (‘Plan integral para la convivencia intercultural en Aragón 2008/2011’) was implemented four years later). The measures implemented include programs of reception, teaching of the official languages, teaching of the languages and cultures of the immigrant groups, programs designed for teachers, and intercultural mediation.

1.2.3.2. Asturias

Two languages coexist in the Principality of Asturias: Spanish and Asturian or Bable. However, the two languages are asymmetrically used in administrative, communication, social, and cultural areas, portraying a diglossic situation, where Spanish is the official majority language and Asturian the minority one.



The Statute of Autonomy specifically states that Asturian is a protected and promoted language. The inclusion of Asturian in the education system is further guided by the Law 1/1998, of March 23, of Use and Promotion of Bable/Asturian, which establishes the presence of the regional minority language in the education system on voluntary basis. Accordingly, Asturian is considered a part of the curriculum, being taught within the school timetable.

Teaching of Asturian started in 1984, following an agreement signed between the Ministry of Education of Spain and the Government of Asturias. Children were offered the possibility to attend to up to three hours of Asturian during school hours in Primary and Secondary Education (Huguet, Lapresta & Madariaga, 2008).

The optional classes of Asturian attracted an increasing number of children, whose number grew exponentially, from 1300 in the 1984-1985 to more than 15,000 students 15 years later (Huguet & González Riaño, 2001).

Furthermore, students of immigrant origin have been considered within the framework of attention to diversity. Accordingly, each center has the possibility to elaborate a reception program integrated with the Program of Educational Compensation (Alfaya & Muñoz-Repiso, 2005). Additionally, in 2004, there were created the ‘Temporal Classrooms of Linguistic Immersion’ designed to facilitate the incorporation of immigrant students to the ordinary classrooms. Lastly, in 2009 the ‘Autonomic Plan of Social Inclusion of the Principate of Asturias 2009-2011’ (‘Plan Autonómico de Inclusión Social del Principado de Asturias 2009-2011’) was implemented.

1.2.3.3. The Balearic Islands

The Balearic Islands is one of the Autonomous Communities that has as its own language Catalan, which shares official status with Spanish.

While the Statute of Autonomy granted Catalan co-official status, the Law 3/1986 of Linguistic Normalization from April 19th went further and secured a front place for Catalan in education. In



this sense, it establishes that students have a right to receive primary education in their mother tongue. In addition, classes of Catalan language and literature are mandatory and should be taught in the same number of hours as those of Spanish language and literature.

Furthermore, the Linguistic Normalization Law (1986) also established that students must be able to use both Catalan and Spanish by the end of compulsory education, made Catalan compulsory in adult education and appointed the Balearic government as responsible of providing the necessary resources.

Despite these legal measures, in 1986 teaching of Catalan was in a precarious situation (Huguet & Madariaga, 2007). The situation drastically improved in 1990 due to the Agreement signed on May 29th between the Ministry of Education and Science and the Autonomous Community of the Balearic Islands, which declared bilingual 86 public schools.

From this point, the presence of Catalan increased significantly, up to the point that during the academic year 2008-2009, more than half (50.2%) of the total number of educational centers were offering bilingual education and the rest of schools (49.8%) used Catalan as language of instruction and Spanish as a subject. In primary education, the education in Catalan predominates, as it is offered by 64.8% of all institutions.

There are also differences between public centers and private institutions, in the case of the former there is a preference for bilingual programs, which can be found in 72.2% centers, while the public ones implemented education in Catalan in 62.7% institutions (Ministry of Education, Culture and Sports, 2012).

The considerable increase of the number of immigrant students has led to the implementation of a series of measures, such as reception classrooms, immersion programs, intercultural workshops, and programs of educational compensation, organized under the 'Plan of Linguistic and Cultural Reception' ('Plan de acogida lingüística y cultural') and the II Integral Plan of immigration' ('II Plan integral de inmigración') (Govern de les Illes Balears, 2002, 2005).

1.2.3.4. Galicia

As in the case of the other Autonomous Communities presented so far, the Status of Autonomy of Galicia (1981) established Galician as Galicia's own language and granted it official status alongside Spanish.

Two years later, the Law of Linguistic Normalization (1983) was approved, with the objective to "restore the

Galician language in a progressive way in all domains from which it was excluded, e.g. civil service, schools, the media, etc." (Loredo Gutiérrez, Fernández Salgado, Suárez Fernández, & Casares Berg, 2007).



For this purpose, Galician was declared the official language and became a compulsory subject in all non-university levels of education. Similar to other bilingual Autonomous Communities, as Catalonia and Basque Country the main goal has been that by the end of compulsory education, students will be competent in both Galician and Spanish. In addition, language are not supposed to represent a criterion for separating children in different centers or classes. Children have the right to be taught during preschool and primary education in their mother tongue.

Subsequent decrees, such as the Decree of 8th September 1983, the Order of 1st March 1988 and the Decree of 14th September 1995, regulated in more detail the use of Galician in the education system. Consequently, in preschool and elementary education, children are schooled in their mother tongue. These regulations in combination with the avoidance of segregation of linguistic groups are restricting the implementation of immersion programs at these first levels of education (Loredo Gutiérrez et al., 2007).

In secondary education, the curriculum is distributed between the two official languages. The Decree of 1995 specifically mentions the minimum of subjects to be taught in Galician and gives schools the possibility to choose how to distribute the remaining subjects (Huguet & Madariaga, 2005, Loredo Gutiérrez et al., 2007).

The education system also pursues to provide equal opportunities and conditions to all students, regardless of their origin. At curricular level, the measures designed for immigrant students regard educational reinforcement, curricular adjustment, and flexibility of the schooling age (Alfaya & Muñoz-Repiso, 2005). These measures and the corresponding guidelines are defined in the 'Plan of Reception 2005' ('Plan de Acogida 2005').

1.2.3.5. Basque Autonomous Community

The Basque Autonomous Community (BAC) is one of the three political regions where Euskera is spoken, alongside some areas in Navarre in Spain and the Atlantic Pyrenees Department in France. Considered one of the oldest Western European languages, Euskera's origins are still not known (Lasagabaster, 2007). However, it is very distant from Spanish, since it does not belong to the Indo-European language family (Huguet, Lasagabaster, & Vila, 2008).



Euskera, like the other minority languages spoken within Spanish territory, was banned during the Franco regime. Nonetheless, in the 1960s several private schools, called 'ikastola' managed to use Euskera as medium of instruction. After the number of students dramatically increased, these institutions managed to gain official recognition (Cenoz & Etxague, 2011; Lasagabaster, 2001).

BAC's Statute of Autonomy (1979) ratified the official status of Euskera alongside Spanish. The Basic Law on the Standardisation of the Euskera Language passed in 1982 recognized the right to be educated in Euskera and Spanish. Following, three education models were established: model A, model B, and model D (the letter 'C' does not exist in the Euskera alphabet).

Model A uses Spanish as medium of instruction, while Euskera is taught as a subject for four to five hours per week. The model is mainly designed for Spanish-speaking students and aims to consolidate their understanding of Euskera and their basic abilities of expression regarding everyday issues, as well as to strengthen their positive attitudes towards Euskera (Lasagabaster, 2001).

Model B uses both Spanish and Euskera as languages of instruction according to the early partial immersion precepts, being directed mainly to students that have Spanish as

L1.Education starts in kindergarten in Euskera. Later, in the first year of primary education, Spanish is introduced and used to teach reading, writing and mathematics.

Model D uses Euskera as medium of instruction, while Spanish is taught as a subject for four to five hours per week. This model could be described as total immersion for Spanish speakers and as maintenance for Euskera speakers (Cenoz & Etxague, 2011).

Additionally, there is a marginal model, called *X*, which was regular during the Franco regime and in which no hours are dedicated to Euskera. Students choosing this program have various reasons for not learning Euskera, such as living temporarily in the BAC (Lasagabaster, 2001).

Immigrant students prefer the model A of education, because they consider it an easier way of integration (Etxeberría & Elosegui, 2010). To encourage immigrant students to learn Euskera and to familiarize themselves with the culture, the ‘Basque Plan of Immigration 2003-2005’ (‘I Plan Vasco de Inmigración 2003-2005’) was initially implemented, followed by the ‘Second Basque Plan of Immigration 2007-2009’ (‘II Plan Vasco de Inmigración 2007-2009’) and the ‘Third Basque Plan for Social Inclusion 2011-2015’ (‘III Plan Vasco para la Inclusión Social 2011-2015’).

1.2.3.6. Navarre

Navarre is the other Autonomous Community where Euskera and Spanish coexist and share official status. However, the presence and status of Euskera are not uniformly distributed across Navarre, which lead to the division of the community in three language zones. According to the Euskera Language Law (1986), these are: the bascophone or Euskera



speaking zone, the mixed zone, and the non-bascophone or the non-Euskera speaking zone. Euskera is official only in the bascophone zone (Oroz Bretón, & Sotés Ruiz, 2008).

Distinct education models are applied in each zone. In the bascophone zone, three models are available:

- *Model A* has Spanish as language of instruction, while Euskera is taught as a compulsory subject for three to four hours per week. If requested, one or two other subjects could be taught in Euskera.
- *Model B* uses both Spanish and Euskera as languages of instruction.
- In *model D* Euskera represents the medium of instruction, while Spanish is studied as a subject.

The mixed zone contains, besides the models A, B, and D, the model G, according to which all education is realized only through Spanish and Euskera is not studied at all. Parents have the possibility to choose the education model, as long as at least a minimum number group of students can be formed.

In the non-bascophone zone, models A and G predominate. Euskera is taught only as a subject if parents have specifically requested it.

Regarding immigrant students, programs of linguistic immersion have been designed mainly for those that do not know Spanish. The guiding principles of the measures implemented are stated in the ‘Plan for social integration of the immigrant population’ (‘Plan para la integración social de la población inmigrante’), adopted in 2002.

1.2.3.7. The Valencian Community

The Valencian Community ratified in 1982 the co-official status of Valencian³ and recognized it as the own language of the community. However, the 1984 ‘Law on Use and Education of Valencian’ established predominantly Valencian speaking and predominantly Spanish speaking territories. It also regulated who is exempted from learning and using Valencian.



Following the Decree 79/1984, two linguistic education programs were implemented:

- The Teaching in Valencian Program, in which Valencian is used as the main language of instruction. Spanish is also used as medium of instruction for some subjects, as well as being taught as a compulsory subject.
- The Progressive Incorporation Program uses Spanish as the main language of instruction, while some subjects are taught in Valencian.

In 1990, an immersion program for primary education, designed for students who have a first language other than Valencian, was introduced. Valencian represents the only medium of instruction until the third year, when Spanish begins to be introduced gradually (Juan-Garau & Pérez Vidal, 2011). These programs that offer education through Valencian can be found in the Valencian-speaking zone (Vila, 2008).

³ Valencian represents a variant of Catalan, spoken in the Valencian Community (RAE, 2001)

Besides the aforementioned programs, in the Spanish-speaking area, there is also the Basic Program, in which Spanish is the only medium of instruction and Valencian is studied as a subject (Juan-Garau & Pérez Vidal, 2011).

Confronted with an increasing number of immigrant students, the Govern of the Valencia Community elaborated in 2000 the 'Initial Plan for educational attention of the children of foreign immigrant families 2000-2003' ('Plan inicial para la atención educativa de los hijos e hijas de familias extranjeras inmigrantes 2000-2003'), which included measures regarding the reception of newcomers, intercultural education, teacher formation, and didactic resources (Alfaya & Muñoz-Repiso, 2005). These actions were continued through the four-years 'Plan of Actions for the Quality of the Education System 2003-2007' ('Plan de Actuaciones para la Calidad del Sistema Educativo 2003-2007') and the 'General Plan of Immigration and Coexistence of Valencia 2008-2011' ('Plan Director de Inmigración y Convivencia de Valencia, 2008-2011').

1.3. CATALONIA

One of the bilingual autonomous communities of Spain, Catalonia has two official languages, Catalan and Spanish. To these a third official language, Aranese, is added in the northwestern district Aran Valley.



As this is the context of our research, this section is dedicated to the social, legal, demographic, and educational particularities of Catalonia.

1.3.1. Social and legal framework

Catalan and Spanish are the official languages of Catalonia, based on Catalan being Catalonia's own language and Spanish being official throughout the Spanish State. The official status of the two languages was ratified by the Statute of Autonomy of Catalonia approved on December 18th 1979, also called the Statute of Sau.

On 18th June 2006, a new reformed version of the Statute of Autonomy was approved in a referendum. The section dedicated to Catalonia's own language and official languages was expanded. It also granted official status to Occitan (Aranese), spoken in Aran Valley, a northwestern county of Catalonia:

ARTICLE 6. CATALONIA'S OWN LANGUAGE AND OFFICIAL LANGUAGES

- 1. Catalonia's own language is Catalan. As such, Catalan is the language of normal and preferential use in Public Administration bodies and in the public media of Catalonia, and is also the language of normal use for teaching and learning in the education system.*
- 2. Catalan is the official language of Catalonia, together with Spanish, the official language of the Spanish State. All persons have the right to use the two official languages and citizens of Catalonia have the right and the duty to know them. The public authorities of Catalonia shall establish the necessary measures to enable the exercise of these rights and the fulfilment of this duty. In keeping with the provisions of Article 32, there shall be no discrimination on the basis of use of either of the two languages.*
- 3. The Generalitat and the State shall undertake the necessary measures to obtain official status for Catalan within the European Union and its presence and use in international organizations and in international treaties of cultural or linguistic content.*
- 4. The Generalitat shall promote communication and cooperation with the other communities and territories that share a linguistic heritage with Catalonia. To this end, the Generalitat and the State may, as appropriate, sign agreements, treaties, and other collaboration instruments for the promotion and external*

dissemination of Catalan.

5. The Occitan language, known as Aranese in Aran, is Aran's own language and is official in Catalonia, as established by this Estatut and by the laws of linguistic normalization (Generalitat de Catalunya, 2006).

The position of Catalan was strengthened as it was established as the language of preferential use in administration, media and the education system. In addition, the introduction of citizens' duty to know Catalan, mirroring the Spanish Constitution, placed Catalonia's own language on a par with Spanish. Therefore, the Statute reinforced the measures adopted by previous laws, such as the Catalan Linguistic Policy Act of 1998, and made one more step towards advancing the process of language recovery and achieving equality between Catalan and Spanish (Hoffman, 2010; May, 2012).

The co-existence of Catalan and Spanish has been frequently described as diglossia (Artigal, 1993; Lizárraga, 2012). Accordingly, each of the two languages has its well-established function (Fishman, 1980). Nonetheless, based on Fishman's (1972) observations, Miller and Miller (1996) argued that the relations between Catalan and Spanish are more complex:

The use of the two languages in contact does not have the kind of rigid 'high' and 'low' distribution that is typical of a diglossic situation, though undoubtedly diglossic functions and diglossic attitudes still remain in certain contexts. As there is no general consensus about which is the 'high' language and which is the 'low' language perhaps the most appropriate description of the situation is one of a highly competitive, seesawing bilingualism of an unstable kind (Miller & Miller, 1996: 117).

In addition, the new wave of immigration from all over the world that began in the 1990s changed the linguistic and cultural landscape of Catalonia, breaking "the traditional dichotomy between Catalan and Spanish that has dominated language policy making over the past decades" (Juarros-Daussà & Lanz, 2009: 2).

Regarding demography, the Catalan ethnolinguistic group has a slightly numeric advantage and benefits from residing within its historical territory (Miller & Miller,

1996). However, its numerical dominance has been threatened by the Spanish immigration wave of the 1970s and the most recent international immigration wave.

Institutional support, reflected in a series of policies and measures of positive discrimination in favor of Catalan (e.g. introduction of language quotas in the media, requirement for bilingual service provision in the commercial sector, reinforcement of language requirements for those working in civil service, promoting the use of Catalan at all education levels, implementing immersion education programs) also contributed to the increase of the Catalan group's vitality and helped the recovery of the Catalan language.

In this context, we further look into the interplay between the migration flux and the bilingual education system of Catalonia and the policies implemented and actions undertaken consequently in order to protect and promote Catalan alongside Spanish.

1.3.2. Migration in Catalonia

The international movements of the last decade have profoundly affected Spain, a newcomer among the receiving countries. Consequently, Catalonia also faced an upsurge in immigration, which made it the autonomous community with the largest immigrant population within the Spanish state. Among the various and wide-ranging outcomes, we emphasize the impact this flow of immigrants had at educational level, as the Catalan educational system had to adapt in order to successfully integrate more than 175,000 students of immigrant origin (MECD, 2013a) and to adequately respond to their particular needs.

Catalonia experienced a fast increase of the international immigrant population during the first decade of this century. Currently, as already noted, among the 17 autonomous communities, Catalonia hosts the largest group of foreign nationality with 1,183,907 foreigners that account for 15.3% of the total population (INE, 2013a).

Since 2000, when there were 181,590 foreigners with a residence permit, their numbers rose abruptly in ten years to more than a million. As a result, 1,198,538 foreigners were registered in 2010. The flow of immigrants seemed to stop and even slightly decline from 2010 to 2011, probably as an outcome of the toll of the economic crisis on Catalonia

(Idescat, 2012; INE 2012a). Whereas the data for 2012 appeared to indicate that the upward trend will restart, as 927 more foreigners were registered, the foreign population in Catalonia is expected to count 2872 less persons in 2013, according to the provisional data available (INE, 2013a). The evolution of the foreign population in Catalonia can be observed in figure 8.

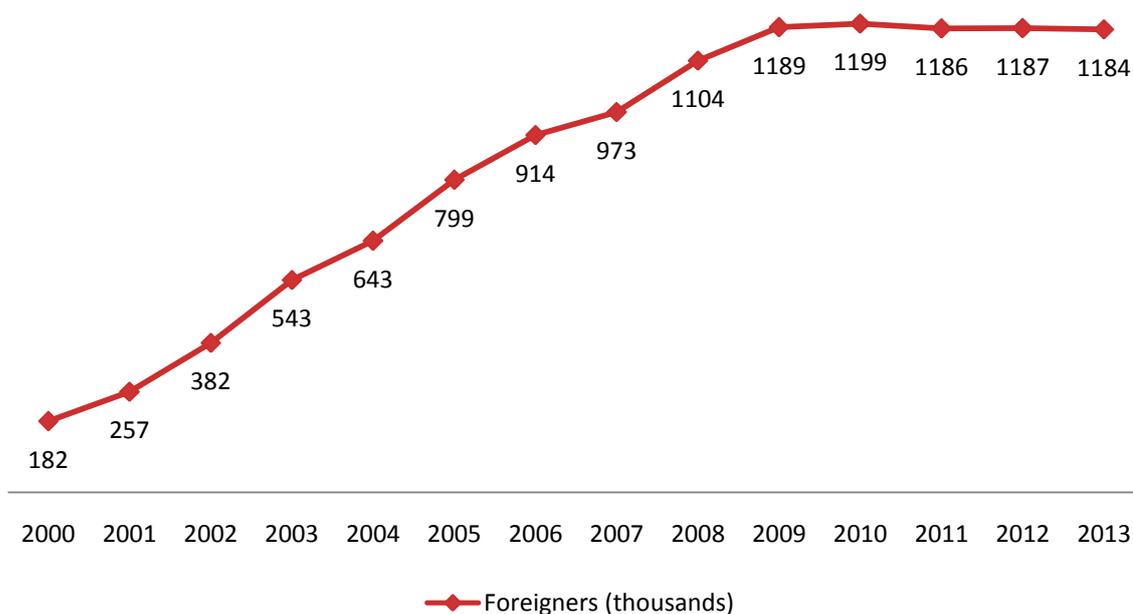


Figure 8. Evolution of the foreign population in Catalonia for the period 2000-2013. The values for 2013 are provisional (INE, 2012, 2013a).

The expansion of migration leads to an increased cultural, demographic, and economic diversity that is reflected by the number of countries of origin represented in immigration flows (Massey & Taylor, 2004). This phenomenon is visible in Catalonia, which hosts immigrants from more than 160 countries. As it can be seen in table 4, people have relocated to Catalonia from all over the world. The contributions of Europe, Africa, and America to the migrant flows are relatively similar, as each region accounts for approximately 30% of the immigrant population, whereas Asia and Oceania account for a smaller, but still highly significant proportion of the immigrant population (Idescat, 2012).

Table 4. Distribution of the immigrant population in Catalonia by geographical area

Area	Immigrant population	Percentage of the total immigrant population
Europe	367,193	30.94
European Union	309,706	26.10
Rest of Europe	57,487	4.85
Africa	322,673	27.19
North Africa and Maghreb	252,328	21.26
Sub-Saharan Africa	67,486	5.69
Central and Southern Africa	2,859	0.24
America	353,330	29.77
North America	6,985	0.59
Central America	64,185	5.41
South America	282,160	23.78
Asia	142,879	12.04
Middle East	3,933	0.33
Central and Eastern Asia	124,792	10.52
South and Eastern Asia	12,079	1.02
Japan	2,075	0.17
Oceania	662	0.06
Stateless	42	<0.01

Source: Idescat (2012)

At a more detailed level of analysis, it can be seen that the distribution of the immigrant population depending on their country of origin is diversified, as presented in figure 9. The Moroccans represent the most numerous group of foreigners, with 240,434 persons residing in Catalonia, corresponding to 20.2% of the total foreign population. The second largest group is the Romanian one, comprising 105,564 persons and accounting for 8.9% of the foreign population. Ecuador (53,006), Italy (50,237), and China (50,194) are other important sending countries, each one accounting for more than 4% of the foreigners (Idescat, 2012).

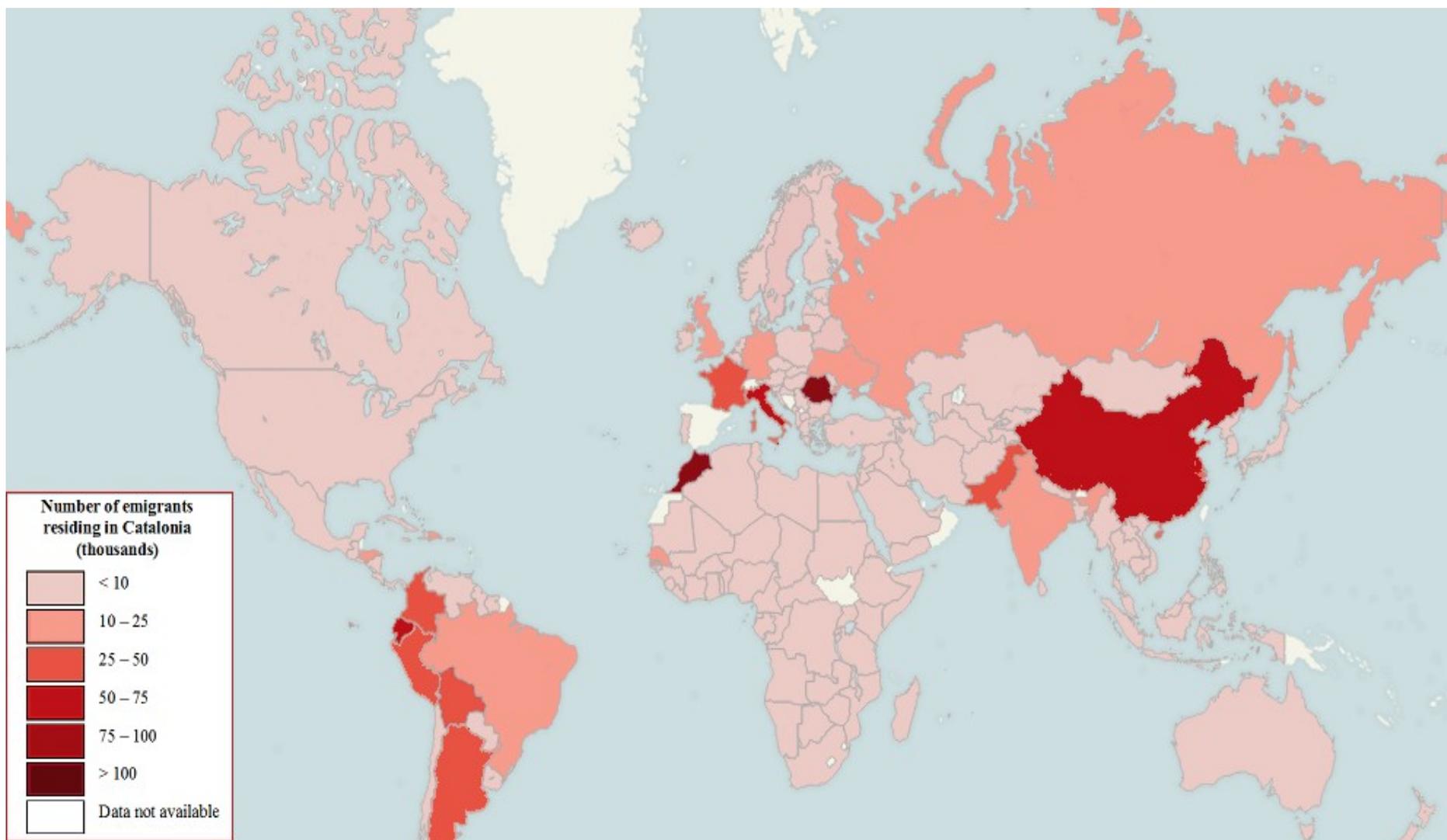


Figure 9. Worldwide distribution of foreigners living in Catalonia by their origin countries. Own elaboration based on data from Idescat (2012).

Many of the immigrants brought their children to their new countries of residence or started families. Thus, the number of children of immigrant descent also increased considerably. In 2011, a total number of 175,468 immigrant children were enrolled in the Catalan system of education at a non-university level, corresponding to 13.55% of the total student population (MECD, 2013a). The number of students of immigrant origin multiplied by seven from the academic year 2000-2001, increasing with more than 150,000 students (MECD, 2012). Figure 10 presents the evolution of the foreign students in the period 2000-2012.

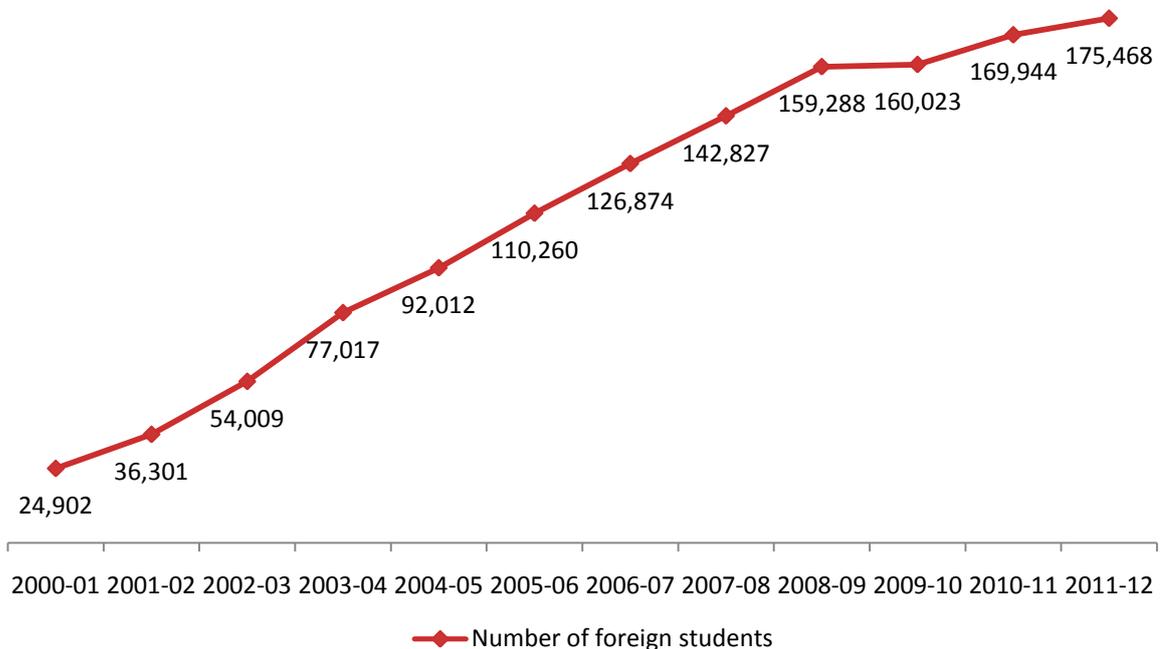


Figure 10. Evolution of the immigrant students population in Catalonia (2000-2012) (MECD, 2012, 2013a)

Immigrant children are enrolled at all levels of education (see table 5). The largest number can be found in elementary education, there being 59,844 children registered at the public and private institutions that provide elementary education in Catalonia. Meanwhile, 49,622 children of immigrant origin study at secondary level, accounting for 17.51% of the total student population.

Table 5. Immigrant children per education level for the academic year 2011 – 2012 (MECD, 2013a, 2013b)

Education level	Number of immigrant students	Percentage of the total number of students (%)
Kindergarten	39,590	11.60
Elementary education	59,844	13.09
Special education	1,206	18.31
Secondary education	49,622	17.51
High school	8,963	10.11
Professional formation	13,925	12.58
Qualification programs	2,318	32.89

The origins of immigrant students are widely diverse. In this sense, table 6 shows the absolute numbers of immigrant students and their corresponding percentages of the total student population of Catalonia by their geographical areas of origin.

Table 6. Distribution of immigrant students by geographical area (MECD, 2012b)

Area	Immigrant students	Percentage of the total number of immigrant students
Europe	34,691	20.36
European Union	28,087	16.48
Rest of Europe	6,604	3.88
Africa	56,700	33.27
North Africa and Maghreb	47,824	28.06
Rest of Africa	8,876	5.21
America	61,069	35.83
North America	1,565	0.92
Central America	7,682	4.51
South America	51,822	30.41
Asia	17,287	10.14
Oceania	69	0.04
Unknown	602	0.35

The largest group came from America, especially from South America countries, which account for 30.41% of all the immigrant students. Furthermore, 33.27% came from

Africa, most of them being from Maghreb, which provided 28% of the immigrant student group. Similarly, among the 20.36% students from Europe, the majority came from a European Union member state. Finally, Asia and Oceania are the areas of origin of 10.18% of the immigrant student population.

After seeing the migratory movements specific to Catalonia, in the next chapter, we look at the characteristics of the Catalan education system and the measures adopted as an answer to the increasing number of students of immigrant origin.

1.3.3. Multilingual education in Catalonia

Being one of Spain's bilingual autonomous communities, Catalonia also implemented a bilingual education system, which is described in the next section, followed by a presentation of the measures and actions taken to receive students of immigrant origin and to help them learn the two official languages of the region.

1.3.3.1. The education system of Catalonia

The education system of Catalonia suffered a series of changes imposed by successive laws that lead to the transformation of Catalan from a language taught as a subject to the language of instruction in non-university education.

The Law of Linguistic Normalization of 1983 impelled the augmenting presence of Catalan in the region's education system by making mandatory that students obtain a good command of both Catalan and Spanish by the end of compulsory education, regardless of the language in which they started schooling (Huguet & Madariaga, 2005).

Following, three education models were adopted or implemented in preschool and elementary schools: predominantly Catalan, bilingual instruction and predominantly Spanish. In all cases, the other language was one of the subjects included in the curriculum. It was also stipulated that all professors had to know both languages. Parents had the possibility to choose the instruction language for their children in preschool and elementary education. The linguistic policy received an impressive amount of support from parents, regardless of their Catalan or non-Catalan background (Hoffman, 2000). As

a result, 90% of schools adopted a predominantly Catalan model (Artigal, 1991).

In 1993, a Catalan immersion model of education was implemented in all preschool and primary education centers, while in secondary education, parents continued to have the possibility to choose the linguistic model.

The immersion program was designed mainly for children from Spanish speaking families in order to help them learn both languages. The program implemented was early total immersion, because Catalan was used as the only medium of instruction from the beginning of schooling. Immersion education represented more than an opportunity to become bilingual; it was “part of the project of reinstating Catalonia’s heritage language as a language of normal use in its territory” (Artigal, 1997: 133).

The Catalan Linguistic Policy Act of 1998 consolidated the Catalan Conjoint Model (Model de Conjunció en Català), which stipulated that students will not be divided on first language criteria and that Catalan will be the vehicular and teaching language in non-university education. In addition, Catalan and Spanish were guaranteed adequate presence in the curriculum in order to achieve competence in both languages by the end of compulsory education. Teaching staff was also required to know the two official languages and to be able to use them as mediums of instruction (Galindo & Vila, 2009; Generalitat de Catalunya, 2010).

Further, the principles of teaching in primary and secondary education were established in the Decrees 142/2007 and 143/2007 respectively, while the Decree 102/2010 stipulated the principles of teaching in preschool education.

The Education Act 12/2009 reinforced the importance of Catalan and promoted multilingualism by guaranteeing at minimum sufficient knowledge of a third language. It also underlines the right and duty of all students to know the official languages. Provisions were also made concerning newcomer students, who are entitled to receive personalized language support (Generalitat de Catalunya, 2010).

1.3.3.2. Immigrant students in the education system of Catalonia

The influx of immigrants raised new challenges for the education system of Catalonia and for the revitalization and maintenance of Catalan. In order to regulate their reception and to help them integrate and learn the official languages several policies have been implemented.

The first actions designed especially for immigrant students can be traced back to the programs of linguistic immersion designed for the Spanish-speaking students coming from other regions of the state. In addition, during the academic year 1983-1984, the Compensatory Education Program (PEC) designed for students with educational necessities caused by social limitations and students belonging to ethnic and cultural minorities was activated and functioned until the academic year 2003-2004.

The issue of the education of immigrant students was directly addressed for the first time by the ‘Second interdepartmental plan on immigration 2001-2004’ (‘II Pla interdepartamental d’immigració 2001-2004’), which included programs regarding the reception of newcomer students, intercultural education, and the learning of the Arabic language and culture (Generalitat de Catalunya, 2001).

Further, the ‘Action plan for foreign students 2003-2006’ (‘Pla d’actuació per a l’alumnat nacionalitat estrangera’ - PAANE) focused on the learning of Catalan by children descended of immigration. The following year, the Department of Education adopted a more complex plan: the ‘Plan for Language and Social Cohesion’ (‘Pla per a la Llengua i la Cohesió Social’ – Pla LIC), approved in 2004 and integrated in the ‘Plan for citizenship and immigration 2005-2008’ (‘Pla de ciutadania i immigració 2005-2008’). The LIC plan regulated the education practices directed to immigrant students and the training of teaching staff for working in the reception classrooms (‘aules de acollida’) (Lizárraga, 2012). It was more complex than previous policies, because it also took in consideration emotional, relational and social cohesion related aspects.

The application of the Plan implied the creation of the General Office for Language and Social Cohesion (Subdirecció General de Llengua i Cohesió Social – SGLCS), divided in two administrative units: Catalan Teaching Service (Servei d’Ensenyament del Català – SEDEC) and the Service of Intercultural and Social Cohesion (Servei d’Interculturalitat I

Cohesió Social - SICS). They are accompanied by a team of support and assessment of language, interculturality, and social cohesion (see figure 11).

Education centers were named the main responsible for the reception and integration of immigrant students. Schools had to develop a ‘Language Project of the Center’ (‘Projecte Lingüístic de Center’) and a ‘Plan of reception and integration’ (‘Pla d’acollida i d’integració’), representing the systematic set of actions designed for students’ incorporation.

Schools could also organize reception classrooms, focused on the intensive learning of Catalan and the acquisition of necessary academic knowledge. Students could study in the reception classroom a maximum of 12 hours per week in primary education and 20 hours per week in secondary education. During the rest of the hours, newcomers participated at regular classes, usually studying subjects that facilitate the process of socialization (Generalitat de Catalunya, 2009).

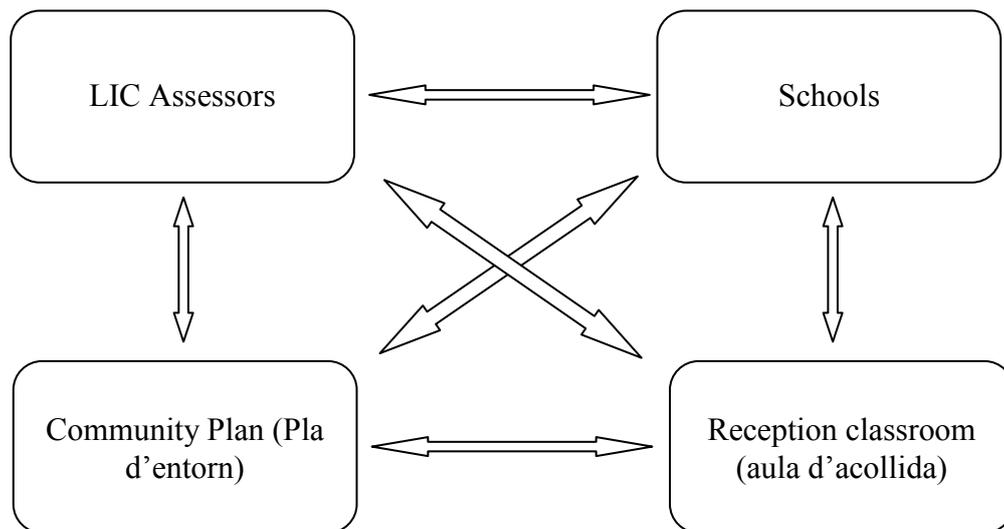


Figure 11. Structure and agents of the Plan for Language and Social Cohesion (Pla LIC)

As it can be seen, the Plan LIC is “a comprehensive integration plan in which students are not segregated and can interact in the normal classroom scenario with native classmates from day one” (Arnau & Vila, 2013: 7).

The community was also involved in the process of integration of newcomers through the ‘Community Plan’ (‘Pla d’entorn’), which aimed to bring together all agents and

collective educators that surround students, such as families, cultural, sports and recreational centers, organizations and associations in order to create a support network outside school (Generalitat de Catalunya, 2009).

The new education context created by the ‘Plan for Language and Social Cohesion’ required an adaptation of the immersion program. Therefore, the ‘Plan for the Actualisation of the Immersion Methodology in the Current Sociolinguistic Context 2007-2013’ (‘Pla per a l’Actualització de la Metodologia d’Immersion en l’Actual Context Sociolingüístic 2007-2013’) was created. Its main objective is to achieve that, by the end of compulsory education, all students, indifferently of their first language, are competent in the two official languages of the territory – Catalan and Spanish – and can understand and deliver oral and written messages in at least one foreign language.

The education system promotes and reinforces Catalan “as the backbone of an educational project and a multilingual intercultural education model, with a goal of social cohesion” (Generalitat de Catalunya, 2009: 5). At the same time, it recognizes the importance of the first languages, specifying that their treatment is critical for the success of transition programs from the home language to the school language. Consequently, it recommends that students’ first languages be symbolically recognized in schools and incorporated into educational practice (Generalitat de Catalunya, 2007).

1.3.3.3. Assessment of the education system of Catalonia

Various studies were conducted to assess the results of the education system of Catalonia, especially concerning students’ linguistic competence in Catalan and Spanish.

A collaborative study conducted in 1990 by SEDEC and the University of Barcelona analyzed the knowledge of Catalan and Spanish in the last three years of primary education. Students obtained higher scores in Spanish than in Catalan. Nonetheless, comparing with the results of a previous study carried out by SEDEC in 1982, the findings suggest an improvement in Catalan competence. In this sense, in eight years, the distance between Catalan and Spanish competence decreased and linguistic knowledge of Catalan became more homogenous (Huguet & Madariaga, 2005).

Vila (1995) reviewed several evaluations of the linguistic immersion program implemented in Catalonia and observed that there were no significant differences in Spanish competence between the children enrolled in immersion programs and those attending Spanish monolingual programs.

Important data about the results of the Catalan education system and their international ranking are provided by the studies carried out within the Project for International Student Assessment (PISA) framework. The worldwide study launched in 1997 by the Organization for Economic Co-operation and Development (OECD) assesses the performance of 15-year-old students on reading literacy, mathematics and science. Data has been collected every three years starting from 2000.

The 2009 PISA study showed that the results corresponding to Catalonia improved from the previous studies. Reading levels of students of Catalonia were above those of students from the member countries of OECD and above the Spanish average score. The evolution of the average scores of Catalonia, compared to the averages of Spain and OECD, can be seen in figure 12. The data from 2000 is included, although the Catalan sample for the first PISA study is not representative as only 23 centers participated.

An important finding concerns the results of immigrant students. The average of immigrant students was considerably lower than the one of autochthonous students. Similar results were obtained by Navarro and Huguet (2010) who examined 121 students enrolled in the 2nd and 4th grades of secondary education and found that the linguistic competences of immigrant students were lower in comparison with autochthonous students, both for Catalan and Spanish.

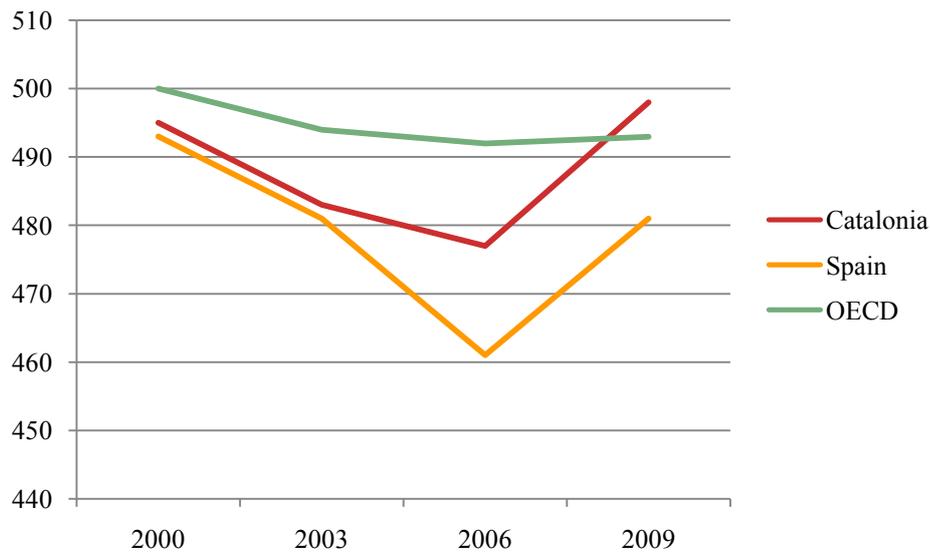


Figure 12. Results of the PISA studies 2000 - 2009. Catalonia, Spain and OECD

These results have to be considered in the wider context of migration and multilingualism, such that any interpretation or action proposed on their basis should also take into account the related variables, among which attitude stand out, due to their connection with behavior generally, as well as to their role in language learning specifically. For this reason, the next chapter resumes general attitude theories and reviews the language attitudes literature with the aim of explaining the relationship between attitudes and language learning and social integration and the factors that foster positive language attitudes.

2. ATTITUDES

Our experiences and reactions are shaped by the way we see the world. We do not respond to the world itself, but to our image of the world, to our mental representations and social constructions of reality, which are not entirely accurate. As Korzybski (1958) famously said, “a map is not the territory it represents” (p. 58). These images are captured by attitudes, which help making sense of the world and aid decision making by providing cognitive simplicity, as they divide the universe in things one likes, dislikes, or has no opinion about (Fazio, 2000; Heining–Boynton & Haitema, 2007).

It is of no surprise that language attitudes have drawn such an impressive interest, considering the ubiquity of language and the role language attitudes play in interpersonal and intergroup interactions, language related behaviors, such as language learning and language use, and social integration.

Therefore, this part is dedicated to language attitude theory and research. Following Edwards’ (1999) recommendation for “a more linguistically aware social psychology or a more psychologically aware sociolinguistics” (p.108) and the example of Dörnyei (1994), Oxford and Shearin (1994) who resorted to various areas of psychology to uncover motivational constructs and aspects related to language learning, we approach language attitudes from a psychological perspective. In other words, we aim to use the considerable amount of data gathered by social psychologists to understand how language attitudes are created, maintained, or changed, and the role they play in language related behaviors and social processes.

Following, the first chapter comprises a review of general attitudes theory, focused on defining attitudes and describing their relationship with related concepts. The second chapter reviews the literature on language attitudes. It is divided in two parts. One part has a more technical approach and attempts to categorize language attitudes studies in

four categories using the attitude objects and the research paradigm as criteria. The second part is centered on the context of the present work and presents several relevant studies conducted in Spain and Catalonia.

2.1. THEORETICAL APPROXIMATIONS

Considering that in order to understand language attitudes, it is necessary to be familiar with the most relevant theories and information regarding attitudes, we define attitudes and present different models of attitudes that capture their structure and content. Next, we explore the intricate relationships between attitudes and other constructs, especially behavior, which also provides data on attitude formation and change.

2.1.1. Defining attitudes

A central concept in social sciences, attitudes maintained their place as “the most distinctive and indispensable concept in social psychology” (Allport, 1935: 798) during a century long fluctuating trajectory. After a series of peaks and troughs, a widespread agreement about attitudes’ importance was finally reached (Ajzen 2005; Breckler & Katz, 1989; Crano, Cooper, & Forgas, 2010; Eagly, 1992; Eagly & Chaiken, 1993, 2005; Greenwald, 1989; Johnson & Boynton, 2010). The relevance of attitudes was probably best conveyed by Allport (1935) who explained their central role in making sense of the environment and interacting with objects and people:

Without guiding attitudes the individual is confused and baffled. Some kind of preparation is essential before he can make a satisfactory observation, pass suitable judgment, or make any but the most primitive reflex type of response. Attitudes determine for each individual what he will see and hear, what he will think and what he will do. To borrow a phrase from William James, they ‘engender meaning upon the world’; they draw lines about and segregate an otherwise chaotic environment; they are our methods for finding our way about in an ambiguous universe (Allport, 1935: 806).

The pervasive role of attitudes can be seen in all circumstances, as they influence decisions and actions, from choosing what products to buy to what political candidates to vote, what job to apply for, where to send the children to school and how to interact with others. Therefore, attitudes became an object of interest for other fields as sociology, economics, marketing, media, political sciences, linguistics. This enriched the informational deposit on attitudes by contributing with different perspectives and methods of analysis and interpretation. Nonetheless, although attitude research established itself as a rich and diverse area with well developed theories and methods and considerable advances were made in clarifying attitudes formation, their structure, properties, change, and measurement, there are still many more questions to answer and aspects to investigate in order to fully understand attitudes, as well as their relationships with behavior and other related concepts.

One such aspect in which regard scholars did not reach consensus was the definition of attitudes, which varied considerably in time, ranging from broad to specific and from simple to complex.

Probably the most famous definition is the one proposed by Gordon Allport in 1935, who concluded after reviewing the attitude research done up to that moment that “an attitude is a mental and neural state of readiness, organized through experience, exerting a directive and dynamic influence upon the individual’s response to all objects with which it is related” (Allport, 1935: 810). This is a broad definition that explains not only what attitudes are, but also how they appear and what they do. Allport’s definition seems to summarize “an implicit theory of attitude structure and function” (Pratkanis & Greenwald, 1989: 247). On the opposite pole, there is the minimal definition stating that an “attitude is the affect for or against a psychological object” that was proposed by Thurstone (1931: 261).

A compilation of definitions proposed across attitude research history is presented in table 7. One of the first things noticed is that the term “attitudes” has come a long way from its original meaning of a posture or pose in painting or drama (Baker, 1992; Fazio, 2007).

Table 7. Definitions of attitudes

Authors	Year	Definition of attitude(s)
Thurstone	1931	the affect for or against a psychological object
Likert	1932	an inference which is made on the basis of a complex of beliefs about the attitude object
Allport	1935	a mental and neural state of readiness, organized through experience, exerting a directive and dynamic influence upon the individual's response to all objects with which it is related
Krech & Crutchfield	1948	an enduring organization of motivational, emotional, perceptual and cognitive processes with respect to some aspect of the individual's world
Rosenberg & Hovland	1960	predispositions to respond to some class of stimuli with three major types of response as cognitive, affective, and behavioral.
Campbell	1963	acquired behavioral dispositions that contained residues of experience of such a nature as to guide, bias or otherwise influence later behavior
Sarnoff	1970	a disposition to react favorably or unfavorably to a class of objects
Williams	1974	an internal state aroused by stimulation of some type and which may mediate the organism's subsequent response
Fishbein & Azjen	1975	a learned predisposition to respond in a consistently favorable or unfavorable manner with respect to a given object
Petty & Cacioppo	1981	a general and enduring positive or negative feeling about some person, object or issue
Oppenheim	1982	a construct, an abstraction which cannot be directly apprehended. It is an inner component of mental life which expresses itself, directly or indirectly, through much more obvious processes as stereotypes, beliefs, verbal statements or reactions, ideas and opinions, selective recall, anger or satisfaction or some other emotion and in various other aspects of behavior
Fasold	1984	an intervening variable between a stimulus affecting a person and that person's response
McGuire	1985	a mediating process grouping a set of objects of thought in a conceptual category that evokes a significant pattern of responses

Gardner	1985	an evaluative reaction to some referent or attitude object, inferred on the basis of the individual's belief or opinions about the referent
Zanna & Rempel	1988	categorizations of an object or issue along an evaluative dimension
Ajzen	1988	a disposition to respond favorably or unfavorable to an object, person, institution, or event
Pratkanis & Greenwald	1989	a person's evaluation of an object or thought
Fazio	1990	association in memory between attitude objects and their evaluation
Baker	1992	a hypothetical construct used to explain the direction and persistence of human behavior
Eagly & Chaiken	1993	a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor
Edwards	2004	belief amplified by affect
Visser & Mirabile	2004	array of summary evaluations stored in memory
Bassili & Brown	2005	emergent properties of the activity of microconceptual networks that are potentiated by contextually situated objects, goals and task demands
Schwarz	2007	evaluative judgement, formed when needed, rather than enduring personal dispositions
Garrett	2010	an evaluative orientation to a social object

In time, attitudes were defined as internal state (Allport, 1935; Williams, 1974), psychological construct (Oppenheim, 1982), affect (Petty & Cacioppo, 1981; Thurstone, 1931), beliefs (Likert, 1932; Rokeach, 1968), dispositions (Ajzen, 1988; Campbell, 1963; Fishbein & Azjen, 1975; Rosenberg & Hovland, 1960), complex process (Krech & Crutchfield, 1948; McGuire, 1985), memory associations (Fazio, 1990), evaluation (Pratkanis & Greenwald, 1989; Zanna & Rempel, 1988), categorization (Zanna & Rempel, 1988), tendency (Eagly & Chaiken, 1993), orientation (Garrett, 2010), and as properties of conceptual networks (Bassili & Brown, 2005). As it can be seen, the constructs used to define attitudes varied from specific to general, from simple to complex, and from temporary to stable.

A series of common elements can be extracted from these definitions of attitudes:

a. *The concept of attitude is hypothetical*, representing a psychological construct, which means that attitudes cannot be observed directly and have to be inferred from their manifestations (Baker, 1992). In this sense, attitudes were explicitly described as “an abstraction which cannot be directly apprehended” (Oppenheim, 1982: 39).

b. *Attitudes have an evaluative nature*. As most definitions showed (Eagly & Chaiken, 1993; Fazio, 1982; Fishbein & Azjen, 1975; Garrett, 2010; Petty & Cacioppo, 1981; Pratkanis & Greenwald, 1989; Sarnoff, 1970; Zanna & Rempel, 1988), attitudes imply evaluation, which is usually done on a bipolar continuum from favorable to unfavorable, or from positive to negative, that could comprise attributes such as good-bad, harmful-beneficial, pleasant-unpleasant, and likeable-dislikeable (Ajzen, 2001).

c. *Attitudes refer to an object*. These evaluations are related to a specific object, they are not “free floating”, but have a quality of “aboutness” (Eiser, 2004). The attitude object can be any entity discriminated by the individual, from concrete objects through abstract ideas, persons, events and behaviors (Eagly, 1992; Maio & Haddock, 2004; Pratkanis & Greenwald, 1989).

Two mutually exclusive types of attitudes objects can be identified: behaviors and targets of behaviors. The later includes any objects other than behaviors, such as things, ideas, individuals, places, groups, and events. In their initial theoretical contribution, Fishbein and Azjen’s (1974) used the terms “attitudes toward behaviors” and “attitudes toward objects”. There is a risk of confusing the term “attitudes toward objects”, which refers to

any attitudes toward an entity that is not a behavior, with the term “attitude object”, which designates any entity, objects and behaviors alike, to which an attitude refers to. As a solution, Eagly & Chaiken (1993) proposed to replace “attitudes toward object” with the term “attitude toward target” and thus distinguish between attitudes toward behaviors and attitudes toward targets of behaviors. We adopted their proposal to avoid confusions and misunderstandings.

Therefore attitudes can be classified as attitudes toward a target (e.g., attitude toward English) and attitudes toward behaviors (e.g., attitude toward learning English). Fishbein and Azjen (1974) underlined the existence of an essential distinction between these two types, seeing that for most people in most situations, measuring attitudes toward a target is very different from measuring attitudes toward a behavior (Crano et al., 2010).

d. *Attitudes are learned.* They do not just happen (Eiser, 2004), but are acquired. The previous experience of interacting with the attitude object serves to build attitude content, as well as to organize the attitudes (Allport, 1935; Campbell, 1963).

e. *Attitudes guide action.* Attitude’s relation with behavior was frequently mentioned (Allport, 1935; Baker, 1992; Fishbein & Azjen, 1975; Oppenheim, 1982; Sarnoff, 1970; Williams, 1974). Some definitions included behavioral correspondence by stating that attitudes are behavioral dispositions (Campbell, 1963; Rosenberg & Hovland, 1960) or a mediating variable between stimulus and the triggered response (Fasold, 1984), implying that if the correspondence between the two was lacking then there was no attitude.

However, the dominant view nowadays seems to be that the relationship with behavior should not be a part of the definition of attitudes, because it is an intricate one, influenced by a multitude of factors. In this sense, Gardner explained that the behavioral component was “not included in the definition since whether or not attitudes have behavioral implications does not seem germane to the definition of the concept” (Gardner, 1985: 9).

The attitude-behavior relationship will be further reviewed in one of the next section, so here we would just like to point out that the argument is against expecting to always find a one-to-one correspondence between attitude and behavior, not against the existence of a complex relationship between the two, which is generally acknowledged, research being focused on its mediating and moderating variables and the corresponding process (Fazio, 1986, 2007; Ledgerwood & Trope, 2010; Zanna & Fazio, 1982; Zanna & Rempel, 1988).

There is also widespread agreement that attitudes influence information processing and perceptions. Thus attitudes impact how an event is defined and provide a framework for future decision making (Darley & Fazio, 1980; Fazio, 1986).

Hence, attitudes can influence perception and guide how individuals respond to the objects with which they interact.

There are also some areas of disagreement concerning the attitude concept. One of these issues regards the conceptualization of attitudes as stable entities or temporary constructions. The debate continues as both perspectives are supported by considerable empirical evidence (Bohner & Dickel, 2011). The definitions reviewed can be placed on a continuum as a function of their endorsement of the stable-entity or constructionist perspective (Gawronski, 2007).

On one side of the continuum are the definitions that view attitudes as stable-entities stored in memory. Fazio (1982, 1986 and 1990) is one of the most representative supporters of this position, as he defined attitudes as object-evaluation associations and proposed a model to explain how attitudes are represented in memory. Visser and Mirabile (2004) also argued that the summary evaluations of attitude objects are stored in memory. Stability of attitudes was also suggested by other constructs used to define attitudes, such as ‘disposition’ (Ajzen, 1988; Campbell, 1963; Fishbein & Ajzen, 1975; Rosenberg & Hovland, 1960).

On the other side are those definitions that see attitudes as evaluative judgements constructed on the spot using the currently accessible information (Schwarz, 2007). Additionally, Williams’ (1974) conceptualization as “an internal state aroused by stimulation of some type” (p. 21) also suggests that attitudes are temporal constructions.

On an intermediate position there is the definition proposed by Eagly and Chaiken (1993) that uses the term ‘tendency’, carefully chosen to express the dynamic aspect of attitudes and to avoid the temporal or permanence implications carried by other constructs (Eagly & Chaiken, 2005).

At this point, it is important to note that, regardless of their position on the stable-temporary continuum, researchers agree that attitudes change, but debate the process. According to the stable-entity perspective, attitude change implies a modification of the

memory representation of a particular attitude. From a constructionist perspective, attitude change reflects the activation of a different set of information when making the evaluative judgement. Trying to integrate the two contradictory perspectives, Bohner and Dickel (2011) suggested that attitudes change “involves both the retrieval of stored evaluations and the consideration of new evaluative information to varying extents” (p. 397).

Although a consensus regarding the precise conceptualization of attitudes was still not reached, Eagly & Chaiken’s (1993) definition managed to capture successfully the essential aspects in a clear and concise manner, which resulted in a conceptualization of attitudes that is easy to work with, both methodologically and theoretically. In addition, it appears to be the most widely used, judging from its frequent citation in the articles and books published in the last two decades.

Therefore, in the present work we adopt the definition of attitude as “*a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor*” (Eagly & Chaiken, 1993: 1). Additionally, we consider attitude to be an object related hypothetical construct of evaluative nature that is learnt, can guide behavior and can change.

2.1.2. Attitudes models

Constructs as beliefs, affect, and behavior were frequently used to define attitudes. This raises several questions concerning the content and structure of attitudes. Understanding the internal structure of attitudes can provide answers related to how attitudes form and change.

This chapter presents three of the models of attitudes proposed in the last century of attitude research: the expectancy-value model (Fishbein & Ajzen, 1975), the three-component model (Rosenberg & Hovland, 1960), and the association model (Fazio, 1989). These well-established models indicate how attitudes may express basic psychological constructs as beliefs and emotions (Olson & Maio, 2003).

2.1.2.1. Expectancy-value model

A belief-based perspective, the expectancy - value model (Fishbein & Ajzen, 1975; Ajzen, 1991; Rosenberg, 1956) states that attitudes emerge from the beliefs held about the attitude object. Beliefs are formed by associating an object with certain attributes. Each of these attributes has a value. Accordingly, an attitude represents a function of the subjective probability that the object has certain attributes and of the evaluation of these attributes. This function can be expressed by the following equation (Fishbein & Ajzen, 1975):

$$A = \sum_{i=1}^n b_i e_i$$

where A is the attitude toward an object, b_i is the belief that the object has the attribute i and e_i is the evaluation of attribute i . The products of the n beliefs and their corresponding evaluations are summed, the resulting index being directly proportional to the attitude in question (Ajzen, 1991).

This model indicates that positive attitudes are formed toward objects that have positive attributes and negative attitudes toward objects with negative attributes. In addition, it offers a predictive model, since it implies that knowledge of beliefs and their associated

evaluations can be used to infer attitudes and anticipate when they predict behavior (Maio & Haddock, 2004).

The expectancy-value model was criticized for ignoring the role of affect in the formation of attitudes (Eagly & Chaiken, 1993; Godin, 1987; Kim, Lim, & Bhargava, 1998). Fishbein and Middlestadt's (1995) defence of the model, which argued that attitude formation is due to cognitive factors and that the effects of noncognitive factors found by other researchers can be explained by methodological artefacts, was vehemently challenged (Miniard & Barone, 1997; Priester & Fleming, 1997; Schwarz, 1997). Thus, despite its popularity and widespread use, the expectancy-value model is often considered too restrictive.

2.1.2.2. Three - component model

The three- component or tripartite model proposed by Rosenberg & Hovland (1960) assumes that attitudes are comprised of three components: affective (positive or negative feelings toward the attitude object), cognitive (beliefs held about the attitude object) and behavioral (overt actions and responses to the attitude object).

Accordingly, positive attitudes are the result of favorable beliefs, feelings, and behaviors toward an object, while negative attitudes appear when the beliefs, feelings, and behaviors express unfavorability toward an object (Olson & Maio, 2003). Nonetheless, attitudes are not equivalent to the affect, beliefs, and behaviors that influence them, as the whole is more than the sum of its components (Eagly & Chaiken, 1993; Olson & Maio, 2003; Zanna & Rempel, 1988).

There are several problematic assumptions of this model. First, the tripartite view indicates that, in order to exist, an attitude needs all three components. Second, the three classes of responses have to be consistent with each other and third, attitudes are assumed to always guide behavior (Fazio & Olson, 2007; Zanna & Rempel, 1988). Results obtained through various studies point to the contrary. In this sense, it was demonstrated that attitudes could be based on any combination of the three components and that often there are inconsistencies between them. Moreover, the attitude-behavior relation is a complex one and the probability that attitudes determine behavior depends on various

factors (Breckler & Wiggins, 1989; Fishbein & Azjen, 1975; Fazio & Olson, 2007; Zanna and Rempel, 1988).

The tripartite model seems to be “abandoned” (Greenwald, 1989), as attitude is currently viewed as “a general evaluative summary of the information derived from these [affective, cognitive, and behavioral] bases” (Fabrigar, MacDonald & Wegener, 2005: 82) and can manifest as affective, cognitive and behavioral responses. Attitudes influence choices and direct actions, having consequences that impact the social world around which attitudes are organized. As a result, “attitude is not simply organized through experience, it organizes experience” (Eiser, 2004: 341).

2.1.2.3. Association model

The association model, which viewed attitudes as object-evaluation associations in memory, was first proposed by Fazio, Chen, McDonel, and Sherman in 1982, and then strongly supported by Fazio (1986, 1989, 1990, 1995, 2001, and 2007).

Attitudes are defined as associations between a specific object and a summary evaluation of the object. The evaluation can be based on affective reactions, on cognitive inferences or on past behaviors and experiences (Fazio, 1986, 1989, 1990). Being evaluative associations, attitudes are represented in memory and they constitute a form of knowledge. Fazio (2007) argues that being a form of evaluation knowledge means that attitudes “exist” in memory, thus they cannot be described as hypothetical.

Initially proposed within the associative network model of memory framework, the model is also consistent with the connectionist models developed later. Thus, attitudes can be described as discrete and symbolic stored units that can be activated, as well as activation patterns generated by learned connections between units, since both perspectives imply that the encounter of an object activates its evaluation, which is a function of past learning (Fazio, 2007).

The model also specifies that associations between the object and its summary evaluation can vary in strength, and, consequently, in their accessibility from memory. Precisely, attitudes are more accessible if the object - evaluation association is stronger:

The strength of an attitude, like any construct based on associative learning, can vary. That is, the strength of the association between the object and the evaluation can vary. It is this associative strength that is postulated to determine the chronic accessibility of the attitude and, hence, the likelihood that the attitude will be activated automatically when the individual encounters the attitude object (Fazio, 1990: 81).

Accessible attitudes are closer connected to behavior and can also influence perception (Fazio, 2001).

Several researchers have argued that attitudes are more than evaluations. In this sense, Chaiken and her collaborators stated that “attitudes are represented in memory not only as mere object-evaluation linkages, but also in a more complex, structural form wherein cognitive, affective and behavioral associations also appear as object-association linkages” (Chaiken, Duckworth, & Darke, 1999: 121). Moreover, attitudes may have a more complex structure that comprises an object-evaluation association and a knowledge structure linked to it (Fabrigar, MacDonald, & Wegener, 2005).

In conclusion, the debate regarding attitude structure and content continues. However, after reviewing the expectancy-value model and the three-component model, it can be observed that the relation between attitudes and the three constructs - affect, cognition, and behavior - is bidirectional, as these can be input as well as output, as seen in figure 13. In other words, a person’s emotions, beliefs and behaviors can create and guide attitudes, as well as be influenced by attitudes (Eagly & Chaiken, 1993; Fazio & Olson, 2007; Zanna & Rempel, 1988).

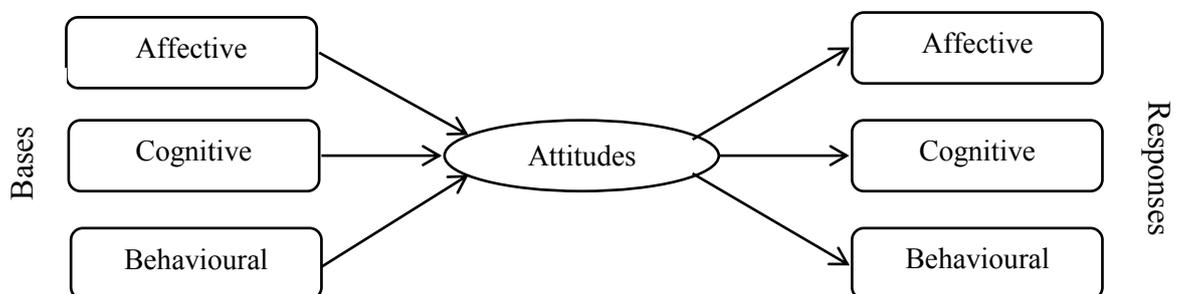


Figure 13. The relationships between attitudes and affect, cognition, and behavior

Additionally, according to the association model, attitudes are developed on the basis of the affective, cognitive and behavioral elements that are summarized in a global evaluation associated to a particular object (Fazio, 1986, 1990).

2.1.3. Attitudes and related concepts

An exploration of the convergence points with other related concepts represents a necessary step in the process of better understanding attitudes. Consequently, this section focuses on the similarities and differences that exist between attitudes and other terms, such as beliefs, values, ideology, and the relationships that may exist between these constructs, always taking into account that all these constructs are dynamic and interconnected.

2.1.3.1. Beliefs

Beliefs are cognitions about “the perceived likelihood that an attribute is associated with an object” (Albarracín, Johnson, Zanna, & Kumkale, 2005: 4). Attitudes were often interpreted as beliefs that associate positive or negative evaluative attributes to objects. Gibbons & Ramirez (2004) considered too difficult to differentiate between attitudes and beliefs and preferred to use one term to cover both. A different view was held by Rokeach (1968), who defined attitude as a system of beliefs and, consequently, placed attitudes at a superordinate structural level.

According to the expectancy - value perspective (Ajzen, 1991; Azjen & Fishbein, 2005; Fishbein & Azjen, 1974), attitudes are products of the attributes contained by the beliefs associated with an object and the evaluations of these attributes. This evaluative aspect captures the main difference between attitudes and beliefs. Furthermore, Edwards (2004) conceptualized attitudes as belief amplified by affect.

Eagly and Chaiken (1993) used the possibility of validation as a criterion to distinguish between the two concepts and argued that while some beliefs can be verified with objective criteria, attitudes are not subjected to an external validation.

A considerable overlap between the two concepts can be found at measurement level. Edwards (1999) drew attention to the shortcomings of some questionnaires that only interrogate respondents about their beliefs and lack the exploratory inquire that would provide more in-depth information about the affective and/or behavioral dimensions.

2.1.3.2. Values

Values were defined as “an enduring belief that a specific mode of conduct or end-state of existence is personally or socially preferable to an opposite or converse mode of conduct or end-state of existence” (Rokeach, 1973: 5).

Olson and Maio (2003) described values as “abstract ideals that people consider to be important guiding principles in their lives” (p. 300) that include affective, cognitive and behavioral components (Maio & Olson, 1998). For the authors the distinction between values and attitudes resides in the importance component of values, because values have a guiding role in life, while attitudes do not carry the implication that the objects are important guiding life principles.

Also, values and attitudes differ in levels of abstraction. In this way, attitudes objects can be concrete (e.g., specific things or persons) or abstract, whereas values focus only on abstract ideals, such as freedom or equality (Maio, Olson, Bernard, & Luke, 2006).

Katz and Stotland (1959) operationalized values as groups of attitudes organized around a central idea. Hence, values seem to be higher-order constructs. Support for this hierarchical network is also provided by Rokeach’s (1973) theory that showed how values could drive attitudes. In addition, another set of theories that describe the value-expressive function of attitudes also emphasized that attitudes serve to express values. Empirical studies showed that by priming a value various relevant attitudes are made accessible, whereas the priming of attitudes does not change the accessibility of related values (Thomsen, Lavine, & Kounios, 1996).

Therefore, values can be described as super-ordinate constructs that can be expressed through attitudes. However, more research is needed regarding how attitudes are derived from values, as little is known about this relationship (Olson & Maio, 2003).

2.1.3.3. Ideologies

Ideologies were defined as groups or configurations of interdependent attitudes and beliefs organized around a dominant theme (Converse, 1964) or as clusters of thematically related values and attitudes (Olson & Maio, 2003). Ideologies normally consist of a broad perspective on life, being “ingrained, unquestioned beliefs about the way the world is” (Wolfram and Schilling-Estes, 2006: 9). Subsequently, ideologies also represent higher-order constructs, which are at a higher level of abstraction than values. Thus, researchers proposed a hierarchical relation according to which ideologies affect values, which shape attitudes (Maio et al., 2006).

Dyers and Abongdia (2010) examined ideologies and attitudes regarding language and extracted a series of differences between the two constructs. Ideologies are usually social, held by groups, which distinguishes them from attitudes, which are mostly individual. Also ideologies are shaped by socio- historical events, whereas attitudes are rooted in individual experience. Moreover, ideologies are long-term and resistant to change, while attitudes can be short-term and long-term and more changeable. The authors also explain that being part of a society that shares particular ideologies influences one’s attitudes, as ideologies represent “an overarching context within which attitudes are formed and played out” (Dyers & Abongdia, 2010: 132). Furthermore, individuals can shape their attitudes by accepting or refusing the dominant ideologies, a process influenced by personal experiences (Dyers, 1997).

Therefore, attitudes can express ideologies. As in the case of values, how attitudes can be derived from ideologies was little documented. Ideologies can serve as a psychological basis or as post-hoc justifications of attitudes. Also, the effects can be direct, when the ideology or value is relevant for a specific attitude, or indirect, through other attitudes (Olson & Maio, 2003).

2.1.3.4. Social identity

Social identity was first defined by Tajfel as “the individual’s knowledge that he belongs to certain social groups together with some emotional and value significance to him of this group membership” (Tajfel, 1972: 292). It represented the central construct of the social identity theory constructed by Tajfel and Turner (1979) that aimed to explain group processes, intergroup relationships, and the social self (Hogg, Terry, & White, 1995).

The social world is assumed to be divided in categories or classes that represent social categorizations. Social identification refers to “the process of locating oneself, or another person, within a system of social categorizations or, as a noun, to any social categorization used by a person to define him- or herself and others” (Turner, 1982:17). The sum of all social identifications defining an individual forms his or her social identity (Turner, 1982).

Examining attitudes from a social identity perspective, Hogg and Smith (2007) conceptualized attitudes as “normative attributes of social groups that define who we are and provide us with an identity in society” (p. 120). Individual attitudes reflect group normative attitudes that articulate intergroup similarities and ingroup – outgroup differences. Attitudes are associated to group memberships, which are internalised in the process of identity construction. By belonging to different groups, an individual acquires attitudes normative of these various groups and thus constructs his or hers attitudinal individuality. In this sense, Sherif (1936) stated that “man’s socialization is revealed mainly in his attitudes formed in relation to the values or norms of his reference group or groups” (p. 203).

Hence, individuals “adopt the prototypic ingroup attitudes as their own” (Wood, 2010: 557). In other words, through self-categorization, an individual’s attitudes are depersonalized so that they can conform to the ingroup prototype, which represents “genuine attitude change” (Hogg & Smith, 2007:96).

Turner (1982) explained attitude change as a process of referent informational influence, according to which attitudes are modified to correspond to the cognitive representation of the normative attitudes. Moreover, attitude change is maximized when group membership is salient, as the vehicle of influence is the individual’s social identification. This occurs

because agreement with the ingroup indicates that the shared attitudes reflect reality and thus strengthens one's subjective certainty (Wood, 2010).

Furthermore, attitudes can be used to categorize other persons, to infer their group membership. A person's group membership can also serve to deduce their attitudes. All this happens because social groups are represented as category prototypes, which are "fuzzy sets of interrelated attributes" (Hogg, Abrams, Otten, & Hinkle, 2004: 253). These attributes include physical traits, clothing and apparel preferences, behaviors, feelings, ways of speaking, and attitudes toward various objects.

Accordingly, "attitudes are windows on identity" (Hogg & Smith, 2007: 89) as they serve to define and to express one's identity, as well as to infer the identities of other individuals with whom one interacts.

2.1.3.5. Motivation

Motivation is concerned with how "behavior gets started, is energized, is sustained, is directed, is stopped and what kind of subjective reaction is present in the organism when all this is going on (Jones, 1955: vii). More precisely, motivation energizes and directs behavior through motives, which represent "goals or end-states toward which people strive" (Eagly & Chaiken, 2005: 753).

Although both are related to behavior, according to Newcomb (1950) attitudes and motives differ in stability and generality, with attitudes being more general and more persistent. Moreover, motives comprise a drive state, which attitudes do not, and are goal specific, while attitudes are object specific (Baker, 1992).

In social psychology the two concepts developed different trajectories, each with its own research tradition, theories and scholars. However, the field of language learning went in the opposite direction, toward unification of these concepts. In this sense, similarities were emphasized and differences discarded to the extent that conceptualizations of attitude and motivation, as well as their relationship became blurred and confused (Ellis, 1985; Baker, 1992).

Assessing the situation, McGuire (1985) claimed that the distinction is necessary only if "the distinguished variables relate differently to third variables of interest" (p. 241). At

the same time, other researchers pleaded that distinguishing between attitude and motivation is highly important, underlining that “to tackle both concepts as if they were one is misguided and turns out to be of very little help” (Chambers, 1999: 26)

Nonetheless, through an infusion of social psychology’s assumptions and findings, it can be argued that attitude and motivation are two separate concepts intricately related. On the one hand, motives can affect attitudinal processes (Eagly & Chaiken, 2005). Motives such as accuracy motivation (Chen & Chaiken, 1999; Fazio, 1990), defence motivation and impression motivation (Chen & Chaiken, 1999) were found to influence information processing and, consequently, attitude formation and change (Eagly & Chaiken, 2005; Wood, 2000), as well as attitude-behavior relations (Fazio, 1990, 2007).

On the other hand, attitudes can be at the origin of motivation emergence. Atkinson and Feather’s (1966) model of motivation underlines the essential role played by attitudes. The model states that a person’s motivation to engage in a behavior depends on her expectation for success and the value placed on that particular behavior. The value given to the behavior stands for the attitude held toward that behavior (Cochran, McCallum, & Bell, 2010).

In a similar manner, several language learning models implied that attitudes are components (Gardner, 1985) or precursors of motivation (Belmechri & Humme, 1998; Dörnyei, 2006; Oxford & Shearin, 1994) and serve as affective support for its maintenance (Gardner & MacIntyre, 1993; Ibarra, Lasagabaster, & Sierra, 2008; Lambert, 1974; Lasagabaster, 2005). Explaining the socio-educational model, Gardner and his collaborators specifically stated that “language attitudes are seen to ‘cause’ motivation” (Gardner, Lalonde, Moorcroft, & Evers, 1987: 42).

To sum up, attitudes and motivation are two distinct constructs that differ in content, structure, stability, generality, and relationship with behavior, but that are intricately interrelated.

In conclusion, aiming to understand better attitudes, in this section we delved into how they relate to other relevant concepts. Attitudes, beliefs, values, ideologies, identities, and

motivations are all subjective constructs, related to an individual's perception of the world.

Although they share some conceptual features, the constructs differ in terms of structure, properties, and functions. What mainly distinguishes attitudes from the other concepts examined is their intrinsic evaluative nature (Mueller, 1986). Also, attitudes, beliefs, motivations, and values are individually held, while ideologies and social identities are common to a social group.

Further, all these constructs are related to each other through intricate bidirectional influences. Focusing on attitudes, we saw that all five constructs investigated could influence attitudes formation and change, although in distinct manners. Thus, beliefs are considered to be more elemental psychological constructs that can serve as components of attitudes, whereas values, ideologies, and social identities represent higher-order structures from which attitudes are derived and organised.

Additionally, attitudes express themselves through beliefs and can influence motivation. Regarding values and ideologies, although some authors postulate a bidirectional influence (Maio et al., 2006), there is little evidence in favor of the power of attitudes to change values or ideologies, as research was focused on the influences from the higher to the lower levels of abstraction.

The next section is dedicated to the relationship between attitudes and behavior, one of the most important and most intensively researched aspects regarding attitudes.

2.1.4. Attitudes and behavior

The assumption that the attitudes and behaviors of an individual are consistent had always been at the core of attitudes interest and research. Intensive research was conducted to see if and how attitudes and behavior are related and what factors influence their relationships. A summary of the most relevant findings is presented in this chapter.

2.1.4.1. The attitude-behavior relationship

Behavior is usually defined as “the overt action of an individual” (Albarracin et al., 2005: 3). The relationship between attitudes and behavior represents one of the greatest controversies of the field. For many researchers the attitude-behavior relation was that important that they made guiding behavior a defining aspect of the concept of attitudes (Allport, 1935; Campbell, 1963; Sarnoff, 1970; Williams, 1974; Oppenheim, 1982; Ajzen, 1988; Johnson & Boynton, 2010). Attitudes were assumed to be causally linked to behavior, as they were “always seen as precursors of behavior, as determinants of how a person will actually behave in his daily affairs” (Cohen, 1964: 138).

The claim of attitudes’ antecedence to behavior was challenged by Wicker (1969) who, after reviewing 42 studies and finding few correlations around .30 and some close to zero, deemed the attitude-behavior relation improbable. He even went so far as to doubt the existence of attitudes, reasoning that “the review provides little evidence to support the postulated existence of stable, underlying attitudes within the individual which influence both his verbal expressions and his actions” (Wicker, 1969: 75).

Fishbein and Ajzen (1974) explained the relative low correlations obtained as consequences of using different level of specificity in measuring attitudes and behaviors. Many studies employed a single highly specific behavioral measure and related it to a general attitude measure. For instance, attitude toward foreign languages, attitude toward French and attitude toward speaking French in the classroom have different levels of specificity. Relating a specific behavior such as spending a holiday in France or watching a movie in French to the more general attitude toward French is bound to lead to disappointing results. The authors showed that aggregating behaviors across situations and forms of action to obtain a general measure improved the attitude-behavior

correspondence. Kraus' (1995) meta-analysis confirmed that correlations between attitudes and behaviors measured at the same level of specificity are higher. Therefore, attitudes and behavior have to be observed at comparable level of specificity (Eagly, 1992; Eagly & Chaiken, 1993; Johnson & Boynton, 2010; Fishbein & Azjen, 1974).

Furthermore, according to the principle of compatibility (or the correspondence principle), in order to best predict behavior, the measures of attitudes have to correspond on the four core elements of a behavior: a) an action (e.g., to enrol), b) an object toward which the action is directed (e.g., at a foreign language course); c) a setting (e.g., at an educational institution) and d) a time (e.g., during the next year) (Ajzen & Fishbein, 1977, 2005; Jaccard & Blanton, 2005).

It was also found that for complex behaviors, attitude's predictive power decreases (Johnson & Boynton, 2010). The predictive power of attitudes can further be affected by the possible presence of multiple attitude objects that are salient (Pratkanis & Greenwald, 1989).

The distinction between the two types of attitude objects, behaviors and targets (e.g., concrete objects, persons, abstract ideas, etc.) are also relevant for the attitude-behavior relationship (Fishbein & Azjen, 1974; Crano et al, 2010). Accordingly, two schools of thought can be identified: one based on the expectancy-value approach that works mostly with attitudes toward behaviors, and another one that respects the traditional approach indicated by Allport and aims to predict behavior from the more general attitudes toward targets (Eagly, 1992).

The numerous studies aimed at capturing the intricacies of the attitude-behavior relationship discovered that the relationship is moderated by a series of variables. The degree to which attitudes predict behavior depends on properties of attitudes, such as accessibility (Kraus, 1995; Cooke & Sheeran, 2004; Fazio, 1989, 1990; Glasman & Albarracín, 2006), stability (Ajzen, 1996; Kraus, 1995; Cooke & Sheeran, 2004; Glasman & Albarracín, 2006), ambivalence, certainty, affective-cognitive consistency (Kraus, 1995; Cooke & Sheeran, 2004), or being based on direct experience as opposed to indirect experience (Kraus, 1995; Cooke & Sheeran, 2004, Fazio, 1986).

In a meta-analysis of attitudes and behavior, Shrigley (1990) found evidence indicating that attitude preceded behavior, as well as that behavior preceded attitude, concluding that

the two reciprocally influence each other. Therefore, attitudes and behavior might be in a relationship of reciprocal causation, being both cause and effect of each other (Baker, 1992; Eagly, 1993; Heining–Boynton & Haitema, 2007; Kim & Hunter, 1993a, 1993b; Olson & Stone, 2005).

To explore further the relationship between attitudes and behavior, in the next section we review some models that explain the influence of attitudes on behavior, followed by the models that explain the influence of behavior on attitudes.

2.1.4.2. Models of the attitudes –behavior relationship

The attitude-behavior relationship has intrigued scholars and ignited extensive research. As evidence gathered, it became clear that attitudes and behavior are in a bidirectional causal relation.

On the one side, researchers investigated how attitudes guide behavior. Fishbein and Ajzen (1975) proposed *the theory of reasoned action*, which was later improved as *the theory of planned behavior*. They described a consciously deliberative process where the attitude-behavior relationship was completely mediated by intentions.

Intentions are assumed to “capture the motivational factors that influence a behavior; they are indications of how hard people are willing to try, of how much of an effort they are planning to exert, in order to perform the behavior” (Ajzen, 1991: 182). Intentions are explained by attitude toward behavior, which is defined according to the expectancy-value model, as the product of beliefs about consequences of the behavior and evaluations of those consequences. The other predictor, subjective norm, refers to “the perceived social pressure to perform or not to perform the behavior” (Ajzen, 1991: 189). The predictor added in the theory of planned behavior, perceived behavioral control reflects the perceived ease or difficulty of performing the behavior. Finally, these three predictors are functions of behavioral, normative, and control beliefs, which can be influenced by a wide range of background factors (see figure 14).

Heavily criticized for being too rational and having little explicative power regarding spontaneous actions (Johnson & Boynton, 2010; Eagly, 1992; Eagly & Chaiken, 1993)

the TRA and TPB were challenged by subsequent models that tried to account for spontaneous behaviors by incorporating automatic processes.

Thus, Fazio and colleagues (1986) proposed *the attitude-to-behavior process model*, which described a spontaneous process, according to which automatically activated attitudes influenced the perceptions of an object and the subsequent behavior.

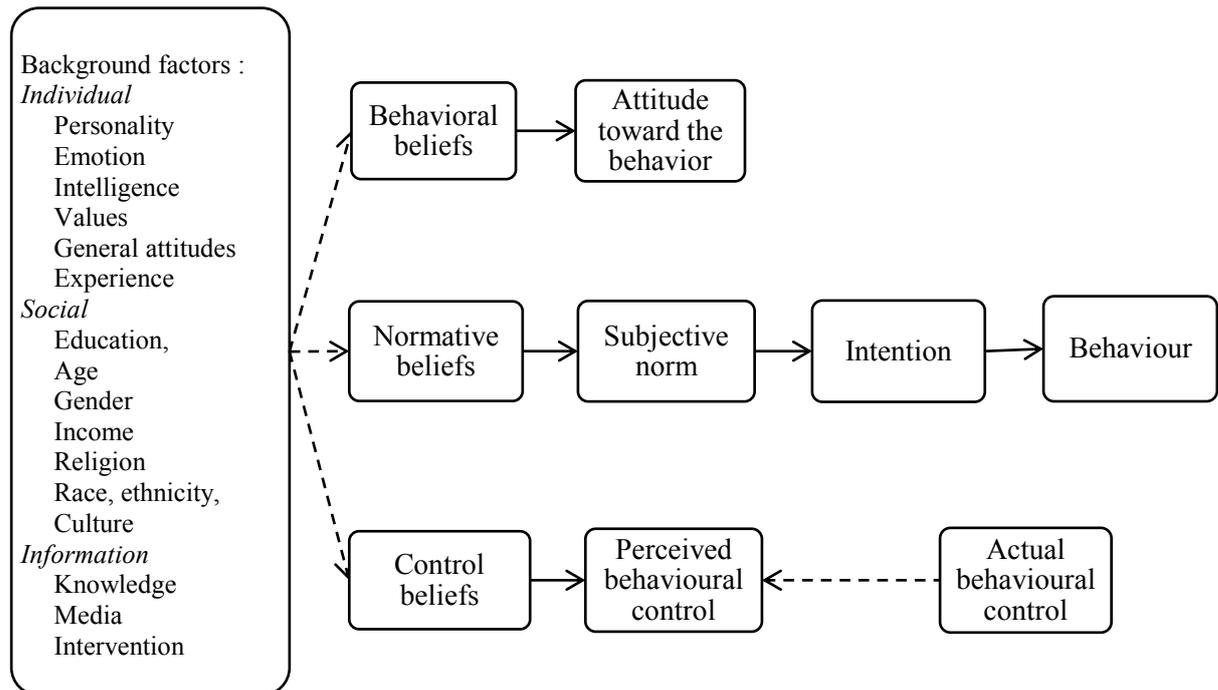


Figure 14. The theories of reasoned action and planned behavior (adapted from Azjen & Fishbein, 2005).

Heavily criticized for being too rational and having little explicative power regarding spontaneous actions (Johnson & Boynton, 2010; Eagly, 1992; Eagly & Chaiken, 1993) the TRA and TPB were challenged by subsequent models that tried to account for spontaneous behaviors by incorporating automatic processes.

Thus, Fazio and colleagues (1986) proposed *the attitude-to-behavior process model*, which described a spontaneous process, according to which automatically activated attitudes influenced the perceptions of an object and the subsequent behavior.

According to the model, behavior is “a function of the individual’s perceptions in [an] immediate situation” (Fazio & Towles-Schwen, 1999: 98). The perceptions involved in defining the event are guided and influenced by the individual’s attitudes toward the attitude object in the immediate situation. In other words, attitudes serve as a filter through which the objects, and implicitly, the situations are perceived, as represented in figure 15 (Fazio, 1990, Fazio & Roskos-Ewoldsen, 2005).

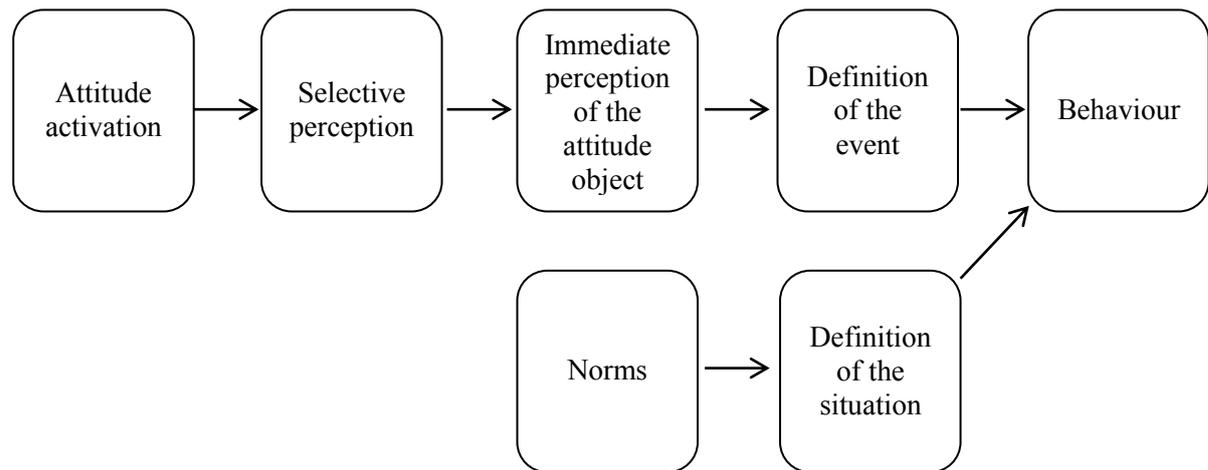


Figure 15. The attitude-to-behavior process model (adapted from Fazio, 1986).

Nevertheless, attitudes can guide behavior through both spontaneous and deliberative processes, as *the MODE model* (Fazio, 1986, 1990) showed by integrating the previous theories in a single model, according to which motivation and opportunity determine if an individual will engage in a deliberative or automatic process.

The model is based on the assumption that, since the deliberative process is effortful, individuals need to be motivated to carry out the required cognitive work, which happens when the potential costs of the behavior are high. The deliberative process also requires opportunity, which refers especially to the time and resources needed (Fazio, 1990; Fazio & Roskos-Ewoldsen, 2005). Situations where a quick behavioral response is demanded or where competitive cognitive tasks demands impede the deliberation are representative examples of instances in which, despite being motivated to do so, an individual can not engage in a reasoning process and has no other alternative than to resort to the spontaneous process described by the attitude-to-behavior mode (Fazio, 1986, 1990; Fazio & Towles-Schwen, 1999).

On the other side, behaviors have been found to influence attitudes. *Biased scanning* proposed that performing a coerced or voluntary counter-attitudinal behavior could change attitudes through generation and consideration of counter-attitudinal arguments (Janis & King, 1954).

Festinger's (1962) *dissonance theory* showed that, when performing by free choice a behavior inconsistent with one's attitudes, the individual will tend to realign his attitudes with the behavior. At the core of this theory is the concept of dissonance that captures the existence of inconsistencies between beliefs, attitudes, values, and behaviors or between the current behavior and cultural norms or past experience (Olson & Stone, 2005). Festinger defined dissonance explaining that "two elements are in a dissonant relation if, considering these two alone, the obverse of one element would follow from the other. To state it a bit more formally, x and y are dissonant if not-x follows y" (Festinger, 1962: 13).

Dissonance generates psychological discomfort that motivates the individual to reduce it. The reduction of dissonance can be achieved by changing the behavior, other relevant cognitions, such as attitudes regarding the behavioral context, or by adding cognitive elements. Since behavior is hard to deny, if no other external justifications (e.g., incentives, coercion) are available, individuals will tend to resolve their dissonances by changing their attitudes.

Among those that challenged the dissonance theory was Bem (1967, 1972), who proposed as an alternative *the self-perception theory*. Constructed on the assumption that self-perception mirrors interpersonal perception, the theory states that individuals make inferences about their own attitudes based on their behavior in a similar way to how observers infer others attitudes from their behaviors.

In *an integrative model*, Fazio, Zanna, and Cooper (1977) suggested that dissonance theory explains the influence of attitude-incongruent behaviors, while the self-perception theory captures the influence of attitude-congruent behaviors on attitudes.

Therefore, behavior influences attitudes and attitudes influence behavior. So far, the two directions of the attitude-behavior relationship were studied independently. More research is needed to understand this reciprocal interdependence. A first step in this direction was taken by Holland, Verplanken, and Van Knippenberg (2002) who proposed that the

strength of attitudes moderated this relationship, so that strong attitudes guide behavior and weak attitudes follow behavior.

Nonetheless, in order to examine the relationship between attitudes and behavior, as well as the other related concepts, it is necessary to be able to measure these constructs. Therefore, next chapter presents how attitudes can be measured directly or indirectly.

2.1.5. Measurement

Being a hypothetical construct, attitudes cannot be measured directly; they have to be inferred based on some indicators. Hence, debates were sparked concerning the inherent issues of measuring attitudes.

Thurstone pioneered attitude measurement by showing that, despite their complexity, attitudes can be measured:

An attitude is a complex affair which cannot be wholly described by any single numerical index. For the problem of measurement this statement is analogous to the observation that an ordinary table is a complex affair which cannot be wholly described by any single numerical index. So is a man such a complexity which cannot be wholly represented by a single index. Nevertheless we do not hesitate to say that we measure the table (1931: 255).

What he proposed to measure was the “potential action toward the object with regard only to the question whether the potential action will be favorable or unfavorable toward the object” (Thurstone, 1931: 255). In this way, to respond to the necessity of measuring attitudes, their conceptualization was narrowed to evaluative tendencies toward a specific attitude object (Krosnick, Judd, & Wittenbrink, 2005), a very similar definition to the one proposed by Eagly & Chaiken (1992).

Several methods of measuring attitudes were proposed, each with its advantages and limits. These are usually grouped in two categories: direct and indirect methods, depending on respondents’ awareness of what is measured through their answers.

2.1.5.1. Direct measurement of attitudes

Generally, direct methods consist of self – reports, where participants are asked to describe their attitudes, which can be further classified as quantitative or qualitative.

2.1.5.1.1. Quantitative methods

The quantitative approach has dominated attitude research (Krosnick, Judd, & Wittenbrink, 2005; Liebscher & O’Dailey-Cain, 2009), as various quantitative techniques were developed to capture individuals’ attitudes.

2.1.5.1.1.1. Thurstone’s equal appearing intervals method

One of the pioneers of attitude measurement, Thurstone (1928) devised a relatively complex method that comprised seven steps of preparation. The first step involved the generation or gathering of a high number (over 100) of statements about the attitude objects. During the next step, judges (around 300) had to place each statement into one of 11 available categories. The categories were placed at equal distances on an axis going from unfavorable to favorable. For each statement, the mean and variance were computed using the category where it was placed and the number of judges that placed it there. These indices were then used to select two statements for each category. Afterwards, the 22 statements could be presented to a person who had to check the ones with which they agreed, indicating in this way their position on the favorable – unfavorable continuum.

This technique was precise and had high construct and content validity, but was mainly limited by the resource and time-consuming process of construction.

2.1.5.1.1.2. Likert’s method of summated ratings

Likert proposed an easier to build method of measuring attitudes (Krosnick et al., 2005). First, a series of around one hundred statements expressing favorability or unfavorability toward the attitude object were constructed. Following, participants used five response options, from ‘strongly disagree’ to ‘strongly agree’ to rate each statement. The number of response options could vary, depending of the researcher’s aims and choices. Some preferred an odd number of response options, which gives respondents the possibility to

give a neutral answer, while others argued for an even number that would force participants to place themselves on one side or the other of the scale.

To select the most adequate statements, item-to-total correlations were used. In the end, 20 statements were chosen to form the instrument. Subsequently, participants rated their degree of agreement with each statement and a sum of these ratings was computed to find out the total score.

Another form of direct measurement consists of dichotomous items, usually the two options of answering being 'yes/no'. It has the advantage of being more clear and easy to answer (Heining-Boynton & Haitema, 2007).

Despite its inherent limitations, such as subjectivity and lack of item weighing, this method established itself as one of the most popular (Oppenheim, 2000).

2.1.5.1.1.3. Osgood, Suci and Tannenbaum's Semantic differential

The semantic differential method, developed by Osgood, Suci and Tannenbaum (1957) consists of a set of pairs of adjectives, such as good – bad, pleasant – unpleasant, valuable – worthless, etc. These antonyms were placed at the ends of a 7-point scale. Participants were asked to evaluate an attitude object by marking a point on the rating scale. Initially, the authors provided labels for each point. For instance, the pair good – bad, could be detailed as 'extremely good, quite good, slightly good, neither good nor bad, slightly bad, quite bad, extremely bad'. Later, the technique was frequently used without explaining the meaning of all points, the scale containing only the anchors on the ends. The points were scored either from 1 to 7, or from -3 to +3 and the total score was the average of ratings.

Due to its simplicity of construction and straightforward application, the semantic differential quickly became one of the most widely used techniques. It implies a bipolar view of attitudes, allowing thus for a more nuanced assessment of the attitude.

As all direct quantitative measures, the three methods described are subjected to measurement errors and distortions that can be caused by social desirability response bias (Schlenker & Weigold, 1989) and self-deception strategies.

Although time consuming, these methods have the great advantage of “being built using empirical evidence of convergence of interpretations across people and of correlational validity of the statements” (Krosnick et al., 2005: 33). In addition, aggregating many items to obtain the final score decreases random measurement error (Allison, 1975).

Recently, for reasons of time and resources economy, researchers preferred to use fewer items and to skip the effortful stages of construction and pretesting of items.

2.1.5.1.2. Qualitative methods

Although attitude research has traditionally used quantitative methods, an increasing number of researchers have been supporting the use of interviews to collect more profound data that quantitative methods cannot provide (Lapresta et al., 2009, 2010; Liebscher & O’Dailey-Cain, 2009; Trenchs-Parera & Newman, 2009; Zhang & Slaughter-Defoe, 2009).

The data collected through interviews are generally analysed through a discourse-based approach. Liebscher & O’Dailey-Cain (2009) presented the three main types of discourse-based approaches of attitude analysis. The content-based approach analyses attitudes that were directly expressed within the discourse. Categories are used to search for overall patterns in attitude content. This approach is frequently used in combination with quantitative methods, seeing that it provides in-depth information to complement and to better interpret the quantitative data.

Turn-internal semantic and pragmatic approaches focus on the analysis of linguistic features referring to the structure and function of particular words, and other linguistic elements. This analysis provides an extra layer of information. Further, interactional approaches go even into more detail as it takes into consideration the interactive features, how the participants respond to each other.

One of the main advantages of using interviews for data gathering is that respondents are allowed to give their own answers, as they are not constricted by a pre-established set of alternatives (Oppenheim, 2000). Besides the more elaborate and spontaneous answers, another advantage resides in the personal contact established between interviewer and

respondent, which enables the former to assess and react accordingly to the mood of the respondents, their non-verbal and para-verbal cues (Agheyisi and Fishman, 1970).

However, there are also some disadvantages of interviews, such as the degree of representativity and the high costs in terms of economic, time, and human resources needed to collect and interpret the data. Subjectivity is another issue, but one that can be solved with the help of clearly established instructions and guidelines and by combining multiple interviewers or analysts.

2.5.1.2. Indirect measures

To counteract people's tendencies of presenting themselves to others through distorted images, scholars searched for new modalities of measuring attitudes, so that respondents would not be aware of what was actually assessed.

2.5.1.2.1. Behavioral observation

In this sense, Wells and Petty (1980) used behavioral manifestations to infer attitudes. They recorded the movements participants made while listening to an attitudinal message. More approving head movements, such as nodding were observed during pro-attitudinal messages than in the case of counter-attitudinal messages.

Other studies used seating distance to measure attitude toward members of a specific group, assuming that the farther away they sit the more negative were the attitudes (Krosnick et al., 2005). Similarly, helping behavior was used to infer racial attitudes (Gaertner & Dovidio, 1977).

Nonetheless, one could argue that these indicators are actually responses determined by attitudes and not attitudinal manifestations. Even more, behavior is influenced by a host of variables (Jaccard & Blanton, 2005), which makes behavioral observation measures extremely noisy.

2.5.1.2.2 Implicit measures

The discovery of the possibility to know and understand mental processes analyzing the time required to achieve a certain mental tasks created new opportunities for research and for indirect measures of psychological constructs (Lane, Banaji, Nosek, & Greenwald, 2007). Subsequently, various techniques of measuring response times were developed based on the assumption that the speed of taking a decision and the number of errors made in the process are related to the difficulty of the task. More precise, the easier the task, the faster a decision is taken and fewer errors are made.

Priming measures and response competition based measures were developed around the response latency as a variable estimating the nature of mental operations.

2.5.1.2.2.1. Priming measures

The evaluative priming procedure, introduced by Fazio and his associates (Fazio, 1986; Fazio et al., 1986) focused on the automatic activation of attitudes. A prime consisting in the attitude object was presented, which was supposed to activate any associated evaluations. Following, participants received a target word – an evaluative adjective, whose connotation as good or bad they had to rate by pressing a key as fast as possible. This ‘affective priming effect’ was observed in many subsequent studies that employed a variety of priming and target stimuli, as well as tasks (Fazio, 2001).

2.5.1.2.2.2. Response competition measures

The Implicit Association Test (IAT) estimates the strength of association between two concepts. Thus, attitudes are operationalized as object – attribute associations. Two sets of targets had to be categorized on two dimensions of judgment. Usually, there was a set of objects that had to be placed in their corresponding group and a set of attributes that had to be categorized by valence. The two judgment tasks are combined, the targets being presented randomly. The IAT measured the strength of associations between mental constructs or categories by using the time required for placing items in each category and the number of errors made. The basic assumption was that it was easier to achieve the same behavioral response (pressing a key) for concepts strongly associated than for weak associations (Lane et al., 2007).

Although a promising technique, IAT was seldom used in language attitudes research. An example of IAT employment in language attitude research can be found in the study carried out by Ogunnaike Dunham, and Banaji (2010) to verify if attitudes were influenced by the language in which they were expressed. They measured the attitudes held by the same persons, toward the same objects, in the same time interval, changing only the language of expression. Attitudes toward Arabic and French names were assessed in both Arabic and French in Morocco and attitudes toward English and Spanish names were measured in English and Spanish in USA. In both contexts, the results showed that attitudes toward the social group were more positive when assessed in the language of the group (e.g., more favorable attitudes toward Spanish names were recorded when the test was in Spanish than when it was in English). Thus, the language in which the assessment was carried out influenced implicit attitudes. According to the authors, these findings indicated that “favorable attitudes toward the linguistic ingroup are embedded in the language” (Ogunnaike et al., 2010: 1002).

2.5.1.2.3. Matched-guise technique

In language attitude research, indirect measurement is usually equated with the matched-guise technique developed by Lambert and his associates (1960) to investigate language attitudes in Canada. Their aim was to investigate how English and French speakers see each other. The main assumption was that “speech style triggers certain social categorization that will lead to a set of group-related trait-inferences” (Giles & Billings, 2004: 189). Hence, listeners infer that the speaker has particular traits of personality depending on the language variety used.

Usually, the same person produced two or more recordings of the same text in the languages or language varieties studied. These were the ‘guises’ and were supposed to pass as pertaining to different speakers. Substantial attention was given to the control of other variables, such as speech rate, pitch, voice quality, etc. By controlling all variables except language variety, any evaluation was prompted by the language cues. Judges listened to the recordings and evaluated the ‘speakers’ using a series of semantic scales.

Semantic differential scales (Osgood et al., 1957) were normally employed, the traits being presented as pairs of antonym adjectives (e.g., intelligent-stupid, amusing-boring).

Two clusters of traits were extracted: status, which includes intelligence, education, competence, social class, and solidarity, which comprises traits like sociability, kindness, social attractiveness, etc. These two categories of characteristics were heavily used, even if with variations of the traits contained and of the categories' labels. Zahn and Hopper (1985) used factor analysis to uncover a third category: dynamism, which comprises traits as confidence, aggressiveness and enthusiasm.

The technique was critiqued for being too artificial (Lee, 1971) and for the choice of traits (Carranza & Ryan, 1975). Furthermore, Agheyisi and Fishman (1970) drew attention to the possible influence of the congruity or incongruity between topic, speaker, and language variety.

To conclude, a wide range of measurement techniques is available to researchers, each with its advantages and limitations. Thus, depending on the objectives of the research project and the resources available a combination of quantitative and qualitative approaches will help to gather more indepth data. Due to their capacity of quickly gathering large amounts of data and of achieving representativity, quantitative methods continue to dominate the field of attitude research.

2.2. LANGUAGE ATTITUDES

Drawing from the previous chapter, a definition of language attitudes is offered in the next one. Further, language attitudes literature is reviewed in two sections with different approaches. The first part attempts to identify the main research paradigms and then use them to organize various language attitudes studies. The second part presents the studies conducted in the multilingual context of Spain and Catalonia, focusing on the significantly influential variables examined in these studies.

2.2.1. Defining language attitudes

People pondered on the role and meaning of language since the beginnings of civilizations (Huguet & Madariaga, 2005). Language permeates all aspects of our lives and, thus, “a definition of language is always, implicitly or explicitly, a definition of human beings in the world” (Williams, 1977: 21).

Language represents primarily a “method of communicating ideas, emotions and desires by means of voluntarily produced symbols” (Sapir, 1921: 4). However, language transmits more than just the intended information; it also carries social meanings and it contains social markers of identity, group, and social class membership (Cargile, Giles, Ryan, & Bradac, 1994; Garrett, 2001, 2010; Grosjean, 1982; Huguet & Madariaga, 2005). Language is a “powerful social force” (Cargile et al., 1994: 211), and, consequently, language attitudes have repercussions at societal, institutional, interpersonal and individual levels, influencing perception and decision-making (Giles & Billings, 2004).

Garrett (2010) defined language attitudes based on the general attitude definition provided by Sarnoff, who stated that an attitude is “a disposition to react favorably or unfavorably to a class of objects” (Sarnoff, 1970: 279). He concluded that “an attitude is an evaluative orientation to a social object of some sort, whether it is a language, or a new government policy, etc.” (Garrett, 2010: 20). In other words, language attitudes are distinguished from other attitudes through their object (Fasold, 1984).

Therefore, language can be considered “an object being seen as favorable or unfavorable” (Baker, 1992: 11). Subsequently, language attitudes reflect tendencies to evaluate languages favorably or unfavorably.

Moreno (1998) suggested a wider definition of language attitudes:

Language attitude is a manifestation of the social attitude of the individuals, distinguished by focus and specific reference to both language and its use in society; and when discussing ‘language’ any type of linguistic variety is included (p. 179).

According to this definition, language attitudes do not strictly refer to general languages, but include all linguistic variety. In addition, attitudes toward language use also form part of the concept.

Due to the strong association between language and community membership, the conceptualization of language attitudes is often extended to include attitudes toward speakers (González & Hugué, 2002; Lasagabaster, 2003). In this sense, Richard, Platt, and Platt (1992) defined language attitudes as:

the attitudes which speakers of different languages or language varieties have towards each other's languages or to their own language. Expressions of positive or negative feelings towards a language may reflect impressions of linguistic difficulty or simplicity, ease or difficulty of learning, degree of importance, elegance, social status, etc. Attitudes towards a language may also show what people feel about the speakers of that language (Richard, Platt, & Platt, 1992: 199).

The definition of language attitudes was further stretched to integrate various behaviors and other related aspects (Fasold, 1984), due to the relevance language attitudes have for “the definition of speech communities, to the explanation of linguistic change, language maintenance and language shift, and to applied concerns in the fields of intergroup communication, language planning and education” (van Hout & Knops, 1988: 1).

In order to tackle this wide definition of language attitudes it is necessary to consider the language attitudes objects. Baker (1992) underlined that the term “language attitude” has been used as an “umbrella concept” that has stood for:

- Attitude toward language;
- Attitude toward language variety or dialect;
- Attitude toward speakers of a specific language or variety;
- Attitude toward language learning;
- Attitude toward the learning situation;
- Attitude toward language related behaviors, such as language use, language maintenance, planning behaviors, etc.

Therefore, different language related objects were explored as representatives of language attitudes. However, there could be various possible relations among the attitudes toward these diverse objects. These attitudes might be identical, strongly correlated, might overlap to a certain extent or might not even be associated. There could be cases when a favorable attitude toward a language coexists with an unfavorable attitude toward its speakers or vice-versa. One can positively value a language, but hold a negative attitude toward learning it, or, on the contrary, one may hold a negative attitude toward a language, but consider that learning that language is important (Edwards, 1985). Even more, the attitudes toward different objects could influence each other. For instance, “attitude towards a language might arise from, or be influenced by, attitude towards the people who spoke that language” (Sharp et al., 1973: 37).

Presuming that the attitudes toward different language objects represent facets of the same construct could lead to loss of data. By equating attitudes toward different objects, the image of attitudinal patterns in a certain context results poorer in details and diminished in quality. Instead of obtaining a high-resolution picture of the possible intricate interrelations among attitudes toward various language related objects, as well as in relation with other variables, the result ends up being only a black and white schema of language attitudes.

To argue this position and to support the relevance of the differences between language attitude objects we would like to remind the reader about the distinction between attitude toward a target and attitude toward behavior, significant especially with regard to the attitude-behavior relationship (Crano et al., 2010; Eagly & Chaiken, 1993; Fishbein & Ajzen, 1974). Accordingly, language related objects can be grouped in

targets, which include languages, language varieties, speakers, and learning situations, for example, and behaviors, which comprise language learning, use, and maintenance.

Further, another criterion that differentiates attitudes objects is specificity (Eagly, 1992; Eagly & Chaiken, 1993; Gardner, 1985; Krauss, 1995; Johnson & Boynton, 2010; Fishbein & Azjen, 1974). Language attitudes can vary along this dimension of specificity from more general attitudes (e.g., attitudes toward foreign languages, attitudes toward English, attitudes toward Catalan) to specific attitudes (e.g., attitudes toward learning English, attitudes toward the class of Catalan, attitudes toward the teacher of French). When examining attitudes' role in the language learning process, relatively specific attitudes toward behavior, as attitudes toward learning a particular language (e.g., attitudes toward learning English), will probably have a different predictive power and will relate in a different manner than more general attitudes toward a target, such as attitudes toward a specific language in general (e.g., attitudes toward English).

Additionally, Gardner (1985) distinguished between educational and social language attitudes. Educational attitudes encompass attitudes regarding the educational aspects of second language acquisition, such as attitudes toward learning the language, the teacher, and the course. Social attitudes are focused on the cultural implications of language acquisition and include attitudes toward social groups, ethnocentrism, and anomie.

Taking into account that language attitudes are another type of attitudes distinguished by their objects (Baker, 1992; Fasold, 1984; Garrett, 2010) and that the differences between these objects are important to understand more complex processes, as language acquisition or social integration, we consider language attitudes to be a supra-ordinate category that encompasses all language related attitudes. Furthermore, language attitudes are hypothetical constructs of evaluative nature that are learnt through experience. They have a certain degree of stability, which allows their identification, but can also change.

Within this framework, taking into account the characteristics previously described and based on Eagly and Chaiken's (1993) definition, we describe attitudes toward language as psychological tendencies expressed by evaluating favorably or unfavorably a particular language.

2.2.2. Language attitudes change

One of the main assumptions about attitudes regards their ability to change, which is reflected by the fact that one of the most active areas of research is the one dedicated to attitude change. The interest for attitude change is likely explained by the role it can play in altering behavior.

Being intrinsically connected with language decay, maintenance, or restoration, language attitude change has often been implied implicitly or explicitly by language policies. Examples of language attitude change at societal level can be found in Wales (Baker, 1992) and in Catalonia (Woolard & Gahng, 1990), as in both cases the attitudes toward the minority languages as languages of instrumental value and teaching mediums have successfully improved.

At individual level, language attitudes can change as a result of individual needs and motives and social situations. Drawing from social psychological attitude theory, language attitude change can be influenced by motivation, values, ideologies, identities, and behaviors. Significant events, such as violence, mass protests, guerrilla activity, government imposed policies, can also lead to attitude change (Baker, 1992). Further, attitude properties, such as strength and accessibility, moderate attitude change and its magnitude.

In situations of language contact, where different speech communities coexist, the relationships between social groups play a vital role in language attitude change. Baker (1992) described several conditions that may foster language attitude change. First, community integration may promote attitude change, especially for those who plan to settle in the respective community.

Second, contact between communities, accomplished through common goals, cultural activities, sports, religion, hobbies and interests, also enhances the chances of language attitude change. This change is more likely the closer the relationships between groups are.

Additionally, a marketing of the language, encouraging individuals outside the speech community to use the language, instead of guarding it as special attribute of the group

may be useful in promoting attitude change, encouraging individuals outside the speech community to use.

Further, a supportive political, cultural, economic environment that provides the necessary conditions for contact and intimacy between groups to occur may also help change language attitudes.

Finally yet importantly, change is more likely to occur when felt to be voluntary, achieved through informing and consulting.

After establishing the definition and characteristics of language attitudes, we proceed with a review of various language attitudes studies.

2.2.3. Language attitudes studies

A quick review of the literature published on language attitudes reveals the aforementioned variety of language related attitude objects that are studied under the label ‘language attitudes’. This chapter is dedicated to studies regarding language attitudes and has a double objective. On the one side, we argue that the inherent differences existing between the language related attitudes investigated under the umbrella term ‘language attitudes’ have to be acknowledged and taken into consideration. With this purpose, we propose a four-category classification of language attitudes studies, using attitude objects and research paradigms as criteria of categorization. On the other side, we present the antecedents of the current research, looking at the previous studies carried out in the multilingual contexts of Spain and Catalonia and focusing on the relevant variables.

2.2.3.1. Paradigms in language attitudes research

In a review of language attitudes studies, Agheyisi and Fishman (1970) identified three categories that encompassed language attitude studies: a) studies concerning language-oriented attitudes, focused on their evaluation; b) studies interested in the social significance of languages or language varieties that deal with group stereotyped impressions; c) studies dealing with language related behaviors, such as language learning, choice, use, reinforcement and planning.

These research lines, emergent in the 1970s, have grown in the last decades. The area of language learning enjoyed an impressive development becoming one of the main areas of language attitudes research. Using Agheyisi and Fishman’s (1970) classification as a starting point and looking at the current research tendencies, we identified four main categories of studies:

- 1) *The language evaluation paradigm* focuses on attitudes toward language. The most representative studies are the ones conducted in Wales by Sharp and associates (1973) and Baker (1992). Methodologically, direct measurement through a questionnaire is normally employed.
- 2) *The speaker evaluation paradigm* originated also in Canada, with the studies conducted by Lambert and his associates (1960) and is concerned with attitudes toward

speakers of a particular language or language variety. It has its own characteristic technique of indirect measurement – the matched-guise technique.

3) *The language learning paradigm* focuses on language learning and draws heavily from the works of Gardner (1985) in Canada. Generally, attitudes toward language learning, toward the learning situation and toward the language community are explored in relation with motivation and a questionnaire is used for their measurement.

4) *Research concerning attitudes toward language related behaviors other than language learning* refers to the several studies exploring attitudes toward language related behaviors like language use and language maintenance⁴. This line of research is rather heterogeneous in terms of objectives and methods.

With the aim of grasping the situation of contemporary research carried out in the field of language attitudes, we present in table 8 a series of studies organized according to the proposed categorization. As the purpose of this endeavour was to obtain an estimative image and not to exhaustively review all works published about the topic, besides the seminal works, we generally presented studies published in the last decade.

The parameters included serve to provide a general outline of the studies discussed. For this purpose, the table contains:

- *Article identification data*. Each study is identified through its authors and year of publication.
- *Attitude objects*. The attitude objects examined in each study were usually identified directly through the label or definition provided by the authors. In the few cases when such identification data was missing, the objects were derived on the basis of their operationalization and of the items used for their measurement (e.g., if respondents were asked how much they like English and if they think English is a beautiful language it was inferred that the object in question is language. Similarly, ratings of the teacher and course implied that attitudes toward the learning situation were assessed). As a result, the following language related

⁴ There are other language related attitudes, such as attitudes toward codeswitching (Edwards, 2004; Heller, 1995) that were not included in our discussion. Their omission is due to the fact that these attitudes are not usually included under the language attitudes ‘umbrella term’, being treated as a separate category. What differentiates codeswitching, which refers to ‘language alternation patterns’ (Kells, 2002: 13), from other language related attitudes resides in its reference to two languages instead of one, since codeswitching captures the mixing of two languages.

objects were found: language in general, language variety, accent, language learning, learning situation, speakers, language use, and language maintenance.

- *Languages investigated.* Besides their names, the status of each language in the respective context is indicated. Thus, it is specified if a language is official (O), a minority (mL) or foreign language (FL) in the respective territory or if, for the sample of participants, the language in cause is their mother tongue or their first or second language. We preferred to keep the label of language status or position as they were assigned by the authors.
- *Context.* The state and/or region are reported to summarize the geographical, linguistic, and political context in which the research was carried out.
- *Participants.* The categories: elementary education students, secondary education students, undergraduate students, and adults were used to describe participants. The origin of the participants is also mentioned when they are immigrants or of immigrant descend.
- *Measurement.* The methods of attitude measurement, such as questionnaire, matched-guise technique, interview, are reported to see if and how some techniques tend to be associated to particular attitude objects.
- *Selected results.* Some of the most relevant results obtained are also summarized.

Before presenting in more detail each of the four categories of language attitudes studies, we would like to underline some general observations regarding the tendencies of current research in the field of language attitudes.

First, most studies were conducted in multilingual territories, frequently with two or more officially recognized languages, as is the case of Catalonia (Bernaus & Gardner, 2008; Bernaus et al., 2004, 2007; Huguet, Janés, & Chireac, 2008; Newman et al., 2008) , Basque Country (Cenoz & Valencia, 2008; Lasagabaster, 2003; Lasagabaster & Sierra, 2008; Rojo et al., 2010) , Valencia (Ferrer, 2010), Wales (Day et al., 2010; Thomas & Roberts, 2011), Belgium (Dewaele, 2005), South Africa (Hilton, 2010; Zungu & Pillay, 2010), Hong Kong (Lai, 2011).

Second, the focus of research carried out in dominantly monolingual territories, such as Hungary, was generally placed on foreign languages, among which English captured most frequently researchers' interest. This could reflect the advancement of English as an

international lingua franca (Bartram, 2006; Bernaus & Gardner, 2008; Bilaniuk, 2002; Csizér & Kormos, 2008; Henry & Apelgren, 2008; Lasagabaster, 2003; Ryan, 2009).

Finally, at measurement level, there is a clear preference for quantitative techniques, manifested through the wide use of questionnaires and the matched-guise technique. Few studies adopted a qualitative approach (Bartram, 2006; Day et al., 2010; Evans & Imai, 2011; Trenchs-Parera & Newman, 2009) or combined quantitative and qualitative methods (Lapresta et al., 2009; Lasagabaster, 2008; Ryan, 2009).

In the following section, we present the four categories of language attitudes studies. The seminal works are first introduced, after which we address some recent studies for a better understanding of the each research paradigm's scope, methods, results, and evolution.

Table 8. Summary of selected language attitudes studies

	STUDY	ATTITUDE OBJECT	LANGUAGE	CONTEXT	PARTICIPANTS	MEASUREMENT	SELECTED RESULTS
LANGUAGE EVALUATION PARADIGM	Sharp, Thomas, Price, Francis, & Davies (1973)	language	English (O) Welsh (O)	UK (Wales)	secondary education students	questionnaire	Linguistic background, age, gender, length of residence, type of education influenced attitudes.
	Baker (1992)	language bilingualism	English (O) Welsh (O)	UK (Wales)	secondary education students	questionnaire	Linguistic background, Welsh culture, language ability, and age were related to attitudes.
	Caruana (2007)	language	Maltese (O) English(O) Italian (FL)	Malta	undergraduate students	questionnaire	Attitudes toward Maltese were determined by gender, L1, and predominant language in hometown. L1, socio-professional status and language in hometown influenced attitudes toward English, whereas attitudes toward Italian were determined by age at which learning started, visiting an Italian speaking country, and watching TV.
	Day, Davis, & Drakakis-Smith (2010)	language	Welsh (O & mL)	UK (Wales)	adults	interview	Positive attitudes toward Welsh, but considered unnecessary to learn it.
	Donitsa-Schmidt, Inbar, & Shohamy (2004)	language culture	Arabic (O)	Israel	elementary education students and parents	questionnaire	Participating in language learning classes improved attitudes. Attitudes toward Arabic predicted motivation.

LANGUAGE EVALUATION PARADIGM	Huguet (2006)	language	Spanish (O) Asturian (mL) Catalan (mL)	Spain (Asturias and Aragon)	secondary education students	questionnaire	Voluntary attendance to courses, presence of the minority languages in the curriculum, home languages influenced attitudes. Socio- professional status had no impact on attitudes.
	Huguet (2007a)	language	Catalan (O) Spanish (O) English (FL)	Spain (Catalonia)	undergraduate students	questionnaire	First language of students, school language background, and the linguistic context influenced attitudes. Gender, socio-professional status, and city population had no effect.
	Huguet & González Riaño (2004)	language	Asturian (mL) Spanish (O)	Spain (Asturias)	elementary and secondary education students	questionnaire	Attendance to optional Asturian classes improved attitudes. Being monolingual influenced attitudes in favor of the spoken language.
	Huguet & Janés (2008)	language	Catalan (O) Spanish (O)	Spain (Catalonia)	secondary education students immigrant origin	questionnaire	Area of origin, socio-professional status, and socio-cultural level influenced attitudes. Attitudes and linguistic competence were correlated. Length of stay and age of arrival in Catalonia did not render significant differences.

LANGUAGE EVALUATION PARADIGM	Huguet & Llurda (2001)	language	Catalan (O) Spanish (O)	Spain (Aragon and Catalonia)	secondary education students	questionnaire	Generally, students held positive attitudes toward both languages. Attitudes toward Spanish were influenced by home language.
	Huguet & Suïls (1998)	language	Catalan (O & mL) Spanish (O)	Spain (Aragon and Catalonia)	secondary education students	questionnaire	Students from Baix Segre preferred Catalan, while those from Baix Cinca preferred Spanish.
	Huguet, Lapresta, & Madariaga (2008)	language	Spanish (O) Aragonese (mL) Catalan (mL) English (FL) French (FL)	Spain (Aragon)	secondary education students	questionnaire	Voluntary attendance to minority languages classes related to more positive attitudes. Socio-professional status was only related to attitudes toward English. Home language determined differences in attitudes toward Spanish and Catalan.
	Huguet, Suïls, & Janés (2000)	language	Catalan (O & mL) Spanish (O)	Spain (Aragon and Catalonia)	secondary education students immigrant origin	questionnaire	Catalan students preferred Catalan, while Aragonese students preferred Spanish. Attendance to Catalan classes favored more positive attitudes toward Catalan.

LANGUAGE EVALUATION PARADIGM	Ibarraran, Lasagabaster & Sierra (2008)	language	Spanish (O) Euskera (O) English (FL) Spanish, Arabic, Chinese, Portuguese, Rumanian, etc. (MT)	Spain (Basque Country)	secondary education students immigrant origin	questionnaire	General positive attitude toward Spanish and negative attitude toward Euskera. Immigrant students showed more positive attitudes toward English than the autochthonous. Also they had positive attitudes toward their mother tongues.
	Janés (2006a)	language	Catalan (O) Spanish (O)	Spain (Catalonia)	secondary education students immigrant origin	questionnaire	Area of origin influenced attitudes, with students from Latin America having the least positive attitudes toward Catalan. Students living in Catalonia for more than 6 years and those arriving younger than 10 years-old had more positive attitudes. Language competences were related to attitudes.
	Lapresta, Huguet, & Janés (2010)	language	Catalan (O) Spanish (O)	Spain (Catalonia)	secondary education students immigrant origin	interview	Students' discourses regarding attitudes toward Catalan and Spanish were influenced by the perceived academic and social integration and appreciation. Area of origin and linguistic family also had an influence.

LANGUAGE EVALUATION PARADIGM	Lapresta, Chireac, Huguet, Janés, Navarro, Querol, Sansó (2009)	language	Catalan (O) Spanish (O)	Spain (Catalonia)	secondary education students immigrant origin	questionnaire interview	Origin, area of origin, gender, home language, socio-professional status, length of residence, age of arrival influenced attitudes, which were also associated with language competences. Perceived academic and social appreciation and identity were key variables.
	Lasagabaster (2003)	language	Euskera (O) Spanish (O) English (FL)	Spain (Basque Country)	undergraduate students	questionnaire	Mother tongue (Spanish, Euskera, or both) influenced attitudes.
	Lasagabaster (2005)	language	Euskera (O) Spanish (O) English (FL)	Spain (Basque Country)	undergraduate students	questionnaire	Age, gender, specialization, mother tongue, language proficiency, size of hometown, province, type of school, and knowledge of foreign language were determinants of attitudes toward language.
	Lasagabaster (2007)	language	Euskera (O) Spanish (O) English (FL)	Spain (Basque Country)	undergraduate students	questionnaire	L1, linguistic model, size of hometown, and predominant language influenced attitudes toward Spanish and Euskera. Socio-professional status influenced attitudes toward Spanish. Attitudes toward English were determined by L1, visiting an English speaking country, knowledge of other foreign languages and linguistic model.

LANGUAGE EVALUATION PARADIGM

Lasagabaster (2008)	language	Euskera (MT) English (O) French (MT) Spanish (MT)	USA	adults	questionnaire interview	Socio-economic status and generation influenced attitudes. Gender, having visited Euskera Country, size of hometown, origin (French or Spanish Euskera Country), and educational background had no influence.
Lasagabaster & Sierra (2009)	language	Euskera (O) Spanish (O) English (FL)	Spain (Basque Country)	secondary education students	questionnaire	Students in CLIL classes showed more positive attitudes toward English than those in EFL classes. There was a gender effect, girls having more positive attitudes.
Laugharne (2007)	language	English (O) Welsh (O) Spanish, German, French (FL)	UK (Wales)	undergraduate students	questionnaire	Training, gender, language of hometown, age at which they started to learn Welsh, L1, language competences influenced attitudes toward Welsh, English, and foreign languages.
Loredo Gutiérrez, Fernández Salgado, Suárez Fernández, & Casares Berg (2007)	language	Galician (O) Spanish (O) English (FL)	Spain (Galicia)	undergraduate students	questionnaire	Perceived competence, gender, first language, socio-professional status, school language background, linguistic context, and city's number of inhabitants influenced attitudes.

LANGUAGE EVALUATION PARADIGM

Madariaga, Huguet, & Lapresta (2013)	language	Catalan (O) Spanish (O) English (FL) L1	Spain (Catalonia)	secondary education students immigrant origin	questionnaire	Origin, home language, length of residence, age of arrival influenced attitudes. Attitudes and language competences were correlated.
Mettewie & Janssens (2007)	language	French (O) Dutch (O) English (FL)	Brussels	undergraduate students	questionnaire	Educational system, home language, socioeconomic status, region, knowledge of other languages influences attitudes toward languages. Watching TV in English and visiting an English speaking country lead to more positive attitudes toward English.
Moriarty (2010)	language	Irish (O) Euskera (O)	Ireland Spain (Basque Country)	undergraduate students	questionnaire	Language competence, medium of education, home language, gender, and year of study predict attitudes toward Irish and Euskera.
Ó Laoire (2007)	language	Irish (O) English (O)	Ireland	undergraduate students	questionnaire	L1 influenced attitudes toward Irish, English, and L3. Attitudes toward Irish and L3 were also determined by language competences.

LANGUAGE EVALUATION PARADIGM	Querol & Huguet (2010)	language	Catalan (O) Spanish (O)	Spain (Catalonia)	secondary education students immigrant origin	questionnaire	Attitudes toward Catalan were correlated with Catalan competences. Attitudes toward Spanish were correlated with Spanish competences for the immigrant group, no relationship was found for the autochthonous students.
	Rojo, Madariaga, & Huguet (2010)	language	Euskera (O) Spanish (O)	Spain (Basque Country)	secondary education students immigrant origin	questionnaire	Autochthonous students rated higher Euskera, whereas among the immigrant groups, the one from Latin America showed the least favorable attitudes toward Euskera.
	Safont (2007)	language	Valencian (O) Spanish (O) English (FL)	Spain (Valencia)	undergraduate students	questionnaire	L1, specialization, linguistic model, size of hometown, and predominant language in town influenced attitudes toward Catalan and Spanish. Attitudes toward English were affected by size of hometown and visiting an English-speaking country.
	Sakuragi (2006)	language language learning	Chinese (FL) French (FL) Japanese (FL) Spanish (FL)	USA	undergraduate students	questionnaire	Attitudes toward FL learning and toward Chinese, Japanese, and Spanish were related to world-mindedness and social distance.
	Thomas & Roberts (2011)	language	English (O) Welsh (O)	UK (Wales)	elementary education students	questionnaire	Children showed positive attitudes toward Welsh and English, but they favored the use of English outside school.

LANGUAGE EVALUATION PARADIGM	Ting (2003)	language language use	English (O) Bahasa Malaysia (O)	Malaysia (Sarawak)	adults	questionnaire	General positive attitudes toward English and Bahasa Malaysia. English valued to business communication, especially in the private sector.
	Wright & Scullion (2007)	language	Irish (O)	UK (Northern Ireland)	elementary education students	questionnaire	Students from Irish-medium schools showed more positive attitudes toward Irish.
	Ytsma (2007)	language	Frisian (O) Dutch (O) English (FL)	Friesland	undergraduate students	questionnaire	L1 and gender influenced attitudes toward Dutch. L1 influenced attitudes toward Frisian and English.
	Zhang & Slaughter-Defoe (2009)	language language learning language maintenance	Chinese (mL)	USA	families	interview observation	Parents held positive attitudes toward Chinese, but had difficulties in transmitting them to their children.
	Zungu & Pillay (2010)	language	isiZulu (O)	South Africa	secondary education students	questionnaire	Both Zulu and non-Zulu learners showed positive attitudes toward isiZulu.

SPEAKER EVALUATION PARADIM	Lambert, Hodgson, Gardner, & Fillenbaum (1960)	speakers	English (O) French (O)	Canada	undergraduate students	matched-guise technique	English speakers, the high status group, received higher ratings than French speakers from both English and French participants.	
	SPEAKER EVALUATION PARADIM	Bayard, Weatherall, Gallois, & Pittam (2001)	speakers	English varieties: US, British, Australian, New Zealand	USA New Zealand Australia	undergraduate students	matched-guise technique	The American women received the highest ratings from all participants. Respondents from New Zealand and Australia have higher scores on solidarity to speakers of their varieties.
		Bokhorst-Heng & Santos Caleon (2009)	speakers	Chinese (O & MT) Indian (O & MT) English (O)	Singapore	elementary education students	matched- guise technique	Attitudes differed by socio-economic status and ethnicity (Chinese, Malay, and Indian). English speakers were the highest rated.
		Bilaniuk (2002)	speakers	Ukrainian (O) Russian (FL/mL) English (FL)	Ukraine	secondary education and undergraduate students	matched-guise technique	Attitudes differed by gender and ethnicity (Ukrainian, Russian).

SPEAKER EVALUATION PARADIM	Blas Arroyo (1995)	speakers	Spanish dialects (Nordic, meridional) Catalan dialects (of Barcelona, Valencian)	Spain (Valencia)	secondary education students	matched- guise technique	The northern dialect of Spanish and Valencian had higher ratings on social status.
	Bugel & Scutti Santos (2010)	speakers language	Rioplatense (Argentinean) (FL) Spanish (FL)	Brazil	Undergraduate students	matched-guise technique questionnaire	Peninsular Spanish was considered the language of prestige and more positive personality characteristics were attributed to Spaniards than to Argentinians
	Cargile (2000)	speakers	US accent Chinese accent	USA	non Asian American undergraduate students	matched-guise technique	Speakers were rated equally suitable for employment
	Cargile & Giles (1998)	speakers	Standard American accent; moderate Japanese accented; heavy accented; disfluent	USA	non-Asian American adults	matched-guise technique	Moderated accented Japanese speakers were rated similarly to standard American speakers on status, but less favorable on attractiveness. Increasing strength of accent is associated with less favorable ratings of status and attractiveness.
	Dailey (2005)	speakers	English accent Spanish accent	USA	secondary education students	matched-guise technique	Linguistic landscape and ethnicity influenced attitudes.

SPEAKER EVALUATION PARADIM	Ferrer (2010)	speakers	Spanish (O) Valencian (O) Catalan	Spain (Valencia)	undergraduate students	matched-guise technique	More positive attitudes toward Valencian than toward Catalan speakers
	Garrett (2010)	dialects speakers	English dialects (North-west, Cardiff, South- West, Valleys, Mid-Wales, North-east, RP)	UK (Wales)	teachers; secondary education students	matched-guise technique open questions questionnaire	Four dimensions were identified: prestige, dynamism, pleasantness, and Welshness. Welsh and non- Welsh speakers varied in their evaluations of the 6 dialects and their speakers.
	Hiraga (2005)	speakers	English (RP, standard American EN, urban UK and US, rural UK and US)	UK	undergraduate students	matched-guise questionnaire debate	Standard varieties were higher rated than the regional varieties.
	Ladegaard (1998)	speakers	English (RP, US, Scottish, and Australian varieties)	Denmark	secondary education students	matched-guise technique	RP had the highest ratings on status and competence.
	Ladegaard (2000)	speakers	Varieties of Danish	Denmark	secondary education students	open questions	Boys had more positive attitudes toward the local varieties, while girls rated higher the standard variety.
	Martínez & Blas Arroyo (2012)	speakers	Catalan (mL) Spanish (O)	Spain (Castellon and Teruel)	mixed	matched-guise technique	Diglossic attitudes were found, as Catalan was the less prestigious variety.

	Newman, Trenchs-Parera, & Ng (2008)	speakers	Catalan (O) Spanish (O)	Spain (Catalonia)	secondary education students	matched-guise technique	Catalan speakers were higher rated on solidarity. There were no important differences in status between Catalan and Spanish
	Rindal (2010)	speakers	British English (FL) American English (FL)	Norway	secondary education students	matched-guise technique	British English was rated as the most prestigious variety, whereas American English was considered informal
LANGUAGE LEARNING PARADIGM	Bernaus & Gardner (2008)	learning situation	English (FL)	Spain (Catalonia)	teachers and secondary education students	questionnaire	Attitudes were found to be related to motivation and English achievement
	Bernaus et al. (2004)	language learning learning situation speakers	Catalan (O) Spanish (O) English (FL)	Spain (Catalonia)	secondary education students immigrant origin	questionnaire	Area of origin (Spain, South America, Africa, Asia) and self-ratings of language proficiency influenced attitudes, which preceded motivation
	Bernaus et al. (2007)	language learning learning situation speakers	Catalan (O) Spanish (O)	Spain (Catalonia)	secondary education students immigrant origin	questionnaire	Attitudes were related to motivation. Country of origin had little effect.
	Bernaus et al. (2009)	learning situation	English (FL)	Spain (Catalonia)	teachers and secondary education students	questionnaire	Teaching strategies, teachers' and students motivation, and English achievement were related to attitudes.

LANGUAGE LEARNING PARADIGM	Chambers (2000)	language learning	English (FL) German (FL)	Germany UK	secondary education students	questionnaire	Students from Germany had valued more FL learning than those from UK. There was a decline of attitudes toward FL learning for which students blamed teachers.
	Csizér & Kormos (2008)	language related attitudes (language, speakers, and culture)	English (FL)	Hungary	secondary education students	questionnaire	Foreign media use and instrumentality orientation influenced attitudes, which preceded motivated learning behavior. Perceived importance of contact was not found to be related to attitudes.
	Csizér & Lukács (2010)	language learning speakers	English (FL) German (FL)	Hungary	secondary education students	questionnaire	More positive attitudes toward English and toward US culture. Language learning attitudes predict motivated learning behavior.
	Dörnyei & Csizér (2002)	language speakers learning situation	English (FL) German (FL) French (FL) Italian (FL) Russian (FL)	Hungary	secondary education students	questionnaire	Engagement in learning a language determined more positive attitudes. Interest decreased for all languages except English.

LANGUAGE LEARNING PARADIGM	Gardner, Masgoret, & Tremblay (1999)	language learning learning situation speakers	French (FL)	Canada	undergraduate students	questionnaire	Early socio-cultural experiences influenced attitudes and motivation.
	Gardner, Masgoret, Tennant, & Mihic (2004)	language learning language situation	French (FL)	Canada	undergraduate students	questionnaire	Attitudes and motivation change is reduced and moderated by students' results during the course, captured by their grades.
	Heining-Boynton & Haitema (2007)	language learning learning situation	French (FL) Spanish (FL)	USA	secondary education students	questionnaire interview	General positive attitudes that decline in time. Gender differences.
	Henry & Apelgren (2008)	language multilinguism	English (FL) foreign languages in general	Sweden	secondary education students	questionnaire	General positive attitudes that decline in time. Girls have more positive attitudes toward learning FLs.
	Kormos & Csizér (2008)	language learning speakers	English (FL)	Hungary	secondary education and undergraduate students adult language learners	questionnaire	For students and undergraduates, attitudes toward language learning were slightly more important than the Ideal L2 Self in predicting motivated learning.

	Kormos et al. (2008)	language speakers	English (FL)	Hungary	undergraduate students	questionnaire	General positive attitudes toward English.
	Kormos, Kiddle, & Csizér (2011)	language learning	English (FL)	Chile	mixed (secondary education and undergraduate students)	questionnaire	Attitudes toward language learning were found to be inter-related with the Ideal L2 Self.
LANGUAGE LEARNING PARADIGM	MacIntyre & Noels (1996)	language learning learning situation	Spanish (FL) Italian (FL)	Not declared	undergraduate students	questionnaire	Attitudes and motivation are related to language learning strategies use.
	Mantle-Bromley (1995)	language speakers	Spanish (FL) French (FL)	USA	secondary education students	questionnaire	Participation in a specially designed program improved attitudes toward FLs and their speakers.
	Ryan (2009)	language learning	English (FL)	Japan	mixed (secondary education and undergraduate students)	questionnaire interview	Positive attitudes toward learning English correlated with effort.
	Saravia & Bernaus (2008)	learning situation speakers	Catalan (O) Spanish (O) French (FL) English (FL)	Spain (Catalonia)	undergraduate students	questionnaire	Attitudes and motivation were related to language learning and had higher levels for those studying to become teachers than for those studying nursery and physiotherapy.

	Tragant (2006)	language learning	English (FL)	Spain (Catalonia)	Mixed (secondary education and undergraduate students, adults)	questionnaire	Younger students show more positive attitudes and higher levels of motivation to foreign language learning.
OTHER STUDIES	Aziakpono & Bekker (2010)	language use	English (O) IsiXhosa (O)	South Africa	undergraduate students	questionnaire and interview	Generally positive attitudes toward the use of English, related to instrumental motivations. Also positive attitudes toward the use of isiXhosa, associated with instrumental and integrative motivations.
	Brown & Sachdev (2009)	language use	English (O & L2) Japanese (L1)	UK	adults undergraduate students	questionnaire	English proficiency, ethnolinguistic identity, and vitality were found to be related to attitudes.
	Lawson & Sachdev (2004)	language use	English (O) Sylheti (MT) Bengali (MT)	UK	secondary education students	questionnaire	Attitudes and language use were closely related. For Sylheti and Bengali, there was a clear association between attitudes and language competence, vitality, identity, and contact. There were no gender differences.
	MacIntyre, Baker, Clément, & Donovan (2002)	learning situation	French (O & L2)	Canada	secondary education students	questionnaire	Attitudes and motivation were positively correlated with willingness to communicate, perceived competence, and use and negatively associated with communication anxiety.

	Cenoz & Valencia (1994)	speakers language learning	British accent American accent	Basque Country	secondary education students	semantic differential questionnaire	Attitudes were not related to English achievement.
OTHER STUDIES	Dewaele (2005)	language	French (FL) English (FL)	Belgium	secondary education students	questionnaire	Self perceived competence and communicative behavior were related to attitudes. Differences in attitudes toward French were found by gender and regional identity.
	Pieras-Guasp (2002)	language speakers	Catalan (O) Spanish (O)	Balearic Islands (Mallorca)	secondary education students	questionnaire matched-guise	Students had positive attitudes toward Catalan, which associated with instrumental purposes. Spanish speakers were higher rated on status and Catalan speakers were higher rated on solidarity, but only by the Catalan-speaking participants.

Note: FL = foreign language; L1 = first language; L2 = second language; mL = minority language; MT = mother tongue; O = official language.

2.2.3.1.1. Language evaluation paradigm

The language evaluation paradigm encompasses studies focused on language evaluation. In other words, the attitude objects are languages in general (e.g., English, French, Catalan), which are assessed by means of a questionnaire. Most of the contemporary research uses adapted versions of the instruments provided by Sharp and his collaborators (1973) or by Baker (1992). By working with attitudes toward languages and their relationships with various behaviors, this research paradigm follows the traditional attitudes approach envisioned by Allport (1935).

After describing the two seminal studies conducted by Sharp and his collaborators (1973) and Baker (1992) in Wales, we review some contemporary studies that follow this paradigm.

2.2.3.1.1.1. Seminal studies

Sharp, Thomas, Price, Francis, and Davies (1973) conducted a large-scale study of attitudes toward languages in Wales. They assessed the attitudes toward English and Welsh of 12000 students with ages between 10 and 14 years. To collect data, the authors used two types of scales: Thurstone scales to measure attitudes toward the two languages investigated and semantic differential for attitudes toward English and Wales, as well as for attitudes toward English and Welsh speakers. The findings indicated that attitudes toward English and toward Welsh were related, attitudes toward English being influenced by attitudes toward Welsh.

It was also found that attitudes varied depending on linguistic background, age, length of residence in Wales and gender. More precisely, results showed that with age favorable attitudes toward Welsh diminished, while favorable attitudes toward English increased. Girls tended to express more positive attitudes toward Welsh in comparison with boys, but no differences were observed for English. Also, students that received a bilingual education had more favorable attitudes toward Welsh than those who did not. Although promising, the authors drew attention that being a choice made by parent, enrolment to a bilingual schools could have been related to parents' attitudes which probably also played their role in the formation of children's attitudes toward English and Welsh.

Another seminal study was also carried out in Wales twenty years later. Baker (1992) focused on finding adequate explanatory models of attitudes toward Welsh and of attitudes toward bilingualism. The attitudes of almost 800 students were measured using five-point Likert scales.

A series of relevant variables were examined such as linguistic background, age, gender, youth culture, type of school and linguistic ability. Age and linguistic background proved again to influence attitudes toward Welsh. Attitudes became less favorable with age. As well, the more Welsh was the linguistic background, more positive were the attitudes expressed. This way, English speakers had the least favorable attitudes. Welsh culture also proved to have a strong influence on attitudes. Further, linguistic background, age, culture and ability were found to be related to attitudes to bilingualism.

Baker also explored attitude change over a two-year period. The attitudes toward Welsh and bilingualism reported by participants when they were 13 to 16 years-old were less positive than the attitudes they were 11 to 14 years old. This decline was coupled with a diminished use of Welsh and it was the same for all the age groups considered. A more accentuated decrease of favorable attitudes toward Welsh was found for boys and for those students enrolled at English medium schools. More positive attitudes were maintained by participants that had a higher perceived linguistic competence of Welsh.

2.2.3.1.1.2. Modern studies

An adapted version of Baker's (1992) instrument was used by Moriarty (2010) to investigate the language attitudes and practices of Irish and Basque university students that were not first-language speakers of Irish and Basque. Using stepwise regression, language competence was identified to be the most powerful predictor of attitudes toward both Irish and Basque. Following, medium of education, home language, gender, and year of study also influenced the attitudes toward the two languages analyzed. However, the positive attitudes seen in both contexts were not reflected into language practices, as the students reported a rather limited use of the minority languages. Although Basque was used in higher degree in comparison with Irish, the author recommended that in both contexts efforts be made to revitalize the languages in domains other than the educational one.

This line of research expanded outside the territory of UK, where it was initiated. There is a strong tradition of language-oriented research in Spain. Studies conducted in the Basque Country tend to follow Baker's model (Ibarraran, Lasagabaster, & Sierra, 2008; Lasagabaster, 2003, 2008; Lasagabaster & Sierra, 2009), while the research conducted in Catalonia usually uses an adaptation of the questionnaire developed by Sharp and his collaborators (1973)⁵.

Adaptations of Baker's questionnaire were also used by Ting (2003) in Malaysia to discover employed adults' positive attitudes toward English and Bahasa Malaysia, with a slight preference for English for business communication.

Furthermore, Donitsa-Schmidt, Inbar, and Shohamy (2004) analyzed the attitudes toward the Arabic language and culture held by elementary education students and their parents living in Israel. The findings indicated that parental support and attendance to classes of Arabic improved children's attitudes.

Additionally to the widespread direct quantitative measure approach, some studies investigated attitudes toward languages using qualitative measures, such as interviews and observation. Day, Davis, and Drakakis-Smith (2010) interviewed 50 English adults living in Wales regarding their attitudes toward Welsh, which resulted to be "sympathetic but detached" (Day, Davis, & Drakakis-Smith, 2010: 1416), as the respondents supported the maintenance of the minority language without considering necessary to learn Welsh.

Another study that used interviews to assess attitudes toward language was conducted by Zhang and Slaughter-Defoe (2009) in the United States of America. The authors asked immigrant Chinese families about their attitudes toward Chinese, its learning and its maintenance and found out that there was a discrepancy between parents and children, as the former had difficulties in transmitting their favorable attitudes toward Chinese to their children.

Concluding, language evaluation has been attracting the interest of researchers across the world, which expanded the range of attitudes measure to include qualitative methods, such as interviews, besides the well-established questionnaires developed by Sharp and colleagues (1973) and Baker (1992).

⁵ These studies will be presented in detail in another chapter dedicated to language attitudes studies carried out within the Spanish territory.

2.2.3.1.2. Speaker evaluation paradigm

Speaker evaluation paradigm is based on the theoretical premise that the language features of the speaker activate a social categorization that leads to the attribution of specific traits (Fuentes et al, 2012; Garrett, 2010; Giles & Billings, 2004). This line of research highlights the social role of language, which “belongs to a person’s whole social being: it is part of one’s identity, and is used to convey this identity to other people” (Williams, 1994: 77).

As in the previous section, we introduce the seminal study that first used the matched-guise technique and, afterward, we review some more recent studies that followed the speaker evaluation paradigm.

2.2.3.1.2.1. Seminal studies

The first study that used the matched-guise technique was conducted by Lambert and his associates (1960) in Canada. Two groups of participants, English and French speakers, listened recordings of bilingual persons reading in English and French, without knowing it was the same person. Then, they rated the speakers on 14 traits: sense of humour, entertainingness, kindness, general likeability, sociability, character, dependability, leadership, intelligence, self-confidence, ambition, good looks, height and religiousness. The English group rated the English guises higher than the French ones. Contrary to expectations, the French-speaking group also evaluated more favorably the English guises in comparison to the French ones. In other words, the prestige group was more favorably evaluated by both the majority and the minority group members.

Therefore, the study uncovered a tendency of evaluating more favorably the language spoken by the high status group with no differences between in-group and out-group members, which was frequently observed in subsequent studies carried out in various contexts (Edwards, 1994).

The evaluative traits were grouped in two categories: status and solidarity. Status is related to prestige and socioeconomic success. Solidarity reflects the extent of identification with the speaker and comprises social attraction and trustworthiness. Zahn and Hopper (1985) used factor analysis to uncover three categories: superiority –

regarding status and education (e.g., intelligence, competence), attractiveness – related to solidarity and social attractiveness, and dynamism, comprised of traits as confidence, aggressiveness and enthusiasm.

2.2.3.1.2.2 Modern studies

Within this research tradition, the matched-guise technique was used preponderantly in social contexts where, besides the majority language, one or more minority languages were present.

In this sense, Bilaniuk (2002) investigated the attitudinal situation in Ukraine by applying the matched-guise technique to 1557 participants aged between 13 and 27 years. Women were found to evaluate more favorably the English and Russian guises. In addition, women speaking Russian received the highest ratings, while men were evaluated more favorably in their Ukrainian guise. The author explained these gender differences as a form of establishing and maintaining higher social status.

A considerable amount of research focused on the distinction between standard and non-standard varieties. A standard variety is spoken by the majority of the population and is usually associated with high socioeconomic status, power and media usage in a particular territory (Giles & Billings, 2004). A non-standard variety is a foreign one or one used by a minority or lower socioeconomic group (Fuertes, Gottdiener, Martin, Gilbert, & Giles, 2012).

Generally, standard varieties are rated higher on status, while non-standard varieties received higher ratings on solidarity from the speakers of those respective varieties (Edwards, 1985; Giles & Billings, 2004). Solidarity is usually associated with frequent interaction and high similarity. Consequently, participants rate higher on this dimension the accents with which they identify (Hiraga, 2005).

Considering that the technique requires the same text, usually written in the standard variety, to be read, Hiraga (2005) argued that the matched-guise technique can only be used to investigate attitudes toward accents, as it is not adequate for attitudes toward dialects. This view was supported by Giles (1970), who explained:

An important distinction needs to be made here between the perception of accent as opposed to dialect. The term 'dialect' basically implies variations from the standard code at most levels of linguistic analysis, whereas 'accent' merely implies a manner of pronunciation with grammatical, syntactical, morphological and lexical levels being regarded as more or less commensurate with the standard (Giles, 1970: 213).

Accordingly, Ladegaard (1998) examined the attitudes toward speakers of several English varieties: RP, US, Scottish, and Australian, held by students in Denmark. The results showed that RP received the highest ratings on both status and solidarity. A similar positive evaluation of RP as the prestige variety was also found Norway (Rindal, 2010).

Recent studies suggest that the language variety hierarchy is changing and that American English began to surpass RP (Giles & Billings, 2004). A study by Bayard, Weatherall, Gallois, and Pittam (2001) combined participants from USA, Australia and New Zealand. The respondents rated male and female speakers of American, Australian, New Zealand, and British English on four dimensions: power, competence, status and solidarity. The American female received high ratings on all dimensions from all three groups of participants and the British male had high ratings on status. New Zealand and Australia participants gave higher scores on solidarity to their own accents.

Another study conducted in England, compared six varieties of English from UK and US and found that standard American received high ratings on all dimensions and even a higher rating on solidarity compared to RP (Hiraga, 2005).

A series of studies conducted on US territory indicated that the American English accented speakers were evaluated more favorable compared to Japanese accented (Cargile & Giles, 1997, 1998) and to Spanish accented speakers (Dailey, 2005; Giles et al., 1995).

Contrasting the attitudes toward Rioplatense (Argentinean) and Peninsular Spanish manifested by Brazilians, Bugel and Scutti Santos (2010) found that Peninsular Spanish was considered the more prestigious variety. Moreover, Spaniards were seen as distant and formal and Argentineans were perceived as closer.

Pieras-Guasp (2002) used a combination of questionnaire and matched-guise technique to examine attitudes toward Catalan and Spanish and toward the speakers of these two

languages. The 54 secondary education students from the Balearic Islands that participated expressed their general attitudes toward Catalan by rating 20 statements on a five-point Likert scale. They also rated the importance of 20 purposes of knowing and using Catalan. Generally, the students showed positive attitudes toward Catalan. They associated an instrumental value to Catalan, which they considered important in the academic and professional areas and less relevant for social interaction.

Additionally, according to the matched-guised technique, students rated speakers of Catalan and Spanish and the status and solidarity dimensions. Spanish guises were higher rated on the status dimensions by all participants. Catalan guises received higher evaluations on the solidarity attributes from the Catalan-speaking participants, while no differences in favor of the Spanish guises were found for the Spanish-speaking students.

Pieras-Guasp (2002) integrated the contradictory answers to the questionnaire and the reactions to the Catalan and Spanish speakers by concluding that Catalan was considered an asset, not a requirement in a linguistic context where Spanish is the prestige language. In addition, students agreed that Catalan should be maintained, although it has little social value. Thus, Catalan respects the pattern of a low-prestige language in a diglossic situation.

Concluding, the speaker evaluation paradigm encompasses a large variety of studies, as speakers have been evaluated by their language, dialect, and accent. Researchers continue to be highly interested in the speaker evaluation paradigm because it uncovers complex group dynamics and power plays.

2.2.3.1.3. Attitudes and language learning

The works of Lambert (1969) and Gardner (1985) in the bilingual context of Canada, lead to impressive advancement in second language learning research by showing the important role played by psychosocial variables, especially attitudinal and motivational factors. After Gardner's (1985) seminal work showing that attitudes and motivation facilitate language acquisition, research on this topic developed exponentially. Within this approach, attitudes are studied mainly for their influence on "the extent to which the individuals will actively involve themselves in learning the language" (Gardner, 1985: 56).

Thus, we first review the socio-educational model proposed by Gardner (1985) and then present some studies regarding attitudes in the context of language learning that followed and/or expanded this theory.

2.2.2.1.3.1. Seminal theory

Gardner's socio-educational model of second language acquisition is one of the most famous theories of language learning. At the core of the model are attitudes and motivation because "they determine the extent to which the individuals will actively involve themselves in learning the language" (Gardner, 1985: 56).

The author introduced the concept of 'integrativeness' that captures individual's interest and willingness to interact with members of the L2 group. It is based on the assumption that individuals who want to identify with another language community will be more motivated to learn the language (Gardner, 1985, 1991, 2001; Masgoret & Gardner, 2003). The strong connection between language learning and social integration is explained in Gardner's (2001) definition of the construct:

Integrativeness reflects a genuine interest in learning the second language in order to come closer to the other language community. At one level, this implies an openness to, and respect for other cultural groups and ways of life. In the extreme, this might involve complete identification with the community (and possibly even withdrawal from one's original group), but more commonly it might well involve integration within both communities (p. 5).

Integrativeness comprises three factors: attitudes toward the target language group, integrative orientation, and interest in foreign languages. By introducing integrativeness and attitudes toward the language community, Gardner and his associates showed the relevance of the social context, a relatively new idea for its time. The main assumption was that “students’ attitudes toward the specific language group are bound to influence how successful they will be in incorporating aspects of that language” (Gardner, 1985: 6).

Another important component of the model is motivation, defined as “a combination of the learner’s attitudes, aspirations and effort with respect to learning the language” (Gardner & MacIntyre, 1993b: 159). The motivated individual wants to achieve a particular goal, devotes considerable effort to achieve this goal and experiences satisfaction in the activities associated with achieving this goal (Gardner & MacIntyre, 1993a). Therefore, the construct comprises a desire to learn the language, motivational intensity and attitudes toward learning the language.

The socio-educational model also includes attitudes toward the learning situation, which comprise attitudes toward the course and attitudes toward the teacher, to reflect the evaluation of the learning context.

These three components, integrativeness, motivation and attitude toward the learning situation, are sometimes aggregated to obtain the integrative motivation, as represented in figure 16 (Gardner, 1985; 2000; Masgoret & Gardner, 2003; Gardner, Day, & MacIntyre, 1992; Gardner & MacIntyre, 1993b; Gardner et al., 2004).

Integrative motivation reflects individual’s “desire to understand the language and culture of another group for the purpose of interaction” (Gardner et al., 1992: 198) and it was assumed to be the most important type of motivation.

However, this might not be the case for all languages in all contexts. A distinction between second and foreign language learning has to be made. A second language is learnt in a context where it is used as a vehicular language, providing thus visual and auditory stimulation. Whereas a foreign language is learnt in a context, where it is not typically used and where most of the contact with the respective language takes place in the classroom (Oxford & Shearin, 1994). This leads to a series of issues concerning the model, especially the concept of ‘integrative motivation’. For instance, it raises the problem of how the small amount of contact with the FL community relates to integrative

motivation. Dörnyei (1990, 2003) furthermore suggested that, in foreign language learning, instrumental orientations are more important and the integrative ones are more general, not associated to a specific community.

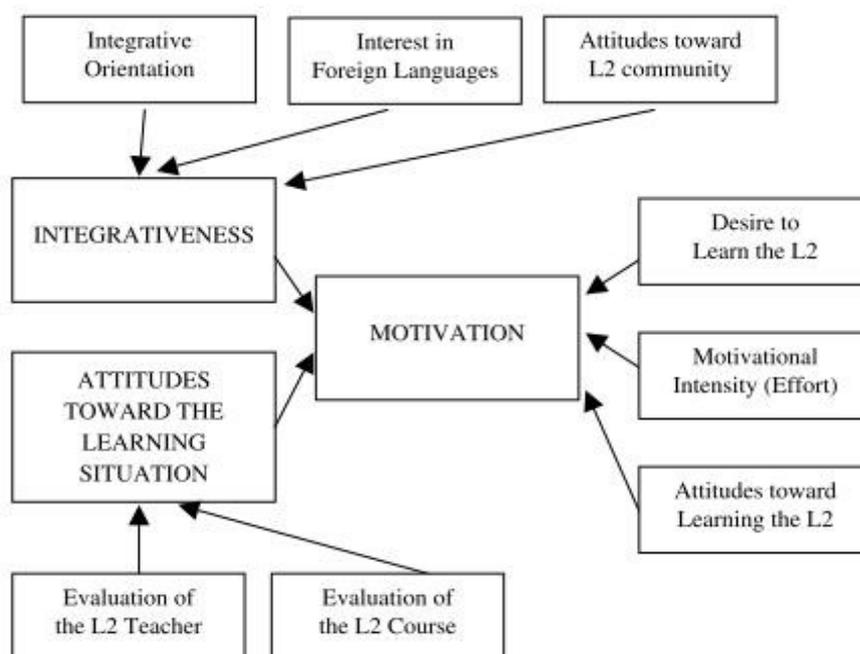


Figure 16. Gardner's integrative motivation (Dörnyei, 2005: 69)

Additionally, in a detailed analysis of Gardner's theory, Dörnyei (1994, 2005) listed a series of problematic aspects of the model. First, he drew attention to a terminological issue produced by the use of the term 'integrative' at three different levels of abstraction: there is 'integrative orientation', 'integrativeness' and 'integrative motivation'. Also, there is confusion regarding what is understood by motivation in Gardner's works, if it is the overall concept of 'integrative motivation' or its component 'motivation'.

Integrative motivation is at the center of the Socio-educational model, but its pair, instrumental motivation was not included in the initial core theory. Later, Gardner (2000, 2001) explained instrumental motivation as a combination of instrumental factors and motivation. His proposal is that the motivation subcomponent works like a "central motivational engine that needs to be ignited by some specific learning goal such as instrumental or integrative orientation" (Dörnyei, 2005: 70).

Furthermore, attention has to be drawn to the common misinterpretation of the theory as contrasting integrative and instrumental motivation (Dörnyei, 2005). Gardner and Tremblay (1994) reminded researchers that these are orientations (i.e., class of reasons for learning the language), not motivations.

The same argument can be used to argue against the use of ‘instrumental and integrative attitudes’ (Baker, 1992; Ndhlovu, 2010; Sakuragi, 2006; Wright & Scullion, 2007). The classification of attitudes as integrative or instrumental leads to confusion regarding the attitude-motivation relation. Besides, it implies a reductionist approach of the two distinct concepts. Thus, it is recommendable to treat attitudes and instrumental and integrative motivational orientations separately.

Confronted about the jointed use of attitudes and motivation (Dörnyei, 1994), Gardner and Tremblay (1994) used a parallel with the theory of planned behavior (Ajzen, 1991) to defend the model. The sequence of determinants: language related attitudes - motivation – language learning behavior included in the Socio-educational model is similar to the attitude - intention - behavior causal line of relations described in the TPB. This is supported by Ajzen’s (1991) conceptualization of intention that includes motivational elements. In addition, as Fishbein & Ajzen (1975) recommended, attitude toward learning the language has the same level of specificity as motivation to learn the language.

To sum up, Gardner’s (1985) socio-educational model indicates how attitudinal and motivational components relate to L2 acquisition. Since the model is explained in more details in another section, we will only mention here that it includes three types of language related attitudes: attitude toward language learning in general, attitude toward the specific learning situation and attitude toward the language community. The fact that these attitudes represent distinct concepts is emphasized by their placement at different levels and their different relations with the other concepts comprised in the model.

To measure the aforementioned variables, Gardner constructed an instrument: the Attitude/Motivation Test Battery (AMTB). The instrument also included scales for language anxiety and instrumental orientation (Bernaus & Gardner, 2008; Gardner & MacIntyre, 1993b; Gardner, Masgoret, Tennant, & Mihic, 2004).

A meta-analysis of 75 samples from studies conducted by Gardner and his associates demonstrated that the attitudinal and motivational variables described in the socio-

educational model are related to achievement and that motivation is the dominant factor (Masgoret & Gardner, 2003).

Many of the studies in this category employ the Attitude/Motivation Test Battery (AMTB). Besides studies that investigated the validity of the instrument and the adequateness of the model in different contexts (Bernaus & Gardner, 2008; Bernaus et al., 2004; Masgoret & Gardner, 2003), some studies examined how attitudes and motivation relate to other variables. Some of these studies are presented in the following section.

2.2.3.1.3.2. Modern studies

MacIntyre and Noels (1996) examined how attitudes and motivation relate to the use of language learning strategies. The 138 undergraduate students that participated were asked about 50 learning strategies that belonged to six types (i.e., memory, cognitive, compensation, metacognitive, affective, and social). Attitudes toward the learning situation and motivation were found to correlate with the use of cognitive, metacognitive, and social strategies.

In another study carried out by Gardner, Masgoret, and Tremblay (1999), the effect of background variables on language learning was investigated. A total of 109 undergraduate students that have studied French at least one year participated. The authors build a causal model that showed the influence of early contextual factors, such as initial experiences, language anxiety, and parental encouragement, on attitudes and motivation. Attitudes toward the learning situation and toward French Canadians were linked with integrativeness and motivation was influenced by attitudes toward the learning situation, attitudes toward learning French, and integrativeness.

Dörnyei and Csizér (2002) were interested in how attitudes and motivation evolve in time at national level. They conducted a repeated cross-sectional design study where they collected data regarding English, German, French, Italian, and Russian from 4765 Hungarian secondary education students in 1993 and from 3828 students six years later, in 1999. The findings showed that there was a general decline in interest for foreign languages, with the exception of English that maintained its high popularity. Students actively engaged showed higher motivational levels and more positive attitudes than the

non-learners. Considering that foreign language study was not voluntary, the researchers explained the results as an effect of active engagement on attitudes and motivation.

Another study that used a cross-sectional design was carried out by Henry and Apelgren (2008). Besides the adapted version of the AMTB (Gardner, 1985), the researchers also explored the L2 self dimension developed by Dörnyei and his associates (Dörnyei & Csizér, 2002; Dörnyei, 2005). The sample of participants consisted of 532 Swedish students enrolled in the 4th, 5th, and 6th grades of secondary education. The general attitudes toward English tended to remain stable, whereas attitudes toward learning English were less positive in 6th grade than in the 4th and 5th grades. Although they maintained favorable attitudes toward English, students showed more enthusiasm toward learning a new foreign language.

Gardner and his collaborators (2004) conducted a longitudinal study where they followed 197 undergraduate students for one year during an intermediate French course. Depending on the grades obtained, participants were divided in three groups: A grade group, B grade group, and less than B grades group. Students with a final A grade started and finished the academic year with positive attitudes toward learning French and the learning situation and highly motivated, no important change being found in their case. The B students also started the course motivated and with favorable attitudes, but as a result of their experiences, at the end of the year their attitudes toward learning French and toward the course became less positive, their motivation diminished and they became less integratively oriented. The students with less than B grades began the course with lower levels of motivation and less favorable attitudes toward the course and learning French and these keep decreasing as the year progresses. The authors concluded that “the possibility of change is not great, but it is larger for variables directly associated with the classroom environment than for more general variables” (Gardner et al., 2004: 28).

Tragant and Muñoz (2000) investigated the effect of age on language learning attitudes and motivation by comparing a group of students that started learning English at the age of 8 and a group that started at the age of 11. The authors conducted a longitudinal study, testing the participants annually three times. They uncovered a positive correlation between attitudes toward learning English and the number of hours dedicated to English study. Younger students had more positive attitudes and were more motivated, whereas older students were more instrumentally oriented.

In another study, Tragant (2006) gathered data from 2010 students that had started learning English at the ages of 8, 11, and 18 or later. Adults and secondary education students expressed more positive attitudes toward learning English as a foreign language than elementary education students. In addition, those who started later tended to be more motivated. Another interesting set of results concerned the motivational orientations specific to each age group. Elementary students focused more on the learning situation, whereas older students emphasized instrumental reasons.

Participants were surveyed several times, such that the learners that started at age 8 responded after 200, 416, 726, and 800 hours of instruction and the adult learners reported their attitudes after 200 and 416 hours. Overall, this study did not find any evidence for a decline in attitudes toward foreign language learning and motivation. The author concluded that age played a more important role than time of instruction in determining differences in attitudes and motivation.

In another longitudinal study, Heining-Boynton and Haitema (2007) examined how elementary students' attitudes toward foreign language learning change over a four-year period. The data collected from more than 20,000 children indicated that attitudes toward foreign language learning and the learning situation, in this case represented by the teacher, as well as the desire the continuation of study and the use of the respective foreign languages outside school declined over the span of their elementary education. Girls were found to hold more positive attitudes than boys.

The results of this quantitative longitudinal study were extended by a follow-up qualitative study conducted 10 years later, which showed that on the long-term foreign language instruction during elementary education was positively valued. The authors concluded, after comparing their results with those obtained in studies concerning attitudes toward school and subjects as science, mathematics and reading, that "foreign language teaching is similar to teaching other core subjects such as science and mathematics" (Heining-Boynton & Haitema, 2007: 165).

One of the most recent studies was conducted by Mantle-Bromley (1995) who aimed to analyze attitude change in the context of a 9-week Foreign Language Exploratory Program developed in the United States. A modified version of the AMTB was used to

measure the attitudes of 208 secondary education students that were split in two groups, an experimental and a control group.

A series of experimental lessons constructed based on attitude change and multicultural education theories were of designed to improve students' attitudes toward French and Spanish speakers. Five methods were used throughout the program: a) cognitive dissonance, b) acting in ways inconsistent with one's belief, c) direct exposure to the attitude object, d) "fait accompli" – after the teacher provides evidence supporting a viewpoint, students are asked to evaluate the situation, e) increased understanding of one's attitudes, their formation and maintenance. After implementation of the program, students in the experimental group held more positive attitudes toward French, Spanish, and the respective speakers than before. The attitudes of the control group became less positive. In addition, the attitudes of the students in the experimental group were more positive than the attitudes of those in the control group.

To sum up, Gardner's socio-educational model enjoyed an impressive success, being frequently used as framework for language learning research. Following the numerous studies conducted within this paradigm, considerable evidence of a causal relationship between attitudes and motivation, and subsequently language learning has gathered.

2.2.3.1.4. Attitudes toward language related behaviors

Besides language learning, there are other relevant language related behaviors, such as language use and language maintenance. Despite its importance in interpersonal and intergroup interactions and constructing and expressing one's social identity (Lauring, 2008; Miller, 2000), language use was not as intensively researched as language learning. As a result, studies that consider language use are varied in terms of theoretical framework, objectives, and methods.

MacIntyre, Dörnyei, Clément, and Noels (1998) investigated willingness to communicate as a determinant factor of language use. Following we present this model and a series of various studies focused on language use.

2.2.3.1.4.1. Seminal theory

The transition from attitudes to action was examined not only in language learning, but also in language use.

Aiming to understand the communicative patterns of individuals, MacIntyre and collaborators (1998) examined 'willingness to communicate' (WTC). This concept was initially used in reference to one's first language and was considered a personality trait that explained individual's choice to engage in communication (McCroskey & Baer, 1985 as cited in MacIntyre et al., 1998). For the more complex framework of second language communication (Dörnyei, 2003), the authors extended the original conceptualization by taking into account situational factors and making the concept more dynamic. Thus, WTC is defined as the individual's "readiness to enter into discourse at a particular time with a specific person or persons, using a L2" (MacIntyre et al., 1998: 547).

A pyramid shape was chosen to model the integrated influence of several psychological, social and linguistic factors on L2 use (see figure 17). The layers that compose the pyramid are divided between situational influences placed at the first three layers and enduring influences situated at the base. The model comprises desire to affiliate with a person, linguistic self-confidence as both state and trait, interpersonal and intergroup motivation, intergroup attitudes, parameters of the social situation, communicative competence, climate and personality. Based on the intention – behavior causal sequence,

the model represents an extended version of the theory of planned behavior (Ajzen, 1991) constructed to respond to the particularities of second language communication.

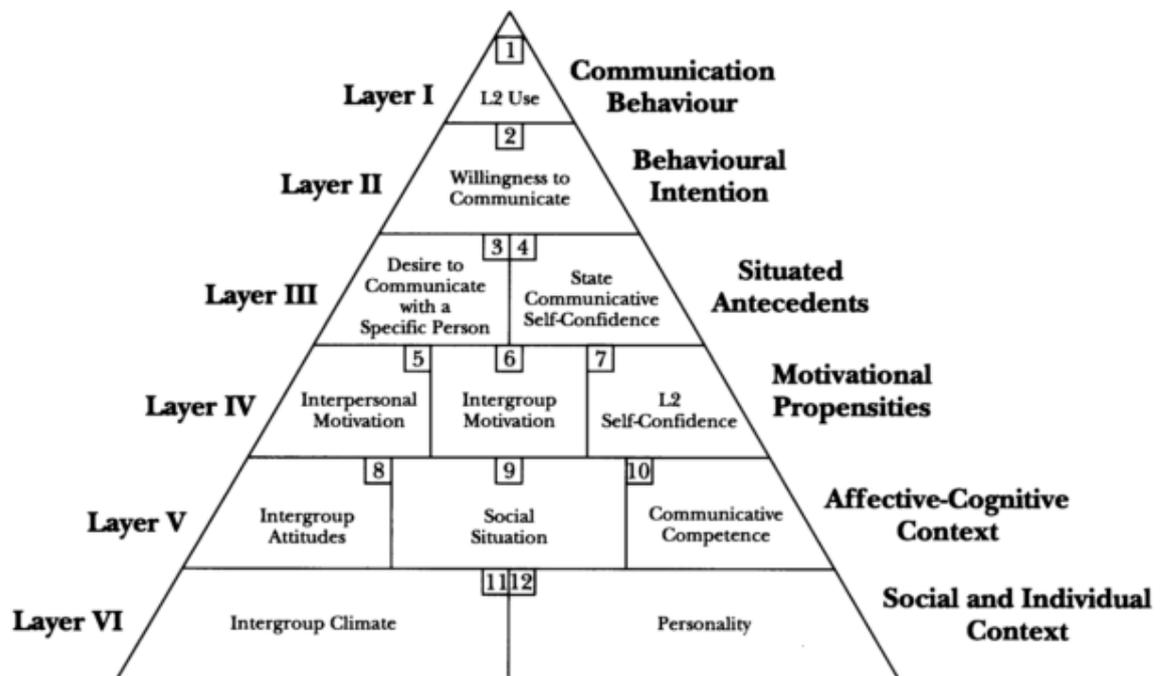


Figure 17. Model of variables influencing willingness to communicate (MacIntyre et al., 1998:547).

The intergroup attitudes included in the model correspond to attitudes toward the L2 speakers. Two ways of influencing L2 use were identified. First, it is assumed that positive attitudes toward the L2 group will lead to an increasing number of positive interactions with members of the respective community (MacIntyre et al., 1998). Second, they relate to L2 learning motivation (Gardner, 1985; MacIntyre et al., 1998).

2.2.3.1.4.2. Modern studies

MacIntyre and his colleagues (2002) conducted a study in Canada that focused on L2 communication. The 268 participants were enrolled in grades 7, 8, and 9 of a French immersion program. Encouraging results were obtained, seeing that willingness to communicate, frequency of using the L2, and perceived competence increased from grades 7 to 8. Also an increase in willingness to communicate was found for girls from grades 8 to 9. Attitudes toward the learning situation were also assessed and used to compute the attitude/motivation index, which also included integrativeness and

motivation. The results showed that students with positive attitudes and motivation tend to be more willing to communicate, use the L2 more frequently, show higher perceived competence and have lower communication anxiety.

The study carried out by Lawson and Sachdev (2004) investigated the language use of Sylheti, Bengali, and English and the attitudes toward language use of 45 secondary education students of Sylheti-Bangladeshi origin living in London, UK. Reported language use and attitudes toward language use were measured across eight contexts (i.e., with parents, siblings, and friends, in shops, religious places, and newspapers, at school and social events). The trilingual participants showed similar patterns of attitudes and language use, as the two variables were strongly related. Bengali and Sylheti were used largely in familial contexts, while English was preferred for public domains of communication.

Furthermore, in the case of Sylheti and Bengali, attitudes toward language use were found to be correlated with written and oral language competences. Meanwhile, attitudes toward the use of English were significantly associated with oral competences of English, but not with written competences. Group identification was also assessed and was found to be higher for English and Bengali than for Sylheti. In addition, the results indicated that identity, vitality and language contact served as predictors of use and attitudes toward language use for Sylheti and Bengali.

Brown and Sachdev (2009) used 18 pairs of items to measure the attitudes toward the use of English and Japanese held by Japanese speakers living in London, UK. Data obtained in this manner showed that attitudes toward language use and actual use are associated with language vitality, proficiency, identity, so social contact and that it can systematically vary depending on context.

Attitudes toward language use were also investigated by Aziakpono & Bekker (2010) in the multilingual context of South Africa, where there are eleven official languages (English, Afrikaans and nine Bantu languages). The authors were interested in the attitudes and motivational orientations regarding the use of English and isiXhosa, the language spoken predominantly in the region, as languages of learning and teaching (LOLT). The questionnaire included items such as: ‘I would like to study all my courses at the university in English and isiXhosa’, ‘The use of isiXhosa in tutorials would enable

me to understand my subject much better' 'I would like my lecturers to be able to speak isiXhosa' 'Rhodes University should use both English and isiXhosa as languages of learning and teaching'. A combination of quantitative and qualitative data indicated that students had positive attitudes toward the use of both languages and thought that using isiXhosa besides English would help learning.

To summarize, the language attitudes studies reviewed focus on different attitudes objects, use various measurement techniques and methods, and are often based in different theories. As a result, we proposed to group the studies in four categories by their research paradigms: language evaluation paradigm, speaker evaluation paradigm, language learning paradigm, and a more general category to include the other studies regarding attitudes toward language related behaviors.

Many language attitudes objects were studied within their corresponding paradigm, which made difficult to uncover how the attitudes toward various objects are related. Future research will have to juxtapose different language attitudes objects to explore their relationships.

2.2.3.2. Language attitudes studies conducted in Spain

The aim of this chapter is to review some of the studies carried out in the Spanish state, especially in Catalonia, where our research was also conducted. We present all types of studies, so that no relevant information might be overlooked. The organization of this chapter follows geographical and linguistic criteria. Therefore, we first present several studies conducted within the Spanish territory, next we dedicate a special section to English, and finally we review studies carried out in Catalonia.

2.2.3.2.1. Language attitudes studies regarding the languages spoken within the Spanish state

Being a multilingual state, Spain represented a fruitful context of language attitudes research. Following, some relevant studies from the last decade are introduced.

The dynamics of social interactions between language-defined groups were explored in a series of studies following the speaker evaluation paradigm. Thus, in a study conducted in Valencia, Blas Arroyo (1995) used four different speakers: two speakers of Spanish varieties, northern and southern, and two for Catalan varieties - the one spoken in Valencia and the one specific to the Barcelona area. The speaker of northern Spanish received the highest ratings on status. Contrasting the two varieties of Catalan, it resulted that Valencian was more strongly associated with social status, a possible reflection of the complicated political relations between the two regions.

Ferrer (2010) examined the evolution of language related attitudes in Valencia by comparing data obtained from 180 students in 1998 with data collected from 320 students in 2008. After the ten-year time lapse, the prestige attributed to Spanish speakers diminished, but the solidarity ratings augmented, as well as the percentage of the population speaking Spanish. Valencian speakers received the same ratings on status but registered a decline in solidarity, suggesting that Valencian started to lose its role as symbol of identity. In addition, Catalan continued to lose ground, being surpassed by Valencian. Regarding methodology, it is important to note that Ferrer (2010) chose, in a similar manner to Blas Arroyo (1995), a variant of the matched-guise technique in which different voices were used and which could be a source for issues in group comparison.

In another study, conducted by Martínez & Blas Arroyo (2012) in Els Ports (Castellón) and Matarranya (Teruel), attitudes toward speakers of Catalan and Spanish were compared. The 60 participants of all ages from these two rural areas attributed more prestige to Spanish and more social appeal to Catalan.

Another series of studies used the language evaluation paradigm. An investigation of the attitudes toward Spanish and Euskera in the Basque Country revealed that the first language of participants had a considerable influence on attitudes. Lasagabaster (2003) applied an adapted version of Baker's (1992) language attitudes questionnaire to university students that had as L1 Spanish, Euskera or both. Students with L1 Spanish expressed more favorable attitudes toward Spanish and less favorable toward Euskera, while those with L1 Euskera had more positive attitudes toward Euskera and less positive toward Spanish.

In a subsequent study, where 1087 undergraduate students participated, Lasagabaster (2005) analyzed the explanatory power of a series of variables, including age, gender, specialization, mother tongue, language proficiency, size of hometown, province, type of school, and knowledge of foreign language. It was revealed that attitudes toward Spanish were best predicted by sociolinguistic context, first language, competence in Spanish, size of hometown, and knowledge of other languages. Attitudes toward Euskera were explained by competence in Euskera, sociolinguistic context, age, and gender. The two languages seemed to be in a rivalry at attitudinal level, with each group of speakers valuing highly their language and downgrading the other one.

In a study carried out in Galicia by Loredó Gutiérrez and his colleagues (2007), 207 undergraduate students expressed more favorable attitudes toward Galician than toward Spanish and thirdly English. Galician was higher rated by students who perceived themselves as competent in Galician, who had Galician as L1 or were bilinguals, who were from the lower social classes, who had more Galician presence in their education, who live Galician-speaking areas or in areas with less than 100,000 inhabitants, or who were women. In the case of Spanish, the most positive attitudes were showed by those with high levels of perceived language competence, who had Spanish as their L1, who were educated in Spanish, who reside in Spanish speaking areas or with more than 100,000 inhabitants. Whereas, English was higher rated by students with a high

competence in English, who have travelled to an English-speaking country, and who were from a high social status family.

Huguet and Suïls (1998) carried out a study at the border area between Catalonia and Aragon. They explored the attitudes of 257 secondary education students. The findings showed the importance of family language background, as there was a preference for Catalan specific to Catalan students and a preference for Spanish on the part of students living in the Catalan speaking area of Aragon. These results also varied by first language, seeing that in Baix Segre, Catalan speakers seemed to hold less positive attitudes in percentages toward Spanish than Spanish-speaking respondents and in Baix Cinca, Spanish speakers tended to hold less positive attitudes toward Catalan than Catalan speakers did. The results were confirmed by Huguet, Suïls, & Janés (2000), who emphasized the role of attendance to Catalan classes in fostering positive attitudes toward Catalan.

Huguet and Llurda (2001) investigated the attitudes of 94 secondary education students studying in Catalonia and Aragon. Generally, students expressed positive attitudes toward Catalan and Spanish. Family language condition proved to influence attitudes toward Spanish, but did not have a significant effect on attitudes toward Catalan. Thus, attitudes toward Spanish were more positive the more the family spoke the language.

Huguet (2006) investigated attitudes toward Spanish, Asturian, and Catalan in Asturia and Aragon. For this purpose, a questionnaire was applied to 231 secondary education students in Asturia and 163 in Aragon. The results showed that, generally, attitudes toward Spanish were positive. Some differences appeared when the home language of participants was introduced as an independent variable. Asturian and Catalan speakers tended to value more their own languages than Spanish, while the reverse was true for Spanish speakers, who rated higher Spanish. There was a relationship of indirect proportionality between the minority languages and the official one, so that an increase of positive attitudes toward Asturian or Catalan corresponded to a decline in attitudes toward Spanish. Another variable that was analyzed was attendance to optional classes of Asturian or Catalan, which was found to influence attitudes toward the respective minority languages so that those who attended classes reported more positive attitudes than those who did not study any minority language.

Huguet, Lapresta and Madariaga (2008) conducted a study in Aragon, focused on the three languages that coexist there: Spanish, Catalan and Aragonese. Thus, 287 secondary education students expressed their attitudes toward the three languages spoken in Aragon and two foreign languages, English and French, by means of a sociolinguistic questionnaire. Their answers indicated that Spanish was the highest valued language, while Catalan was found to be the least valued. When taking into account the home language of participants, Spanish speakers showed the most positive attitudes toward Spanish, being followed at a significant distance by Catalan bilinguals and Aragonese bilinguals. In the case of Catalan, Catalan bilingual students reported more favorable attitudes than Aragonese bilinguals and students with immigrant origins.

Most of the studies explored the attitudes of autochthonous participants. However, as the immigrant population increased, researchers redirected their attention toward this new interest group.

In a study carried out in the Basque Country, Rojo, Madariaga and Huguet (2010) asked 390 autochthonous students and 183 immigrant ones enrolled in secondary education about their attitudes toward Spanish and Euskera. Both languages were positively evaluated, with Euskera being more highly rated by autochthonous respondents. Among the immigrant students, the group coming from Latin America stood out as the one with the least favorable attitudes toward Euskera.

A similar tendency of immigrant students to hold less favorable attitudes toward Euskera and to value highly Spanish was found in an earlier study of Ibarra and associates (2008). In addition, their findings showed that autochthonous students that were instructed in Spanish, according to the educational model A, also harboured less positive attitudes toward Euskera and positive ones toward Spanish.

2.2.3.2.2. Language attitudes studies regarding English

Considering that the continually increasing importance and presence of English in the Spanish linguistic landscape, this section is dedicated to studies regarding attitudes toward English as a foreign language.

English is continually gaining more ground. However, in the Spanish multilingual context, attitudes toward English were found to be more varied than in other countries. In Aragon, secondary education students declared predominantly neutral attitudes toward English. A discrepancy was found between students from higher and lower social classes, with the first group showing more favorable attitudes as a sign of their awareness of the international importance of English (Huguet et al., 2008).

In a study conducted by Lasagabaster (2003) in the Basque Country, 1097 undergraduates expressed their attitudes toward English, Spanish and Euskera. The participants with Spanish as L1 had the most favorable attitudes toward English, being followed by the bilingual group and, at last, by those with Euskera as L1. Euskera speakers evaluated English less favorably than Euskera, but more positively than Spanish. In a subsequent study, Lasagabaster (2005) used multiple regression analysis to show that attitudes toward English are influenced by respondents' perceived degree of competence and their sociolinguistic context.

In another study, secondary education students that followed the Model A of education, being instructed in Spanish, gave English higher ratings compared to Euskera, but lower than for Spanish. In addition, immigrant students valued English more favorably than autochthonous participants (Ibarraran et al., 2008).

Sociolinguistic contextual disparities could account for the different attitudinal patterns existent across the world. Regional particularities such as the presence of English in the media and in day-to-day interaction offer a possible explanation for the distinctions among contexts, such as those between the northern European countries and Spain (Lasagabaster, 2003).

2.2.3.2.3. Language attitudes studies conducted in Catalonia

After briefly seeing the situation of language attitudes in the Spanish territories, we focus on Catalonia.

2.2.3.2.3.1. Studies following the speaker evaluation paradigm

In 1980, around the implementation of the linguistic normalization policy, Woolard (1989, 1991, 2003) conducted one of the main studies on language attitudes in Catalonia. It was the first study that used the matched-guise technique to investigate attitudes toward Catalan and Spanish speakers. Participants had to assess four women's voices on 15 traits (amusing, sense of humor, likeable, open, physically attractive, generous, trustworthy, cultured, intelligent, leaderlike, self-confident, hardworking, proud, ambitious and progressive). Instead of the semantic differential specific to this technique, Woolard (1989) used a six point Likert scale.

Only two dimensions were analyzed: status and solidarity. The results indicated that both Spanish and Catalan participants assigned greater status value to Catalan. Regarding solidarity, that both groups rated higher the guises in which the language spoken coincided with the native language of the speaker and of the participant (i.e., Spaniards rated higher on solidarity when they heard a native Spanish speaking in Spanish, while Catalans gave higher ratings to native Catalan speakers in their Catalan guise). An interesting pattern of ratings was noticed for guises of native Spanish speakers. Spanish participants downgraded native Spanish speakers using Catalan, while for Catalans respondents, the languages used by the native Spanish speakers made no difference. It seemed that speaking Catalan could have been interpreted as betrayal of their Spanish group. These findings were considered indicators of the fact that 'second language speakers of Catalan were likely to be discouraged rather than recruited in informal interaction' (Woolard & Gahng, 1990: 315).

Seven years later, Woolard and Gahng (1990) replicated the study to see how social evaluation of Catalan and Spanish speakers changed following the language policies implemented. The same format and the same four guises were used, with the only difference that now they were rated on 14 traits, 'progressive' being eliminated. Also, efforts were made to match the participant samples. In both cases, the studies were

conducted in five public and private secondary education schools in Barcelona. The comparison of the data obtained at the two time points showed an increase of the status value of Catalan. On the solidarity dimension, the two groups continued preferring their own languages. As regarding the native Spanish speakers who use Catalan, on one side Spanish participants decreased their tendency to rate lower and, on the other side, Catalans expressed more solidarity toward them. The authors interpreted the results as a “loosening of the bond between the Catalan language and native Catalan ethnolinguistic identity” (Woolard & Gahng, 1990: 326), since it was no longer important for Catalans who spoke Catalan, but rather that it was spoken.

The evolution of language attitudes was further studied by Newman, Trenchs-Parera and Ng (2008) who based their research on Woolard’s (1989) and Woolard and Gahng’s (1990) matched-guise studies. They expanded the design by introducing a balanced bilingual among guises and gender as a variable. This way, five female speakers and five male speakers were recorded. To the 15 traits used by Woolard (1989, 1991), three more, related to gender, were added: sensitive, strong, and masculine or feminine. The study was conducted in 2005, “a generation after the implementation of the linguistic normalization” (Newman et al., 2008: 330) in eight schools in Catalonia.

The results indicated that Catalan speakers received high ratings on solidarity from all respondents, but were no longer highly rated on the status dimension. Overall, the distinctions between respondents from Spanish and Catalan backgrounds were attenuated, as well as the differences in status and solidarity. A general positive valuation of bilingualism emerged as characteristic for the 21st century multilingual Catalan community. According to Newman and his associates (2008), this pattern of attitudes denoted predominant support for linguistic cosmopolitanism, a language ideology that breaks down ethnolinguistic boundaries, support heterogeneity and multilingualism and accommodates the other groups’ linguistic preferences (Newman et al., 2008; Newman, 2011).

Subsequent qualitative studies conducted by Trenchs-Parera and Newman (2009) and Newman (2011) used content analysis to reveal the presence of six language ideologies among the autochthonous community: parochial Catalan, mixed Catalan, cosmopolitan Catalan, cosmopolitan Spanish, mixed Spanish, and parochial Spanish. At the extremes were the linguistic parochialisms stances, supporting monolingualism, either Catalan or

Spanish. These were in conflict with linguistic cosmopolitanism, which promoted bilingualism and linguistic crossing. It is worth noting that the cosmopolitan attitudes dominated the Catalan linguistic context (Newman, 2011; Trenchs-Parera & Newman, 2009).

When investigating the immigrant population, no such spectrum of linguistic ideologies could be identified. Immigrants' ideologies and attitudes were 'diffuse' (Trenchs-Parera & Newman, 2009: 521). When discussing Spanish, the Latin American group mixed the acknowledgement of its political authority, universality, and supra-ethnicity with the necessity to maintain their language variety as a symbol of cultural distinctiveness and identity. As for Catalan, it received less importance and was not considered a threat to identity. Catalan was perceived as an obstacle to communication and educational success, but this perception diminished with time and proficiency (Newman, 2011). In order to make Catalan more appealing to newcomers, Trenchs-Parera and Newman (2009: 522) recommended constructing it as "a symbol of inclusion and openness, and not assimilation".

2.2.3.2.3.2. Studies focused on language learning

Some researchers built on Gardner's (1985) socio-educational model and investigated how attitudes related to motivation and language learning in the multilingual context of Catalonia.

Bernaus and her associates (Bernaus & Gardner, 2008; Bernaus et al., 2004, 2007) adopted a socio-educational (Gardner, 1985) perspective and analyzed language attitudes toward Catalan, Spanish and English in a language learning framework. Bernaus et al. (2004) applied a questionnaire based on Gardner's Attitude/Motivation Test Battery to 114 students enrolled in secondary education at one school in Barcelona with 80% of the population coming from an immigrant background. The students, of whom none spoke Catalan at home, expressed more positive attitudes toward Spanish and English in comparison with those toward Catalan. They also rated more favorable Spanish speakers, followed by English, and lastly Catalan speakers.

These results were further explored in the study conducted by Bernaus and associates in 2007 at the same school. Among others, they investigated the effect of country of origin

and year level on language attitudes. While the first proved to have little influence, year level determined a decline of attitude's favorability, as well as of motivation. It was also found that students used Spanish more frequently than Catalan outside the classroom.

Bernaus and Gardner (2008) focused on foreign language learning and tested the predictors of English achievement in Catalonia. Through hierarchical linear modelling analysis, they uncovered that attitudes toward the learning situation was a negative predictor for English achievement when unrelated to motivation. This finding is interesting because it shows that can affect achievement directly and indirectly, by influencing motivation.

Similar interest in the learning of English was showed by Tragant and Muñoz (2000) who studied the relation between language attitudes and language learning. The results indicated that attitudes toward English became more positive as the number of classes increased. Moreover, this factor had more power than the age of students or the age at which they started learning English.

2.2.3.2.3.3. Studies following the language evaluation paradigm

A great part of the research conducted in the last decade worked with general attitudes toward language. Many of studies included in this section are focused on the attitudes of students of immigrant origin.

Huguet (2007a) asked 309 university students about their linguistic use and attitudes toward Catalan, Spanish, and English. The variables that could explain differences in attitudes were the first language of students, school language background, and the linguistic context. In this sense, students whose L1 was Catalan, who were educated in Catalan, or who lived in a city where Catalan was widely used reported more positive attitudes toward Catalan. Other variables, such as gender, socio-professional status, and population of the town or city where they lived did not have a significant influence on attitudes.

Janés (2006a, 2006b) analyzed the attitudes of secondary education students of autochthonous and immigrant origin residing in the districts Osona and Lleida. Differences by gender, home language, socio-professional status, and area of origin were

found. In this sense, attitudes toward Catalan were more positive for students that had Catalan as home language and were from a low status family. Attitudes toward Spanish were more favorable for Spanish speaking students that had a high socio-professional status, and were from Latin America. Without finding significant differences, the author uncovered a tendency of immigrant students living in Osona to have more positive attitudes toward Catalan and of those residing in Lleida to rate higher Spanish. These tendencies suggest that context also plays an important role in influencing attitudes.

Huguet, Janés, and Chireac (2008) investigated the attitudes toward Catalan and Spanish held by immigrant students enrolled in secondary education. The authors examined how attitudes are affected by a series of variables, including area of origin, mother tongue, length of stay, schooling in the homeland and parents' socioprofessional level and sociocultural status. It was found that students coming from Latin America manifested the least favorable attitudes toward Catalan and the most positive attitudes toward Spanish among all the immigrant groups. Also, students that lived for more than six years in Catalonia, as well as those who immigrated before reaching the age of 10 tended to show more positive attitudes toward Catalan. In addition, starting schooling in Catalonia proved to lead to significant differences, in the sense that the students that went to school in Catalonia had more favorable attitudes than those schooled in their country of origin.

Lapresta and his colleagues (2009) combined quantitative and qualitative methods to investigate the language attitudes of 456 autochthonous and 225 immigrant secondary education students residing in the Osona and Lleida districts of Catalonia. The results of the quantitative part of the study showed that students who had Catalan as home language, who came from a low socio-professional status family, who started going to school in Catalonia, who had a longer length of residence and who had arrived earlier in Catalonia showed more positive attitudes toward Catalan. Spanish was rated higher by students whose home language as Spanish, who were from families with a high socio-professional status, who came from Latin America, and who were girls. Moreover, attitudes toward Catalan and Spanish were correlated with language competences.

All these findings were broadened by a qualitative analysis using interviews. It was revealed that construction of language attitudes differed by origin and area of origin. Students of immigrant origin that felt valued academically and socially tended to interact more with their autochthonous peers, to be more satisfied with their lives in Catalonia and

to have more positive attitudes toward Catalan. For autochthonous students, attitude formation was anchored in the identity dimension, as they perceived Catalan as the fundamental symbol of the Catalan identity.

Lapresta, Huguet, and Janés (2010) added more depth to the quantitative information regarding the attitudes toward Catalan and Spanish by conducting a series of 35 semi-structured interviews with autochthonous and immigrant secondary education students. Four dimensions (motivation, language competence and use, social networks, identity-language-integration) were used to analyse the data collected. The findings indicated that students differed in their construction and organization of attitudes by area of origin and family language. Further, the personal perception of school and social integration proved to be a very important variable associated with positive attitudes toward the two official languages of Catalonia. In other words, students that feel appreciated and valued in academic and social contexts tend to hold more favorable attitudes.

Another qualitative study was conducted by Woolard (2009) who interviewed 26 secondary education students about their use and perception of Catalan and Spanish. Catalan was generally described in terms of elegance, refinement, seriousness, and formality and it associated with persons of high professional and economic status. Spanish was described as coarse and informal and it was associated with poor neighbourhoods and uneducated people. In addition, students tended to reject language mixing. Woolard suggested that language choice represented a matter of style and did not serve to construe social status and relations. The author also observed the emergence of an 'espanyol identity', characterized by a deliberate rejection and avoidance of Catalan.

Querol and Huguet (2010) investigated the relationship between attitudes and language competences. They compared the results of 93 autochthonous and 28 immigrant secondary education students and discovered that autochthonous students obtained better results at the language tests for both Catalan and Spanish than the students of immigrant origin. Immigrant and autochthonous students expressed positive attitudes toward both languages, but the later group seemed to value more Catalan. Further the results showed that the attitudes toward Catalan and Catalan competences were positively correlated. Attitudes toward Spanish were correlated with Spanish competences for the immigrant group, but not for the autochthonous students.

Madariaga, Huguet, and Lapresta (2013) investigated the attitudes toward Spanish, Catalan, English, and the first language (L1) of 1206 autochthonous and immigrant secondary education students. The findings indicated that autochthonous students had more positive attitudes toward Catalan and less positive attitudes toward the other three languages in comparison with the immigrant students. Home language also influenced the language attitudes, as those with Catalan as home language gave the highest ratings to Catalan and the lowest to Spanish, and those with Spanish as home language manifested the opposite pattern, rating Spanish higher and Catalan lower. Differences between Spanish and non-Spanish speaking immigrant students were also found, the former having more positive attitudes toward Spanish and English and less favorable attitudes toward Catalan and L1. Length of residence and age of arrival influenced attitudes toward Catalan, English, and L1. Further, being born in Catalonia determined a different attitudinal pattern from those born in their origin countries. The results also indicated that Spanish competences were positively correlated with attitudes toward Spanish and English, while Catalan competences were correlated with attitudes toward all the languages investigated.

To conclude, due to its multilingual context, Catalonia represents an auspicious place for language attitudes research, which has been conducted under various research paradigms

This review of language attitudes studies revealed a series of variables highly relevant regarding the formation and change of attitudes. Table 9 presents these variables, indicating also their relationship with language attitudes and the studies that found evidence confirming or infirming this relationship. Studies where the participants included immigrant secondary education students are differentiated from the ones conducted with other groups of respondents, mainly autochthonous students of either secondary education or university studies.

Table 9. Variables relevant in language attitudes studies

Variables	Relationship	Studies confirming the relationship		Studies infirming the relationship	
		Immigrant students	Other participants	Immigrant students	Other participants
Grade	Attitudes decline with grade	Bernaus et al. (2007)	Baker (1992); Chambers (2000); Dörnyei & Csizér (2002); Heining-Boynton & Haitema (2007); Henry & Apelgren (2008)		
Gender	Girls tend to have more positive attitudes than boys	Lapresta et al. (2009)	Bilaniuk (2002); Caruana (2007); Dewaele (2005); Dörnyei & Csizér (2002); Heining-Boynton & Haitema (2007); Henry & Apelgren (2008); Lasagabaster (2005); Lasagabaster & Sierra (2009); Loredo Gutiérrez et al. (2007); Moriarty (2010); Sharp et al. (1973); Ytsma (2007)		Huguet (2007) Lasagabaster (2008) Lawson & Sachdev (2004)
Socio-professional & socio-cultural status	Significant differences between groups	Huguet & Janés (2008)	Bokhorst-Heng & Santos Caleon (2009); Caruana (2007); Lasagabaster (2007, 2008); Loredo Gutiérrez et al. (2007); Mettwie & Janssens (2007)		Lasagabaster (2009); Safont (2007); Ytsma (2007)
Language competences	Positively related	Huguet & Janés (2008); Janés (2006); Madariaga et al. (2013);	Lasagabaster (2005); Laugharne (2007)		
Area of origin	Significant differences between groups	Bernaus et al. (2004); Huguet & Janés (2008); Lapresta et al. (2009)		Bernaus et al. (2007)	
Length of residence & Age of arrival	Positively related	Lapresta et al. (2009); Madariaga et al. (2013);		Huguet & Janés (2008)	

Grade, gender, socio-professional and socio-cultural status, language competences, area of origin, length of residence, and age of arrival influenced attitudes toward language. Accordingly, several studies found that language attitudes tended to decline as students advanced on their academic trajectory. This significant effect of grade on language attitudes was found for both immigrant (Bernaus et al., 2007) and autochthonous students from various contexts (Baker, 1992; Chambers, 2000; Dörnyei & Csizér, 2002; Heining-Boynton & Haitema, 2007; Henry & Apelgren, 2008).

A large number of studies showed that gender determined differences in attitudes toward language (Caruana, 2007; Dewaele, 2005; Dörnyei & Csizér, 2002; Lasagabaster & Sierra, 2009; Loredó Gutiérrez et al., 2007; Moriarty, 2010; Sharp et al., 1973), as well as other language attitudes (Bilaniuk, 2002; Heining-Boynton & Haitema, 2007; Henry & Apelgren, 2008). However, Huguet (2007) and Lasagabaster (2008) did not find any significant differences between the attitudes toward language depending on gender. Similarly, Lawson & Sachdev (2004) found no differences between boys and girls regarding their attitudes toward language use.

Other variables found to be relevant in context of immigration are socio-professional and socio-cultural status (Huguet, Janés, & Chireac, 2008). However, their ability to influence language attitudes is still under question, mixed results were obtained in studies conducted with autochthonous students and undergraduates, seeing that some studies confirmed the relationship between the two variables and attitudes (Bokhorst-Heng & Santos Caleon, 2009; Caruana, 2007; Lasagabaster 2007, 2008; Loredó Gutiérrez et al., 2007; Mettwie & Janssens, 2007), while others did not find any evidence of this relationship (Lasagabaster, 2009; Safont, 2007; Ytsma, 2007).

Furthermore, the well-established association between language attitudes and language competences was also found in studies conducted with immigrant students (Huguet, Janés, & Chireac, 2008; Janés, 2006a; Madariaga et al., 2013).

Additionally, there are variables specific for studies regarding immigration, such as area of origin and length of stay. There is disagreement concerning the effect of area of origin, seeing that its influence was both confirmed (Bernaus et al., 2004; Huguet, Janés, & Chireac, 2008; Lapresta et al., 2009) and infirmed (Bernaus et al., 2007).

Similarly, length of stay and age of arrival were found to be determinants of the attitudes toward language held by immigrant students (Lapresta et al., 2009; Madariaga et al., 2013), but there were also findings that did not show a significant relationship between the two (Huguet, Janés, & Chireac, 2008).

As it can be seen, despite the considerable advances achieved in the field of language attitudes research, there are still several unanswered questions and important aspects that were not thoroughly investigated. In this sense, more research is necessary to understand the effect of these variables, especially in the case of students of immigrant origin.

Moreover, the relationship between attitudes toward language and self-identification, although supported theoretically (Giles, 1987; Hogg & Smith, 2007; Lapresta et al., 2009; Tajfel, 1972; Turner, 1982; Wood, 2010) received very little empirical attention. Similarly, the relationship between language use and attitudes toward language had been rarely analyzed explicitly, as in most cases language uses were presented descriptively and in parallel with attitudes toward language (Caruana, 2007; Huguet, 2007; Janés, 2006a; Lasagabaster, 2007; Laughame, 2007; Mettwie & Janssens, 2007) or in relation with attitudes toward language use (Aziakpono & Bekker, 2010; Lawson and Sachdev, 2004).

Another question addressed concerns the differences between autochthonous and immigrants. There seems to be a general agreement that autochthonous and immigrant students have different attitudinal patterns (Janés, 2006a, 2006b; Huguet, Janés, & Chireac, 2008; Lapresta et al., 2009; Madariaga et al., 2013). However, more data is needed regarding the differences in attitude formation and change processes. Our study makes the first steps in this direction by investigating if the effects and weights of determinant variables also vary by origin.

An area of extreme importance, but fairly little researched is the one of language attitude change. The results obtained so far were contradictory. On the one side, language related attitudes were found to decline in time by some cross-sectional (Dörnyei & Csizér, 2002; Henry & Apelgren, 2008) and longitudinal studies (Baker, 1992; Heining-Boynton and Haitema, 2007). In addition, Mantle-Bromley (2012) showed that special designed programs could improve attitudes toward a foreign language and its speakers. On the other side, the results of other longitudinal studies did not find evidence of attitude

change (Tragant, 2006). On an intermediate position, Gardner and his collaborators (2004) concluded that it is easier to change attitudes toward the learning situation than general attitudes toward language, and that this change was likely caused by learning experiences.

The aforementioned findings come from different paradigms of language attitude research. Obviously, systematic research in this direction is needed to understand in what conditions and through which processes attitudes toward language change.

Furthermore, research concerning attitudes toward language has been dominated by bivariate analyses. Multivariate analyses, which examine all the variables of interest at the same time, would offer an extra layer of information. Such analyses have been conducted in Wales (Baker, 1992) and the Basque Country (Lasagabaster, 2005), but lacked in the context of Catalonia.

Consequently, the research project presented in the second part aimed to answer these questions and to uncover more information about the factors determining language attitude formation and change in the case of immigrant students.

SECOND PART

EMPIRICAL RESEARCH

1. INTRODUCTION

Language attitudes have attracted the interest of scholars and researchers due to their importance and relevance to language acquisitions and social dynamics. They become particularly relevant in context of immigration. A review of the literature of speciality indicated a series of areas and aspects regarding the formation and change of language attitudes where more information is needed.

The present work aims to find some of the much-needed clarifications needed in this field. The focus is on attitudes toward languages in Catalonia, a context of immigration and multilingualism. Therefore, the first study included in this work attempts to answers some the issues identified, regarding the role of language use and self-identification variables and the identification of the most influential variables with the help of multivariate analyses.

Moreover, language attitude change on the part of immigrant students represents an unsearched territory. As a result, the second study is a longitudinal one that aims to examine if immigrant students changed their attitudes toward Catalan, Spanish, and English over a period of two years and under what influence these changes took place.

First, we present the objectives and hypotheses of the two studies. Following, in the description of the methodology, for each study we explain the variables examined, the characteristics of the participants, the instruments, the procedure, and the statistical treatment. The next section is dedicated to the presentation of the results obtained, which are later discussed in reference to our objectives and hypothesis and previous findings.

2. OBJECTIVES

The general objective of the present research is to analyze the attitudes toward Catalan, Spanish, and English held by immigrant and autochthonous students and how these attitudes change in time.

A series of specific objectives are drawn from the general one, as the present empirical work aims:

- To describe the attitudes toward Catalan, Spanish, and English expressed by students of immigrant origin residing in Catalonia;
- To describe the attitudes toward Catalan, Spanish, and English expressed by autochthonous students;
- To compare the attitudinal patterns and processes of autochthonous and immigrant students;
- To examine the effect of socio-structural and language related variables on the attitudes toward Catalan, Spanish, and English;
- To identify the most influential variables regarding the attitudes toward language;
- To describe the attitude change toward Catalan, Spanish, and English on the part of students of immigrant origin;
- To examine the effect of socio-structural and language related variables on the attitude change toward Catalan, Spanish, and English;
- To identify the main determinants of attitude change toward Catalan, Spanish, and English in the case of immigrant students.
- To propose social and educational measures designed to improve and to foster positive attitudes toward the languages spoken in Catalonia.

3. HYPOTHESES

In order to accomplish the aforementioned objectives, taking into account the theoretical and contextual framework, a series of hypotheses was established, as it follows:

- H1. Attitudes toward Catalan, Spanish, and English will be influenced by origin (autochthonous/immigrant).
- H2. Attitudes toward Catalan, Spanish, and English will be influenced by gender.
- H3. Attitudes toward Catalan, Spanish, and English will be influenced by grade.
- H4. Attitudes toward Catalan, Spanish, and English will be influenced by socio-professional and socio-cultural status.
- H5. Attitudes toward Catalan, Spanish, and English will be influenced by language competences.
- H6. Attitudes toward Catalan, Spanish, and English will be influenced by language uses.
- H7. Attitudes toward Catalan, Spanish, and English will be influenced by self-identifications with Catalonia, Spain, and area of origin.
- H8. Attitudes toward Catalan, Spanish, and English will be influenced by length of residence.
- H9. Attitudes toward Catalan, Spanish, and English will be influenced by area of origin (Europe, Africa, Latin America, and Asia and Oceania).
- H10. Attitudes toward Catalan, Spanish, and English of immigrant students will be influenced by place of birth (foreign born or born in Catalonia).
- H11. Origin will moderate the effect of the investigated variables on attitudes toward Catalan, Spanish, and English.
- H12. Considered simultaneous, the variables of interest will have different explanatory powers regarding the attitudes toward Catalan, Spanish, and English.
- H13. Attitudes toward Catalan, Spanish, and English will change after a two-year period.
- H14. Attitude change toward Catalan, Spanish, and English will be influenced by gender.
- H15. Attitude change toward Catalan, Spanish, and English will be influenced by grade.

- H16. Attitude change toward Catalan, Spanish, and English will be influenced by socio-professional and socio-cultural status.
- H17. Attitude change toward Catalan, Spanish, and English will be influenced by language competences.
- H18. Attitude change toward Catalan, Spanish, and English will be influenced by language uses.
- H19. Attitude change toward Catalan, Spanish, and English will be influenced by self-identifications with Catalonia, Spain, and area of origin.
- H20. Attitude change toward Catalan, Spanish, and English will be influenced by length of residence.
- H21. Attitude change toward Catalan, Spanish, and English will be influenced by area of origin (Europe, Africa, Latin America, and Asia and Oceania).
- H22. Attitude change toward Catalan, Spanish, and English will be influenced by place of birth (foreign born or born in Catalonia).
- H23. Considered simultaneous, the variables of interest will have different explanatory powers regarding the attitude change toward Catalan, Spanish, and English.

These hypotheses were investigated through two studies whose methodology is presented in the following section.

4. METHODOLOGY

In order to accomplish the objectives and to verify the hypotheses of this work, two studies were conducted. Generally, the two studies follow the same structure and investigate the same variables. However, there are some differences regarding the design and the participants. The first study is of quantitative nature and focused on attitudes toward Catalan, Spanish, and English as dependent variables. The second study is also quantitative and has a longitudinal design. The center of interest is represented by attitude change toward Catalan, Spanish, and English. The studies also differ in terms of participants, as the first one compares immigrant and autochthonous students, whereas the second study focuses on the immigrant group of students.

The next sections we present for each study the variables investigated, the characteristics of the participants, the instruments used, the procedure, and the statistical treatment.

4.1. STUDY 1

4.1.1. Variables

To reach our objectives, we investigated various variables, which are listed below.

- **Attitudes toward languages**

The focus of our research, attitudes toward languages capture the tendencies to evaluate favorably or unfavorably particular languages, in this case, we explored:

- **Attitudes toward Catalan;**
- **Attitudes toward Spanish;**
- **Attitudes toward English.**

These attitudes were measured as a continuous variable. The possible scores that the participants could obtain varied from a value of -10, indicator of an extremely negative attitude, to 10, indicator of an extremely positive attitude toward the respective language.

- **Origin**

The variable Origin comprises two categories: *autochthonous* and *immigrant*. More precisely, were considered autochthonous all the children with Spanish nationality that had as first languages Spanish and/or Catalan. Whereas immigrant students were defined as those without Spanish nationality, who were from immigrant families, regardless of being born in other countries or within Spanish territory and regardless of their first language.

- **Gender**

The inclusion of the variable Gender allowed differentiating between *boys* and *girls*.

- **Grade**

This variable had two categories: 2nd and 4th grade. It implicitly included age as 2nd graders had a mean age of 13.69 ($SD = 0.75$) and the 4th graders had a mean age of 15.76 ($SD = 0.79$).

- **Socio-cultural status**

Socio-cultural status captured the education of the parents or legal guardians of the students. It consisted of three categories:

- *Elementary education* – corresponds to parents without formal education or with elementary level education;
- *Secondary education* – corresponds to parents that graduated secondary education;
- *University education* – corresponds to parents that have earned a bachelor degree or higher.

- **Socio-professional status⁶**

Based on the occupations of parents, three categories representing socio-professional status were created:

- *Low*;
- *Medium*;
- *High*.

- **Language competences**

The two variables regarding language competences investigated were:

- **Catalan competences;**
- **Spanish competences.**

⁶ To verify if there socio-professional status, socio-cultural status, and home language are associated for the autochthonous participants the Pearson's chi-squared test of association was used. The results showed that there was a significant moderate association between socio-professional status and home language ($\chi^2_{(4)} = 79.26, p < .001, \phi = .34$). Catalan speakers tended to have higher status and Spanish speakers tended to be those with low socio-professional status.

Socio-cultural status was moderately associated with home language ($\chi^2_{(4)} = 62.90, p < .001, \phi = .31$), indicating that more Catalan speakers had university education and more Spanish speakers only had elementary education. The proportions of Catalan and Spanish speakers that finished secondary education were equivalent.

Lastly, socio-professional status and socio-cultural status were strongly associated ($\chi^2_{(4)} = 245.68, p < .001, \phi = .60$), indicating that those with higher levels of education also had higher socio-professional status.

These variables provided scores ranging from 0 to 100, which reflected the level of academic language competences in Catalan and Spanish, respectively. Higher scores correspond to a higher level of language competence.

- **Language use**

Language use included three variables:

- **Use of Catalan;**
- **Use of Spanish;**
- **Use of L1** – considered only for students of immigrant origin.

The uses of Catalan, Spanish for all the participants and L1 for those of immigrant origin were represented as a score placed anywhere on a scale that ranged from 0, which meant no use of a particular language, to 3, which indicated that the respective language was the most used.

- **Self-identification**

Three variables regarding the self-identification of students were examined:

- **Self-identification with Catalonia**
- **Self-identification with Spain**
- **Self-identification with the area of origin** - considered only for students of immigrant origin.

A scale ranging from 1 to 4 was used to capture the degree to which participants identified with Catalonia, Spain, or with their area of origin, if they came from an immigrant family. Higher scores indicated a more powerful self-identification with Catalonia, Spain, or their area of origin.

- **Area of origin**

In the case of immigrant students, their area of origin was investigated as possible determinant factor. Considering the high number of sending countries, we grouped them geographically in four areas⁷ of origin:

- Europe⁸
- Africa⁹
- Latin America¹⁰
- Asia and Oceania

- **Length of residence**

A variable specific to students of immigrant origin, length of residence provided the number of years that participants have lived in Catalonia.

- **Place of birth**

Another variable specific to students of immigrant origin, place of birth had two categories that indicated if participants immigrated to Catalonia after their birth:

- *Born in Catalonia*
- *Foreign born*

⁷ A similar classification of area of origin was used by Bernaus and associates (Bernaus et al., 2004, 2007), who explored the attitudes of students from South and Central America, Africa, and Asia.

⁸ Before deciding to include participants from the European Union and the rest of Europe in the same category, we checked to see if the two groups differ. Since no significant differences were found between the two groups ($t_{(100)} = 1.60, p = .113$ for attitudes toward Catalan, $t_{(100)} = 0.86, p = .390$ for attitudes toward Spanish, and $t_{(100)} = 0.14, p = .892$ for attitudes toward English), they were aggregated in the same category.

⁹ Students from Maghreb and from the rest of Africa were included in the same category because the two groups were found to be similar enough to not produce distortions ($t_{(126)} = 1.92, p = .057$ for attitudes toward Catalan, $t_{(126)} = 0.18, p = .854$ for attitudes toward Spanish, and $t_{(126)} = -2.06, p = .042$ for attitudes toward English). It is worth mentioning that the majority were from Maghreb.

¹⁰ Latin America includes all the countries located in South, Central, and North America where a Latin language is spoken. We chose this label due to inclusive characteristic, as it does not exclude any country, such as Mexico.

4.1.2. Participants

4.1.2.1. Selection of the sample

Participants included 1173 secondary education students, of which 673 were autochthonous and 500 were of immigrant origin. Their ages varied between 12 and 19 years, with a mean of 14.71 ($SD = 1.29$). The sample was formed of students enrolled at ten institutes of Secondary Education located in the four provinces of Catalonia, chosen for counting with a representative number of immigrant students. Table 10 presents the numbers of autochthonous and immigrant students from each center.

Table 10. Sample distribution by educational institute and province for the first study

Province	Institute of Secondary Education	Number of students		
		Autochthonous	Immigrant	Total
Lleida	IES Escola del Treball (Lleida)	15	24	39
	IES Guissona (Guissona)	93	28	121
	Total	108	52	160
Barcelona	IES Maragall (Barcelona)	55	65	120
	IES Barcelona Congrés (Barcelona)	43	58	101
	IES Lluís de Peguera (Manresa)	91	41	132
	IES Eduard Fontseré (Hospital de Llobregat)	25	42	67
	Total	214	206	420
Tarragona	IES Francesc Vidal I Barraquer (Tarragona)	37	30	67
	IES Gaudí (Reus)	101	29	130
	Total	138	59	197
Girona	IES Santa Eugènia (Girona)	103	65	168
	IES Montgrí (Torroella de Montgrí)	109	43	152
	Total	212	108	320
Sample extension		1	75	76
Total		673	500	1173

4.1.2.2. Characteristics of the sample

A description of the sample depending on some of the investigated variables is presented in the following section. Additionally, we present the characteristics of the participants by contrasting the autochthonous and the immigrant groups of students.

4.1.2.2.1. Gender

The distribution of the sample was equilibrated with respect to gender, seeing that 50.9% of all participants were boys and 49.1% were girls. This proportion maintained when exploring separately the autochthonous and the immigrant students.

Figure 18 shows the sample distribution by gender, indicating also the absolute number of students that form each category. Among the autochthonous students, 52.2% were boys and 47.8% were girls. Similarly, 49.2% of the students with immigrant origin were boys and 50.8% were girls.



Figure 18. Sample distribution by gender for the first study

4.1.2.2.2. Grade

The sample was formed of 2nd and 4th grade students, which were proportionally distributed. Thus, 51.1% of all students were in 2nd grade and 48.9% were in 4th grade. The same distribution described the autochthonous group, of which 49.3% studied in 2nd grade and 50.7% were enrolled in the 4th grade. Further, 53.4% of the immigrant students were in 2nd grade and 46.6% were in 4th grade. The distribution by grade, including the absolute numbers, is presented in figure 19.

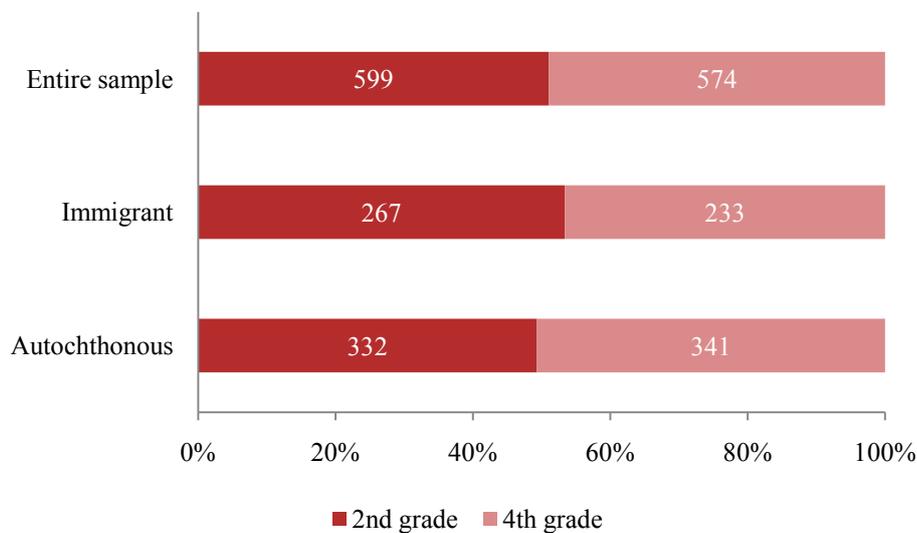


Figure 19. Sample distribution by grade for the first study

4.1.2.2.3. Socio-cultural status

Looking at the distribution of the sample by the socio-cultural status of parents, it is easy to identify a pattern that characterizes both the autochthonous and the immigrant groups of students. Specifically, those with secondary and university education were represented in equivalent proportion, each accounting for approximately 40% of the group total. Thus, 42.9% of the autochthonous students and 40% of the immigrant students had parents that graduated secondary education. Also, 36.8% of the autochthonous group and 38.4% of the immigrant had parents with at least a bachelor degree. For both groups, a smaller proportion, of around 20%, had parents that did not continue their education after the elementary level. Figure 20 presents the sample distribution by socio-cultural status.

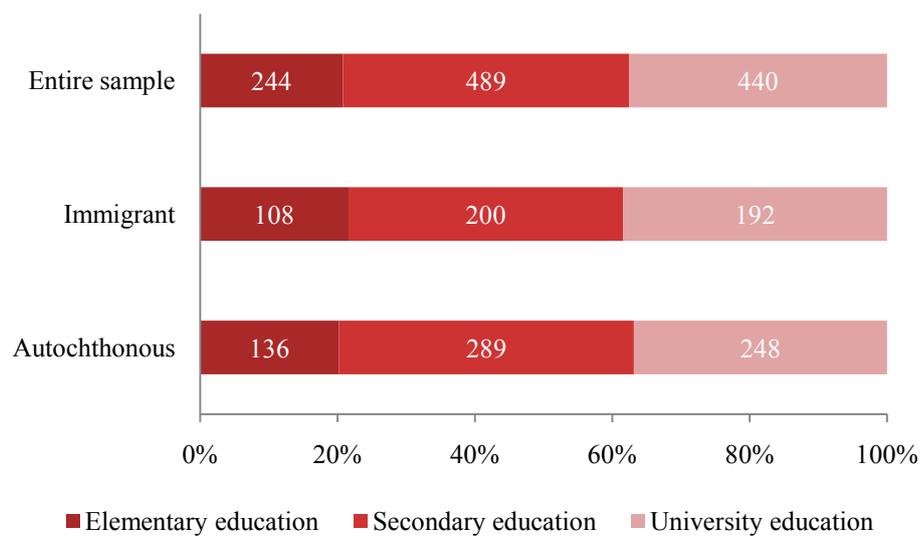


Figure 20. Sample distribution by socio-cultural status for the first study

4.1.2.2.4. Socio-professional status

Unlike in the case of the equivalent distributions by socio-cultural status, socio-professional status created uneven distributions, as represented in Figure 21.

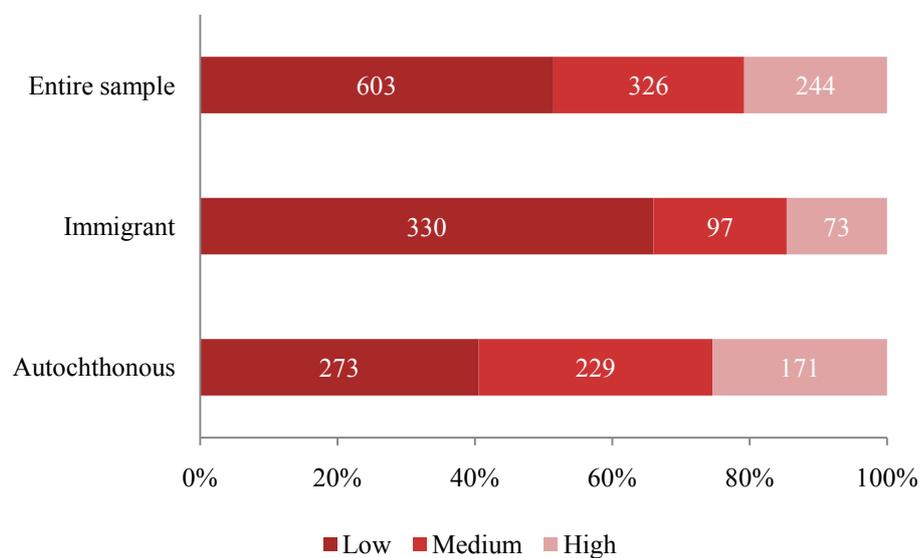


Figure 21. Sample distribution by socio-professional status for the first study

Regarding the autochthonous students, 40.6% were from a family with low socio-professional status, 34% were from a medium status family, and 25.4% from a high status family. In the case of the immigrant group, the gaps between status groups were wider, as the majority of 66% had low socio-professional status, 19.4% were in the medium status group, and 14.6% belonged to a family of high socio-professional status.

4.1.2.2.5. Language competences

The Catalan and Spanish competences of autochthonous and immigrant students are presented in figure 22. The language competences of autochthonous students were rather homogeneous. The group mean of Catalan competences was of 72.93 (*SD* = 11.26) and the mean corresponding to Spanish competences was of 66.39 (*SD* = 11.79).

Meanwhile, the scores obtained by students of immigrant origin were more heterogeneous. Their groups means were of 53.69 (*SD* = 17.39) for Catalan competences and of 53.41 (*SD* = 17.93) for Spanish competences.

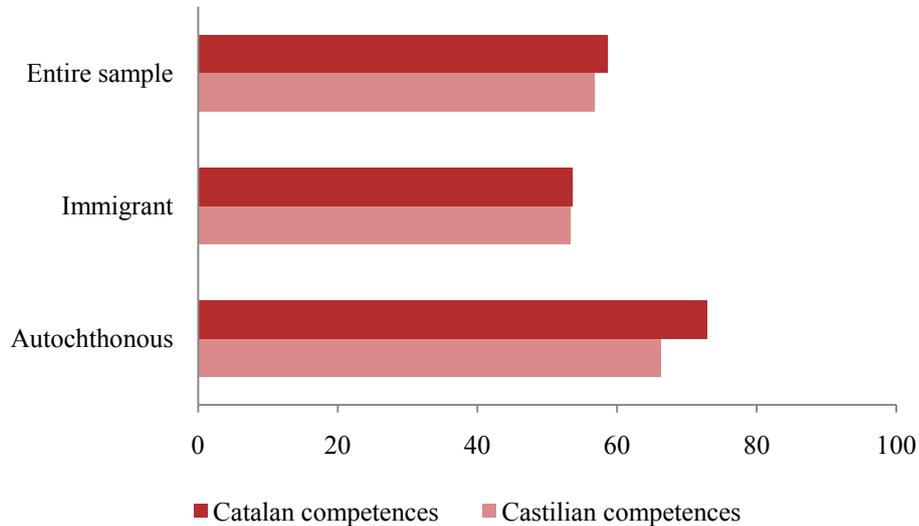


Figure 22. Language competences (means) of the sample of the first study

4.1.2.2.6. Language use

Generally, Catalan and Spanish were the languages most used by the participants. Students of immigrant origin also use their first languages, but in a reduced amount. The language use specific to our sample is represented in figure 23.

Autochthonous students used Catalan ($M = 2.28$, $SD = 0.85$) and Spanish ($M = 2.14$, $SD = 0.88$) in approximately similar amounts. Whereas, immigrant students tended to use Spanish ($M = 2.43$, $SD = 0.74$) more than Catalan ($M = 1.66$, $SD = 0.86$). The least language used was their L1 ($M = 0.18$, $SD = 0.49$).

Further, looking at the estimated specific uses for each of the eight contexts investigated (e.g., interacting with teachers, with peers in the school yard, with peers outside school, with adults, watching TV, reading, and writing), there tends to be an equilibrated use of the two languages among autochthonous students, while immigrant students tend to use Spanish more. Only when interacting with teachers, all participants indicated a higher use of Catalan. Figure 24 presents the language uses for each context.

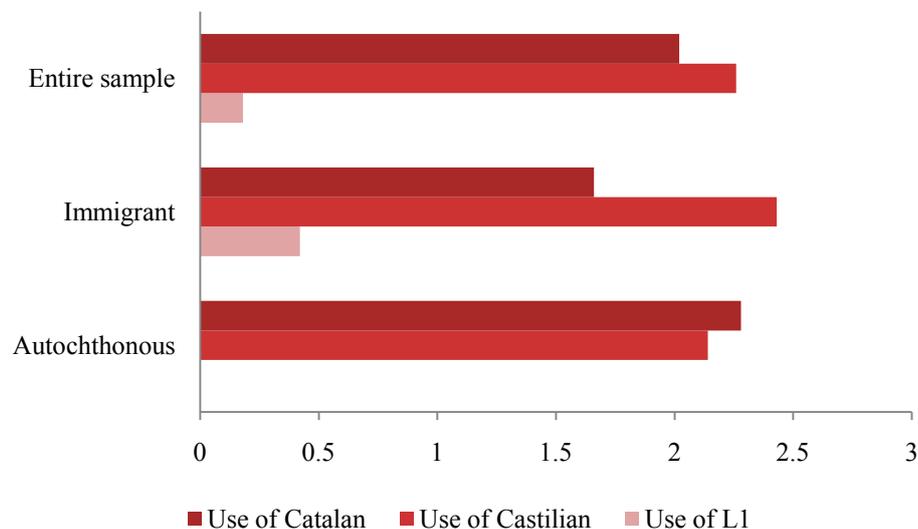


Figure 23. Language use (means) of the sample of the first study

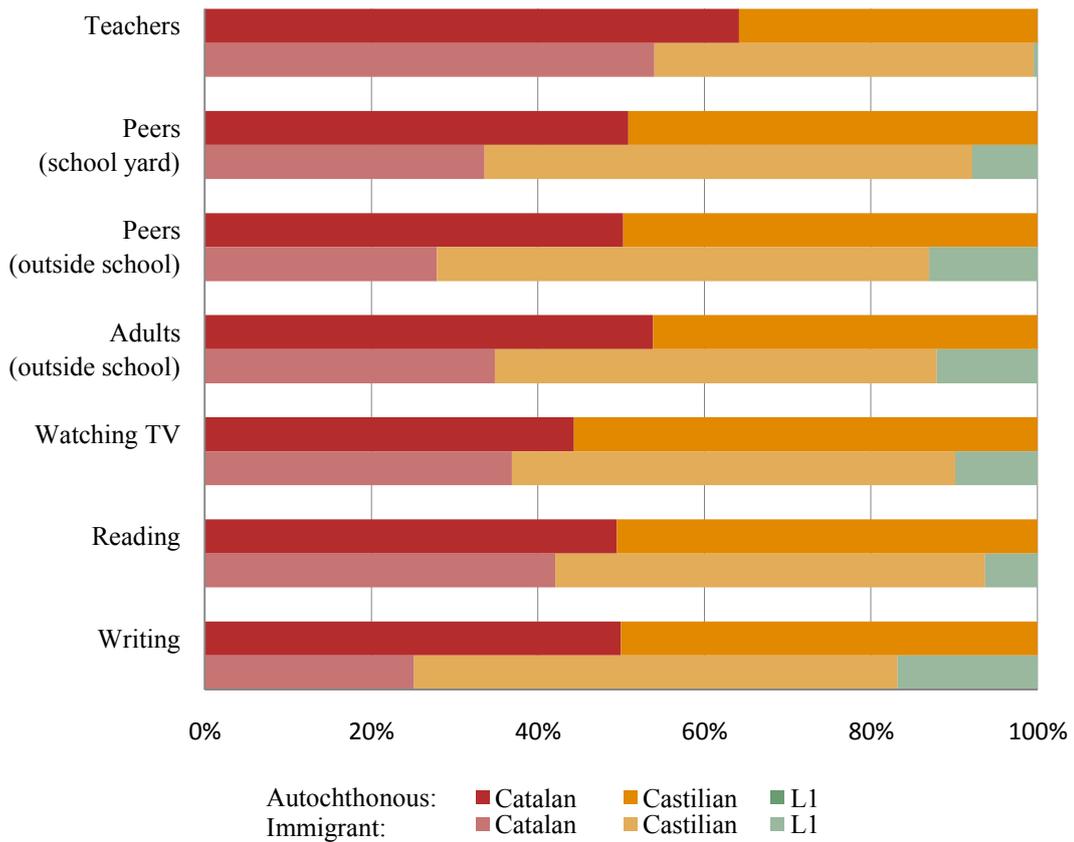


Figure 24. Language use by context on the part of autochthonous and immigrant students for the first study

4.1.2.2.7. Self-identification

The self-identifications of participants varied by origin, as it can be seen in figure 25. Autochthonous students tended to identify with Catalonia ($M = 3.18$, $SD = 0.96$). However, they also identified with Spain ($M = 2.71$, $SD = 1.11$). Students of immigrant origin identified primarily with their origin country ($M = 3.54$, $SD = 0.75$), but also with Catalonia ($M = 2.16$, $SD = 1.05$) and Spain ($M = 2.31$, $SD = 1.07$).

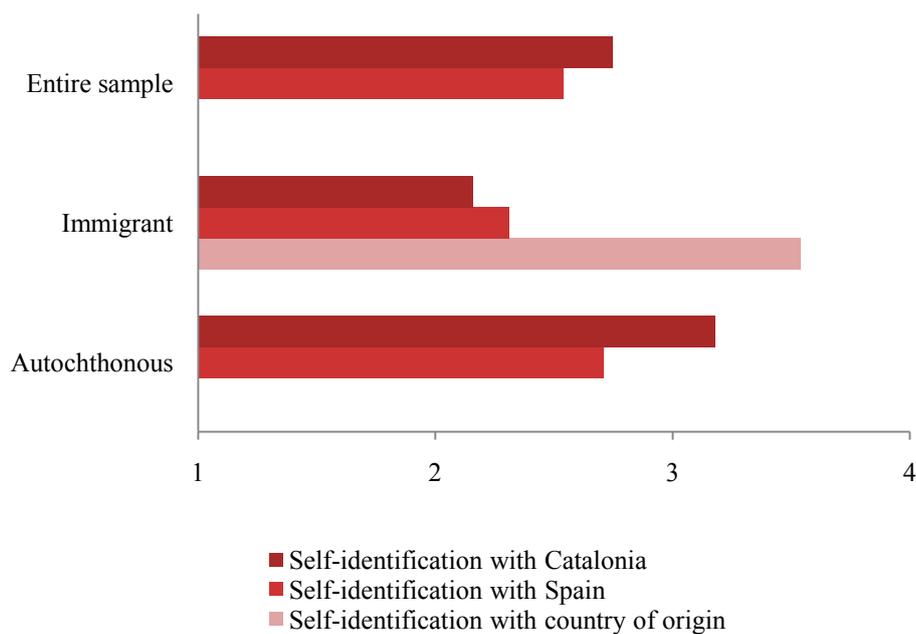


Figure 25. Self-identification with Catalonia, Spain, and area of origin (means) of the sample of the first study

4.1.2.2.8. Area of origin

Figure 26 presents the distribution of the immigrant group by area of origin. As it can be seen, the most numerous group, accounting for 47.4% of all students of immigrant descent, has its origins in Latin American countries. Following, 25.6% of immigrant students were from Africa, 20.4% from Europe, and 6.6% from Asia and Oceania.

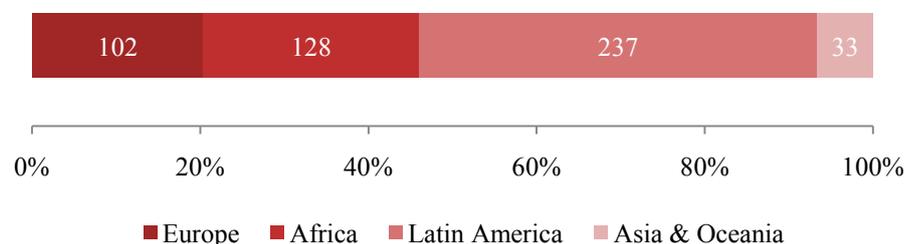


Figure 26. Distribution of the group of immigrant students by area of origin for the first study

4.1.2.2.9. Length of residence

Focusing on the immigrant part of the sample, we describe below the characteristics specific to this group.

Regarding the length of residence, on average immigrants students have been living in Catalonia for 5.67 years. However, there was considerable variability ($SD = 4.45$), as some of the participants had less than a year residing in Catalonia, while others had 18 years of residence.

4.1.2.2.10. Place of birth

Of the 500 students of immigrant origin, only 65, representing 13%, were born in Catalonia. The other 435 students were born in their countries of origin and later moved to Catalonia. Figure 27 presents the distribution of the immigrant group of students by place of birth.

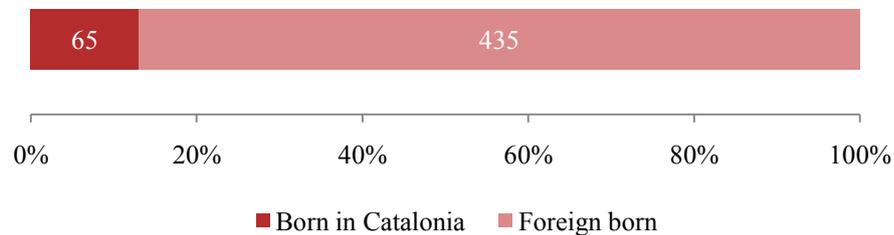


Figure 27. Distribution of the group of immigrant students by place of birth for the first study

4.1.3. Instruments

The instruments used were chosen in a spirit of respect for the research tradition established in the field of attitudes toward language and strengthened by the work carried out in Catalonia. Thus, our instruments were modelled on those designed by the Catalan Education Service (Servei d'Ensenyament del Català – SEDEC) and successfully used afterwards in a series of studies with both autochthonous and immigrant secondary education students (Huguet, 2005; Huguet & González Riaño, 2004; Huguet, Janés, & Chireac, 2008; Huguet & Suils, 1998; Huguet, Lapresta, & Madariaga, 2008; Janés, 2006a, 2006b; Lapresta, Huguet, & Janés, 2010; Querol & Huguet, 2010). A description of the instruments used is provided below.

4.1.3.1. *Attitudes questionnaire*

The attitude questionnaire used follows the model of the one constructed by Sharp and his collaborators for a study conducted in 1973 in Wales. The instrument was adapted to the Catalan context by the Catalan Education Service (Servei d'Ensenyament del Català – SEDEC) and then readapted to the current characteristics of the secondary education students population, taking into account the immigrant group.

For each language investigated, a scale containing ten items was used. The items were designed to capture the general attitude toward a particular language and encompassed various aspects, such as the intrinsic linguistic or aesthetic characteristics of the language (e.g., “Catalan is an ill-sounding language”, “Spanish is a beautiful language”), the importance of the language (e.g., “Catalan is more important than Spanish”), language learning (e.g., “Learning Catalan is unpleasant”, “I approve of all the children in my town studying Catalan”), and language use (e.g., “We should all try harder to use Catalan more frequently”, “I like (or would like) to speak Catalan”).

The items were dichotomous, meaning that students were asked to indicate if they agreed or not with each statement. They were designed so that five statements will indicate a positive attitude toward that particular language and the other five will indicate a negative attitude. The answers were codified with +1 when they were favorable and -1 when they

were unfavorable toward the respective language. These values were summed to obtain the final score that could oscillate between -10 and +10.

As we have mentioned, three scales were employed: attitude toward Catalan, attitude toward Spanish, and attitude toward English. They were found to be internally consistent, as indicated by the Cronbach's alpha coefficients of .79 for the scale measuring attitudes toward Catalan, .75 for attitudes toward Spanish, and .77 for attitudes toward English.

In addition to the validity evidence gathered by the researchers that previously used these instruments, we have confirmed their construct validity with the help of confirmatory factorial analysis (CFA), which was conducted using the program EQS v.6, chosen due to its ability to work with categorical data. The EQS approach is based on maximum likelihood estimation followed by Satorra – Bentler corrections, providing thus robust statistics (Bentler, 2005; Bentler & Wu, 2005; Byrne, 2001, 2006). Following, we present the corresponding results for each of the three scales.

4.1.3.1.1. Attitude toward Catalan

The ten dichotomous items that served to assess the attitude toward Catalan formed a single factor, as supported by the CFA conducted.

The goodness-of-fit indices showed that the model fitted the data. Thus, the comparative fit index (CFI) was 0.957, the Bentler-Bonnet normed fit index (NFI) was 0.95, and the non-normed fit index (NNFI) was 0.945. These baseline fit measures were above the recommended criteria 0.95 for a good fit and 0.90 for an acceptable fit (Byrne, 2009; Garson, 2012). The root mean square error of approximation (RMSEA) obtained was 0.069 with a 90% confidence interval ranging from 0.061 to 0.077. RMSEA was also smaller than the 0.8 cut-off that indicates an acceptable fit.

The Satorra - Bentler scaled χ^2 on 35 degrees of freedom had a value of 236.042 and was significant ($p < .001$). Although this might indicate a poor fit of the model, we have to consider that the chi-square is a very conservative measure, prone to Type II errors in large samples. Several researchers argued that a non-significant chi-square is rarely obtained for a large sample, even if the model has good fit (Bentler & Bonnet, 1980; Garson, 2012; Schumacker & Lomax, 2004). Therefore, in the present case, the large

sample (N = 1173) with which we are working, and the fact that the other indices showed good fit of the model were compelling arguments to accept the single factor model.

All ten items loaded onto the factor, with loadings ranging from .516 to .876, as it can be seen in figure 28.

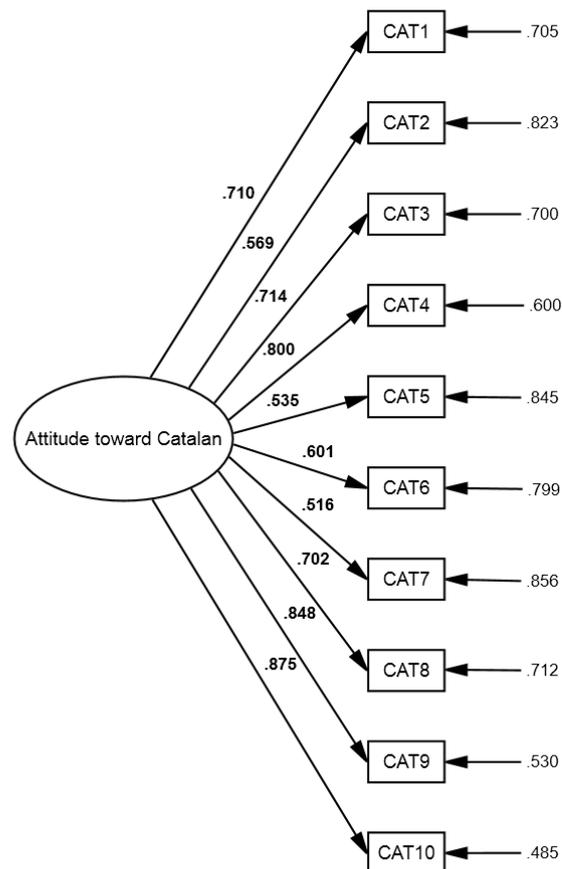


Figure 28. One-factor CFA model of attitudes toward Catalan

4.1.3.1.2. Attitudes toward Spanish

The single factor structure of the set of items measuring the attitudes toward Spanish was verified through another confirmatory factor analysis (CFA). The results indicated that the Satorra - Bentler scaled χ^2 on 35 degrees of freedom had a value of 82.31 and was significant ($p = .001$). However, as we have previously mentioned, a significant chi-square is to be expected in the case of a large sample.

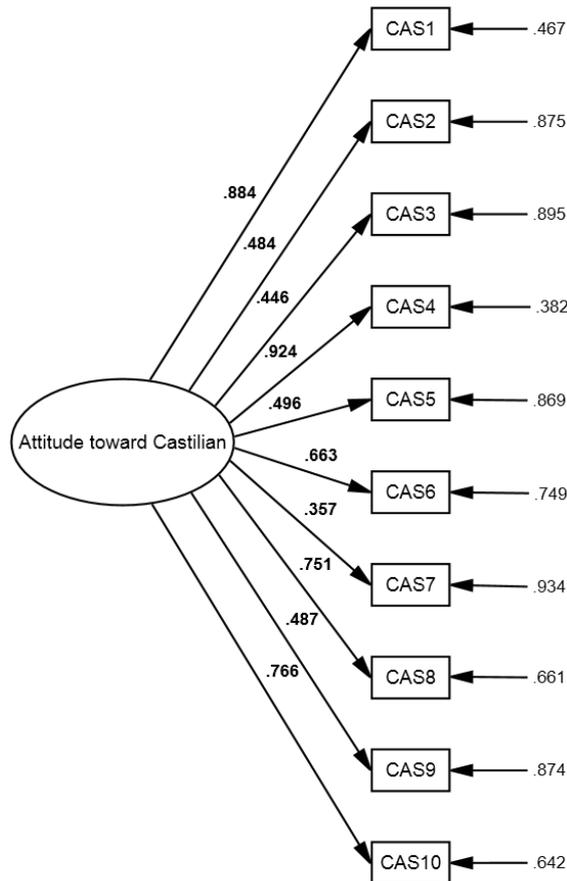


Figure 29. One-factor CFA model of attitudes toward Spanish

Further, the CFI had a value of .982, the NFI was .976, and the NNFI was .982. The value of the RMSEA was of .033, 90% CIs [.024, .043]. Seeing that the other measures indicated a very good fit, being above the standard of 0.95 in the case of the CFI, NFI, and NNFI, and below the 0.5 indicator a good fit for the RMSEA, there was strong evidence in favor of accepting the model. Figure 29 presents the items loadings on the factor, which ranged from .467 to .934.

4.1.3.1.3. Attitude toward English

Finally, regarding attitudes toward English, the one factor model proved to fit the data (see figure 30). The Satorra-Bentler scaled χ^2 (35, N = 1167) was 243.19, $p < .001$, whereas the CFI was .962, the value of NFI was of .956, the NNFI was .952, and the RMSEA had a value of .070, with a 90% CIS ranged between .062 and .079. All ten items loaded on the factor, the loadings varying between .524 and .853.

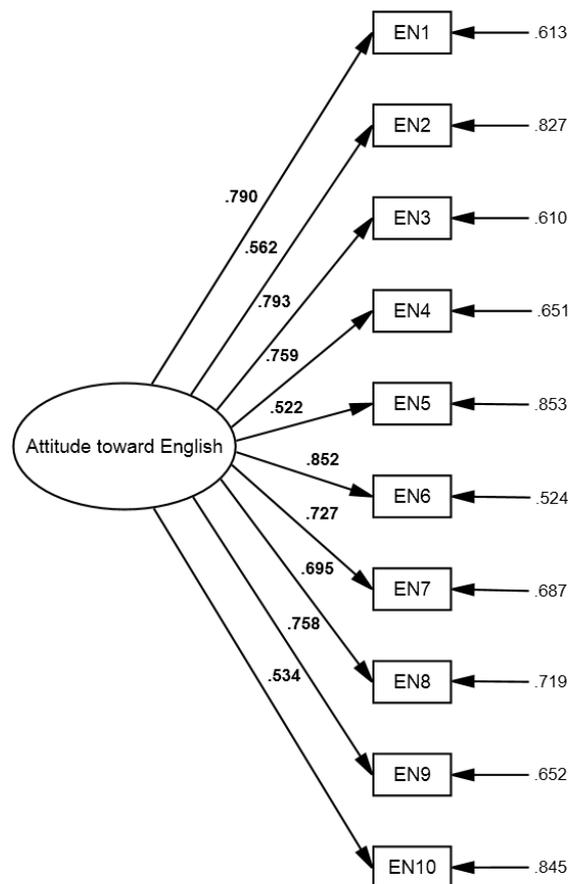


Figure 30. One-factor CFA model of attitudes toward English.

4.1.3.2. Language use scale

The initial items measuring language use were designed for bilingual contexts and required participants to select option that best described the use of a language in relation to the second language. These items were adequate for autochthonous students, as they had to estimate their use Catalan and Spanish. However, an ad-hoc adaptation of the items was necessary for the immigrant students that were asked to give each language - Catalan, Spanish, and first language (L1) – a rank, a value that would capture the frequency of use from the most used to the least used. A mean of these rankings was then computed to reflect the estimated use of each language.

Because previously these items were used mostly at a descriptive level, we verified their factorial structure through exploratory factor analysis. On account of having an extra set of items related to the use of the first language (L1) by immigrant students, two factor analysis, one for the autochthonous group and one for the immigrant group, were conducted. We expected to find a two-factor solution – a factor capturing the use of Catalan and the other one the use of Spanish – in the case of the autochthonous group. For the immigrant group, the aim was to identify a three-factor solution, capturing the use of Catalan, Spanish, and L1, respectively. We also expected the factors to be correlated. Consequently, we examined for principal components using a direct oblimin rotation to a delta equal to zero.

4.1.3.2.1. Autochthonous group

Following the analysis conducted for the autochthonous group a two-factor solution resulted. As expected, the first factor subsumed the seven items related to how much students speak, listen, read, and write in Catalan in various contexts, and accounted for 14.47% of the total variance. Therefore, it was labelled as use of Catalan.

The second factor, to which the seven items referring to Spanish heavily loaded, covered 36.54% of the variance. Similarly, it was named use of Spanish. The corresponding factor loadings and communalities can be seen in table 11.

Table 11. Factor solution for language uses in the case of the autochthonous group

Items	Factor loadings		Communalities
	Use of Catalan	Use of Spanish	
Catalan - Peers (school yard)	.679		.617
Catalan - Peers (outside school)	.729		.632
Catalan - Adults (outside school)	.666		.487
Catalan - Reading	.661		.412
Catalan - Watching TV	.633		.362
Catalan - Writing	.769		.597
Catalan - Teachers	.510		.307
Spanish - Peers (school yard)		.705	.638
Spanish - Peers (outside school)		.795	.636
Spanish - Adults (outside school)		.662	.533
Spanish - Reading		.692	.456
Spanish - Watching TV		.690	.430
Spanish - Writing		.772	.603
Spanish - Teachers		.546	.433
Eigenvalue	2.026	5.116	
Variance	14.47%	36.54%	

Furthermore, the two factors were negatively correlated ($r = -.66$, $p < .001$), suggesting that those who use more Catalan tend to use less Spanish.

The scales were also internally consistent, as the Cronbach's alpha coefficient for use of Catalan had a value of .87 and for use of Spanish it was .86.

4.1.3.2.2. Immigrant group

The analysis conducted for the immigrant group revealed an adequate three-factor solution. Table 12 presents the factor loadings and communalities for the rotated factors.

Table 12. Factor solution for language uses in the case of the immigrant group

Items	Factor loadings			Communalities
	Use of Catalan	Use of Spanish	Use of L1	
Catalan - Peers (school yard)	.620			.613
Catalan - Peers (outside school)	.634			.625
Catalan - Adults (outside school)	.537			.453
Catalan - Reading	.754			.516
Catalan - Watching TV	.637			.379
Catalan - Writing	.692			.575
Catalan - Teachers	.579			.357
Spanish - Peers (school yard)		.772		.670
Spanish - Peers (outside school)		.755		.635
Spanish - Adults (outside school)		.475		.505
Spanish - Reading		.630		.456
Spanish - Watching TV		.379		.393
Spanish - Writing		.600		.604
Spanish - Teachers		.699		.503
L1 - Peers (school yard)			.739	.561
L1 - Peers (outside school)			.752	.621
L1 - Adults (outside school)			.809	.583
L1 - Reading			.599	.464
L1 - Watching TV			.757	.586
L1 - Writing			.645	.557
L1 - Teachers				.067
Eigenvalue	3.428	6.078	1.215	
Variance	16.32%	28.94%	5.78%	

The items grouped as expected and, therefore, the three factors could be labelled use of Catalan, use of Spanish and use of L1. One item, related to the use of L1 when communicating with teachers did not load on any factor, because it had the constant value

of zero. However, this was not surprising, considering that Catalan or Spanish are normally used to interact with teachers.

A total of 51.05% of variance was explained by the three factors. The first factor accounted for 16.32% of the variance, the second factor 28.94% of the variance and the third factor 5.78% of the variance.

The three factors were not independent. A moderate positive correlation was found between use of Catalan and use of Spanish ($r = .302$) and between the use of Spanish and the use of L1 ($r = .363$). Use of Catalan and use of L1 seemed to not be correlated ($r = -.022$).

Additionally, the factors were reliable in terms of internal consistency, seeing that the Cronbach's alpha coefficients were .81 for use of Catalan, .84 for use of Spanish, and .82 for use of L1.

4.1.3.3. Socio-linguistic survey

Data on other variables of interest was collected with the help of a socio-linguistic survey. Specifically, the survey included items regarding:

- Gender;
- Age;
- Grade;
- Place of birth;
- Area of origin;
- Length of residence;
- Socio-cultural status, which was assigned depending on the highest level of education of the mother or the father of the respective student;
- Socio-professional status, which was assigned depending on the jobs held by the parents;
- Self-identification with Catalonia, which was revealed by an item asking participants to estimate on a four-point Likert scale from 'not at all' to 'their degree of identification with Catalonia.

- Self-identification with Spain, also measured with the help of a four-point Likert scale.
- Self-identification with area of origin, similarly estimated on a four-point Likert scale.

4.1.3.4. Language competences tests

Catalan and Spanish language competences were assessed with the help of the standard tests developed by Bel, Serra, and Vila (1991, 1993) for the Catalan Education Service (SEDEC) and often used in studies concerning secondary education students of immigrant origin (Huguet, 2008; Navarro & Huguet, 2005, 2010; Sansó, 2010; Vila, 2008).

The Catalan competence and the Spanish competence tests were parallel and were designed to evaluate the academic linguistic competences. For each language, the test was composed of two parts: one written and one oral. It encompassed ten linguistic abilities: written comprehension, written expression, morphosyntax, phonetics, spelling, oral comprehension, oral expression - lexicon and morphosyntax, information organization, reading correctness, and intonation. Each subtest was graded on a scale from 0 to 100 and their mean was used as an indicator of the individual's general language competence.

The focus of this section is placed on the two official languages of the region, Catalan and Spanish, for which parallel tests of language competences were available. We note the unfortunate lack of a parallel test that would measure students' English competences, and, as a consequence, the impossibility of analyzing the possible relationships between English competences and language attitudes.

4.1.4. Procedure

The first steps consisted in contacting the Department of Education and obtaining the necessary permits. A number of ten schools were selected based on their demographic composition that was representative of the Catalan reality. Afterwards, the selected schools were contacted to establish the schedule of application.

The series of questionnaires and tests used were applied in a random order to avoid any possible order effect. On average a participant needed around two hours to complete all tests. Due to the large number of participants, specialized and trained personnel applied the tests.

4.1.5. Statistical treatment

To analyze the data collected, using the software package SPSS v.20, we conducted various analyses, including descriptive statistics, correlations, mixed –design ANOVAs, and simple and multiple regressions (see table 13).

Table 13. Statistical analyses by type of variables

Type of independent variables	Effect on attitudes toward language	Effect moderated by origin	Effect moderated by area of origin
Categorical	Mixed-design ANOVA + post-hoc Bonferroni adjusted test		
Continuous	simple regression	moderation analysis	hierarchical multiple regression with interaction terms
Categorical (dummy) + continuous	simultaneous multiple regression		

This variety of techniques reflects the mixed type of data. In this sense, we have worked with both categorical and continuous variables, because we chose to explore the variables in their original form. The decision to not work with categorized transformations of the continuous variables was made to avoid loss of data and power (Field, 2013; Fritz,

Morris, & Richler, 2012; Tabachnick & Fidell, 2007). Subsequently, ANOVAs and regression analyses were used when investigating categorical or continuous variables respectively, seeing that the two are “conceptually the same procedure” (Field, 2000: 245), being part of the general linear model.

ANOVA was found to be robust to violations of normality and homogeneity of variance (Leech, Barret, & Morgan, 2005; Lorenzen & Anderson, 1993). Nonetheless, there are scholars who argue that it is safe to analyze the data if the variance ratio is not higher than 4 (Norusis, 2005; Martin & Bridgmon, 2012; Roberts & Russo, 1999) or even 10 (Tabachnick & Fidell, 2007). As a result, we verified before conducting the analyses that the ratio of the largest to the smallest variance was less than 4 to 1.

Multiple regression was also used, combining continuous and categorical variables. In order to introduce the categorical variables into the regression equation, dummy variables were created. These are dichotomous variables with values of 0 and 1, which indicate the appartenance to a specific group. For each variable, the number of dummy variables was of one less than the number of categories.

Moderation analysis was done with the PROCESS tool for SPSS developed by Hayes (2012). Continuing Hayes and Preacher’s previous work (Hayes, 2009; Hayes & Cai, 2007; Hayes & Matthes, 2009; Hayes, Glynn & Huges, 2012; Preacher & Hayes, 2008, 2008b; Preacher, Curran, & Bauer, 2006), PROCESS offers a simple and elegant way of implementing moderation, mediation, mediated moderation, and moderated mediation models. In the context of our research, we chose this computational procedure to investigate interactions where at least one of the variables is continuous because, besides using ordinary least square regression to estimate the coefficients of the model, it also conducts simple slope analysis and adjusts the standard errors for heteroscedasticity (Hayes, 2012).

Nonetheless, PROCESS only works with dichotomous variables. Therefore, in order to analyze the moderation effect of a categorical variable with more than two categories, hierarchical multiple regression was used. The interaction between the independent variable and the moderator is reflected by the interaction terms, also called product terms, obtained by multiplying the continuous independent variable with each dummy variable representing the categorical moderator. Afterwards, these interaction terms are added to

the multiple regression conducted with the independent variable and the dummy variables as predictors. If by adding the interaction terms the amount of variance explained increases significantly, it results that there was a moderation effect.

In case of a moderation effect when more than two groups were analyzed, we compared regression coefficients with the help of the formula proposed by Paternoster, Brame, Mazerolle, and Piquero (1998) based on the work of Clogg, Petkova, and Haritou (1995):

$$Z = \frac{b_1 - b_2}{\sqrt{SEb_1^2 - SEb_2^2}}$$

where b_1 and b_2 represented the unstandardized regression coefficients for the two groups to be compared and SEb_1 and SEb_2 were their standard errors. A value of Z greater than ± 1.96 indicated a significant difference between the two regression coefficients at the .05 level.

Most of the techniques were complemented by bootstrapping (Efron & Tibshirani, 1993), which generates robust estimates regardless of the normality of the distribution. A resampling procedure, bootstrap serves to estimate the properties of the distribution by using the sample data. To uncover the shape of the sampling distribution, many smaller samples are extracted from the sample data, creating alternative versions of data that might have been observed. For each of these bootstrap samples the parameters are calculated. Then all the parameter estimates are used to obtain the distribution of the parameters of interest, which can be ordered to reveal the 95% confidence interval of the parameter. The confidence intervals indicate more accurately the true population value for each parameter (Field, 2013; Kelley & Preacher, 2012).

Seeing that the bootstrap estimates are more accurate, because they are not affected by normality or homoscedasticity, as the significance values are, we include the bootstrap confidence intervals alongside parameters of interest, such as means. In the case of correlation and regression coefficients, bootstrap confidence intervals also provide information about the significance of the respective parameter. An interval that does not contain zero indicates significance. Moreover, we use the bias-corrected accelerated intervals, an improved method that corrects for bias and skewness (Hesterberg, Monaghan, Moore, Clipson, & Epstein, 2005).

Furthermore, the results are accompanied by the corresponding effect sizes. For correlations and regressions, the effect size is communicated by the value of the correlation coefficients. For group comparisons, we computed r effect size, following the formulas proposed by Rosnow, Rosenthal, and Rubin (2000):

For variables with 2 categories:

$$r = \sqrt{\frac{F}{F + df_{intra\ group}}}$$

For variables with more than 2 categories:

$$r = \sqrt{\frac{F_{contrast}}{F(df_{intergroup}) + df_{intragroup}}}$$

Where $C_{contrast}$ represent the value of a post-hoc comparison test and F stands for the value of the omnibus F test.

R effect size can be interpreted as the simple correlation between belonging to a group or category and the scores on the dependent variable. R^2 can be used to uncover the proportion of variance influenced by the respective variable (Sava, 2004).

4.2. STUDY 2

Following, the methodology of the second longitudinal study is presented.

4.2.1. Variables

The independent variables were the same as the ones investigated in the first study. However, for this longitudinal study, the dependent variables were:

- **Attitude change toward Catalan**
- **Attitude change toward Spanish**
- **Attitude change toward English**

These variables, computed as the difference between the attitudes expressed in 4th grade and those showed in the 2nd grade, captured the evolution of attitudes during a two-year period.

4.2.2. Participants

4.2.2.1. Selection of the sample

To carry out the longitudinal study, some of the immigrant students that participated when they were in 2nd grade were questioned again 2 years later. Due to various factors, such as students that left the institute in the two-year interval or whose data was incomplete, the sample of the second study was composed of 72 students of immigrant origin, with ages between 13 and 15 years old ($M = 13.67$, $SD = 0.69$).

The participants were enrolled at five secondary education institutes across Catalonia, as presented in table 14.

Table 14. Sample distribution by educational institute and province for the second study

Province	Institute of Secondary Education	Number of students
Lleida	IES Guissona (Guissona)	7
Barcelona	IES Maragall (Barcelona)	15
Tarragona	IES Gaudí (Reus)	12
Girona	IES Santa Eugènia (Girona)	17
	IES Montgrí (Torroella de Montgrí)	21
Total		72

4.2.2.2. Characteristics of the sample

Following, we provide some information with respect to the characteristics of the sample in function of the variables of interest.

4.2.2.2.1. Gender

The sample was relatively equilibrated in terms of gender, seeing that 44.4% of all students were boys and 55.6% were girls (see figure 31).

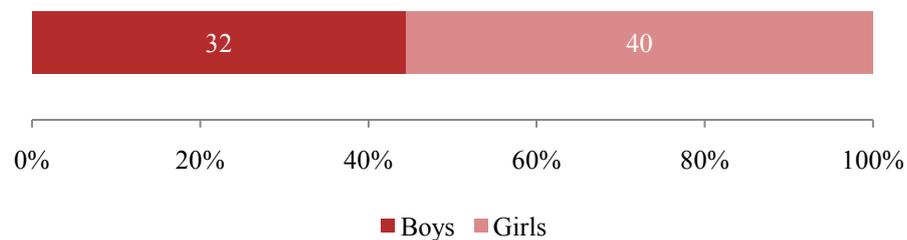


Figure 31. Sample distribution by gender for the second study

4.2.2.2.2. Area of origin

As in the initial study, four areas were used to divide the students by their origin. As presented in figure 32, 38.9% of the sample came from Latin America, 27.8% were from Africa, 25% came Europe, and 6% were from Asia and Oceania.

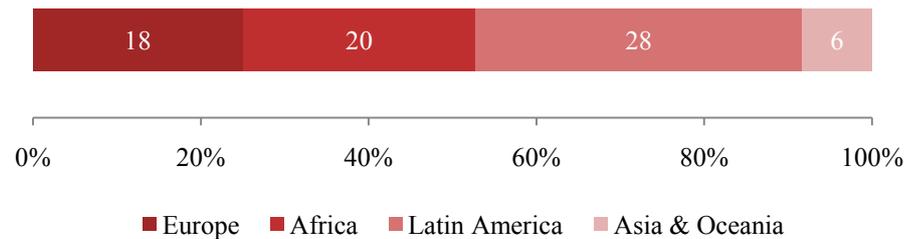


Figure 32. Sample distribution by area of origin for the second study

4.2.2.2.3. Socio-cultural status

The distribution of the sample of immigrant students depending on their parents' levels of education is presented in figure 33. Half of the participants (51.4%) have parents that finished secondary education. Further, the parents of 27.8% of all students of immigrant origin finished their undergraduate studies, whereas for 20.8% the last finished level of education was the elementary one.

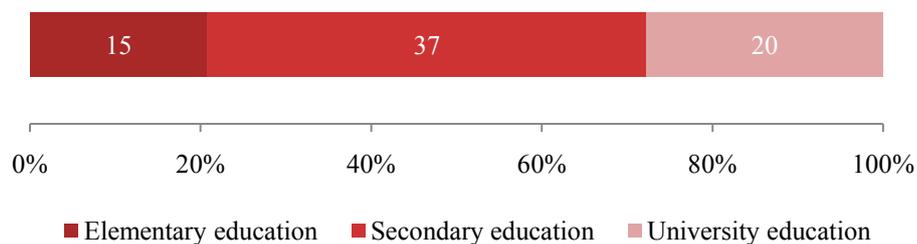


Figure 33. Sample distribution by socio-cultural status for the second study

4.2.2.2.4. Socio-professional status

The sample distribution by socio-professional status was unbalanced. As we have seen before, the socio-professional status does not reflect the socio-cultural status. Thus, the majority (62.5%) could be categorized as having a low socio-professional status. The medium socio-professional status group included 20.8% and the high status group consisted of 16.7% of all students of immigrant descend (see figure 34).

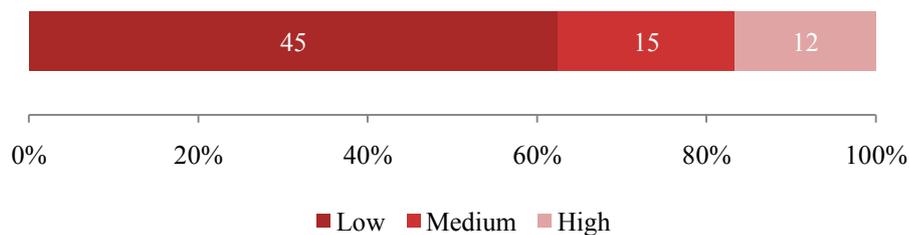


Figure 34. Sample distribution by socio-professional status for the second study

4.2.2.2.5. Language competences

On average, in 2nd grade the students of immigrant origins tended to have intermediate level competences of Catalan ($M = 59.33$, $SD = 12.34$) and Spanish ($M = 53.93$, $SD = 14.56$), as it can be seen in figure 35.

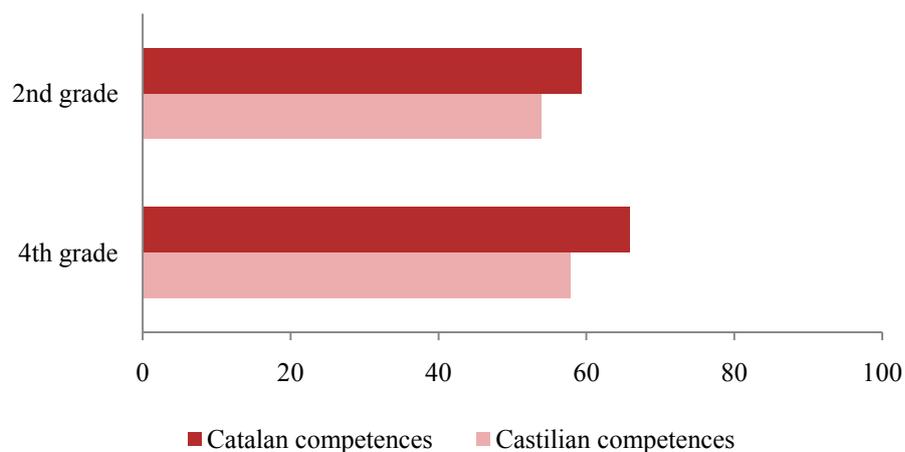


Figure 35. Language competences (means) of the sample of the second study

At general level, a slight improvement might occur in the two-year interval. Hence, in 4th grade, Catalan competences had a mean of 65.84 ($SD = 9.04$) and Spanish competences had a mean of 57.76 ($SD = 11.39$).

4.2.2.2.6. Language use

Figure 36 presents the uses of Catalan, Spanish, and L1 reported by students of immigrant origin in 2nd and 4th grade. On average, 2nd grade students reported the languages most used to be Spanish ($M = 2.30$, $SD = 0.78$), Catalan ($M = 1.94$, $SD = 0.82$), and to a lesser degree, their first language ($M = 0.3$, $SD = 0.53$). 4th graders provided similar estimations regarding their use of Spanish ($M = 2.35$, $SD = 0.70$), Catalan ($M = 2.01$, $SD = 0.82$), and L1s ($M = 0.36$, $SD = 0.60$).

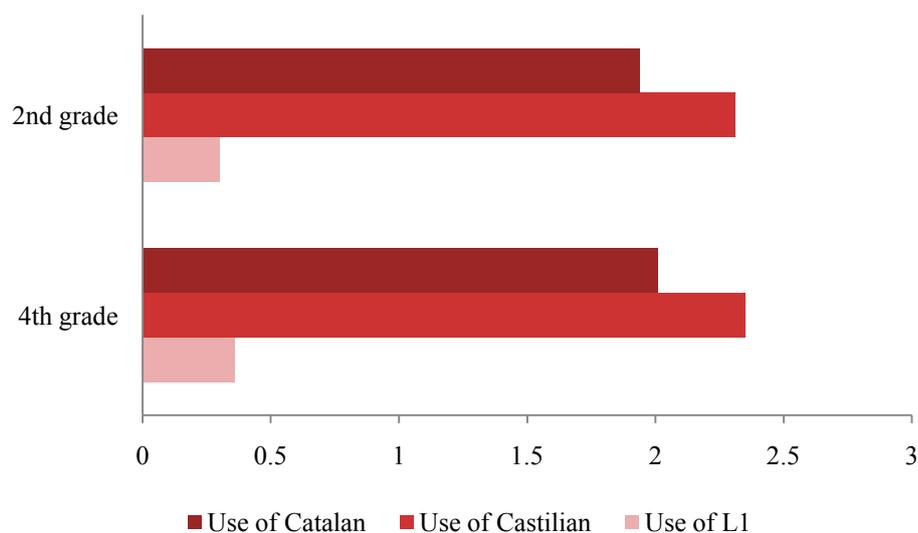


Figure 36. Language use (means) of the sample of the second study

4.2.2.2.7. Self-identification

Figure 37 shows the group means of the self identification with Catalonia, Spain, and the area of origin. On a scale from 1 to 4, students estimations of their self-identification with their area of origin had a mean of 3.47 ($SD = 0.75$), whereas the mean of their self-identification with Catalonia was of 2.31 ($SD = 1.05$) and the mean of their self-identification with Spain was of 2.29 ($SD = 1.09$).

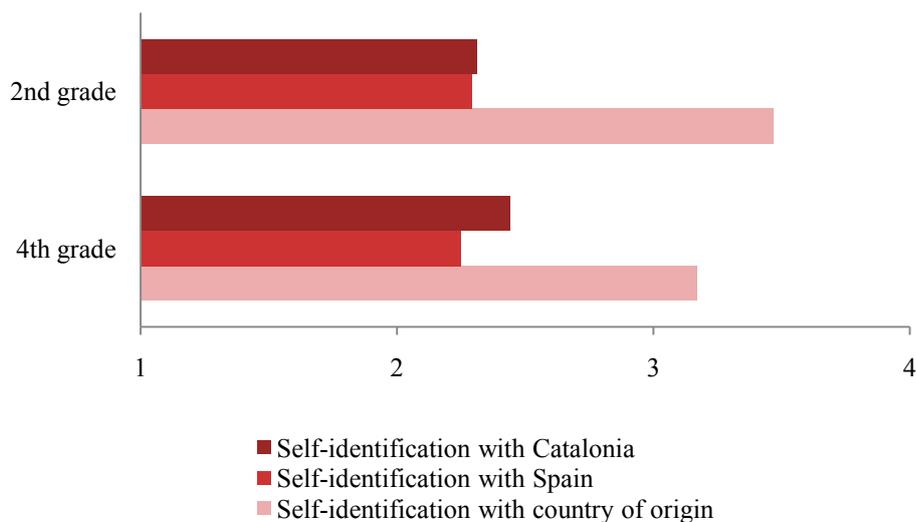


Figure 37. Self-identification with Catalonia, Spain, and area of origin (means) of the sample of the second study

Two years later, the participants represented their self-identifications in a similar manner, seeing that the mean corresponding to their self-identification with the area of origin was of 3.17 ($SD = 0.94$), for the self-identification with Catalonia was of 2.44 ($SD = 0.98$), and the self-identification with Spain had a mean of 2.25 ($SD = 0.94$).

4.2.2.2.8. Length of residence

During their 2nd year of secondary education, the participants had been living in Catalonia for 6.14 years ($SD = 4.64$) on average. The lengths of residence varied from less than a year to 15 years.

4.2.2.2.9. Place of birth

Regarding the place of birth, the majority of participants, representing 83.3% of the total sample, were born outside Catalonia, whereas only 16.7% were born in Catalonia. Figure 38 shows the distribution by place of gender, also indicating the numbers of students that belong to each category.

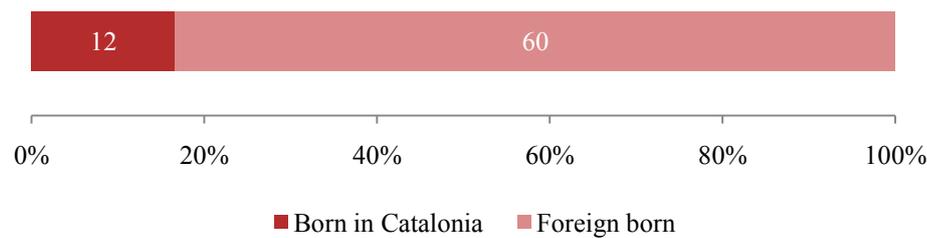


Figure 38. Distribution by place of birth for the second study

4.2.3. Instruments

In order to carry out the longitudinal study the same instruments as in the first study were used. Their description can be read in section 4.1.3.

4.2.4. Procedure

Two years after gathering the data for the first study, some of the schools were contacted again to coordinate the schedule for the second application of instruments.

Part of the students of immigrant origin enrolled in 2nd grade during the first study accepted to participate again in our investigation. They completed the exact same tests and surveys as the first time to allow the realization of a truly longitudinal study.

4.2.5. Statistical treatment

After carefully weighing the various possibilities of analyzing how attitudes changed in the two-year interval and their respective advantages and limitations, we chose to use change scores computed as the raw difference between the attitudes expressed in 4th grade and the ones in 2nd grade. Taking into consideration the objectives of the present research and the characteristics of the variables analyzed, difference scores were thought to be the most adequate due to their straightforward measure of change at the individual level.

Although difference scores have some limitations (Baker, 1992), several researchers have deconstructed the respective imputations, such as their inherent unreliability, and brought strong arguments towards their use (Bernard & Kite, 2012; Gottman & Rushe, 1993; MacKinnon, 2008; Mauish, 2004; Rogosa, 1995; Rogosa & Willet, 1983; Willet, 1989; Williams & Zimmerman, 1996). To summarize, difference scores represent “a natural and useful measure of individual change, when only two waves of data are available” (Rogosa, Brandt & Zimowsky, 1982:744). In addition, they are more intuitive in nature and meaning, have more face-value, and, according to some scholars, are less prone to bias than other measures of change, such as residual change scores, which indicate if individuals changed more (or less) than expected on the basis of their initial score (De Vaus, 2001; Salking, 2010).

To investigate the effect of the independent variables on attitude change toward Catalan, Spanish, and English, the same statistical treatments as those previously described in section 4.1.5 for the first study was used here also.

5. RESULTS

This chapter contains the results of the two studies conducted with respect to the previous described objectives and hypotheses.

5.1. RESULTS - STUDY 1

Containing the results of the first study, this chapter is divided in three parts. The first introductory part describes the attitudes toward Catalan, Spanish, and English at a general level. The second part is dedicated to the analysis of the individual effects of various variables on attitudes toward languages. Finally, in the third part we explored the combined effect of the variables previously found to be determinants of attitudes toward languages with the purpose of constructing an explanatory model and identifying the most influential variables.

The means, correlation coefficients, and unstandardized coefficients from the regression equations are reported accompanied by 95% bias corrected and accelerated bootstrap confidence intervals, which are written in brackets.

5.1.1. Description of attitudes toward language

First, we examined the attitudes expressed by the 1173 students that participated in the first study toward each of the three languages analyzed: Catalan, Spanish, and English. In addition to this descriptive introduction, the relationships between attitudes were explored through correlation analysis.

5.1.1.1. Attitudes toward Catalan

Generally, the students interviewed expressed rather positive attitudes toward Catalan, as indicated by the group mean of 5.99 [5.72, 6.25] and the high percentages of respondents with scores in the upper part of the scale, as it can be seen in figure 39. However, there was considerable heterogeneity within the group, as suggested by the standard deviation of 4.49.

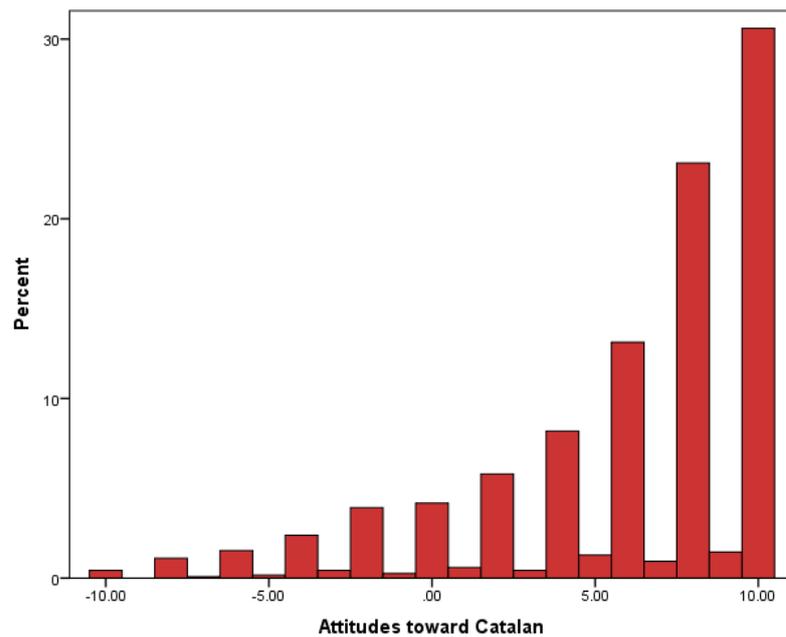


Figure 39. Distribution of attitudes toward Catalan for the whole sample

It is possible to use -5 and 5 as cut-offs to categorize attitudes in three categories, such that scores lower than -5 indicate negative attitudes, scores between -5 and 5 correspond to neutral attitudes and scores higher than 5 indicate positive attitudes. Consequently, it resulted that the majority of the respondents (69.2%) showed favorable attitudes. Among these 30.6% of all students obtained the maximum score of ten. Further, 27.6% expressed neutral attitudes and 3.2% showed negative attitudes toward Catalan.

5.1.1.2. Attitudes toward Spanish

The attitudes toward Spanish tended to be positive, with a mean of 5.63 [5.37, 5.89], but were rather heterogeneous, as indicated by a standard deviation of 4.43. This was reflected by the high number of students (67.1%) that manifested clearly positive attitudes, while 28.8% participants expressed neutral and 4.1% showed negative attitudes toward Spanish. The distribution of attitudes toward Spanish can be observed in figure 40.

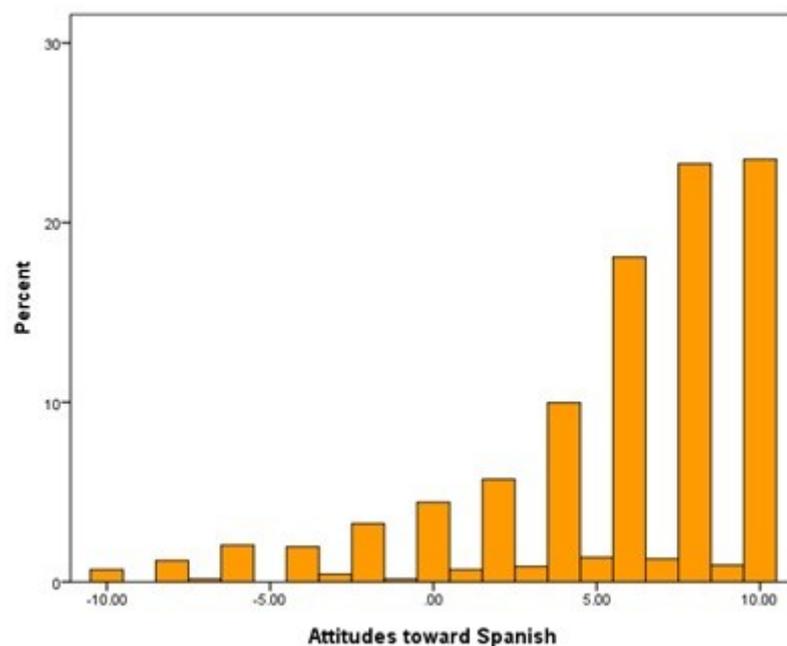


Figure 40. Distribution of attitudes toward Spanish for the whole sample

5.1.1.3. Attitudes toward English

Overall, the participants expressed varied but favorable attitudes toward English, as indicated by the mean of 5.61 [5.35, 5.90] and the standard deviation of 4.56. As it can be seen in figure 41, there was a predominance of positive attitudes, which were held by 65.2% of the total of students. Of the rest of the respondents, 30.3% expressed neutral attitudes and 4.5% manifested negative attitudes toward English.

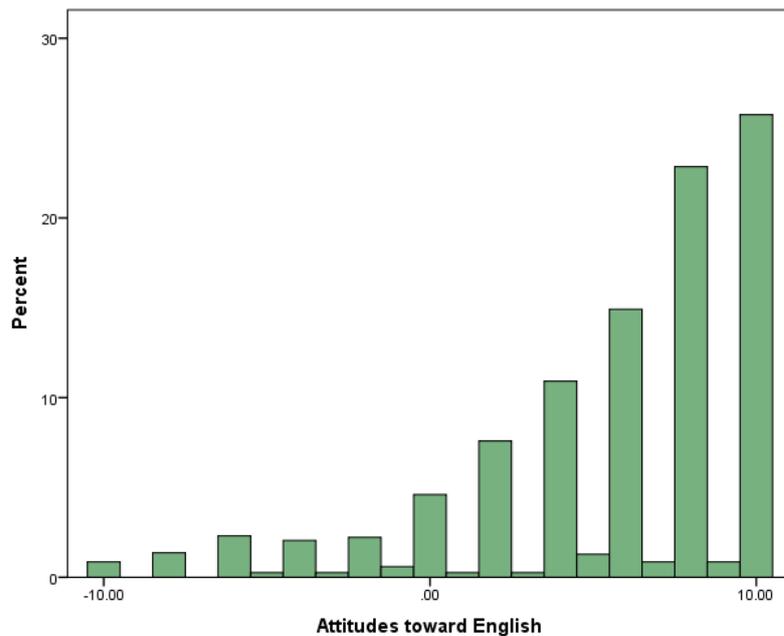


Figure 41. Distribution of attitudes toward English for the whole sample

5.1.1.4. Relationships between attitudes toward language

Following, we used Pearson correlations to examine how attitudes toward language relate to one another. Generally, all attitudes toward language were related to each other. The most powerful association was found between attitudes toward Catalan and attitudes toward Spanish, which were negatively correlated ($r_{(117)} = -.31, p < .001$). Attitudes toward English were found to be significantly and positively correlated to both attitudes toward Spanish ($r_{(117)} = .14, p < .001$) and attitudes toward Catalan ($r_{(117)} = .07, p = .016$).

To summarize, secondary education students expressed rather positive attitudes toward Catalan, Spanish, and English. Further, those who held positive attitudes toward Catalan had less favorable attitudes toward Spanish and vice versa. Although weaker, there were also positive associations between attitudes toward English and toward Catalan and Spanish.

5.1.2. The effect of various variables on language attitudes

This section aims to present the influence of several socio-structural and language related variables on students' language attitudes. To build a more detailed image of the relationships between these variables and language attitudes, we explored not only the effects on each attitude toward language, but also the differences between the attitudes toward Catalan, Spanish, and English. Furthermore, we examined the variations of these effects by origin.

The variables investigated are ordered by similarity in terms of type and participants applicability. In other words, first are analyzed the variables considered for the entire sample, followed by the variables specific to the immigrant group.

5.1.2.1. The effect of origin on attitudes toward language

Following, we investigate the differences between autochthonous and immigrant students with respect to their attitudes toward Catalan, Spanish, and English. Before examining the differences determined by origin, we describe the attitudes toward language expressed by the two groups formed of autochthonous and immigrant students.

5.1.2.1.1. Descriptive data of the attitudes toward language of autochthonous and immigrant students

Generally, both autochthonous and immigrant students expressed rather positive attitudes toward Catalan, Spanish, and English. The distributions of autochthonous and immigrant students' attitudes toward language were skewed toward the positive pole of the attitudinal scales, as it can be seen in figure 42, figure 43, and figure 44.

Using 5 and -5 as cut-offs, attitudes toward language can be divided in three categories: unfavorable, neutral, and favorable attitudes. Consequently, it can be seen that both autochthonous and immigrant students expressed predominantly favorable attitudes toward all three languages investigated.

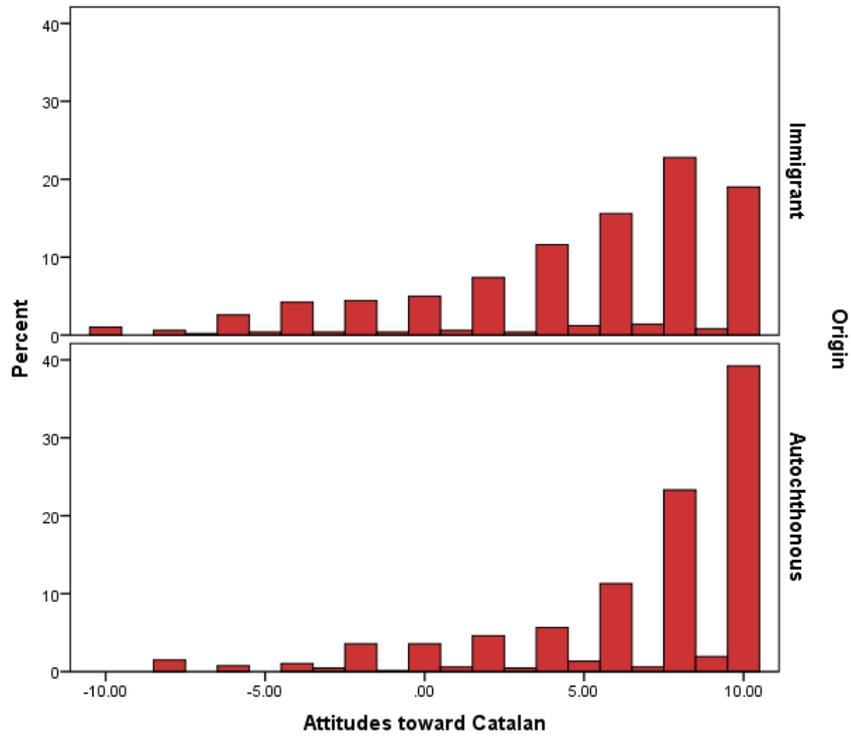


Figure 42. Distribution of attitudes toward Catalan by origin

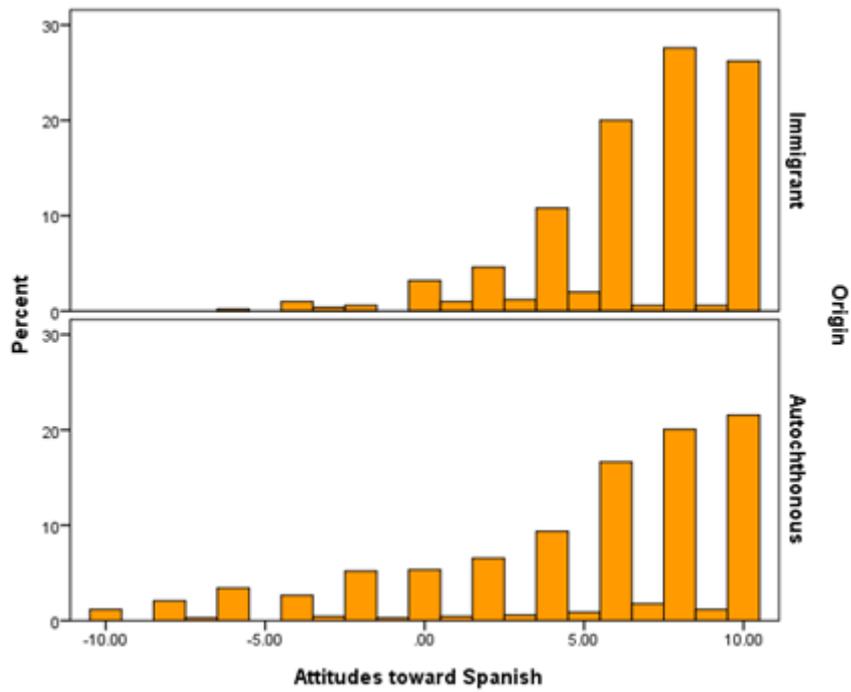


Figure 43. Distribution of attitudes toward Spanish by origin

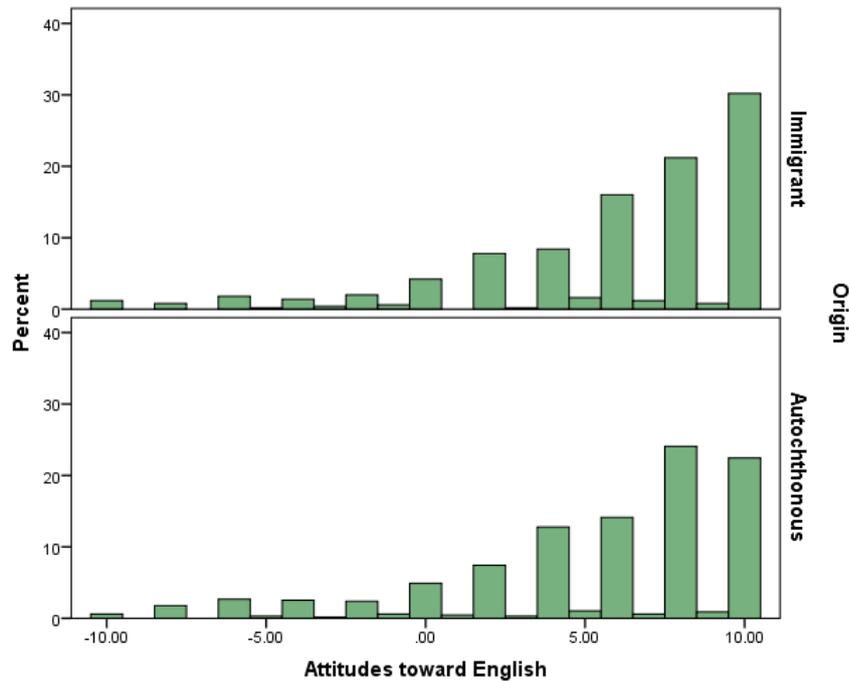


Figure 44. Distribution of attitudes toward English by origin

Among autochthonous students dominated a positive valuation of Catalan, as 76.4% of them manifested favorable attitudes, 21.4% neutral attitudes and 2.2% showed unfavorable attitudes toward Catalan. Meanwhile, 59.6% of all immigrant students expressed favorable attitudes, 36% neutral attitudes and 4.4% unfavorable attitudes.

Regarding the attitudes toward Spanish, 61.2% of autochthonous students expressed favorable attitudes, 31.8% neutral and 7% unfavorable attitudes. In the immigrant group, most of the attitudes toward Spanish were favorable (75%) and some were neutral (24.8%), while just one person expressed an unfavorable attitude toward Spanish (0.2%).

Finally, regarding the attitudes toward English the highest percentage of both autochthonous and immigrant students showed favorable attitudes with a proportion of 62.1% and 69.4% respectively. There was also a considerable number of neutral attitudes that were expressed by 32.8% of the autochthonous and 26.8% of the immigrant students. Unfavorable attitudes were expressed by 5.1% of the autochthonous and 3.8% of the immigrant students.

The means and standard deviations corresponding to the attitudes toward language expressed by the immigrant and the autochthonous students are presented in table 15.

Table 15. Descriptive statistics for attitudes toward language by origin. 95% BCa confidence intervals based on 2000 bootstrap samples are reported in brackets.

Origin	N	Attitudes toward language					
		Catalan		Spanish		English	
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Immigrant	500	4.91 [4.52, 5.32]	4.73	6.72 [6.44, 6.97]	3.09	5.99 [5.6, 6.37]	4.44
Autochthonous	673	6.79 [6.47, 7.11]	4.12	4.82 [4.44, 5.21]	5.06	5.33 [4.96, 5.71]	4.64

5.1.2.1.2. The effect of origin on attitudes toward language

A mixed-design ANOVA was used to examine the patterns of attitudes toward language determined by being of autochthonous or immigrant origin. Origin (autochthonous and immigrant) was introduced as the between-subjects factor and attitudes toward language as the within-subjects factor. This technique allowed exploring both the differences determined by origin, as well as the differences in attitudes between languages.

The interaction effect between origin and language proved to be significant ($F_{(1.91, 2236.63)} = 53.64, p < .001$)^{11,12}. Further, the interaction was broke down by analyzing the simple effects of each variable. First, we analyzed the differences in attitudes toward language between autochthonous and immigrant students for each language. Regarding the effect of origin on the attitudes toward Catalan, the results indicated that there was a significant difference, autochthonous students having more favorable attitudes than immigrant students. On the contrary, in the case of Spanish the immigrant group manifested more positive attitudes than the autochthonous group. The results of the Bonferroni adjusted comparisons are presented in table 16.

Last, regarding English, a significant difference between autochthonous and immigrants was found, although it was of a small effect size. More precisely, immigrant students expressed more favorable attitudes toward English than the autochthonous students did.

¹¹ Mauchly's test of sphericity indicated that the assumption of sphericity was not respected, requiring the Huynh-Feldt adjustment for the degrees of freedom ($\chi^2_{(2)} = 59.6, p < .001, \epsilon = .955$).

¹² The results indicated that there were no significant main effects of language ($F_{(1.91, 2236.63)} = 0.54, p = .577$) and of origin ($F_{(1,1171)} = 2.3, p = .129$).

Table 16. Bonferroni adjusted tests for the simple effects of origin

Origin		Attitudes toward language								
		Catalan			Spanish			English		
		<i>t</i>	<i>p</i>	<i>r</i>	<i>t</i>	<i>p</i>	<i>r</i>	<i>t</i>	<i>p</i>	<i>r</i>
Autochthonous	Immigrant	7.27	<.001	.21	-7.41	<.001	.22	-2.48	.013	.07

Second, the differences between languages were analyzed for each of the two groups of students. Catalan, Spanish, and English were rated differently by immigrant students ($F_{(2, 1166)} = 12.92, p < .001$), as it can be seen in table 17. Spanish received the highest ratings and it was followed at a significant distance by English. Catalan was on the last place, these being the least positive attitudes expressed by immigrant students.

Table 17. Bonferroni adjusted tests for the simple effects of attitudes toward language

Attitudes toward language		Origin					
		Immigrant			Autochthonous		
		<i>t</i>	<i>p</i>	<i>r</i>	<i>t</i>	<i>p</i>	<i>r</i>
Catalan	Spanish	-5.80	<.001	.12	7.34	<.001	.16
	English	-4.01	<.001	.08	6.30	<.001	.13
Spanish	English	2.77	.017	.06	-2.23	.077	.05

Concerning autochthonous students, there were also significant differences ($F_{(2, 1166)} = 24.19, p < .001$). However, these students showed a different pattern of language attitudes. Catalan was the language that received the most positive ratings, being rated higher than Spanish, and English, whereas the attitudes toward Spanish and English did not differ significantly. The attitudes toward language of the autochthonous and immigrant students are represented in figure 45.

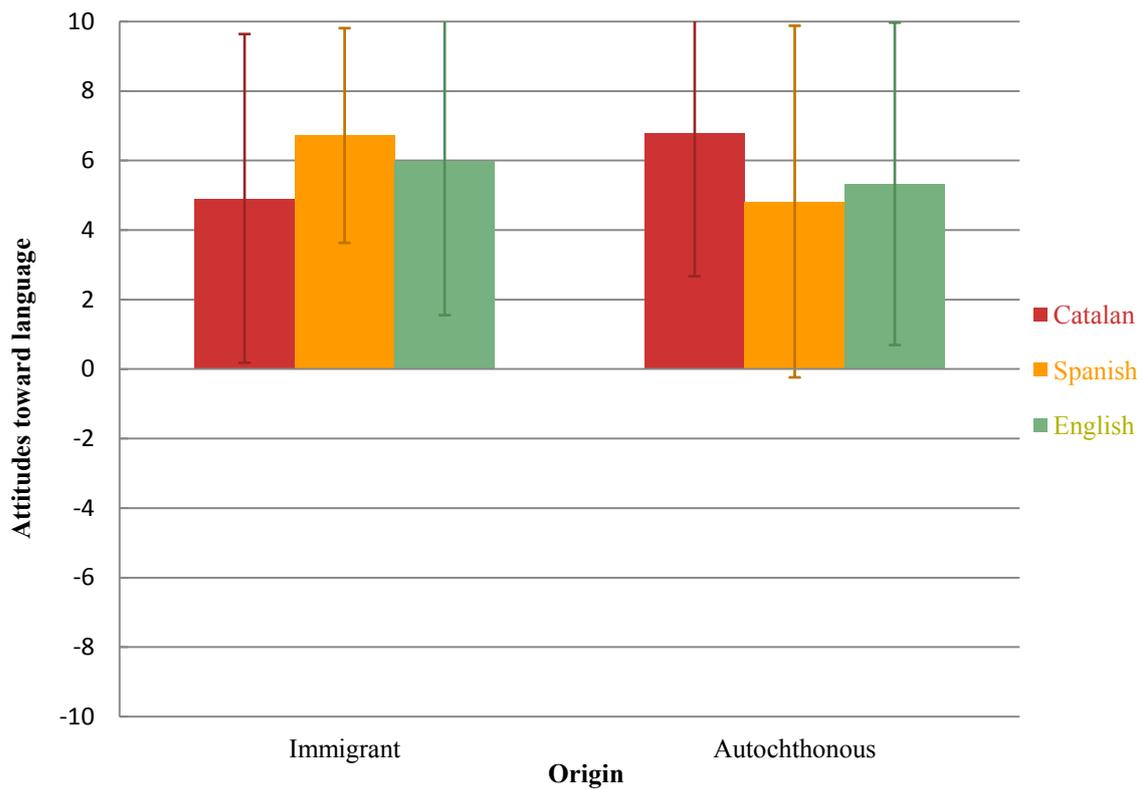


Figure 45. Means of attitudes toward language by origin. Error bars represent plus and minus one standard deviation.

In conclusion, Catalan was highly valued by the autochthonous students, whose attitudes toward it were more positive than toward the other two languages, as well as more positive than the attitudes held by immigrant students. For the immigrant students, it was Spanish the highest rated language. English was the second preferred language for both groups, although the attitudes of the immigrant students were more positive than the attitudes of the autochthonous group.

5.1.2.2. *The effect of area of origin on attitudes toward language*

In the case of immigrant students, we analysed their attitudes toward language in more depth, looking at the variations of attitudinal patterns determined by area of origin. Following, we first describe the attitudes toward Catalan, Spanish, and English by area of origin. Second, we present the results of the comparative analyses.

5.1.2.2.1. Descriptive data of the language attitudes of students from Europe, Africa, Latin America, and Asia and Oceania

Generally, the attitudes toward all three languages investigated tended to be positive, as it can be observed in figure 46, figure 47, and figure 48.

As previously explained, the cut-off values -5 and 5 can be used to categorize attitudes into favorable, neutral, and unfavorable. Accordingly, it can be noticed that more than half of the participants expressed favorable attitudes toward Catalan. Specifically, 78.8% of the students coming from Asia and Oceania, 69.5% of all students from Africa, 59.8% of all European students, and 51.5% of those from Latin America, and showed favorable attitudes. Neutral attitudes toward Catalan also represented a considerable proportion of answers, representing 41.4% for Latin America, 37.3% for Europe, 29.7% for Africa, and 18.2% for Asia and Oceania. Unfavorable attitudes toward Catalan were expressed by far less participants: 7.2% for Latin America, 2.9% of the students from Europe, 3.0% for Asia and Oceania, and 0.8% in the case of Africa.

Similarly, there was a predominance of favorable attitudes toward Spanish, which accounted for 85.7% for the group from Latin American, 74.5% for Europe, 60.2% for Africa, and 57.6% for Asia and Oceania. There was also a representative proportion of neutral attitudes, which were showed by 39.8% of those from Africa, 39.4% of the students from Asia and Oceania, 25.5% of the students from Europe, and 14.3% of those from Latin America. Interestingly, there were very few unfavorable attitudes toward Spanish, as only 3% of students from Asia and Oceania manifested negative attitudes. Students from Europe, Africa, and Latin America did not express any unfavorable attitudes toward Spanish.

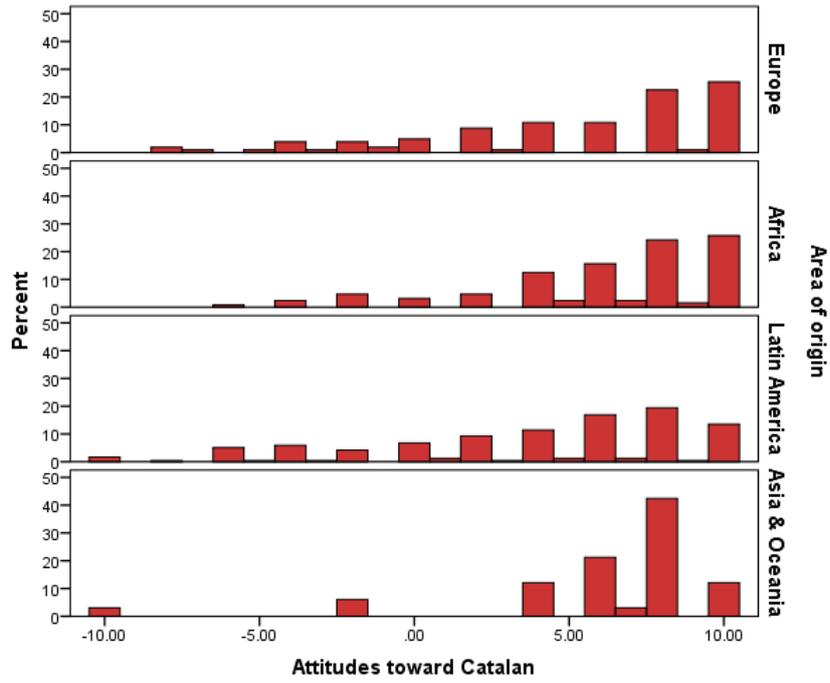


Figure 46. Distribution of attitudes toward Catalan by area of origin

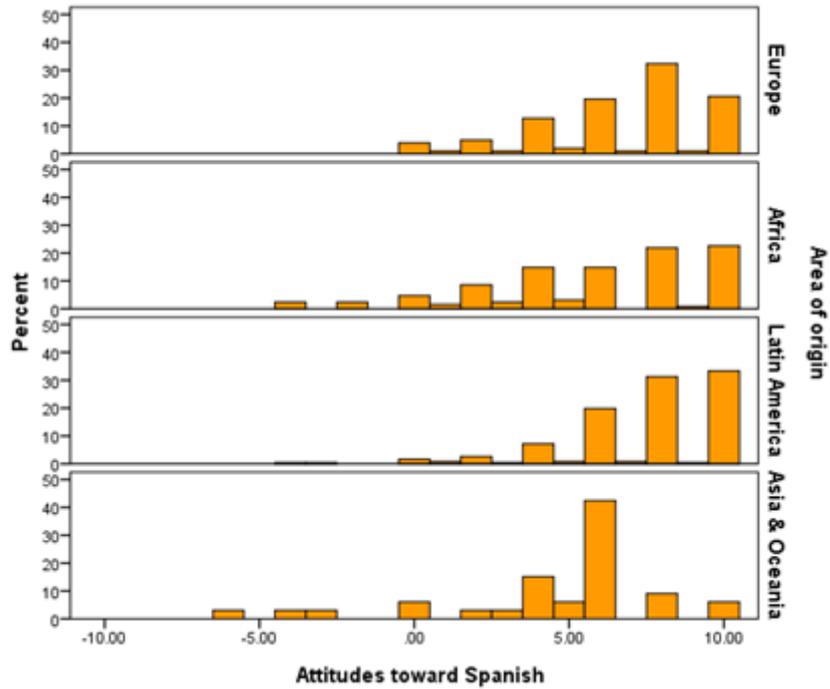


Figure 47. Distribution of attitudes toward Spanish by area of origin

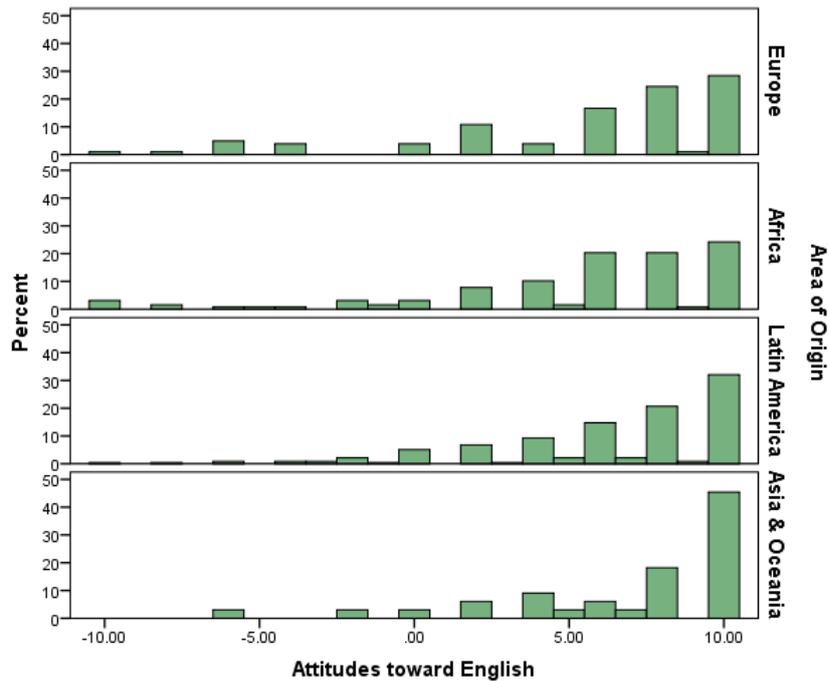


Figure 48. Distribution of attitudes toward English by area of origin

Attitudes toward English were also predominantly favorable (72.7% for Asia and Oceania, 70.6% for Europe, 70.5% for Latin America, and 65.6% for Africa). Neutral attitudes were found in proportions of 28.9% for Africa, 27.8% for Latin America, 24.2% for Asia and Oceania, and 22.5% for Europe. Whereas unfavorable attitudes were showed by 6.9% of students from Europe, 5.5% from Africa, 3.0% from Asia and Oceania, and 1.7% from Latin America.

5.1.2.2.2. The effect of area of origin on attitudes toward language

A mixed-design ANOVA with language (Catalan, Spanish and English) as the within-subjects factor and area of origin (Europe, Asia, Latin America, and Asia) as the between-subjects factor was conducted to see if students coming from different geographic areas manifested different patterns of language attitudes. The corresponding descriptive statistics are presented in table 18.

The interaction effect between language and area of origin was significant ($F_{(5.58, 925.12)} = 10.91, p < .001$)¹³. Thus, both the degree of favorability of the attitudes expressed toward the three languages and their order of preference varied among students from different

¹³ Since the assumption of sphericity was not met ($\chi^2_{(2)} = 43.3, p < .001$), the degrees of freedom were accordingly adjusted by applying the Huynh-Feldt correction ($\epsilon = .932$).

areas of origin¹⁴.

Table 18. Descriptive statistics of attitudes toward language by area of origin. 95% BCa CIs based on 2000 bootstrap samples are reported in brackets.

Area of origin	N	Attitudes toward language					
		Catalan		Spanish		English	
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Europe	102	5.17 [4.18, 6.12]	4.81	6.72 [6.2, 7.21]	2.7	5.64 [4.59, 6.65]	4.94
Africa	128	6.23 [5.55, 6.89]	3.77	5.84 [5.2, 6.42]	3.57	5.34 [4.43, 6.19]	4.9
Latin America	237	3.91 [3.22, 4.61]	5.04	7.49 [7.16, 7.81]	2.6	6.36 [5.88, 6.86]	3.94
Asia & Oceania	33	6.15 [4.61, 7.35]	4.03	4.54 [3.27, 5.61]	3.61	6.97 [5.54, 8.15]	4.04

To break down this interaction, first, post-hoc tests were conducted to compare the four groups of students from different areas among themselves on their attitudes toward each one of the three languages analyzed.

The results revealed significant differences in attitudes toward Catalan between students coming from different areas of origin ($F_{(3, 496)} = 8.05, p < .001$). In this sense, students coming from Africa expressed more positive attitudes toward Catalan than those coming from Latin America. No other comparisons between areas of origin yielded significant results (see table 19).

Regarding Spanish, there were also significant differences between areas ($F_{(3, 496)} = 14.92, p < .001$). Students from Latin America had significantly more favorable attitudes toward Spanish than the students with origins in Africa or Asia. Another significant difference appeared between students from Europe and from Asia, the former group being the one with the more positive attitudes toward Spanish. Looking at the effect sizes corresponding to the differences among areas of origin, we can see that most of them are small to medium.

¹⁴ The results also showed that the main effect of area of origin was not significant ($F_{(3, 496)} = 0.067, p = .978$), but there was a significant effect of language attitudes ($F_{(1.86, 925.12)} = 3.63, p = .030$).

Meanwhile, in the case of English, no significant differences were identified ($F_{(3, 496)} = 2.23, p = .084$), suggesting that students from Europe, Africa, Latin America and Asia have similar attitudes toward English.

Table 19. Bonferroni adjusted post-hoc tests for the simple effects of area of origin

Area of origin		Attitudes toward language								
		Catalan			Spanish			English		
		<i>t</i>	<i>p</i>	<i>r</i>	<i>t</i>	<i>p</i>	<i>r</i>	<i>t</i>	<i>p</i>	<i>r</i>
Europe	Africa	-1.74	.499	.08	2.24	.154	.10	0.50	1.000	.02
	Latin America	2.29	.135	.10	-2.17	.182	.10	-1.39	.999	.06
	Asia & Oceania	-1.06	1.000	.05	3.67	.002	.16	-1.50	.799	.07
Africa	Latin America	4.57	.000	.21	-5.05	.000	.23	-2.10	.217	.09
	Asia & Oceania	0.09	1.000	.00	2.24	.153	.10	-1.88	.362	.08
Latin America	Asia & Oceania	-2.60	.057	.12	5.34	.000	.24	-0.74	1.000	.03

Further, we compared the attitudes toward Catalan, Spanish and English corresponding to each of the four areas of origin. The results showed that students from Latin America showed a clear hierarchy of their language preferences ($F_{(2, 495)} = 48.28, p < .001$). Their most positive attitudes were directed towards Spanish, which they valued more than Catalan and English. Their second choice seemed to be English, which, although it received lower ratings than Spanish, was higher rated than Catalan was. Accordingly, Catalan occupied the last position as the least valued language.

Students from Europe also showed significant differences in their language attitudes ($F_{(2, 495)} = 5.06, p = .007$) by expressing more positive attitudes toward Spanish than toward Catalan. European students' attitudes toward English were not significantly different from their attitudes toward Catalan and toward Spanish.

Significant differences were also found for the students from Asia ($F_{(2, 495)} = 4.42, p = .012$), who showed more favorable attitudes toward English in comparison with Spanish and did not revealed significant differences between Catalan and Spanish or Catalan and English.

Meanwhile, students from Africa seemed to evaluate in a similar and equilibrated manner all three languages identified ($F_{(2, 495)} = 1.34, p = .262$), as it can be seen in table 20. The means corresponding to each area of origin are graphically represented in figure 49.

Table 20. Bonferroni adjusted post-hoc tests for the simple effects of attitudes toward language

Attitudes toward language		Area of origin											
		Europe			Africa			Latin America			Asia		
		<i>t</i>	<i>p</i>	<i>r</i>	<i>t</i>	<i>p</i>	<i>r</i>	<i>t</i>	<i>p</i>	<i>r</i>	<i>t</i>	<i>p</i>	<i>r</i>
Catalan	Spanish	2.80	.016	.09	0.79	1.000	.03	9.80	.000	.32	1.64	.304	.05
	English	0.75	1.000	.02	1.60	.333	.05	5.98	.000	.20	0.74	1.000	.02
Spanish	English	2.25	.075	.07	1.16	.743	.04	3.55	.001	.12	2.85	.014	.09

To summarize, the results showed that area of origin determined differences in attitudes toward language among students of immigrant origins. The most pronounced differences were found between the group of students from African and the group from Latin America. In this sense, students from Africa had more positive attitudes toward Catalan and less positive attitudes toward Spanish.

Additionally, students from Africa evaluated all languages similarly, whereas students from Latin America differentiated between languages, showing a clear preference for Spanish, followed by English, at the expense of Catalan. Students from Asia and Oceania differed with respect to their attitudes toward Spanish, which were less positive than the ones expressed by students from Latin America and Europe.

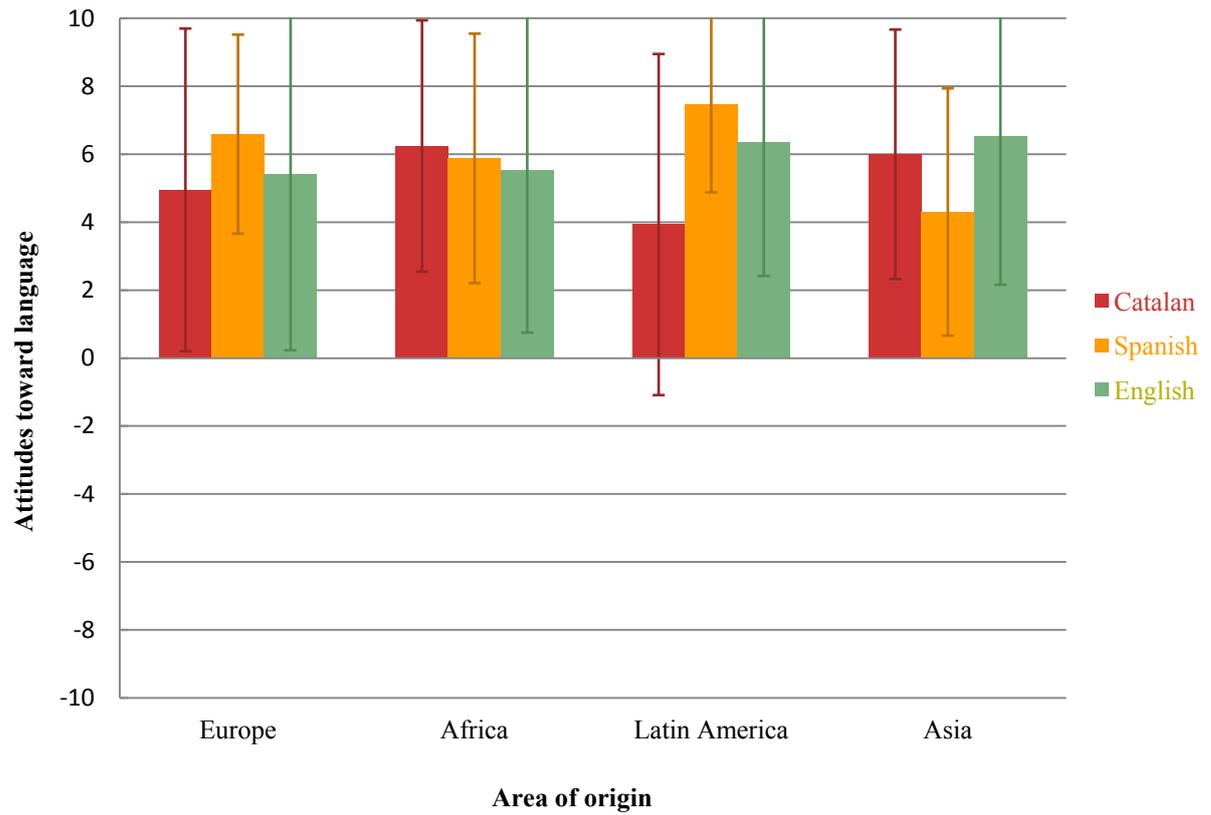


Figure 49. Means of attitudes toward Catalan, Spanish, and English by area of origin. Error bars represent plus and minus one standard deviation.

5.1.2.3. The effect of grade on attitudes toward language

Another variable of interest was grade. Consequently, we explored its effect on attitudes toward language and its possible variations by origin and of area of origin.

5.1.2.3.1. The effect of grade on attitudes toward language by origin

First, the interaction effect of grade, attitudes toward language, and origin was examined (see table 15). A mixed-design ANOVA, with grade and origin as the between-subject factors and attitudes toward language as the within-subjects factor was conducted.

The results revealed that the interaction effect of grade, origin and language was not significant ($F_{(1,91, 2237.73)} = 1.69, p = .186$), indicating that there are no variations of effect of grade on attitudes toward language determined by origin and language.

Furthermore, the main effects of language ($F_{(1,91, 2237.73)} = 0.53, p = .580$) and origin ($F_{(1, 1169)} = 2.87, p = .091$) were not significant.

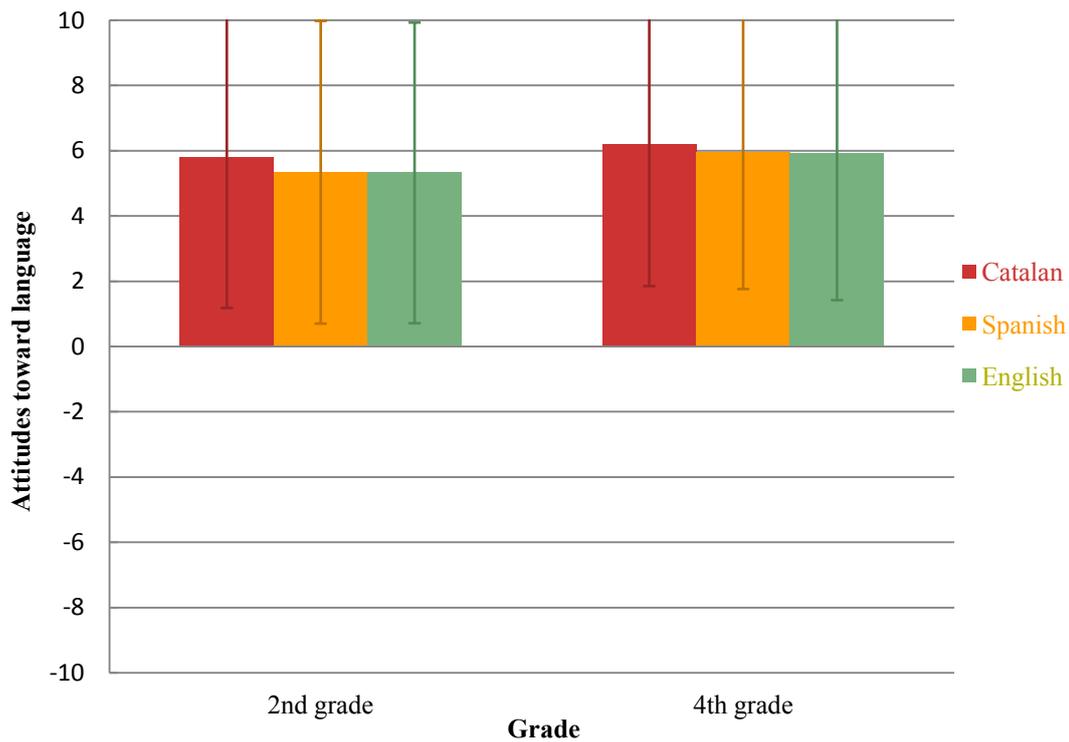
Table 21. Descriptive statistics for attitudes toward language by grade and origin. 95% BCa CIs based on 2000 bootstrap samples are reported in brackets.

Grade	Origin	N	Attitudes toward language					
			Catalan		Spanish		English	
			<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
2 nd	Immigrant	267	4.56 [3.97, 5.16]	4.87	6.55 [6.13, 6.95]	3.30	5.6 [5.03, 6.15]	4.69
	Autochthonous	332	6.8 [6.35, 7.26]	4.14	4.36 [3.77, 4.94]	5.29	5.1 [4.55, 5.62]	4.55
	Total	599	5.80 [5.43, 6.20]	4.62	5.34 [4.97, 5.69]	4.64	5.32 [4.95, 5.69]	4.61
4 th	Immigrant	233	5.31 [4.74, 5.89]	4.54	6.91 [6.11, 6.98]	4.69	6.44 [5.92, 6.95]	4.10
	Autochthonous	341	6.78 [6.34, 7.21]	4.1	5.27 [4.75, 5.76]	4.78	5.55 [5.02, 6.08]	4.72
	Total	574	6.19 [5.79, 6.59]	4.34	5.94 [5.58, 6.28]	4.18	5.91 [5.51, 6.28]	4.49

The results indicated that was a significant effect of grade ($F_{(1, 1169)} = 13.8, p < .001, r = .11$). Bonferroni adjusted tests indicated that the attitudes toward Catalan of 2nd and 4th graders were not significantly different, as indicated in table 22.

Table 22. Bonferroni adjusted tests for the main effect of grade

Grade		Attitudes toward language								
		Catalan			Spanish			English		
		<i>t</i>	<i>p</i>	<i>r</i>	<i>t</i>	<i>p</i>	<i>r</i>	<i>t</i>	<i>p</i>	<i>r</i>
2 nd	4 th	-1.47	.142	.004	2.34	.020	.07	2.21	.028	.06

**Figure 50. Means of attitudes toward Catalan, Spanish, and English by grade. Error bars represent plus and minus one standard deviation.**

Significant differences were found for Spanish, in which case students in 4th grade had more positive attitudes than students in 2nd grade. Also, the attitudes toward English of 4th graders were significantly more favorable than the attitudes of 2nd. Figure 50 presents the means of attitudes toward Catalan, Spanish, and English by grade.

5.1.2.3.2. The effect of grade on language attitudes by area of origin

Second, the interaction effect of grade, language attitudes, and area of origin was examined. The descriptive statistics corresponding to the language attitudes for each cell combination are shown in table 23.

The mixed-design ANOVA with grade and area of origin as the between-subjects factors and language attitudes as the within-subjects factor that was conducted revealed that the interaction between area of origin, grade, and language attitudes was not significant ($F_{(2, 924.34)} = 0.83, p = .542$)¹⁵.

Table 23. Descriptive statistics for attitudes toward language by grade and area of origin. 95% BCa CIs based on 2000 bootstrap samples are reported in brackets.

Area of origin	Grade	N	Attitudes toward language					
			Catalan		Spanish		English	
			<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Europe	2 nd	57	5.23 [4.07, 6.35]	4.32	6.75 [6.09, 7.46]	2.63	5.30 [3.89, 6.56]	5.17
	4 th	45	5.09 [3.31, 6.77]	5.43	6.69 [5.86, 7.49]	2.81	6.07 [4.64, 7.46]	4.65
Africa	2 nd	74	5.70 [4.77, 6.56]	4.18	5.81 [4.85, 6.68]	3.83	5.30 [4.01, 6.40]	5.15
	4 th	54	6.96 [6.15, 7.78]	3.00	5.89 [5.04, 6.74]	3.23	5.41 [4.24, 6.49]	4.58
Latin America	2 nd	119	3.17 [2.13, 4.16]	5.43	7.24 [6.70, 7.76]	2.90	5.77 [4.97, 6.50]	4.21
	4 th	118	4.66 [3.76, 5.55]	4.50	7.74 [7.36, 8.12]	2.24	6.96 [6.31, 7.60]	3.57
Asia & Oceania	2 nd	17	7.06 [6.35, 7.76]	1.75	4.23 [2.29, 5.88]	3.93	6.76 [4.59, 8.53]	4.21
	4 th	16	5.19 [2.31, 7.44]	5.43	4.87 [3.00, 6.50]	3.34	7.19 [5.25, 9.00]	3.99

Regarding the main effects, the results indicated that the main effects of area of origin ($F_{(3,492)} = 0.12, p = .950$) and grade ($F_{(2,488)} = 2.05, p = .153$) were not significant, but the main effect of language proved to be statistically significant ($F_{(2, 924.34)} = 3.53, p = .032$).

¹⁵ Following the violation of the assumption of sphericity ($\chi^2_{(2)} = 42.85, p < .001$), the Huynh-Feldt correction was used to adjust the degrees of freedom ($\epsilon = .939$).

In conclusion, there was an overall effect of grade, students in the 4th grade having more positive attitudes toward Catalan, Spanish, and English than the students in the 2nd grade. However, when analyzing only the group of immigrant students, the differences between year levels had no statistical significance.

5.1.2.4. The effect of gender on attitudes toward language

The differences in attitudes toward language determined by gender were analyzed first for the whole sample, comparing students of autochthonous and immigrant origins. Second, the analysis focused on the immigrant group, examining the influence of gender by area of origin.

5.1.2.4.1. The effect of gender on attitudes toward language by origin

The interaction of gender, origin, and attitudes toward language was analyzed through a mixed-design ANOVA (see table 24). The interaction effect of language, gender and origin was not significant ($F_{(1.91, 2236.25)} = 1.66, p = .191$)¹⁶, indicating that the effect of gender did not significantly varied between languages and origins.

Since the interaction effect did not yield significant results, we examined the main effects. Origin ($F_{(1, 1169)} = 1.93, p = .165$) and attitudes toward language ($F_{(1.91, 2236.25)} = 0.49, p = .603$), did not have a significant main effect. However, there was a significant main effect of gender ($F_{(1, 1169)} = 21.01, p < .001, r = .13$), indicating that the attitudes expressed by girls are overall more positive than the attitudes expressed by boys.

As shown in table 25, Bonferroni adjusted pairwise comparisons confirmed that girls' attitudes toward Catalan were more favorable than boys' attitudes. Significant differences were also found regarding attitudes toward Spanish and English, girls expressing more positive attitudes than boys (see figure 51).

¹⁶ Following the violation of the assumption of sphericity ($\chi^2_{(2)} = 59.72, p < .001$), the degrees of freedom were adjusted accordingly using the Huynh-Feldt estimates of sphericity ($\epsilon = .956$).

Table 24. Descriptive statistics for attitudes toward language by gender and origin. 95% BCa CIs based on 2000 bootstrap samples are reported in brackets.

Gender	Origin	N	Attitudes toward language					
			Catalan		Spanish		English	
			<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Boys	Immigrant	246	4.38 [3.73, 5.02]	5.13	6.4 [6.01, 6.79]	3.23	5.92 [5.3, 6.53]	4.65
	Autochthonous	351	6.58 [6.12, 7.01]	4.26	4.37 [3.76, 4.93]	5.32	4.92 [4.42, 5.38]	4.76
	Total	597	5.68 [5.30, 6.04]	4.75	5.21 [4.81, 5.59]	4.68	5.32 [4.95, 5.70]	4.74
Girls	Immigrant	254	5.42 [4.89, 5.92]	4.26	7.02 [6.65, 7.37]	2.93	6.06 [5.52, 6.59]	4.23
	Autochthonous	322	7.02 [6.61, 7.43]	3.95	5.32 [4.78, 5.83]	4.72	5.78 [5.27, 6.27]	4.46
	Total	576	6.32 [5.97, 6.67]	4.17	6.07 [5.72, 6.39]	4.11	5.90 [5.53, 6.27]	4.36

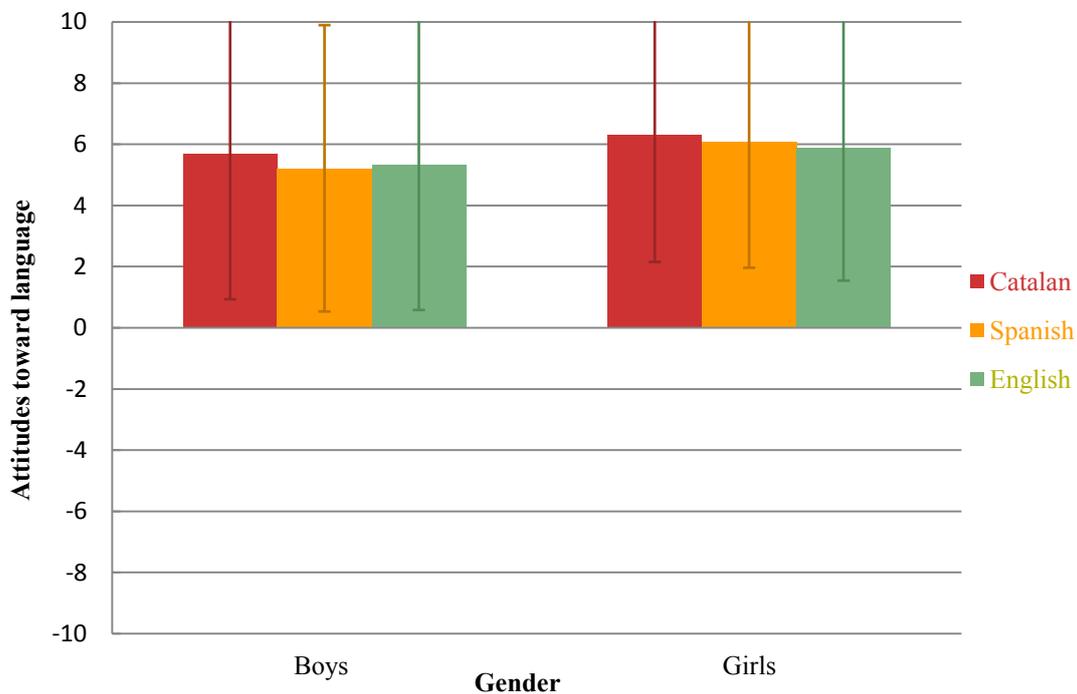


Figure 51. Means of attitudes toward Catalan, Spanish, and English by gender. Error bars represent plus and minus one standard deviation.

Table 25. Bonferroni adjusted tests for the main effect of gender

Gender		Attitudes toward language								
		Catalan			Spanish			English		
		<i>t</i>	<i>p</i>	<i>r</i>	<i>t</i>	<i>p</i>	<i>r</i>	<i>t</i>	<i>p</i>	<i>r</i>
Girls	Boys	2.46	.014	.07	3.34	.001	.10	2.17	.031	.06

5.1.2.4.2. The effect of gender on language attitudes by area of origin

Further, a mixed-design ANOVA with gender and area of origin as the between-subjects factors and language attitudes as the within-subjects factor was conducted (see table 26).

Table 26. Descriptive statistics for attitudes toward language by gender and area of origin. 95% BCa CIs based on 2000 bootstrap samples are reported in brackets.

Area of origin		Gender	N	Attitudes toward language					
				Catalan		Spanish		English	
				<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Europe	Boys	50	4.82 [3.32, 6.21]	5.37	6.26 [5.42, 7.12]	2.98	6.00 [4.56, 7.16]	4.95	
	Girls	52	5.50 [4.33, 6.59]	4.23	7.17 [6.50, 7.83]	2.34	5.29 [4.00, 6.48]	4.96	
Africa	Boys	60	5.47 [4.32, 6.48]	4.19	5.32 [4.45, 6.16]	3.65	4.58 [3.00, 5.98]	5.35	
	Girls	68	6.91 [6.14, 7.65]	3.22	6.31 [5.43, 7.10]	3.46	6.01 [4.86, 7.03]	4.40	
Latin America	Boys	119	3.49 [2.59, 4.41]	5.30	7.24 [6.76, 7.72]	2.70	6.25 [5.48, 6.98]	4.23	
	Girls	118	4.33 [3.49, 5.17]	4.74	7.74 [7.26, 8.18]	2.48	6.47 [5.77, 7.15]	3.64	
Asia & Oceania	Boys	17	5.53 [2.59, 7.88]	5.41	4.76 [2.65, 6.47]	4.07	8.12 [6.94, 9.18]	2.59	
	Girls	16	6.81 [5.87, 7.56]	1.60	4.31 [2.62, 5.69]	3.18	5.75 [3.19, 8.12]	4.96	

The expected interaction effect of gender, language attitudes and area of origin was not statistically significant ($F_{(2, 924.53)} = 0.71, p = .636$)¹⁷, indicating that there are no

¹⁷ Following the violation of the assumption of sphericity ($\chi^2_{(2)} = 42.73, p < .001$), the Huynh-Feldt correction was used to adjust the degrees of freedom ($\epsilon = .940$).

significant variations of gender's effect on language attitudes determined by area of origin.

Examining the main effect of the three variables, the results also indicated that the main effects of area of origin ($F_{(3,492)} = 0.12, p = .950$) and gender ($F_{(2,488)} = 2.05, p = .153$) were not statistically significant, whereas the main effect of language attitudes was significant ($F_{(2, 924.53)} = 3.56, p = .029$). In other words, when analyzing only the group of immigrant students, although girls tended to express more favorable attitudes in comparison with the boys, the differences were not statistically significant.

To summarize, overall girls tend to have more positive attitudes toward Catalan, Spanish, and English than boys do. Even if the significance threshold was not reached, the same tendency of girls having more favorable attitudes toward languages was observed for the immigrant group.

5.1.2.5. The effect of socio-cultural status on attitudes toward language

Another variable of interest was the socio-cultural status. Its effect was analyzed depending on origin and of area of origin.

5.1.2.5.1. The effect of socio-cultural status on attitudes toward language by origin

The attitudes toward language expressed by students from families with different socio-cultural statuses were explored through a two-level analysis. Using mixed-design ANOVA, we examined the effect of socio-cultural status by comparing language attitude patterns of autochthonous and immigrant students (see table 27).

The interaction of origin, socio-cultural level and attitudes toward language was found to be significant ($F_{(3.84, 2240.88)} = 8.05, p < .001$)^{18,19}. To break down this interaction, the simple effects of each variable were analyzed using Bonferroni adjusted multiple

¹⁸ Mauchly's test of sphericity indicated that the assumption of sphericity was not respected, requiring the Huynh-Feldt adjustment for the degrees of freedom ($\chi^2(2) = 56.98, p < .001, \epsilon = .960$).

¹⁹ Besides the interaction effect that was of interest in the context of the present research, the results also showed that there were no significant main effects of socio-cultural status ($F_{(2, 1167)} = 1.99, p = .136$), language ($F_{(1.92, 2240.88)} = 2.17, p = .114$), and origin ($F_{(1, 1167)} = 1.49, p = .233$).

comparisons. The results, which are summarized in table 28 and represented in figure 52 and figure 53, indicated that the socio-cultural level had different effects in the immigrant and the autochthonous group for the three languages examined. In this sense, concerning the attitudes toward Catalan, there were no significant differences determined by socio-cultural level in the group of immigrant students ($F_{(2, 1167)} = 1.37, p = .253$), but there were significant differences in the group of autochthonous students ($F_{(2, 1167)} = 6.12, p = .002$).

Specifically, the autochthonous students with parents educated at university level had more positive attitudes toward Catalan than those whose parents had secondary or elementary education.

Table 27. Descriptive statistics for attitudes toward language by socio-cultural status and origin. 95% BCa CIs based on 2000 bootstrap samples are reported in brackets.

Socio-cultural status	Origin	N	Attitudes toward language					
			Catalan		Spanish		English	
			<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
University	Immigrant	192	4.98 [4.29, 5.66]	4.54	6.97 [6.53, 7.39]	2.97	6.37 [5.78, 6.92]	4.09
	Autochthonous	248	7.54 [7.05, 7.99]	3.73	3.59 [2.95, 4.24]	5.19	5.64 [5.07, 6.23]	4.43
	Total	440	6.43 [6.00, 6.82]	4.29	5.07 [4.61, 5.53]	4.67	5.96 [5.53, 6.36]	4.30
Secondary	Immigrant	200	4.56 [3.82, 5.26]	5.16	6.86 [6.42, 7.29]	3.04	6.22 [5.59, 6.83]	4.33
	Autochthonous	289	6.49 [5.96, 7.0]	4.36	5.2 [4.61, 5.76]	4.93	5.6 [5.08, 6.12]	4.61
	Total	489	5.70 [5.28, 6.13]	4.79	5.88 [5.49, 6.26]	4.34	5.85 [5.44, 6.26]	4.50
Elementary	Immigrant	108	5.42 [4.62, 6.17]	4.18	5.99 [5.31, 6.65]	3.3	4.91 [3.86, 5.91]	5.07
	Autochthonous	136	6.08 [5.33, 6.84]	4.09	6.27 [5.49, 6.96]	4.58	4.17 [3.34, 4.93]	4.91
	Total	244	5.79 [5.25, 6.31]	4.13	6.15 [5.60, 6.66]	4.06	4.50 [3.86, 5.12]	4.99

Table 28. Bonferroni adjusted tests for the simple effect of socio-cultural status at each combination of origin and attitudes toward language

Origin	Socio-cultural status		Attitudes toward language								
			Catalan			Spanish			English		
			<i>t</i>	<i>p</i>	<i>r</i>	<i>t</i>	<i>p</i>	<i>r</i>	<i>t</i>	<i>p</i>	<i>r</i>
Immigrant	University	Secondary	0.95	1.000	.03	0.25	1.000	.01	0.33	1.000	.01
		Elementary	-0.82	1.000	.02	1.92	.166	.06	2.69	.022	.08
	Secondary	Elementary	-1.63	.309	.05	1.72	.258	.05	2.43	.046	.07
Autochthonous	University	Secondary	2.77	.017	.08	-4.37	<.001	.13	0.12	1.000	.00
		Elementary	3.13	.005	.09	-5.90	<.001	.17	3.06	.007	.09
	Secondary	Elementary	0.90	1.000	.03	-2.42	.047	.07	3.04	.007	.09

Table 29. Bonferroni adjusted tests for the simple effects of attitudes toward language at each combination of origin and socio-cultural status

Origin	Attitudes toward language		Socio-cultural status								
			University			Secondary			Elementary		
			<i>t</i>	<i>p</i>	<i>r</i>	<i>t</i>	<i>p</i>	<i>r</i>	<i>t</i>	<i>p</i>	<i>r</i>
Immigrant	Catalan	Spanish	-4.02	<.001	.09	-4.74	<.001	.10	-0.87	1.000	.02
		English	-3.19	.004	.07	-3.89	<.001	.08	0.88	1.000	.02
	Spanish	English	1.46	.437	.03	1.59	.338	.03	1.96	.151	.04
Autochthonous	Catalan	Spanish	9.08	<.001	.19	3.20	.004	.07	-0.33	1.000	.01
		English	4.96	<.001	.11	2.52	.035	.05	3.71	.001	.08
	Spanish	English	-5.63	<.001	.12	-1.18	.719	.02	4.27	<.001	.09

Similarly, in the case of Spanish the effect of socio-cultural status was not significant for the immigrant group ($F_{(2, 1167)} = 2.04, p = .131$), but it was significant for the autochthonous group ($F_{(2, 1167)} = 19.4, p < .001$). The autochthonous students whose parents had elementary education had more favorable attitudes toward Spanish than those whose parents had secondary and university education. In addition, those in the secondary education group had more favorable attitudes than those in the university group.

Regarding English, significant differences were found for the autochthonous group ($F_{(2, 1167)} = 5.58, p = .004$), as well as for the immigrant group ($F_{(2, 1167)} = 4.02, p = .018$). In both cases, students whose parents had secondary and university education expressed similar attitudes toward English, which were also more favorable than the attitudes showed by students whose parents did not continue their education after the elementary level. All significant differences were of similar size, being fairly small according to Cohen's (1988, 1992) benchmarks.

Further, the simple effects of language within each level combination of origin and socio-cultural status were investigated. The results indicated that there were significant differences between languages in the case of immigrant students whose parents had an university education ($F_{(2, 1166)} = 8.52, p < .001$) or a secondary level education ($F_{(2, 1166)} = 12.04, p < .001$), but there were no significant differences in the case of students whose parents were educated at elementary level ($F_{(2, 1166)} = 1.95, p = .143$). Bonferroni adjusted tests showed that the language preferences of the university and secondary education groups of immigrant students were similar: Spanish and English were similarly rated, and they both received higher ratings than Catalan (see table 29).

Regarding autochthonous students, significant differences between languages were found at all levels of education: university ($F_{(2, 1166)} = 41.40, p < .001$), secondary ($F_{(2, 1166)} = 5.38, p = .005$), and elementary ($F_{(2, 1166)} = 12.13, p < .001$). Autochthonous students whose parents obtained a university degree rated Catalan higher than Spanish and English, and Spanish higher than they rated English. Those whose parents graduated secondary education expressed more positive attitudes toward Catalan than toward Spanish and English, but did not significantly differentiate between Spanish and English. Meanwhile, in the case of autochthonous students from families educated at elementary

level no significant differences between Catalan and Spanish were found, and they rated the two official languages of Catalonia higher than English.

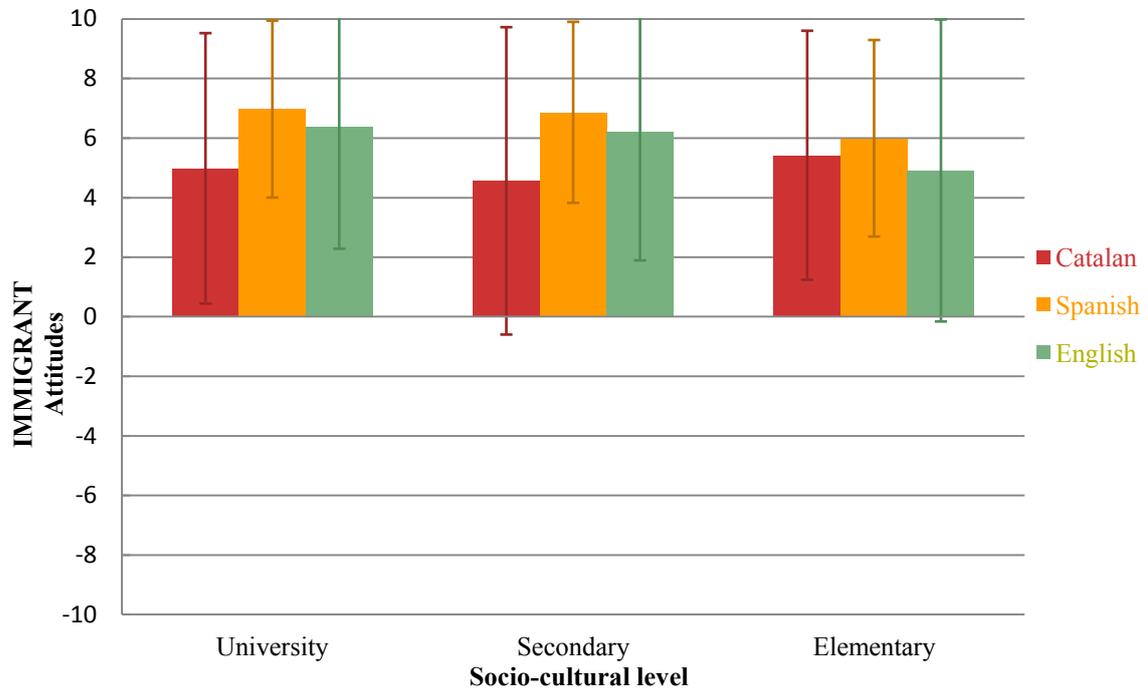


Figure 52. Means of attitudes toward Catalan, Spanish, and English by socio-cultural status for the immigrant group. Error bars represent plus and minus one standard deviation.

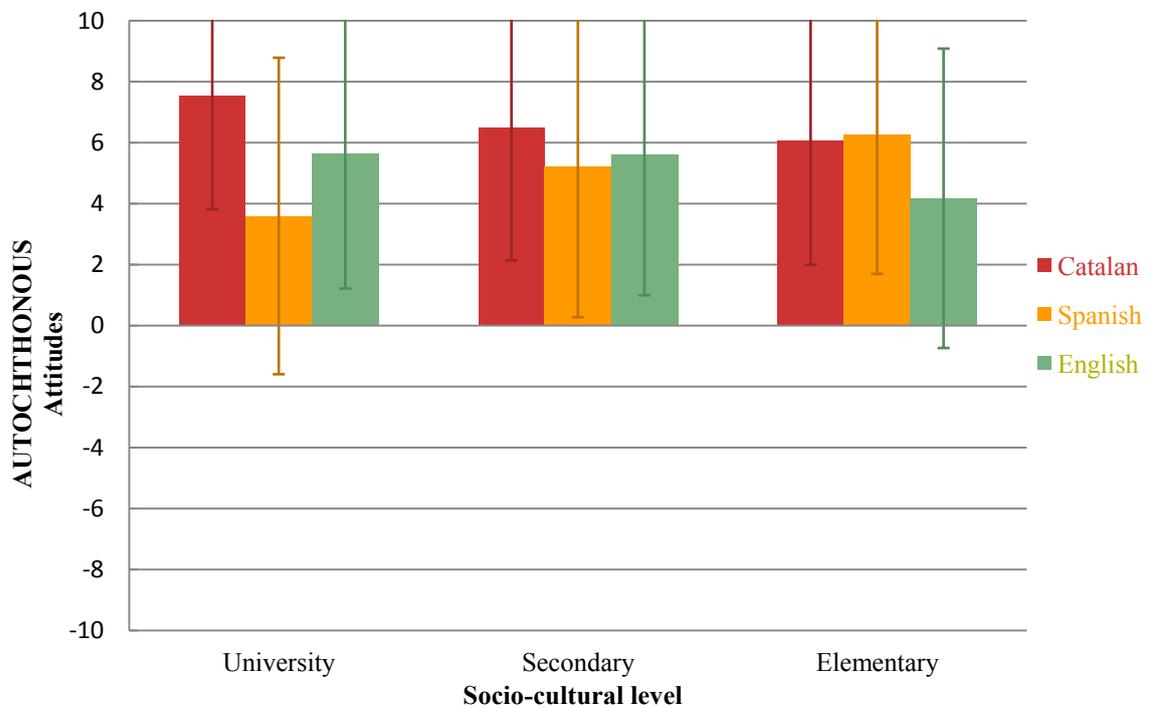


Figure 53. Means of attitudes toward Catalan, Spanish, and English by socio-cultural status for the autochthonous group. Error bars represent plus and minus one standard deviation.

5.1.2.5.2. The effect of socio-cultural status on language attitudes by area of origin

In order to examine if the effect of socio-cultural status on language attitudes varies depending on area of origin a mixed-design ANOVA was conducted. Socio-cultural status and area of origin were introduced as the between-subjects factors and attitudes toward languages as the within-subjects factor (see table 30).

Table 30. Descriptive statistics for attitudes toward language by socio-cultural status and area of origin. 95% BCa CIs based on 2000 bootstrap samples are reported in brackets.

Area of origin	Socio-cultural status	N	Language					
			Catalan		Spanish		English	
			<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Europe	University	48	5.23 [3.85, 6.48]	4.62	6.62 [5.85, 7.37]	2.64	6.73 [5.37, 7.85]	4.31
	Secondary	36	4.94 [3.06, 6.81]	5.62	7.25 [6.25, 8.17]	2.80	5.72 [4.11, 7.22]	4.90
	Elementary	18	5.44 [3.78, 7.11]	3.68	5.94 [4.78, 7.11]	2.58	2.56 [0.22, 4.89]	5.56
Africa	University	22	6.23 [4.45, 7.77]	4.09	6.68 [5.54, 7.77]	2.81	4.95 [2.95, 6.59]	4.35
	Secondary	51	6.65 [5.69, 7.49]	3.45	6.20 [5.17, 7.20]	3.57	5.71 [4.15, 6.98]	4.59
	Elementary	55	5.85 [4.76, 6.80]	3.94	5.18 [4.20, 6.12]	3.78	5.16 [3.65, 6.47]	5.41
Latin America	University	111	4.40 [3.41, 5.27]	4.67	7.62 [7.11, 8.13]	2.62	6.40 [5.59, 7.12]	4.03
	Secondary	100	3.37 [2.33, 4.42]	5.35	7.31 [6.73, 7.82]	2.64	6.43 [5.65, 7.20]	4.00
	Elementary	26	4.04 [1.92, 6.11]	5.28	7.61 [6.73, 8.46]	2.38	5.96 [4.71, 7.11]	3.38
Asia & Oceania	University	11	7.64 [6.36, 8.73]	1.75	2.54 [0.09, 4.64]	4.03	7.36 [6.00, 8.64]	2.62
	Secondary	13	4.53 [1.13, 7.26]	5.75	5.00 [3.08, 6.69]	3.51	8.00 [5.85, 9.69]	3.83
	Elementary	9	6.67 [5.78, 7.56]	2.00	6.33 [5.22, 7.56]	2.00	5.00 [1.55, 7.96]	5.34

The results showed that the interaction between area of origin, socio-cultural status, and language attitudes was not significant ($F_{(2, 921.59)} = 1.68, p = .069$)²⁰. Consequently, explanatory resources might reside in the main effects of the variables investigated.

²⁰ Following the violation of the assumption of sphericity ($\chi^2(2) = 44.23, p < .001$), the Huynh-Feldt correction was used to adjust the degrees of freedom ($\epsilon = .944$).

Nonetheless, none of the main effects of language attitudes ($F_{(2, 921.59)} = 2.65, p = .074$), socio-cultural status ($F_{(2,488)} = 1.14, p = .321$), and area of origin ($F_{(3,488)} = 0.29, p = .829$) were statistically significant.

To summarize, various differences in patterns of attitudes toward language seemed to be determined by the socio-cultural level of students depending on origin, whereas no statistically significant variations were determined by area of origin.

It is interesting to note that the attitudes of immigrant students toward Catalan and Spanish were relatively uniform across socio-cultural statuses. Meanwhile, the attitudes of the autochthonous group toward Catalan and Spanish went on contrary directions as a function of the socio-cultural level. Thus, students in the university level group had both the most favorable attitudes toward Catalan, as well as the least favorable attitudes toward Spanish in comparison with the secondary and elementary education groups.

However, the attitudes corresponding to the elementary education group were similar for the immigrant and the autochthonous group. Furthermore, in the case of English, socio-cultural status seemed to prevail over origin. In this sense, autochthonous and immigrant students all showed more positive attitudes toward English if their parents had university or secondary level education than if they had stopped studying after elementary education.

5.1.2.6. *The effect of socio-professional status*

Following, the effect of socio-professional status on attitudes toward Catalan, Spanish, and English was examined. We also investigated the possible variations of the effect of socio-professional status by origin for the entire sample, and by area of origin, for the immigrant group using mixed-design ANOVA.

5.1.2.6.1. **The effect of socio-professional status on attitudes toward language by origin**

The influence of socio-professional status on attitudes toward language was analyzed initially comparatively between the autochthonous and the immigrant students. There was a significant interaction effect of socio-professional status, origin and attitudes toward language ($F_{(3.85, 2244.01)} = 5.31, p < .001$)^{21,22}. The means and standard deviations of each group obtained by the combination of the three variables investigated are presented table 31. Figure 54 and figure 55 show the effect of socio-professional status on attitudes toward language by origin.

To break down this interaction, the simple effects of each variable were analyzed successively. Regarding the effect of socio-professional status in the case of the immigrant group, the results indicated that there were no significant differences between high, medium, and low socio-professional statuses regarding the attitudes toward Catalan ($F_{(2, 1167)} = 0.8, p = .450$), Spanish ($F_{(2, 1167)} = 0.12, p = .888$), and English ($F_{(2, 1167)} = 1.84, p = .160$).

For the autochthonous group, significant differences determined by socio-professional status were found for the attitudes toward Catalan ($F_{(2, 1167)} = 5.21, p = .006$). The high status group had more favorable attitudes toward Catalan in comparison with the low socio-professional status group. The other comparisons were not significant, as it can be seen in table 32.

²¹ Since the assumption of sphericity had been violated ($\chi^2_{(2)} = 55.14, p < .001$), the degrees of freedom were corrected using the Huynh-Feldt estimates of sphericity ($\epsilon = .961$).

²² The results also showed that none of the variables analyzed had a significant main effect (socio-professional status: $F_{(2, 1167)} = 0.01, p = .986$; origin: $F_{(1, 1167)} = 3.27, p = .071$; and language: $F_{(1.92, 2244.01)} = 0.29, p = .737$).

Significant differences between socio-professional statuses were also found for the attitudes toward Spanish ($F_{(2, 1167)} = 20.86, p < .001$). Hence, the attitudes toward Spanish of the high status group were less positive than the attitudes of the medium and low status groups, while the attitudes of the medium group were less positive than the attitudes expressed by the low status group. Lastly, the attitudes toward English did not differ significantly by socio-professional status ($F_{(2, 1167)} = 1.1, p = .334$).

Table 31. Means and standard deviations of attitudes toward language by socio-professional status and origin. 95% BCa CIs based on 2000 bootstrap samples are reported in brackets.

Socio-professional status	Origin	N	Attitudes toward language					
			Catalan		Spanish		English	
			<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
High	Immigrant	73	4.84 [3.73, 5.85]	4.85	6.68 [5.89, 7.38]	3.29	6.78 [5.72, 7.78]	4.48
	Autochthonous	171	7.67 [7.1, 8.19]	3.45	3.3 [2.54, 4.07]	5.25	5.44 [4.77, 6.11]	4.59
	Total	244	6.82 [6.30, 7.34]	4.12	4.32 [3.70, 4.91]	4.99	5.84 [5.26, 6.41]	4.59
Medium	Immigrant	97	4.43 [3.45, 5.41]	4.85	6.91 [6.28, 7.47]	3.04	6.29 [5.52, 7.02]	4.05
	Autochthonous	229	6.73 [6.16, 7.32]	4.3	4.6 [3.96, 5.24]	5.14	5.61 [4.96, 6.21]	4.56
	Total	326	6.05 [5.52, 6.51]	4.58	5.29 [4.76, 5.82]	4.73	5.81 [5.30, 6.28]	4.23
Low	Immigrant	330	5.07 [4.54, 5.6]	4.67	6.67 [6.36, 6.97]	3.07	5.73 [5.24, 6.19]	4.52
	Autochthonous	273	6.3 [5.76, 6.81]	4.27	5.96 [5.42, 6.51]	4.59	5.02 [4.44, 5.57]	4.73
	Total	603	5.63 [5.28, 5.96]	4.53	6.35 [6.04, 6.66]	3.84	5.41 [5.05, 5.77]	4.63

Another way to look at the interaction consisted in exploring how the differences between languages vary by socio-professional status and origin. In the group formed by students with immigrant origins, the students from high socio-professional status showed differences in attitudes toward language ($F_{(2, 1167)} = 4.11, p = .017$). Concretely, high status immigrant students expressed rated English higher than Catalan, while Spanish was placed between the two, although not at a significant distance (see table 33). Significant differences between languages were also found for the medium status group ($F_{(2, 1167)} = 6.9, p = .001$), Spanish and English being seen more favorably than Catalan by these students.

Table 32. Bonferroni adjusted tests for the simple effect of socio-professional status at each combination of origin and language

Origin	Socio-professional status		Language attitudes								
			Catalan			Spanish			English		
			<i>t</i>	<i>p</i>	<i>r</i>	<i>t</i>	<i>p</i>	<i>r</i>	<i>t</i>	<i>p</i>	<i>r</i>
Immigrant	High	Medium	0.59	1.000	.02	-0.34	1.000	.01	0.70	1.000	.02
		Low	-0.41	1.000	.01	0.03	1.000	.00	1.78	.226	.05
	Medium	Low	-1.25	.630	.04	0.48	1.000	.01	1.06	.873	.03
Autochthonous	High	Medium	2.13	.099	.06	-3.01	.008	.09	-0.37	1.000	.01
		Low	3.22	.004	.09	-6.39	<.001	.19	0.94	1.000	.03
	Medium	Low	1.09	.823	.03	-3.55	.001	.10	1.43	.455	.04

Table 33. Bonferroni adjusted tests for the simple effects of attitudes toward language at each combination of origin and socio-professional status

Origin	Attitudes toward language		Socio-professional status								
			High			Medium			Low		
			<i>t</i>	<i>p</i>	<i>r</i>	<i>t</i>	<i>p</i>	<i>r</i>	<i>t</i>	<i>p</i>	<i>r</i>
Immigrant	Catalan	Spanish	-2.30	.065	.05	-3.55	.001	.08	-4.24	<.001	.09
		English	-2.76	.018	.06	-3.03	.007	.06	-2.01	.135	.04
	Spanish	English	-0.14	1.000	.00	1.05	.876	.02	2.94	.010	.06
Autochthonous	Catalan	Spanish	8.32	<.001	.18	4.69	<.001	.10	0.82	1<.001	.02
		English	4.84	<.001	.10	2.82	.015	.06	3.50	.001	.07
	Spanish	English	-4.83	<.001	.10	-2.63	.026	.06	2.68	.022	.06

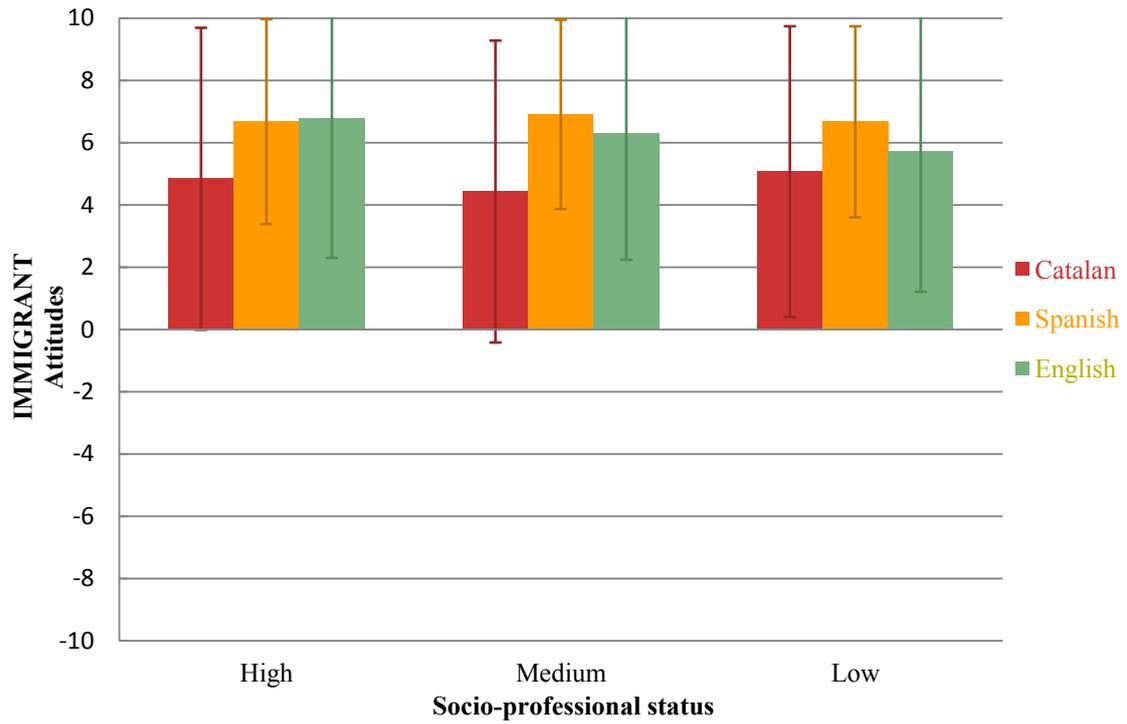


Figure 54. Means of attitudes toward Catalan, Spanish, and English by socio-professional status for the immigrant group. Error bars represent plus and minus one standard deviation.

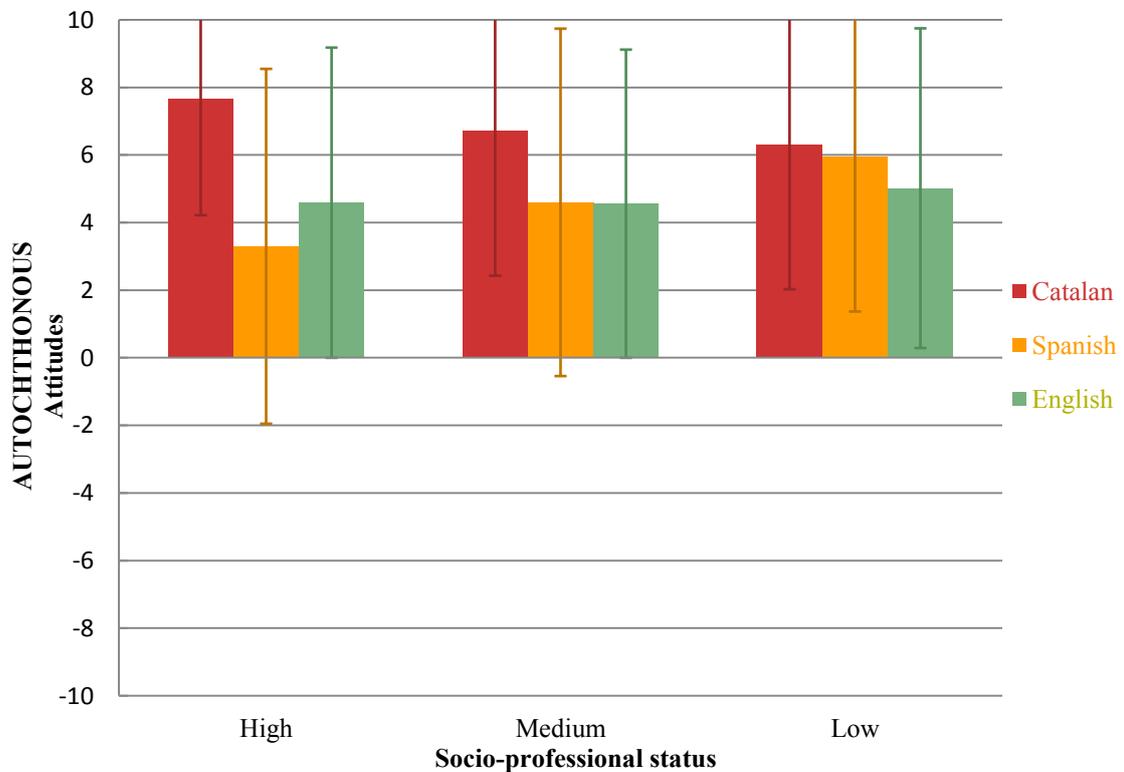


Figure 55. Means of attitudes toward Catalan, Spanish, and English by socio-professional status for the autochthonous group. Error bars represent plus and minus one standard deviation.

Furthermore, significant differences were also recorded for the low status group ($F_{(2, 1167)} = 9.23, p < .001$), which showed more positive attitudes toward Spanish than toward Catalan and English.

Regarding the autochthonous group of students, significant differences between languages were found in the case of students from a high status ($F_{(2, 1167)} = 34.85, p < .001$), as well as in the case of students from a medium status family ($F_{(2, 1167)} = 10.97, p < .001$).

Bonferroni adjusted tests indicated that, in both high and medium status groups, attitudes toward Catalan were more positive than their attitudes toward Spanish and English, while their attitudes toward English were more favorable than toward Spanish. Meanwhile, students from low status families expressed more positive attitudes toward Catalan and Spanish than toward English.

5.1.2.6.2. The effect of socio-professional status on language attitudes by area of origin

The interaction effect of socio-professional status, language attitudes, and area of origin was examined with the help of a mixed-design ANOVA. The descriptive statistics for each combination of the three variables are shown in table 34.

The expected interaction effect was not statistically significant ($F_{(2, 921.59)} = 0.79, p = .651$)²³, suggesting that the influence of socio-professional status on language attitudes does not vary in a significant manner between areas of origin.

The results also showed that there were no significant main effects of socio-professional status ($F_{(2, 488)} = 0.24, p = .790$), attitudes toward language ($F_{(2, 921.21)} = 1.83, p = .160$), and area of origin ($F_{(3, 488)} = 0.15, p = .931$).

²³ Following the violation of the assumption of sphericity ($\chi^2_{(2)} = 44.47, p < .001$), the Huynh-Feldt correction was used to adjust the degrees of freedom ($\epsilon = .944$).

Table 34. Means and standard deviations of attitudes toward language by socio-professional status and area of origin. 95% BCa CIs based on 2000 bootstrap samples are reported in brackets.

Area of origin	Socio-professional status	N	Attitudes toward language					
			Catalan		Spanish		English	
			M	SD	M	SD	M	SD
Europe	High	18	4.11 [1.28, 6.72]	6.18	6.28 [4.83, 7.67]	3.25	6.44 [3.33, 8.89]	5.84
	Medium	20	5.40 [3.00, 7.58]	5.63	6.80 [5.45, 8.10]	3.25	6.10 [4.50, 7.50]	3.92
	Low	64	5.39 [4.36, 6.39]	4.11	6.83 [6.28, 7.33]	2.36	5.26 [3.92, 6.43]	4.99
Africa	High	3	8.67 [8.00, 9.33]	1.15	5.33 [2.67, 8.00]	4.16	6.67 [4.67, 8.67]	3.05
	Medium	20	5.90 [4.00, 7.55]	3.98	6.30 [4.80, 7.65]	3.28	6.00 [3.50, 8.00]	5.03
	Low	105	6.23 [5.52, 6.93]	3.77	5.77 [5.07, 6.47]	3.64	5.18 [4.19, 6.03]	4.93
Latin America	High	46	4.45 [3.22, 5.63]	4.51	7.56 [6.83, 8.26]	2.53	6.69 [5.49, 7.78]	4.24
	Medium	45	3.42 [2.10, 4.64]	4.44	7.55 [6.64, 8.33]	2.83	6.49 [5.49, 7.49]	3.31
	Low	146	3.89 [3.00, 4.75]	5.37	7.44 [7.04, 7.85]	2.56	6.22 [5.54, 6.86]	4.04
Asia & Oceania	High	6	8.00 [7.33, 8.67]	1.26	1.83 [-1.71, 4.5]	4.31	8.50 [7.17, 9.67]	1.97
	Medium	12	4.17 [0.83, 7.00]	5.87	5.67 [4.33, 7.00]	2.81	6.33 [3.17, 9.00]	5.38
	Low	15	7.00 [6.13, 7.87]	1.96	4.73 [2.79, 6.33]	3.57	6.87 [5.20, 8.47]	3.44

In conclusion, the effect of socio-professional status on attitudes toward languages varied by language and origin, but no significant variations were found depending on area of origin. Thus, while socio-professional status had no effect on the attitudes toward language of the immigrant students, it had a significant effect in the case of autochthonous students. Within the latter group, high status students expressed more positive attitudes toward Spanish than medium status students, which, in their turn, manifested more positive attitudes than low status students did.

Furthermore, the differences between immigrant and autochthonous are clearly centered in the place of Catalan among the three languages investigated. In this sense, Catalan

received the lowest ratings of all languages from the immigrant students and the highest from the autochthonous group, regardless of socio-professional status. Socio-professional status moderated only the relation between Spanish and English, students from high status families showing a tendency to value English more.

5.1.2.7. *The effect of Catalan competences*

Following, we explored the effect of language competences. Although attitudes and language competences are strongly connected through an intricate relationship of mutual influence, due to the objectives of the present research, we focused only on the role played by language competences as a determinant of language attitudes. With this aim, the influence of language competences on attitudes toward language and the moderation of this relationship by origin were explored.

First, we examined the effect of Catalan competences. The first step was to check the associations between these variables for the whole sample, which are presented in table 35.

At general level, Catalan competences were found to be positively correlated with attitudes toward Catalan and toward English, whereas no significant relationship was found between Catalan competences and attitudes toward Spanish.

Table 35. Descriptive statistics and correlation matrix for Catalan competences and attitudes toward language

Variables	<i>M</i>	<i>SD</i>	Attitudes twd. Catalan	Attitudes twd. Spanish	Attitudes twd. English
1. Catalan competences	58.63 [57.31, 59.89]	18.10	.23** [.16, .29]	-.05 [-.13, .04]	.17** [.10, .24]
2. Attitudes toward Catalan	5.40 [5.04, 5.75]	4.68		-.20** [-.26, -.14]	.03 [-.06, .12]
3. Attitudes toward Spanish	6.06 [5.75, 6.37]	4.07			.17** [.09, .24]
4. Attitudes toward English	5.83 [5.50, 6.16]	4.48			

Note: * $p < .05$, ** $p < .001$

5.1.2.7.1. The effect of Catalan competences on attitudes toward language by origin

Moderation analyses were conducted with the SPSS computational tool PROCESS (Hayes, 2012) to investigate whether the associations between Catalan competences and attitudes toward Catalan, Spanish, and English respectively depended on origin. We present in order the results for each language of interest.

Attitudes toward Catalan

The results, summarized in table 36, indicated that the interaction term between Catalan competences and origin was not significant. Thus, the effect of language competences on attitudes toward Catalan did not depend on the origin of the participants.

Table 36. Summary of the multiple regression of the interaction effect of Catalan competences and origin on attitudes toward Catalan. 95% BCa CIs are reported in brackets.

	<i>b</i>	<i>SE b</i>	β	<i>p</i>
Attitude toward Catalan				
Constant	5.17 [4.15, 6.58]	0.22		< .001
Origin	-0.26 [-1.54, 1.02]	0.65	-.06	.692
Catalan competences	0.10 [0.04, 0.16]	0.01	.40	<.001
Catalan competences x Origin	-0.06 [-0.12, 0.00]	0.03	-.24	.062

Note: $R^2 = .06, p < .001$

Furthermore, simple regressions for each group indicated that in the autochthonous group Catalan competences explained 7% of the variance of attitudes toward Catalan, whereas in the immigrant group the proportion of variance explained was of 2% (see table 37).

Table 37. Summary of simple analyses of the effect of Catalan competences on attitudes toward Catalan for each group of origin. 95% BCa CIs are reported in brackets.

Origin	R^2	<i>b</i>	<i>SE b</i>	β	<i>p</i>
Autochthonous group	.07	0.10 [0.04, 0.16]	0.03	.40	.001
Immigrant group	.02	0.04 [0.02, 0.06]	0.01	.16	<.001

Catalan language competences were significantly and positively associated with attitudes toward Catalan for both autochthonous and immigrant students, no significant differences being found between the two groups of students.

Attitudes toward Spanish

Regarding the attitudes toward Spanish, the influence of Catalan competences was statistically significant and varied by origin, as indicated by the significant interaction term that captured the combined effect of the two variables (see table 38).

Table 38. Summary of the multiple regression of the interaction effect of Catalan competences and origin on attitudes toward Spanish. 95% BCa CIs are reported in brackets.

	<i>b</i>	<i>SE b</i>	β	<i>p</i>
Attitude toward Spanish				
Constant	5.19 [3.98, 6.41]	0.62		< .001
Origin	1.70 [0.46, 2.95]	0.63	.38	.007
Catalan competences	-0.07 [-0.14, 0.00]	0.03	-.30	.038
Catalan competences x Origin	0.11 [0.04, 0.18]	0.04	.44	.003

Note: $R^2 = .10, p < .001$

Thus, in the case of the autochthonous group the effect was negative, suggesting that higher competences of Catalan lead to less positive attitudes toward Spanish. Whereas, for the immigrant group, the relationship between Catalan competences and attitudes toward Spanish resulted significantly positive (see table 39).

Table 39. Summary of simple analyses of the effect of Catalan competences on attitudes toward Spanish for each group of origin. 95% BCa CIs are reported in brackets.

Origin	R^2	<i>b</i>	<i>SE b</i>	β	<i>p</i>
Autochthonous group	.02	-0.07 [-0.14, 0.00]	0.03	-.14	.038
Immigrant group	.04	0.04 [0.02, 0.06]	0.01	.20	<.001

Moreover, the proportion of variance explained by Catalan competences was of 4% for the immigrant group and of 2% for the autochthonous group. Figure 56 plots the simple slopes.

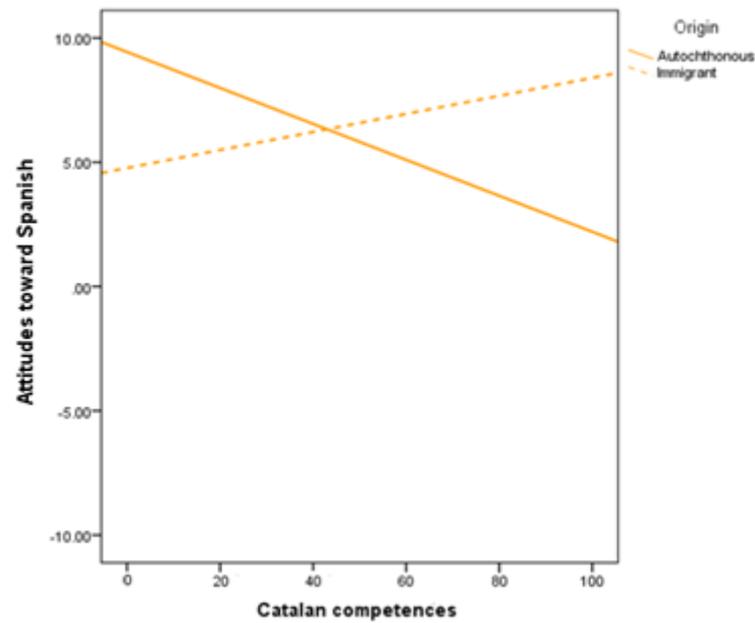


Figure 56. Interaction effect of Catalan competences and origin on attitudes toward Spanish

Attitudes toward English

Further, the results revealed that Catalan competences influenced the attitudes toward English and that this effect varied by origin (see table 40), being stronger for the autochthonous students than for immigrant students (see table 41).

Table 40. Summary of the multiple regression of the interaction effect of Catalan competences and origin on attitudes toward English. 95% BCa CIs are reported in brackets.

	<i>b</i>	<i>SE b</i>	β	<i>p</i>
Attitude toward English				
Constant	3.29 [1.93, 4.65]	0.69		< .001
Origin	2.95 [1.54, 4.37]	0.72	.65	< .001
Catalan competences	0.15 [0.08, 0.21]	0.03	.58	< .001
Catalan competences x Origin	-0.09 [-0.16, -0.02]	0.04	-.37	.009

Note: $R^2 = .067, p < .001$

Additionally, simple regressions for each group of origin showed that in the autochthonous group Catalan competences explained 13% of the variance of attitudes toward English, whereas in the immigrant group 4% of the variance was explained. Figure 57 presents the simple slopes.

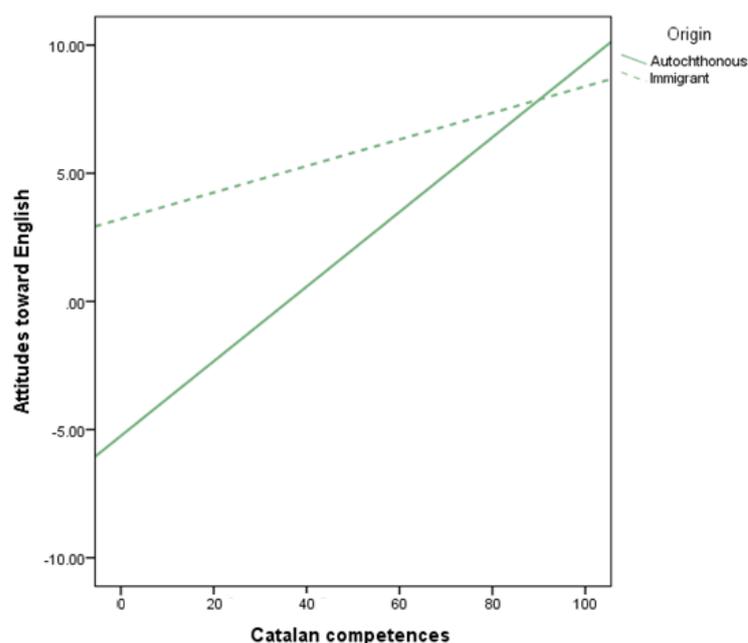


Figure 57. Interaction effect of Catalan competences and origin on attitudes toward English

Table 41. Summary of simple analyses of the effect of Catalan competences on attitudes toward English for each group of origin. 95% BCa CIs are reported in brackets.

Origin	R^2	b	$SE\ b$	β	p
Autochthonous group	.13	0.15 [0.08, 0.21]	0.03	.36	<.001
Immigrant group	.04	0.05 [0.03, 0.07]	0.01	.20	<.001

5.1.2.7.2. The effect of Catalan competences on language attitudes by area of origin

Deepening the analysis for the immigrant group, on the next step we examined if the relationship between Catalan competences and language attitudes varied by area of origin. For this purpose, for each language we conducted a hierarchical multiple regression analysis. In the first block, the predictors introduced were Catalan competences and the three dummy variables comprising area of origin. In the second block, the interaction terms obtained by multiplying Catalan competences and the dummy variables were added.

The answer regarding the variations of the effect of Catalan competences on language attitudes determined by area of origin resided in the increment of variance in the language attitudes that could have been attributed to the product terms. In other words, if by adding

the interaction terms the variance explained increased significantly then the effect of Catalan competences on language attitudes depended on area of origin.

Attitudes toward Catalan

After conducting the previously described hierarchical multiple regression with attitudes toward Catalan as the dependent variable, the results revealed that the introduction of the interaction terms did not significantly increased the variance explained by the linear combination of Catalan competences and area of origin as represented by dummy variables ($\Delta R^2 = .005$, $F_{change(3, 492)} = 0.97$, $p = .406$) – see table 42.

Table 42. Summary of the hierarchical regression of the interaction effect of Catalan competences and area of origin on attitudes toward Catalan. 95% BCa CIs are reported in brackets.

	<i>b</i>	<i>SE b</i>	β	<i>p</i>
Model 1				
Constant	5.23 [4.30, 6.07]	0.47		.000
Catalan competences	0.04 [0.02, 0.06]	0.01	.16	.000
AO Africa	1.23 [0.08, 2.40]	0.58	.11	.043
AO Latin America	-1.10 [-2.26, 0.06]	0.57	-.12	.044
AO Asia & Oceania	1.42 [-0.37, 3.07]	0.84	.07	.126
Model 2				
Constant	5.28 [4.32, 6.12]	0.47		.000
Catalan competences	0.08 [0.02, 0.13]	0.03	.28	.006
AO Africa	1.05 [-0.12, 2.21]	0.58	.10	.093
AO Latin America	-1.16 [-2.31, 0.04]	0.56	-.12	.037
AO Asia & Oceania	1.56 [-0.32, 3.17]	0.88	.08	.136
Catalan competences x AO Africa	-0.06 [-0.12, 0.00]	0.03	-.12	.098
Catalan competences x AO Latin America	-0.03 [-0.1, 0.03]	0.03	-.09	.296
Catalan competences x AO Asia & Oceania	-0.02 [-0.08, 0.04]	0.03	-.02	.723

Note: $R^2 = .07$, $p < .001$ for Model 1; $R^2 = .076$, $p < .001$, $\Delta R^2 = .005$, $p = .406$ for Model 2

Looking at the relationship between the two variables for each area of origin, Catalan competences were found to represent a significant predictor of attitudes toward Catalan

for students coming from Europe and from Latin America. Whereas, no significant effect of Catalan competences was found for the other areas of origin (see table 43).

Table 43. Summary of simple analyses of the effect of Catalan competences on attitudes toward Catalan for each area of origin. 95% BCa CIs are reported in brackets.

Area of origin	R^2	b	$SE\ b$	β	p
Europe	.07	0.08 [0.02, 0.13]	0.03	.26	.008
Africa	.02	0.04 [0.01, 0.08]	0.02	.14	.033
Latin America	.01	0.02 [-0.01, 0.05]	0.02	.09	.332
Asia and Oceania	.08	0.06 [0.02, 0.10]	0.02	.28	.114

Attitudes toward Spanish

Similarly, the results of the hierarchical multiple regression conducted with attitudes toward Spanish as the dependent variable showed that the interaction terms did not increase significantly the explained variance ($\Delta R^2 = .01$, $F_{change(3,492)} = 2.06$, $p = .104$), indicating that the effect of Catalan competences on attitudes toward Spanish did not vary by area of origin (see table 45).

Nonetheless, simple analyses showed that Catalan competences significantly predict the attitudes toward Spanish of the students from Europe, Africa, and Latin America (see table 44).

Table 44. Summary of simple analyses of the effect of Catalan competences on attitudes toward Spanish for each area of origin. 95% BCa CIs are reported in brackets.

Area of origin	R^2	b	$SE\ b$	β	p
Europe	.06	0.04 [0.00, 0.08]	0.02	.24	.014
Africa	.07	0.05 [0.02, 0.08]	0.02	.26	.002
Latin America	.03	0.03 [0.01, 0.05]	0.01	.19	.004
Asia and Oceania	.01	-0.02 [-0.09, 0.04]	0.02	-.11	.527

Table 45. Summary of the hierarchical regression of the interaction effect of Catalan competences and area of origin on attitudes toward Spanish. 95% BCa CIs are reported in brackets.

	<i>b</i>	<i>SE b</i>	β	<i>p</i>
Model 1				
Constant	6.78 [6.29, 7.29]	0.263		.000
Catalan competences	0.03 [0.02, 0.05]	0.008	.19	.000
AO Africa	-0.75 [-1.54, 0.04]	0.402	-.11	.054
AO Latin America	0.89 [0.25, 1.47]	0.310	.14	.011
AO Asia & Oceania	-1.84 [-3.26, -0.42]	0.711	-.15	.002
Model 2				
Constant	6.79 [6.29, 7.30]	0.263		.000
Catalan competences)	0.04 [0.01, 0.07]	0.018	.22	.023
AO Africa	-0.66 [-1.47, 0.10]	0.398	-.09	.093
AO Latin America	0.85 [0.22, 1.42]	0.307	.14	.015
AO Asia	-2.49 [-4.30, -0.87]	0.832	-.20	.000
Catalan competences x AO Africa	0.01 [-0.04, 0.05]	0.024	.03	.615
Catalan competences x AO Latin America	-0.01 [-0.05, 0.03]	0.021	-.04	.600
Catalan competences x AO Asia & Oceania	-0.06 [-0.13, 0.01]	0.038	-.11	.055

Note: $R^2 = .12, p < .001$ for Model 1; $R^2 = .13, p < .001$; $\Delta R^2 = .01, p = .104$ for Model 2

Attitudes toward English

Another hierarchical multiple regression was conducted with attitudes toward English as the dependent variable (see table 46).

The results indicated that the interaction effect of Catalan competences and area of origin was not significant, as the variance of attitudes toward English did not changed significantly after introducing the interaction terms ($\Delta R^2 = .005, F_{change(3, 492)} = 2.06, p = .104$).

Table 46. Summary of the hierarchical regression of the interaction effect of Catalan competences and area of origin on attitudes toward English. 95% BCa CIs are reported in brackets.

	<i>b</i>	<i>SE b</i>	β	<i>p</i>
Model 1				
Constant	5.72 [4.65, 6.71]	0.48		.000
Catalan competences	0.05 [0.03, 0.08]	0.01	.21	.000
AO Africa	-0.08 [-1.34, 1.16]	0.64	-.01	.892
AO Latin America	0.93 [-0.08, 1.93]	0.55	.10	.072
AO Asia & Oceania	1.89 [0.25, 3.45]	0.81	.11	.031
Model 2				
Constant	5.69 [4.62, 6.65]	0.48		.000
Catalan competences	0.03 [-0.02, 0.09]	0.03	.13	.196
AO Africa	0.08 [-1.20, 1.30]	0.64	.01	.892
AO Latin America	0.90 [-0.11, 1.91]	0.55	.10	.083
AO Asia & Oceania	2.17 [0.62, 3.85]	0.79	.12	.028
Catalan competences x AO Africa	0.04 [-0.03, 0.12]	0.04	.09	.189
Catalan competences x AO Latin America	0.01 [-0.05, 0.07]	0.03	.03	.736
Catalan competences x AO Asia & Oceania	0.04 [-0.04, 0.13]	0.05	.05	.375

Note: $R^2 = .059$, $p < .001$ for Model 1; $R^2 = .064$, $p < .001$; $\Delta R^2 = .005$, $p = .468$ for Model 2

According to simple analyses results, Catalan competences significantly predict the attitudes toward English of the students Africa, Latin America, and Asia and Oceania (see table 47).

Table 47. Summary of simple analyses of the effect of Catalan competences on attitudes toward English for each area of origin. 95% BCa CIs are reported in brackets.

Area of origin	R^2	<i>b</i>	<i>SE b</i>	β	<i>p</i>
Europe	.01	0.03 [-0.02, 0.08]	0.03	.11	.259
Africa	.03	0.04 [0.02, 0.07]	0.02	.19	.004
Latin America	.09	.08 [0.03, 0.12]	0.02	.29	.001
Asia and Oceania	.13	-0.02 [-0.09, 0.04]	0.02	.36	.037

To sum up, the influence of Catalan competences on attitudes toward Spanish and English varied significantly as a function of the origin of participants, while for the immigrant group there were no significant differences determined by area of origin.

Thus, regardless of origin, students with high scores at Catalan competences were more likely to held positive attitudes toward Catalan. A similar effect was found for attitudes toward English, but in this case, the relationship between the two variables was stronger for autochthonous students than for those of immigrant descent. Further, a good command of Catalan was associated with positive attitudes toward Spanish for immigrant students and with less favorable attitudes toward Spanish for autochthonous students.

5.1.2.8. *The effect of Spanish competences*

Spanish competences were explored next to verify if they were related to the attitudes toward the three languages of interest. Contrary to our expectations, Spanish competences and attitudes toward Spanish and Catalan were not significantly correlated, as noted in table 48. However, there was a general positive association between Spanish competences and attitudes toward English.

Table 48. Descriptive statistics and correlation matrix for Spanish competences and attitudes toward language

Variables	<i>M</i>	<i>SD</i>	Attitudes twd. Catalan	Attitudes twd. Spanish	Attitudes twd. English
1. Spanish competences	56.75 [55.48, 58.01]	18.10	.07 [.00, .13]	.07 [-.01, .16]	.19** [.12, .27]
2. Attitudes toward Catalan	5.40 [5.04, 5.75]	4.68		-.20** [-.26, -.14]	.03 [-.06, .12]
3. Attitudes toward Spanish	6.06 [5.75, 6.37]	4.07			.17** [.09, .24]
4. Attitudes toward English	5.83 [5.50, 6.16]	4.48			

Note: * $p < .05$, ** $p < .001$

5.1.2.8.1. The effect of Spanish competences on attitudes toward language by origin

The effect of Spanish competences on attitudes toward language and its variations depending on origin were investigated through multiple regression analysis conducted with the PROCESS computational tool (Hayes, 2012). Spanish competences, origin, and the product of these two variables were introduced as predictors of language attitudes.

Attitudes toward Catalan

Regarding the attitudes toward Catalan, the results showed that the effect of Spanish competences was not statistically significant, regardless of students' origin. Table 49 presents the corresponding coefficients of the moderation analysis.

Table 49. Summary of the multiple regression of the interaction effect of Spanish competences and origin on attitudes toward Catalan. 95% BCa CIs are reported in brackets

	<i>b</i>	<i>SE b</i>	β	<i>p</i>
Attitude toward Catalan				
Constant	6.43 [5.56, 7.30]	0.44		<.001
Origin	-1.53 [-2.50, -0.56]	0.49	-.34	.002
Spanish competences	0.04 [-0.02, 0.09]	0.03	.15	.173
Spanish competences x Origin	-0.04 [-0.10, 0.02]	0.03	-.16	.171

Note: $R^2 = .06$, $p < .001$

Additionally, the simple slopes analysis confirmed that the relationship between Spanish competences and attitudes toward Catalan was not significant, regardless of origin. Moreover, the amount of variance explained by Spanish competences was insignificant for both autochthonous and immigrant students (see table 50).

Table 50. Summary of simple analyses of the effect of Spanish competences on attitudes toward Catalan for each group of origin. 95% BCa CIs are reported in brackets.

Origin	R^2	<i>b</i>	<i>SE b</i>	β	<i>p</i>
Autochthonous group	.01	0.04 [-0.02, 0.09]	0.03	.11	.173
Immigrant group	.00	0.00 [-0.02, 0.02]	0.01	-.01	.800

Attitudes toward Spanish

Regarding the attitudes toward Spanish, the interaction term between Spanish competences and origin was not statistically significant, as presented in table 51, indicating that origin did not moderate the relationship between Spanish competences and attitudes toward Spanish.

Table 51. Summary of the multiple regression of the interaction effect of Spanish competences and origin on attitudes toward Spanish. 95% BCa CIs are reported in brackets.

	<i>b</i>	<i>SE b</i>	β	<i>p</i>
Attitude toward Spanish				
Constant	4.18 [3.01, 5.35]	0.60		<.001
Origin	2.70 [1.50, 3.90]	0.61	.61	<.001
Spanish competences	0.04 [0.01, 0.06]	0.01	.14	.967
Spanish competences x Origin	0.05 [-0.03, 0.13]	0.04	.16	.215

Note: $R^2 = .11, p < .001$

Simple analyses showed that the effect of Spanish competences was not significant for the autochthonous group, but it was statistically significant for the immigrant group (see table 52). However, the size of the latter effect was probably too small to cause a statistically significant difference between the two groups of students, as the interaction effect did not reach significant levels.

Additionally, the amount of variance due to Spanish competences was of 8% for the immigrant group, while none of the variance of attitudes toward Spanish was explained by Spanish competences for the autochthonous group.

Table 52. Summary of simple analyses of the effect of Spanish competences on attitudes toward Spanish for each group of origin. 95% BCa CIs are reported in brackets.

Origin	R^2	<i>b</i>	<i>SE b</i>	β	<i>p</i>
Autochthonous group	.00	0.00 [0.08, 0.21]	0.03	.00	.965
Immigrant group	.08	0.05 [0.03, 0.07]	0.01	.28	<.001

Attitudes toward English

Concerning the attitudes toward English, the results showed that Spanish competences had a significant influence that varied by origin (see table 53 and figure 58).

Table 53. Summary of the multiple regression of the interaction effect of Spanish competences and origin on attitudes toward English. 95% BCa CIs are reported in brackets.

	<i>b</i>	<i>SE b</i>	β	<i>p</i>
Attitude toward English				
Constant	5.59 [5.21, 5.97]	0.20		.049
Origin	2.20 [1.12, 3.28]	0.55	.21	<.001
Spanish competences	0.15 [0.09, 0.21]	0.01	.57	<.001
Spanish competences Spanish x Origin	-0.10 [-0.16, -0.03]	0.04	-.34	.003

Note: $R^2 = 0.07$, $p < .001$

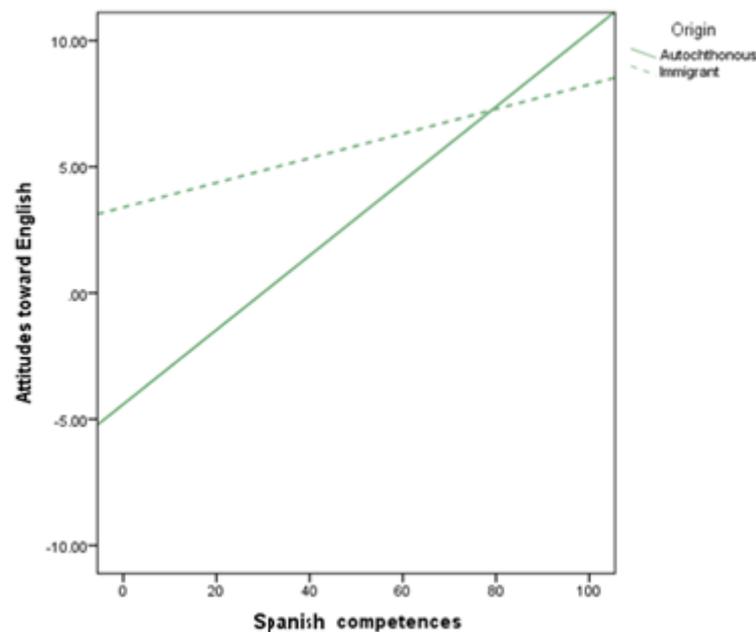


Figure 58. Interaction effect of Spanish competences and origin on attitudes toward English

The effect of Spanish competences on the attitudes toward English was stronger for autochthonous students than for immigrant students. In addition, in the case of the autochthonous group, Spanish competences explained 14% of the variance of attitudes toward English, whereas in the case of the immigrant group 4% of variance was explained (see table 54).

Table 54. Summary of simple analyses of the effect of Spanish competences on attitudes toward English for each group of origin. 95% BCa CIs are reported in brackets.

Origin	R^2	b	$SE\ b$	β	p
Autochthonous group	.14	0.15 [0.08, 0.21]	0.03	.38	<.001
Immigrant group	.04	0.05 [0.03, 0.07]	0.01	.20	<.001

5.1.2.8.2. The effect of Spanish competences on language attitudes by area of origin

To investigate how the effect of Spanish competences on language attitudes varies by area of origin the same procedure as in the case of Catalan competences was employed. Therefore, hierarchical multiple regression analyses were used to see the contribution to the variance of language attitudes made by the interaction terms obtained by multiplying Spanish competences with each of the three dummy variables representing area of origin. Following, we present the corresponding results for each of the language attitudes investigated, to which we also add the simple analyses to understand better the language attitudes patterns determined by Spanish competences and area of origin.

Attitudes toward Catalan

According to the results obtained, presented in table 56, the amount of variance of attitudes toward Catalan did not increased significantly by adding the interaction terms of Spanish competences and areas of origin ($\Delta R^2 = .001$, $F_{\text{change}}(3, 492) = 0.17$, $p = .913$).

Spanish competences did not qualify as a significant predictor of attitudes toward Catalan, regardless of the area of origin of students (see table 55).

Table 55. Summary of simple analyses of the effect of Spanish competences on attitudes toward Catalan for each area of origin. 95% BCa CIs are reported in brackets.

Area of origin	R^2	b	$SE\ b$	β	p
Europe	.00	0.01 [-0.05, 0.07]	0.03	.02	.804
Africa	.01	0.01 [-0.02, 0.04]	0.01	.07	.419
Latin America	.01	0.02 [-0.01, 0.06]	0.02	.07	.294
Asia and Oceania	.05	0.04 [0.00, 0.07]	0.02	.22	.212

Table 56. Summary of the hierarchical regression of the interaction effect of Spanish competences and area of origin on attitudes toward Catalan. 95% BCa CIs are reported in brackets.

	<i>b</i>	<i>SE b</i>	β	<i>p</i>
Model 1				
Constant	5.23 [4.82, 6.10]	0.48		.000
Spanish competences	0.02 [-0.002, 0.04]	0.01	.07	.115
AO Africa	1.22 [0.08, 2.34]	0.58	.11	.050
AO Latin America	-1.36 [-2.57, -0.18]	0.59	-.14	.014
AO Asia & Oceania	1.22 [-0.57, 2.85]	0.85	.06	.194
Model 2				
Constant	5.19 [4.23, 6.10]	0.50		.000
Spanish competences	0.01 [-0.05, 0.07]	0.03	.03	.796
AO Africa	1.20 [0.02, 2.40]	0.62	.11	.072
AO Latin America	-1.34 [-2.58, -0.12]	0.61	-.14	.017
AO Asia & Oceania	1.51 [-0.61, 3.25]	0.92	.08	.155
Spanish competences x AO Africa	0.01 [-0.06, 0.08]	0.03	.02	.845
Spanish competences x AO Latin America	0.02 [-0.06, 0.09]	0.04	.03	.644
Spanish competences x AO Asia & Oceania	0.03 [-0.05, 0.09]	0.04	.04	.513

Note: $R^2 = .051, p < .001$ for Model 1; $R^2 = .052, p < .001$; $\Delta R^2 = .001, p = .913$ for Model 2

Attitudes toward Spanish

Concerning the attitudes toward Spanish of students of immigrant origin, there were no significant differences between areas of origin, as indicated by the statistically insignificant change of variance due to the introduction of the interaction terms ($\Delta R^2 = .011, F_{change(3,492)} = 2.02, p = .110$). The coefficients corresponding to the hierarchical multiple regression used to investigate how the effect of Spanish competences on attitudes toward Spanish varied by area of origin are presented in table 58.

Simple analysis indicated that Spanish competences represented a significant predictor in the case of students coming from Europe, Africa, and Latin America ($R^2 = .04, F_{(1,235)} =$

8.96, $b = 0.03$, $[0.01, 0.06]$, $SE_b = 0.01$, $\beta = .19$, $p = .003$). However, the effects were of small size (see table 57).

Table 57. Summary of simple analyses of the effect of Spanish competences on attitudes toward Spanish for each area of origin. 95% BCa CIs are reported in brackets.

Area of origin	R^2	b	$SE\ b$	β	p
Europe	.05	0.04 [0.00, 0.07]	0.02	.23	.018
Africa	.08	0.05 [0.02, 0.08]	0.01	.28	.001
Latin America	.04	0.03 [0.01, 0.06]	0.01	.19	.003
Asia and Oceania	.00	[-0.06, 0.04]	0.01	-.05	.776

Table 58. Summary of the hierarchical regression of the interaction effect of Spanish competences and area of origin on attitudes toward Spanish. 95% BCa CIs are reported in brackets.

	b	$SE\ b$	β	p
Model 1				
Constant	6.84 [6.34, 7.38]	0.26		.000
Spanish competences	0.04 [0.02, 0.05]	0.01	.20	.000
AO Africa	-0.60 [-1.41, 0.18]	0.40	-.08	.125
AO Latin America	0.57 [-0.08, 1.17]	0.32	.09	.103
AO Asia & Oceania	-1.75 [-3.20, -0.30]	0.72	-.14	.003
Model 2				
Constant	6.85 [6.35, 7.40]	0.26		.000
Spanish competences	0.04 [0.01, 0.07]	0.02	.23	.029
AO Africa	-0.42 [-1.25, 0.32]	0.40	-.06	.318
AO Latin America	0.56 [-0.08, 1.14]	0.32	.09	.112
AO Asia & Oceania	-2.42 [-4.14, -0.77]	0.84	-.19	.000
Spanish competences x AO Africa	0.01 [-0.03, 0.06]	0.02	.05	.544
Spanish competences x AO Latin America	0.00 [-0.04, 0.04]	0.02	-.02	.826
Spanish competences x AO Asia & Oceania	-0.05 [-0.11, 0.02]	0.03	-.11	.087

Note: $R^2 = .12$, $p < .001$ for Model 1; $R^2 = .13$, $p < .001$; $\Delta R^2 = .011$, $p = .110$ for Model 2

Attitudes toward English

The product terms representing the interaction between Spanish competences and area of origin did not increase significantly the proportion of variance of attitudes toward English explained by the aforementioned predictors ($\Delta R^2 = .01$, $F_{change(3, 492)} = 1.94$, $p = .122$). This indicates that the effect of Spanish competences on attitudes toward English did not vary significantly by area of origin (see table 59).

The results of simple analysis conducted for each area of origin showed that Spanish competences have a significant effect on attitudes toward English for students coming from Africa and Latin America, while no effect appeared for the other areas of origin (see table 60).

Table 59. Summary of the hierarchical regression of the interaction effect of Spanish competences and area of origin on attitudes toward English. 95% BCa CIs are reported in brackets.

	<i>b</i>	<i>SE b</i>	β	<i>p</i>
Model 1				
Constant	5.80 [4.69, 6.82]	0.49		.000
Spanish competences	0.05 [0.03, 0.07]	0.01	.20	.000
AO Africa	0.10 [-1.18, 1.36]	0.65	.01	.858
AO Latin America	0.45 [-0.60, 1.49]	0.56	.05	.390
AO Asia & Oceania	1.94 [0.26, 3.54]	0.85	.11	.028
Model 2				
Constant	5.63 [4.53, 6.64]	0.50		.000
Spanish competences	0.00 [-0.06, 0.06]	0.03	-.01	.916
AO Africa	0.53 [-0.79, 1.80]	0.68	.05	.396
AO Latin America	0.58 [-0.47, 1.64]	0.57	.07	.265
AO Asia & Oceania	1.90 [-0.10, 3.85]	0.93	.11	.055
Spanish competences x AO Africa	0.08 [0.01, 0.15]	0.04	.18	.024
Spanish competences x AO Latin America	0.07 [0.00, 0.13]	0.03	.15	.049
Spanish competences x AO Asia & Oceania	0.04 [-0.04, 0.12]	0.04	.07	.333

Note: $R^2 = .049$, $p < .001$ for Model 1; $R^2 = .06$, $p < .001$; $\Delta R^2 = .011$, $p = .122$ for Model 2

Table 60. Summary of simple analyses of the effect of Spanish competences on attitudes toward English for each area of origin. 95% BCa CIs are reported in brackets.

Area of origin	R^2	b	$SE\ b$	β	p
Europe	.00	0.00 [-0.06, 0.06]	0.03	-.01	.927
Africa	.08	0.07 [0.03, 0.11]	0.02	.28	.001
Latin America	.05	0.06 [0.03, 0.10]	0.02	.23	<.001
Asia and Oceania	.05	0.04 [-0.03, 0.10]	0.03	.23	.205

In conclusion, overall Spanish competences were not significant determinants of attitudes toward Catalan and Spanish, regardless of origin and area of origin. Spanish competences were related to students' attitudes toward English, the effect on attitudes toward English being stronger for students of autochthonous origin than for those of immigrant origin.

5.1.2.9. The effect of use of Catalan

One of our main variables of interest was language use. Similarly, although language use and attitudes toward language interrelated, mutually influencing each other, we have focused on only one direction of this reciprocal relationship, investigating the influence of language use on attitudes.

First, we examined use of Catalan, the language of instruction, which was positively correlated with attitudes toward Catalan and toward English and negatively correlated with attitudes toward Spanish (see table 61).

Table 61. Descriptive statistics and correlation matrix for use of Catalan and attitudes toward language

Variables	M	SD	Attitudes twd. Catalan	Attitudes twd. Spanish	Attitudes twd. English
1. Use of Catalan	2.02 [1.96, 2.06]	0.91	.59** [.54, .63]	-.43** [-.46, -.38]	.09** [.03, .15]
2. Attitudes toward Catalan	5.99 [5.72, 6.25]	4.49		-.31** [-.35, -.27]	.07* [.01, .11]
3. Attitudes toward Spanish	5.63 [5.37, 5.89]	4.43			.15** [.09, .21]
4. Attitudes toward English	5.61 [5.35, 5.90]	4.56			

Note: * $p < .05$, ** $p < .001$

5.1.2.9.1. The effect of use of Catalan on attitudes toward language by origin

Multiple regression analyses were carried out to examine the effect of use on attitudes toward language and the computational tool PROCESS (Hayes, 2012) was employed to determine if the effects of use of Catalan on attitudes toward language were moderated by origin.

Attitudes toward Catalan

Use of Catalan proved to be a significant predictor of attitudes toward Catalan and its effect was moderated by origin, as presented in table 62. Simple slope tests revealed that the relationship between use of Catalan and attitudes toward Catalan was more accentuated for the autochthonous group than for the immigrant group. Furthermore, for the autochthonous group use of Catalan accounted for 48% of the variance of attitudes toward Catalan, while for the immigrant it explained 17% of variance (see table 63 and figure 59).

Table 62. Summary of the multiple regression of the interaction effect of use of Catalan and origin on attitudes toward Catalan. 95% BCa CIs are reported in brackets.

	<i>b</i>	<i>SE b</i>	β	<i>p</i>
Attitude toward Catalan				
Constant	5.91 [5.62, 6.2]	0.15		<.001
Origin	-0.17 [-0.63, 0.29]	0.24	-.04	.472
Use of Catalan	3.34 [2.99, 3.68]	0.17	.59	<.001
Use of Catalan x Origin	-1.04 [-1.6, -0.48]	0.28	-.21	<.001

Note: $R^2 = 0.36$, $p < .001$

Table 63. Summary of simple analyses of the effect of use of Catalan on attitudes toward Catalan for each group of origin. 95% BCa CIs are reported in brackets.

Origin	R^2	<i>b</i>	<i>SE b</i>	β	<i>p</i>
Autochthonous group	.48	3.34 [2.99, 3.68]	0.17	.69	<.001
Immigrant group	.17	2.3 [1.86, 2.74]	0.22	.42	<.001

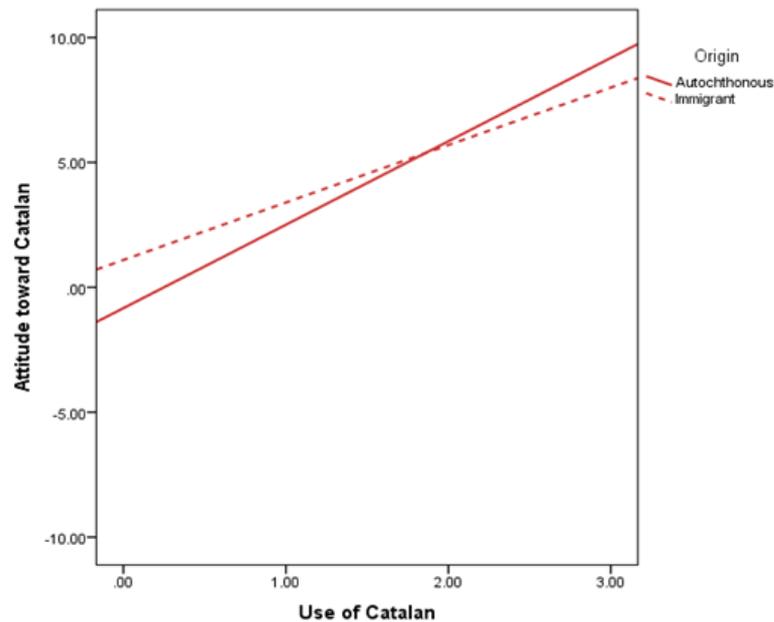


Figure 59. Interaction effect of use of Catalan and origin on attitudes toward Catalan

Attitudes toward Spanish

The interaction term between use of Catalan and origin was significant, as it can be seen in table 64, indicating that origin moderated the effect of use of Catalan on the attitudes toward Spanish.

Table 64. Summary of the multiple regression of the interaction effect of use of Catalan and origin on attitudes toward Spanish. 95% BCa CIs are reported in brackets.

	<i>b</i>	<i>SE b</i>	β	<i>p</i>
Attitude toward Spanish				
Constant	5.99 [5.78, 6.20]	0.11		< .001
Origin	0.89 [0.46, 1.32]	0.22	.10	<.001
Use of Catalan	-1.96 [-2.20, -1.72]	0.12	-.61	<.001
Use of Catalan x Origin	2.35 [1.88, 2.82]	0.24	.31	<.001

Note: $R^2 = .24, p < .001$

Simple slopes showed that use of Catalan and attitudes toward Spanish were negatively related for both groups, but the effect was stronger for the autochthonous group than for the immigrant group (see figure 60).

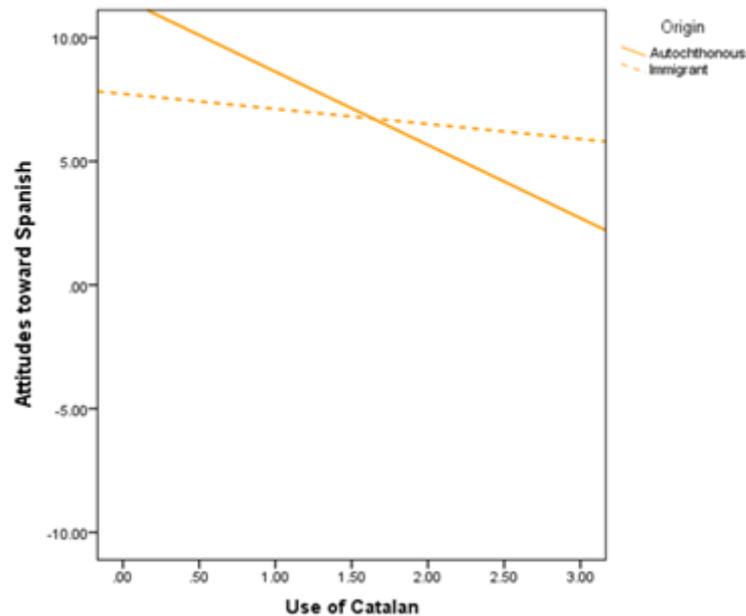


Figure 60. Interaction effect of use of Catalan and origin on attitudes toward Spanish

To supplement this information, it is worth adding that use of Catalan accounted for 25% of the variance of attitudes toward Spanish in the autochthonous group and 3% of variance in the immigrant group (see table 65).

Table 65. Summary of simple analyses of the effect of use of Catalan on attitudes toward Spanish for each group of origin. 95% BCa CIs are reported in brackets

Origin	R^2	b	$SE\ b$	β	p
Autochthonous group	.25	-2.96 [-3.30, -2.62]	0.17	-.50	<.001
Immigrant group	.03	-.61 [-0.94, -0.28]	0.18	-.17	.001

Attitudes toward English

The interaction effect of use of Catalan and origin on attitudes toward English was not statistically significant, indicating that the effect of use of Catalan did not vary by origin. Table 66 summarizes the results of the multiple regression analysis.

Although for the entire sample, use of Catalan appears to have a significant influence on attitudes toward English, when looking at the groups of students formed by origin it results that there was a significant positive effect for the autochthonous group, which

accounted for 3% of the variance, while no significant effect was found for the immigrant group (see table 67).

Table 66. Summary of the multiple regression of the interaction effect of use of Catalan and origin on attitudes toward English. 95% BCa CIs are reported in brackets.

	<i>b</i>	<i>SE b</i>	β	<i>p</i>
Attitude toward English				
Constant	5.52 [5.23, 5.81]	0.15		< .001
Origin	1.01 [0.43, 1.59]	0.29	.18	.001
Use of Catalan	0.64 [0.30, 0.97]	0.17	.11	.002
Use of Catalan x Origin	-0.59 [-1.26, 0.07]	0.34	-.08	.080

Note: $R^2 = .02$, $p = .001$

It is worth noting that the statistically significant effect found for the autochthonous was of small size, having a limited practical significance and not being significantly different from the effect corresponding to the immigrant group.

Table 67. Summary of simple analyses of the effect of use of Catalan on attitudes toward English for each group of origin. 95% BCa CIs are reported in brackets.

Origin	R^2	<i>b</i>	<i>SE b</i>	β	<i>p</i>
Autochthonous group	.03	0.89 [0.43, 1.34]	0.23	.16	.001
Immigrant group	.00	0.29 [0.43, 1.34]	0.23	.06	.204

5.1.2.9.2. The effect of use of Catalan on attitudes toward language by area of origin

The effect of use of Catalan on language attitudes was further investigated for variations determined by area of origin. As previously described, the increase in variance explained due to the interaction terms revealed if there effect of interest varied by area of origin. To supplement this information, simple analysis were also conducted to describe the effect for each area of origin.

Attitudes toward Catalan

The results of the hierarchical multiple regression conducted to examine if area of origin moderated the effect of use of Catalan on attitudes toward Catalan are presented in table . Considering that the interaction terms did not contribute significantly to the variance explained ($\Delta R^2 = .006$, $F_{change(3, 492)} = 1.12$, $p = .339$), it can be concluded that the effect of use of Catalan on attitudes toward Catalan did not vary significantly by area of origin.

Table 68. Summary of the hierarchical regression of the interaction effect of use of Catalan and area of origin on attitudes toward Catalan. 95% BCa CIs are reported in brackets.

	<i>b</i>	<i>SE b</i>	β	<i>p</i>
Model 1				
Constant	5.58 [4.75, 6.37]	0.42		.000
Use of Catalan	2.20 [1.72, 2.66]	0.25	.40	.000
AO Africa	0.46 [-0.55, 1.59]	0.53	.04	.429
AO Latin America	-0.04 [-1.02, 1.00]	0.52	-.00	.933
AO Asia & Oceania	0.51 [-1.15, 2.00]	0.81	.03	.553
Model 2				
Constant	5.64 [4.78, 6.44]	0.42		.000
Use of Catalan	2.56 [1.55, 3.52]	0.49	.46	.000
AO Africa	0.45 [-0.58, 1.58]	0.53	.04	.436
AO Latin America	0.08 [-1.00, 1.21]	0.54	.01	.887
AO Asia & Oceania	0.46 [-1.23, 1.86]	0.83	.02	.593
Use of Catalan x AO Africa	-1.06 [-2.35, 0.23]	0.69	-.08	.136
Use of Catalan x AO Latin America	-0.10 [-1.37, 1.13]	0.63	-.01	.878
Use of Catalan x AO Asia & Oceania	-1.02 [-2.43, 0.83]	0.80	-.04	.350

Note: $R^2 = .176$, $p < .001$ for Model 1; $R^2 = .181$, $p < .001$; $\Delta R^2 = .006$, $p = .339$ for Model 2

Furthermore, use of Catalan had a significant positive effect on attitudes toward Catalan for all immigrant students, regardless of their area of origin (see table 68).

Table 68. Summary of simple analyses of the effect of use of Catalan on attitudes toward Catalan for each area of origin. 95% BCa CIs are reported in brackets.

Area of origin	R^2	b	$SE\ b$	β	p
Europe	.21	2.56 [1.63, 3.48]	0.48	.46	<.001
Africa	.09	1.49 [0.57, 2.45]	0.47	.29	.001
Latin America	.13	2.46 [1.72, 3.20]	0.38	.37	<.001
Asia and Oceania	.09	1.54 [0.74, 2.80]	0.61	.30	.090

Attitudes toward Spanish

Adding of the interaction terms obtained by multiplying use of Catalan with the dummy variables comprising area of origin did not significantly increase the proportion of variance explained ($\Delta R^2 = .003$, $F_{change(3, 492)} = 0.49$, $p = .688$), as showed in table 69.

Table 69. Summary of the hierarchical regression of the interaction effect of use of Catalan and area of origin on attitudes toward Spanish. 95% BCa CIs are reported in brackets.

	b	$SE\ b$	β	p
Model 1				
Constant	6.68 [6.16, 7.20]	0.27		.000
Use of Catalan	-0.25 [-0.59, 0.08]	0.18	-.071	.139
AO Africa	-0.81 [-1.60, 0.02]	0.41	-.115	.041
AO Latin America	0.62 [-0.07, 1.32]	0.33	.101	.087
AO Asia & Oceania	-2.13 [-3.53, -0.80]	0.69	-.171	.000
Model 2				
Constant	6.66 [6.11, 7.18]	0.27		.000
Use of Catalan	-0.37 [-1.06, 0.31]	0.34	-.101	.284
AO Africa	-0.77 [-1.57, 0.09]	0.41	-.108	.057
AO Latin America	0.81 [0.12, 1.55]	0.36	.131	.046
AO Asia & Oceania	-2.10 [-3.50, -0.74]	0.69	-.169	.000
Use of Catalan x AO Africa	-0.16 [-1.21, 0.88]	0.55	-.020	.740
Use of Catalan x AO Latin America	0.33 [-0.42, 1.13]	0.40	.069	.434
Use of Catalan x AO Asia & Oceania	0.02 [-1.73, 1.67]	0.91	.001	.981

Note: $R^2 = .087, p < .001$ for Model 1; $R^2 = .09, p < .001$; $\Delta R^2 = .003, p = .688$ for Model 2

This indicated that there were no significant differences of the effect of use of Catalan on attitudes toward Spanish determined by area of origin. Therefore, use of Catalan did not significantly influence attitudes toward Catalan, regardless of area of origin (see table 70).

Table 70. Summary of simple analyses of the effect of use of Catalan on attitudes toward Spanish for each area of origin. 95% BCa CIs are reported in brackets.

Area of origin	R^2	b	$SE\ b$	β	p
Europe	.01	-0.37 [-0.96, 0.26]	0.33	-.12	.240
Africa	.01	-0.53 [-1.47, 0.26]	0.44	-.11	.216
Latin America	.00	-0.03 [-0.43, 0.39]	0.21	-.01	.892
Asia and Oceania	.01	-0.35 [-2.02, 1.38]	0.83	-.08	.676

Attitudes toward English

Concerning attitudes toward English, use of Catalan did not have a significant effect in the case of immigrant students. According to the results of the hierarchical regression presented in table 72, there were also no significant differences between areas of origin ($\Delta R^2 = .006, F_{change(3, 492)} = 1.06, p = .365$).

Simple analysis showed that in the case of Latin America use of Catalan influenced attitudes toward English, whereas no significant effects were found for the other areas of origin (see table 71).

Table 71. Summary of simple analyses of the effect of use of Catalan on attitudes toward English for each area of origin. 95% BCa confidence intervals are reported in brackets.

Area of origin	R^2	b	$SE\ b$	β	p
Europe	.00	-0.06 [-1.29, 1.16]	0.60	-.01	.921
Africa	.00	0.39 [-0.87, 1.73]	0.65	.06	.505
Latin America	.03	0.92 [0.30, 1.48]	0.32	.17	.007
Asia and Oceania	.07	1.40 [-0.18, 3.03]	0.89	.27	.126

Table 72. Summary of the hierarchical regression of the interaction effect of use of Catalan and area of origin on attitudes toward English. 95% BCa CIs are reported in brackets.

	<i>b</i>	<i>SE b</i>	β	<i>p</i>
Model 1				
Constant	5.75 [4.62, 6.82]	0.50		.000
Use of Catalan	0.58 [0.03, 1.12]	0.27	.11	.024
AO Africa	-0.45 [-1.77, 0.84]	0.67	-.04	.441
AO Latin America	1.04 [0.04, 2.10]	0.56	.12	.054
AO Asia & Oceania	1.21 [-0.56, 2.85]	0.87	.07	.172
Model 2				
Constant	5.63 [4.46, 6.71]	0.52		.000
Use of Catalan	-0.06 [-1.33, 1.28]	0.63	-.01	.911
AO Africa	-0.32 [-1.61, 0.99]	0.68	-.03	.592
AO Latin America	1.41 [0.33, 2.51]	0.59	.16	.019
AO Asia & Oceania	1.30 [-0.49, 2.98]	0.88	.07	.142
Use of Catalan x AO Africa	0.45 [-1.19, 2.12]	0.90	.04	.539
Use of Catalan x AO Latin America	0.97 [-0.47, 2.34]	0.71	.14	.125
Use of Catalan x AO Asia & Oceania	1.46 [-0.61, 3.64]	1.10	.06	.191

Note: $R^2 = .023$, $p = .019$ for Model 1; $R^2 = .03$, $p = .037$; $\Delta R^2 = .006$, $p = .365$ for Model 2

Summarizing, use of Catalan was found to be an important determinant of attitudes toward Catalan and Spanish and its effect was moderated by the origin of students. An increased use of Catalan generated more favorable attitudes toward Catalan and less favorable attitudes toward Spanish. This effect was stronger for the autochthonous group of secondary education students than for the immigrant one. Use of Catalan had also a small effect on attitudes toward English for the autochthonous students.

Overall, the group of immigrant students was relatively homogenous, as the effect of use of Catalan did not vary by area of origin.

5.1.2.10. The effect of use of Spanish

Further, table 73 summarizes the descriptive data and the associative relationships corresponding to the use of Spanish and the attitudes toward the languages investigated. Accordingly, use of Spanish was positively correlated with attitudes toward Spanish and negatively correlated with attitudes toward Catalan. No significant relationship was found between use of Spanish and attitudes toward English.

Table 73. Descriptive statistics and correlation matrix for use of Spanish and attitudes toward language

Variables	<i>M</i>	<i>SD</i>	Attitudes twd. Catalan	Attitudes twd. Spanish	Attitudes twd. English
1. Use of Spanish	2.26 [2.21, 2.31]	0.83	-.41** [-.44, -.37]	.58** [.54, .62]	.04 [-.01, .10]
2. Attitudes toward Catalan	5.99 [5.72, 6.25]	4.49		-.31** [-.35, -.27]	.07* [.01, .11]
3. Attitudes toward Spanish	5.63 [5.37, 5.89]	4.43			.15** [.09, .21]
4. Attitudes toward English	5.61 [5.35, 5.90]	4.56			

Note: * $p < .05$, ** $p < .001$

5.1.2.10.1. The effect of use of Spanish on attitudes toward language by origin

Attitudes toward Catalan

Use of Spanish had a significant effect on attitudes toward Catalan that was not moderated by origin, as the results resumed in table 74 show.

Table 74. Summary of the multiple regression of the interaction effect of use of Spanish and origin on attitudes toward Catalan. 95% BCa CIs are reported in brackets.

	<i>b</i>	<i>SE b</i>	β	<i>p</i>
Attitude toward Catalan				
Constant	5.96 [5.72, 6.20]	0.12		< .001
Origin	-1.31 [-1.80, -0.82]	0.25	-.14	< .001
Use of Spanish	-2.03 [-2.29, -1.77]	0.13	-.41	< .001
Use of Spanish x Origin	0.44 [-0.12, 0.99]	0.28	.05	.121

Note: $R^2 = .19$, $p < .001$

Therefore, use of Spanish was negatively related to attitudes toward Catalan for both autochthonous and immigrant students, accounting for 22% of the variance in the former group and 8% for the later (see table 75).

Table 75. Summary of simple analyses of the effect of use of Spanish on attitudes toward Catalan for each group of origin. 95% BCa CIs are reported in brackets.

Origin	R^2	b	$SE\ b$	β	p
Autochthonous group	.22	-2.22 [-2.52, -1.92]	0.15	.47	<.001
Immigrant group	.08	-1.78 [-2.25, -1.31]	0.24	-.28	<.001

Attitudes toward Spanish

Regarding attitudes toward Spanish, use of Spanish was found to be a significant predictor whose influence was moderated by origin, as it can be seen in table 76 and graphically represented in figure 61.

Table 76. Summary of the multiple regression of the interaction effect of use of Spanish and origin on attitudes toward Spanish. 95% BCa CIs are reported in brackets.

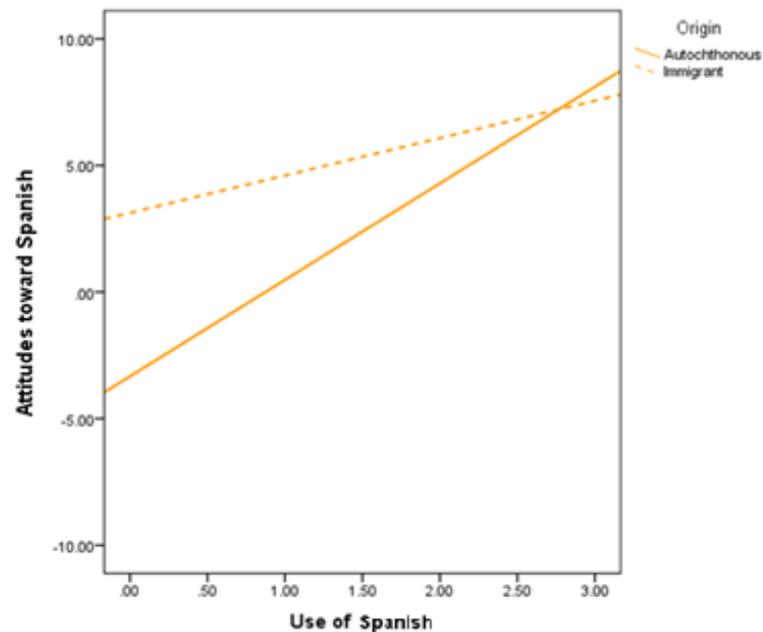
	b	$SE\ b$	β	p
Attitude toward Spanish				
Constant	5.80 [5.60, 5.99]	0.10		<.001
Origin	1.17 [0.78, 1.56]	0.20	.13	<.001
Use of Spanish	2.82 [2.55, 3.08]	0.14	.71	<.001
Use of Spanish x Origin	-2.34 [-2.87, -1.80]	0.27	-.26	<.001

Note: $R^2 = .39, p < .001$

Simple slopes analysis showed that the effect was significantly stronger for the autochthonous group than for the immigrant group. Additionally, for autochthonous students use of Spanish accounted for 43% of the variance of attitudes toward Spanish, whereas for immigrant students 13% of variance was explained (see table 77).

Table 77. Summary of simple analyses of the effect of use of Spanish on attitudes toward Spanish for each group of origin. 95% BCa CIs are reported in brackets.

Origin	R^2	b	$SE\ b$	β	p
Autochthonous group	.43	3.81 [3.45, 4.17]	0.18	.65	<.001
Immigrant group	.13	1.48 [1.08, 1.87]	0.20	.36	<.001

**Figure 61. Interaction effect of use of Spanish and origin on attitudes toward Spanish***Attitudes toward English*

The results regarding attitudes toward English showed that there was no significant interaction effect of use of Spanish and origin (see table 78).

Table 78. Summary of the multiple regression of the interaction effect of use of Spanish and origin on attitudes toward English. 95% BCa CIs are reported in brackets.

	b	$SE\ b$	β	p
Attitude toward English				
Constant	5.57 [5.30, 5.84]	0.14		< .001
Origin	0.58 [.04, 1.12]	0.27	.06	.035
Use of Spanish	0.21 [-0.10, 0.53]	0.16	-.01	.187
Use of Spanish x Origin	0.57 [-0.08, 1.21]	0.33	.06	.085

Note: $R^2 = .01$, $p = .011$

Simple analysis indicated that the effect of use of Spanish on attitudes toward English was not significant for autochthonous participants, but had a small significant effect for immigrant students (see table 79).

Table 79. Summary of simple analyses of the effect of use of Spanish on attitudes toward English for each group of origin. 95% BCa CIs are reported in brackets.

Origin	R^2	b	$SE\ b$	β	p
Autochthonous group	.00	-0.03 [-0.43, 0.37]	0.20	.00	.886
Immigrant group	.01	0.54 [0.03, 1.04]	0.26	.09	.037

5.1.2.10.2. The effect of use of Spanish on language attitudes by area of origin

Attitudes toward Catalan

The significant negative relationship between use of Spanish and attitudes toward Catalan that characterized the immigrant group of students varied by area of origin ($\Delta R^2 = .03$, $F_{change(3, 492)} = 5.15$, $p = .002$) (see table 80).

Use of Spanish had a significant effect on language attitudes for students from Europe, Africa, and Latin America, but not in the case of students from Asia and Oceania (see table 81).

Further, we compared the slopes corresponding to the four groups in order to see which ones differ significantly. The z values indicating the significance of each comparison are presented in table 82. Accordingly, the group from Latin America registered the strongest effect of use of Spanish on attitudes toward Catalan, the corresponding slope being significantly different from the slopes for the groups from Europe, Africa, and Asia and Oceania. Furthermore, the effect of use of Spanish was more pronounced for students from Europe than for students from Africa and Asia and Oceania (see figure 62).

Table 80. Summary of the hierarchical regression of the interaction effect of use of Spanish and area of origin on attitudes toward Catalan. 95% BCa CIs are reported in brackets.

	<i>b</i>	<i>SE b</i>	β	<i>p</i>
Model 1				
Constant	4.96 [3.98, 5.91]	0.46		.000
Use of Spanish	-1.53 [-2.06, -1.01]	0.27	-.241	.000
AO Africa	0.96 [-0.12, 2.08]	0.55	.089	.112
AO Latin America	-0.12 [-1.25, 1.02]	0.61	-.013	.833
AO Asia & Oceania	0.42 [-1.41, 2.02]	0.86	.022	.646
Model 2				
Constant	4.86 [3.85, 5.86]	0.47		.000
Use of Spanish	-2.25 [-3.23, -1.36]	0.47	-.355	.000
AO Africa	1.19 [0.05, 3.36]	0.59	.109	.052
AO Latin America	2.08 [0.70, 3.75]	0.73	.219	.020
AO Asia & Oceania	1.32 [-0.82, 3.11]	0.95	.069	.187
Use of Spanish x AO Africa	1.34 [0.12, 2.62]	0.62	.119	.072
Use of Spanish x AO Latin America	-2.77 [-4.98, -0.94]	1.07	-.202	.035
Use of Spanish x AO Asia & Oceania	2.31 [0.72, 4.07]	0.86	.130	.024

Note: $R^2 = .086, p < .001$ for Model 1; $R^2 = .114, p < .001$; $\Delta R^2 = .028, p = .002$ for Model 2

Table 81. Summary of simple analyses of the effect of use of Spanish on attitudes toward Catalan for each area of origin. 95% BCa confidence intervals are reported in brackets.

Area of origin	R^2	<i>b</i>	<i>SE b</i>	β	<i>p</i>
Europe	.14	-2.25 [-3.20, -1.33]	0.46	-.37	<.001
Africa	.04	-0.91 [-1.62, -0.16]	0.39	-.20	.025
Latin America	.06	-5.03 [-7.21, -3.35]	0.98	-.25	<.001
Asia and Oceania	.00	0.05 [-1.22, 1.44]	0.78	.01	.945

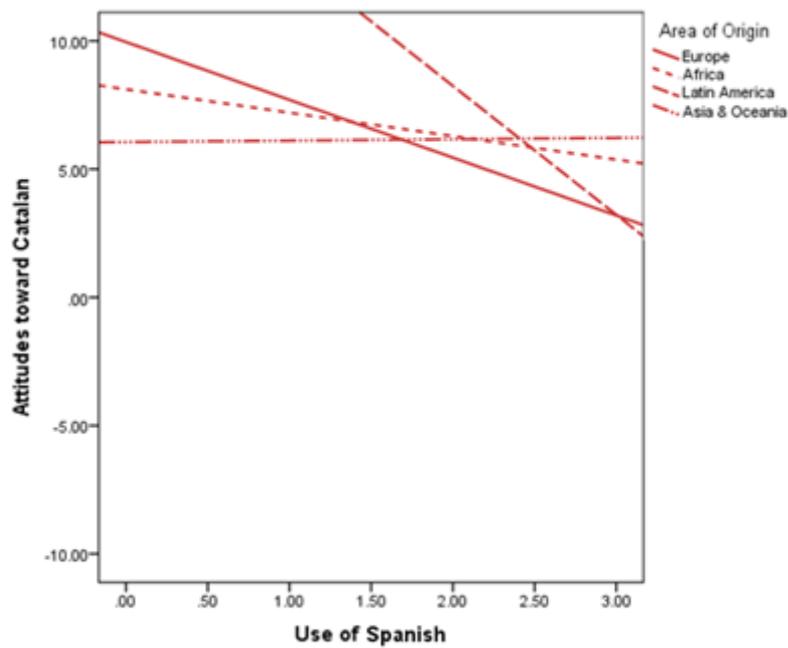


Figure 62. Interaction effect of use of Spanish and area of origin on attitudes toward Catalan

Table 82. Z values for the comparisons between the regression slopes for the effect of use of Spanish on attitudes toward Catalan

Slopes	Africa	Latin America	Asia and Oceania
Europe	5.49	-3.21	3.65
Africa		-4.58	1.42
Latin America			8.56
Asia and Oceania			

Attitudes toward Spanish

The results of the hierarchical multiple regression analysis conducted to investigate the contribution to variance explained made by the product terms reflecting the interaction between use of Spanish and attitudes toward Spanish are summarized in table 83.

It was revealed that the significant positive relationship between use of Spanish and attitudes toward Spanish described previously did not vary by area of origin ($\Delta R^2 = .01$, $F_{change(3, 492)} = 0.59$, $p = .620$).

Table 83. Summary of the hierarchical regression of the interaction effect of use of Spanish and area of origin on attitudes toward Spanish. 95% BCa CIs are reported in brackets.

	<i>b</i>	<i>SE b</i>	β	<i>p</i>
Model 1				
Constant	6.90 [6.35, 7.41]	0.26		.000
Use of Spanish	1.26 [0.80, 1.73]	0.24	.304	.000
AO Africa	-0.79 [-1.58, -0.04]	0.39	-.112	.038
AO America	-0.17 [-0.84, 0.54]	0.35	-.027	.658
AO Asia & Oceania	-1.72 [-3.13, -0.41]	0.66	-.138	.003
Model 2				
Constant	6.85 [6.30, 7.36]	0.25		.000
Use of Spanish	0.90 [0.22, 1.61]	0.34	.218	.012
AO Africa	-0.70 [-1.47, 0.05]	0.38	-.099	.071
AO America	-0.39 [-1.78, 0.71]	0.64	-.064	.490
AO Asia & Oceania	-1.69 [-3.32, -0.21]	0.73	-.136	.008
Use of Spanish x AO Africa	0.56 [-0.38, 1.46]	0.51	.076	.241
Use of Spanish x AO America	0.82 [-0.77, 2.84]	0.92	.091	.330
Use of Spanish x AO Asia & Oceania	0.32 [-1.41, 1.76]	0.85	.027	.629

Note: $R^2 = .146, p < .001$ for Model 1; $R^2 = .149, p < .001$; $\Delta R^2 = .003, p = .620$ for Model 2

Additionally, use of Spanish was found to be a significant predictor of attitudes toward Spanish for all students of immigrant origin, except for those coming from Asia and Oceania (see table 84).

Table 84. Summary of simple analyses of the effect of use of Spanish on attitudes toward Spanish for each area of origin. 95% BCa CIs are reported in brackets.

Area of origin	R^2	<i>b</i>	<i>SE b</i>	β	<i>p</i>
Europe	.07	0.90 [0.24, 1.59]	0.33	.27	.007
Africa	.11	1.46 [0.73, 2.13]	0.39	.33	<.001
Latin America	.03	1.72 [0.33, 3.78]	0.89	.16	.012
Asia and Oceania	.10	1.22 [-0.30, 2.45]	0.74	.31	.075

Attitudes toward English

Furthermore, the interaction between use of Spanish and attitudes toward English was not significant, as resumed in table 85, indicating that there were no significant variations determined by area of origin ($\Delta R^2 = .01$, $F_{change(3, 492)} = 1.70$, $p = .166$).

Table 85. Summary of the hierarchical regression of the interaction effect of use of Spanish and area of origin on attitudes toward English. 95% BCa CIs are reported in brackets.

	<i>b</i>	<i>SE b</i>	β	<i>p</i>
Model 1				
Constant	5.70 [4.62, 6.71]	0.51		.000
Use of Spanish	0.47 [-0.15, 1.04]	0.31	.079	.140
AO Africa	-0.26 [-1.62, 1.09]	0.67	-.026	.657
AO America	0.38 [-0.83, 1.59]	0.63	.042	.512
AO Asia	1.51 [-0.14, 3.07]	0.80	.084	.092
Model 2				
Constant	5.60 [4.52, 6.63]	0.52		.000
Use of Spanish	-0.31 [-1.35, 0.71]	0.57	-.051	.579
AO Africa	-0.10 [-1.48, 1.27]	0.69	-.009	.873
AO America	0.92 [-0.61, 2.40]	0.81	.103	.296
AO Asia	2.26 [0.83, 3.67]	0.74	.126	.022
Use of Spanish x AO Africa	1.07 [-0.30, 2.64]	0.73	.101	.145
Use of Spanish x AO America	0.06 [-2.24, 2.49]	1.14	.005	.964
Use of Spanish x AO Asia & Oceania	2.07 [0.24, 3.90]	0.92	.124	.040

Note: $R^2 = .018$, $p = .066$ for Model 1; $R^2 = .028$, $p = .053$; $\Delta R^2 = .01$, $p = .166$ for Model 2

In addition, when examining the relationship between use of Spanish and attitudes toward English for each area of origin it resulted that the effect was statistically significant only in the case of Asia and Oceania. However, the slopes corresponding to the four areas of origin were not significantly different (see table 86).

Table 86. Summary of simple analyses of the effect of use of Spanish on attitudes toward English for each area of origin. 95% BCa CIs are reported in brackets.

Area of origin	R^2	b	$SE\ b$	β	p
Europe	.00	-0.31 [-1.44, 0.74]	0.58	-.05	.623
Africa	.02	0.76 [-0.11, 1.67]	0.45	.13	.153
Latin America	.00	-0.25 [-2.06, 1.65]	0.97	-.02	.812
Asia and Oceania	.16	1.76 [0.38, 3.10]	0.71	.40	.019

In conclusion, use of Spanish was positively related to attitudes toward Spanish and negatively to attitudes toward Catalan. The relationships were more powerful for autochthonous than for immigrant students. Moreover, among the immigrant students, those from Latin America showed the strongest effect of use of Spanish on attitudes toward Catalan, whereas the effect on attitudes toward Spanish did not vary by area of origin.

Concerning the effect of use of Spanish on attitudes toward English, although there was a significant effect for the immigrant group, it was of small size and of reduced practical significance. Thus the immigrant and the autochthonous group, where no effect was found, did not differ significantly.

5.1.2.11. The effect of use of L1

Considering that students of immigrant descent use their first language (L1) besides the two official languages of Catalonia, this variable was also explored. Use of L1 was considerably lower than the use of Catalan and Spanish, as it can be seen in table 87.

Table 87. Descriptive statistics and correlation matrix for use of L1 and attitudes toward language

Variables	M	SD	Attitudes twd. Catalan	Attitudes twd. Spanish	Attitudes twd. English
1. Use of L1	0.42 [0.36, 0.48]	0.68	.09* [.01, .017]	-.20** [-.29, -.12]	-.11* [-.20, -.02]
2. Attitudes toward Catalan	4.91 [4.51, 5.31]	4.49		-.10* [-.18, -.02]	.01 [-.08, .11]
3. Attitudes toward Spanish	6.72 [6.43, 6.99]	4.43			.16** [.07, .25]
4. Attitudes toward English	5.99 [5.62, 6.39]	4.56			

Note: * $p < .05$, ** $p < .001$

5.1.2.11.1. The effect of use of other languages on attitudes toward language

Attitudes toward Catalan

The use of students' first language was significantly related to the attitudes toward Catalan. Figure 63 represents the relationship between the two variables.

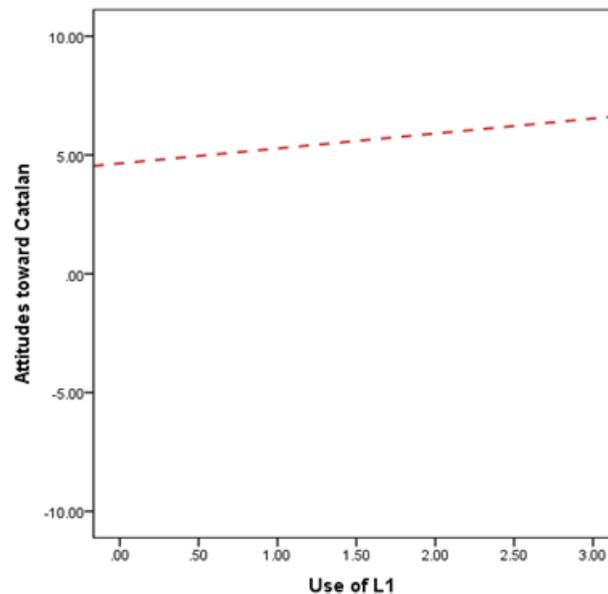


Figure 63. The effect of use of L1 on attitudes toward Catalan

The effect was rather small, seeing that less than 1% of the variance of attitudes toward Catalan was explained by the use of L1 ($F_{(1,498)} = 4.11$, $b = 0.63$ [0.07, 1.19], $SE_b = 0.29$, $\beta = .09$, $p = .028$).

Attitudes toward Spanish

Further, there was a negative significant relationship between attitudes toward Spanish and use of L1 ($b = -0.92$, [-1.37, -0.47], $SE_b = 0.22$, $\beta = -.20$, $p < .001$), with use of L1s accounting for 4% of the variance of attitudes toward Spanish ($F_{(1,498)} = 21.08$, $p < .001$). Figure 64 shows the relationship between use of L1 and attitudes toward Spanish.

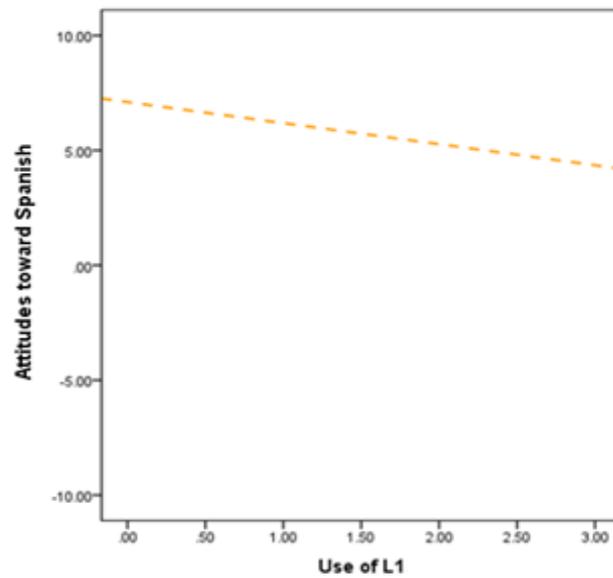


Figure 64. The effect of use of L1 on attitudes toward Spanish

Attitudes toward English

Regarding the attitudes toward English, they were also significantly predicted by the use of L1 ($b = -0.72$, $[-1.36, -0.11]$, $SE_b = 0.32$, $\beta = -.11$, $p = .014$), which accounted for 1.2% of the variance of attitudes toward English ($F_{(1,498)} = 6.08$, $p = .014$) (see figure 65).

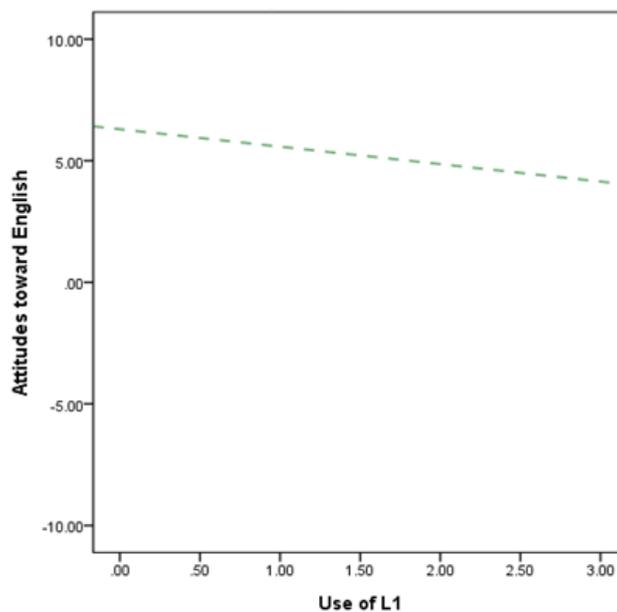


Figure 65. The effect of use of L1 on attitudes toward English

5.1.2.11.2. The effect of use of other languages on language attitudes by area of origin

Attitudes toward Catalan

The hierarchical multiple regression conducted to investigate the interaction between use of other languages and attitudes toward Catalan did not yield significant results ($\Delta R^2 = .01$, $F_{change(3, 492)} = 0.17$, $p = .915$), indicating that there were no significant differences of this effect between areas of origin (see table 89).

Table 88. Summary of the hierarchical regression of the interaction effect of use of L1 and area of origin on attitudes toward Catalan. 95% BCa CIs are reported in brackets.

	<i>b</i>	<i>SE b</i>	β	<i>p</i>
Model 1				
Constant	5.22 [4.18, 6.20]	0.53		.000
Use of L1s	-0.08 [-0.75, 0.53]	0.32	-.011	.830
AO Africa	1.05 [-0.11, 2.22]	0.60	.097	.092
AO Latin America	-1.32 [-2.59, 0.001]	0.64	-.140	.036
AO Asia and Oceania	0.99 [-0.74, 2.62]	0.84	.052	.289
Model 2				
Constant	5.17 [3.79, 6.43]	0.63		.000
Use of L1s	0.00 [-1.20, 1.13]	0.61	.000	.999
AO Africa	1.18 [-0.34, 2.64]	0.78	.109	.138
AO Latin America	-1.14 [-1.08, 0.07]	0.79	-.121	.112
AO Asia	1.15 [-1.08, 3.22]	1.08	.061	.326
Use of L1s x AO Africa	-0.24 [-1.72, 1.27]	0.76	-.020	.781
Use of L1s x AO Latin America	0.79 [-5.79, 2.96]	2.31	.028	.601
Use of L1s x AO Asia and Oceania	-0.24 [-2.13, 1.68]	0.93	-.016	.815

Note: $R^2 = .047$, $p < .001$ for Model 1; $R^2 = .048$, $p = .001$; $\Delta R^2 = .001$, $p = .915$ for Model 2

Simple regression analyses confirmed that in all cases the effect of use of L1 on attitudes toward Catalan was not significant (see table 89).

Table 89. Summary of simple analyses of the effect of use of L1 on attitudes toward Catalan for each area of origin. 95% BCa CIs are reported in brackets.

Area of origin	R^2	b	$SE\ b$	β	p
Europe	.00	0.00 [-1.26, 1.19]	0.61	.00	.999
Africa	.00	-0.24 [-1.04, 0.55]	0.42	-.04	.631
Latin America	.00	0.79 [-6.40, 2.67]	2.33	.03	.600
Asia and Oceania	.00	-0.24 [-1.56, 1.25]	0.70	-.06	.745

Attitudes toward Spanish

Regarding attitudes toward Spanish, the effect of use of other languages did not vary by area of origin ($\Delta R^2 = .01$, $F_{change(3, 492)} = 0.61$, $p = .606$) (see table 90).

Table 90. Summary of the hierarchical regression of the interaction effect of use of L1 and area of origin on attitudes toward Spanish. 95% BCa CIs are reported in brackets.

	b	$SE\ b$	β	p
Model 1				
Constant	7.08 [6.42, 7.69]	0.30		.000
Use of L1s)	-0.52 [-1.04, 0.00]	0.26	-.114	.026
AO Africa	-1.00 [-1.82, -0.19]	0.42	-.142	.012
AO Latin America	0.33 [-0.36, 1.05]	0.37	.054	.404
AO Asia and Oceania	-2.17 [-3.68, -0.86]	0.69	-.174	.000
Model 2				
Constant	6.90 [6.23, 7.56]	0.35		.000
Use of L1s	-0.26 [-1.04, 0.58]	0.40	-.056	.504
AO Africa	-0.75 [-1.66, 0.19]	0.49	-.106	.138
AO Latin America	0.38 [-0.58, 1.57]	0.44	.061	.406
AO Asia	-2.09 [-3.84, -0.55]	0.81	-.168	.005
Use of L1s x AO Africa	-0.42 [-1.57, 0.70]	0.59	-.055	.435
Use of L1s x AO Latin America	-1.20 [-3.11, 2.79]	1.39	-.065	.213
Use of L1s x AO Asia and Oceania	-0.13 [-1.54, 1.18]	0.71	-.013	.846

Note: $R^2 = .092$, $p < .001$ for Model 1; $R^2 = .095$, $p < .001$; $\Delta R^2 = .003$, $p = .606$ for Model 2

Additionally, the relationship between use of other languages and attitudes toward Spanish was not found to be significant, regardless of areas of origin (see table 91).

Table 91. Summary of simple analyses of the effect of use of L1 on attitudes toward Spanish for each area of origin. 95% BCa CIs are reported in brackets.

Area of origin	R^2	b	$SE\ b$	β	p
Europe	.01	-0.25 [-0.99, 0.55]	0.38	-.07	.467
Africa	.02	-0.68 [-1.50, 0.14]	0.41	-.13	.144
Latin America	.01	-1.46 [-2.98, 2.10]	1.30	-.12	.061
Asia and Oceania	.01	-0.38 [-1.58, 0.64]	0.58	-.11	.559

Attitudes toward English

Further, the results also showed that there was no significant interaction between use of other languages and attitudes toward English ($\Delta R^2 = .01$, $F_{change(3, 492)} = 1.97$, $p = .118$), as it can be seen in table 93.

Additionally, simple regression analyses showed that the relationship between use of other languages and attitudes toward English was significant and negative for students from Africa and Asia and Oceania, but not significant for the other areas of origin (see table 92).

Table 92. Summary of simple analyses of the effect of use of L1 on attitudes toward Spanish for each area of origin. 95% BCa CIs are reported in brackets.

Area of origin	R^2	b	$SE\ b$	β	p
Europe	.00	-0.08 [-1.16, 0.93]	0.52	-.01	.905
Africa	.03	-1.32 [-2.66, -0.04]	0.66	-.18	.037
Latin America	.00	1.43 [-0.35, 4.98]	1.02	.08	.226
Asia and Oceania	.13	-1.44 [-3.39, 0.14]	0.89	-.36	.042

Table 93. Summary of the hierarchical regression of the interaction effect of use of L1 and area of origin on attitudes toward English. 95% BCa CIs are reported in brackets.

	<i>b</i>	<i>SE b</i>	β	<i>p</i>
Model 1				
Constant	6.11 [4.99, 7.18]	0.55		.000
Use of L1s	-0.70 [-1.44, 0.01]	0.36	-.106	.045
AO Africa	-0.46 [-1.72, 0.75]	0.65	-.045	.441
AO Latin America	0.15 [-1.08, 1.40]	0.62	.017	.804
AO Asia	1.35 [-0.36, 3.04]	0.87	.075	.128
Model 2				
Constant	5.69 [4.33, 6.92]	0.63		.000
Use of L1s	-0.08 [-1.19, 0.95]	0.54	-.012	.892
AO Africa	0.25 [-1.29, 1.79]	0.78	.025	.735
AO Latin America	0.88 [-0.42, 2.30]	0.70	.099	.195
AO Asia	2.30 [0.68, 3.99]	0.84	.129	.039
Use of L1s x AO Africa	-1.24 [-2.87, 0.46]	0.84	-.111	.123
Use of L1s x AO Latin America	1.51 [-0.61, 5.33]	1.24	.056	.293
Use of L1s x AO Asia	-1.36 [-3.71, 0.74]	1.06	-.095	.158

Note: $R^2 = .021$, $p = .031$ for Model 1; $R^2 = .033$, $p = .021$; $\Delta R^2 = .012$, $p = .118$ for Model 2

5.1.2.12. The effect of self-identification with Catalonia

Self-identification with Catalonia was one of the identification-related variables investigated. Table 94 summarizes the descriptive statistics and the correlation coefficients corresponding to the relationships between self-identification with Catalonia and attitudes toward Catalan, Spanish, and English. The results showed that, considering the entire sample, there was self-identification with Catalonia was positively correlated with attitudes toward Catalan, negatively correlated with attitudes toward Spanish, and not associated in a significant manner to attitudes toward English.

Table 94. Descriptive statistics and correlation matrix for self-identification with Catalonia and attitudes toward language

Variables	<i>M</i>	<i>SD</i>	Attitudes twd. Catalan	Attitudes twd. Spanish	Attitudes twd. English
1. Self-identification with Catalonia	2.75 [2.69, 2.80]	1.12	.58** [.54, .62]	-.40** [-.43, -.36]	.05 [-.01, .11]
2. Attitudes toward Catalan	4.91 [4.51, 5.31]	4.49		-.31** [-.35, -.27]	.07* [.01, .11]
3. Attitudes toward Spanish	6.72 [6.43, 6.99]	4.43			.15** [.09, .21]
4. Attitudes toward English	5.99 [5.62, 6.39]	4.56			

Note: * $p < .05$, ** $p < .001$

5.1.2.12.1. The effect of self-identification with Catalonia on attitudes toward language by origin

Attitudes toward Catalan

Self-identification with Catalonia was found to be a significant predictor of attitudes toward Catalan. Furthermore, the effect was moderated by origin, as indicated by the results of the multiple regression analysis presented in table 95.

Table 95. Summary of the multiple regression of the interaction effect of self-identification with Catalonia and origin on attitudes toward Catalan. 95% BCa CIs are reported in brackets.

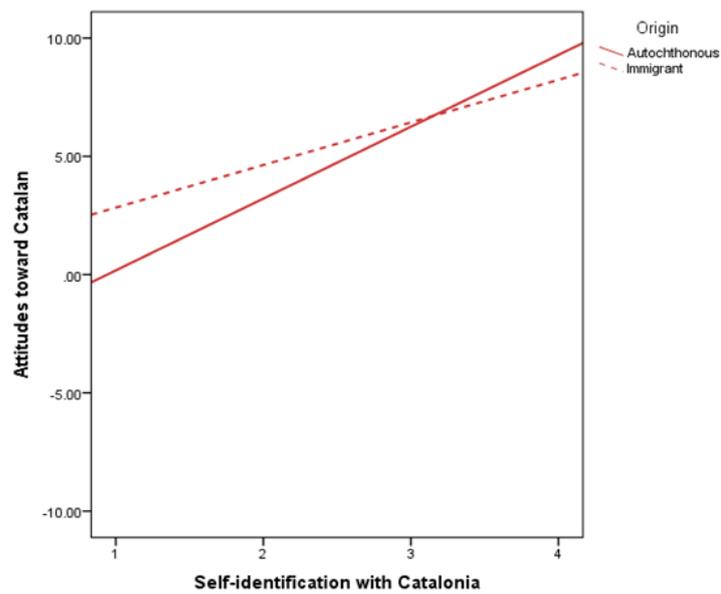
	<i>B</i>	<i>SE b</i>	β	<i>p</i>
Attitude toward Catalan				
Constant	5.70 [5.45, 5.95]	0.13		< .001
Origin	0.49 [-0.02, 1.00]	0.26	.05	.058
Self-identification with Catalonia)	2.51 [2.27, 2.75]	0.12	.75	< .001
Self-identification with Catalonia x Origin	-1.23 [-1.73, -0.75]	0.25	-.20	< .001

Note: $R^2 = .36$, $p < .001$

To better understand this interaction effect, simple slopes were examined. The results showed that the relationship between self-identification with Catalonia and attitudes toward Catalan was stronger for autochthonous than for immigrant (see figure 66). Additionally, in the autochthonous group self-identification with Catalonia accounted for 50% of the variance of attitudes toward Catalan, whereas in the immigrant group 16% of the variance was explained (see table 96).

Table 96. Summary of simple analyses of the effect of self-identification with Catalonia on attitudes toward Catalan for each group of origin. 95% BCa CIs are reported in brackets

Origin	R^2	b	$SE\ b$	β	p
Autochthonous group	.50	3.04 [2.73, 3.34]	0.16	.71	<.001
Immigrant group	.16	1.80 [1.42, 2.18]	0.19	.40	<.001

**Figure 66. Interaction effect of self-identification with Catalonia and origin on attitudes toward Catalan**

Attitudes toward Spanish

Further, a negative significant relationship was found between self-identification with Catalonia and attitudes toward Spanish. As summarized in table 97, the interaction between self-identification with Catalonia and origin was significant.

Table 97. Summary of the multiple regression of the interaction effect of self-identification with Catalonia and origin on attitudes toward Spanish. 95% BCa CIs are reported in brackets.

	<i>B</i>	<i>SE b</i>	β	<i>p</i>
Attitude toward Spanish				
Constant	6.18 [5.96, 6.39]	0.11		< .001
Origin	0.66 [0.22, 1.09]	0.22	.07	.003
Self-identification with Catalonia	-1.58 [-1.79, -1.37]	0.10	-.63	< .001
Self-identification with Catalonia x Origin	2.14 [1.74, 2.54]	0.20	.36	< .001

Note: $R^2 = .22, p < .001$

According to simple slopes analysis, the relationship between self-identification with Catalonia and attitudes toward Spanish was more pronounced for autochthonous than for immigrant students (see figure 67).

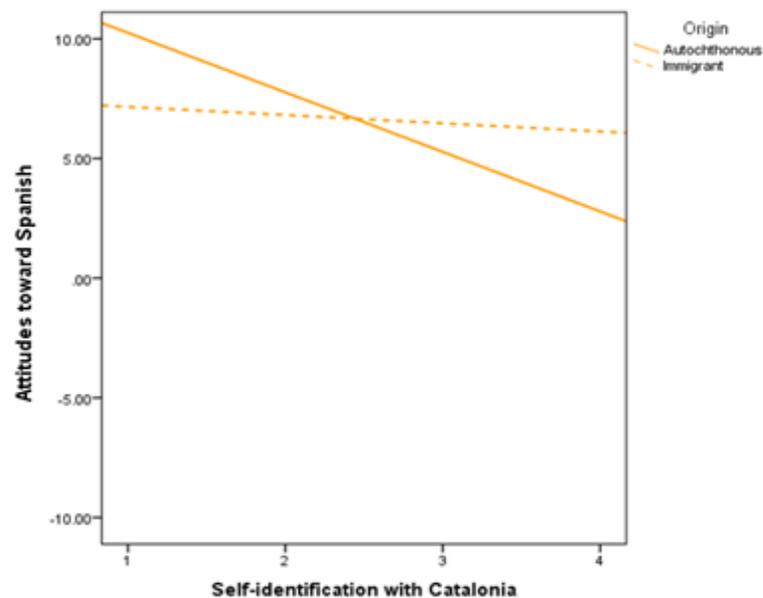


Figure 67. Interaction effect of self-identification with Catalonia and origin on attitudes toward Spanish

Additionally, self-identification with Catalonia explained 22% of the variance of attitudes toward Spanish for the autochthonous group and 1% for the immigrant group (see table 98).

Table 98. Summary of simple analyses of the effect of self-identification with Catalonia on attitudes toward Spanish for each group of origin. 95% BCa CIs are reported in brackets.

Origin	R^2	b	$SE\ b$	β	p
Autochthonous group	.22	-2.49 [-2.79, -2.18]	0.16	-.47	<.001
Immigrant group	.01	-.34 [-0.60, -0.08]	0.13	-.12	.009

Attitudes toward English

Concerning the attitudes toward English, there was a significant interaction effect between self-identification with Catalonia and origin, as presented in table 99.

Simple slopes analysis was used to break down this interaction. The results indicated that there was a positive significant relationship between self-identification with Catalonia and attitudes toward English for the autochthonous group students, whereas the relationship was not significant for the immigrant group (see figure 68).

Furthermore, self-identification with Catalonia accounted for 3% of the variance of attitudes toward English for the autochthonous group, while it explained almost none of the variance for the immigrant group (see table 100).

Table 99. Summary of the multiple regression of the interaction effect of self-identification with Catalonia and origin on attitudes toward English. 95% BCa CIs are reported in brackets.

	B	$SE\ b$	β	p
Attitude toward English				
Constant	5.46 [5.15, 5.76]	0.16		< .001
Origin	0.92 [0.30, 1.55]	0.32	.10	.003
Self-identification with Catalonia	0.44 [0.16, 0.72]	0.14	.19	.002
Self-identification with Catalonia x Origin	-0.81 [-1.36, -0.26]	0.28	-.13	.004

Note: $R^2 = .02, p < .001$

Table 100. Summary of simple analyses of the effect of self-identification with Catalonia on attitudes toward English for each group of origin. 95% BCa CIs are reported in brackets.

Origin	R^2	b	$SE\ b$	β	p
Autochthonous group	.03	0.78 [0.38, 1.19]	0.21	.16	.002
Immigrant group	.00	-0.02 [-0.39, 0.34]	0.19	.00	.895

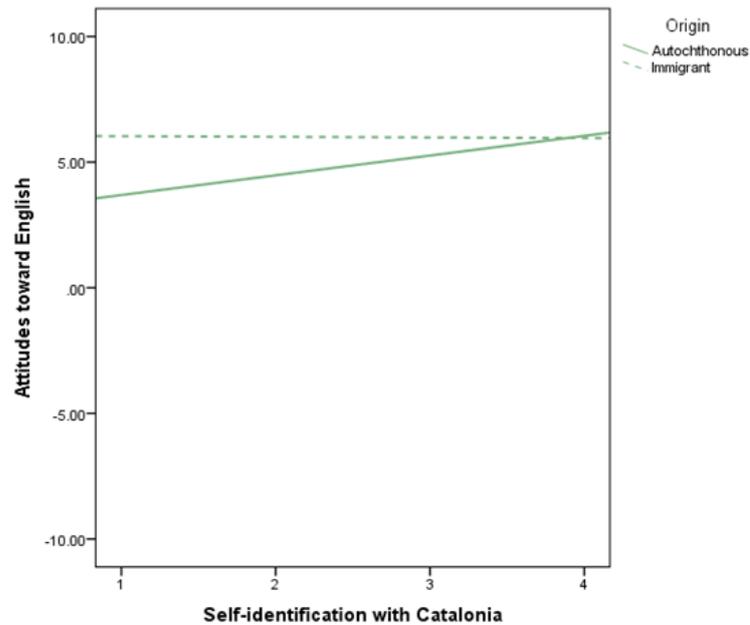


Figure 68. Interaction effect of self-identification with Catalonia and origin on attitudes toward English

5.1.2.12.2. The effect of self-identification with Catalonia on language attitudes by area of origin

Attitudes toward Catalan

The results of the hierarchical multiple regression conducted to investigate the interaction effect between self-identification with Catalonia and area of origin, which are presented in table 101, showed that the effect of self-identification with Catalonia on attitudes toward Catalan did not vary by area of origin ($\Delta R^2 = .006$, $F_{change(3, 492)} = 1.12$, $p = .339$).

Additionally, investigating the relationship between self-identification with Catalonia and attitudes toward Catalan for each area of origin it was found that there is a positive

significant relationship between the two variables for students coming from Europe, Africa, and Latin America, but not for those from Asia and Oceania (see table 102).

Table 101. Summary of the hierarchical regression of the interaction effect of self-identification with Catalonia and area of origin on attitudes toward Catalan. 95% BCa CIs are reported in brackets

	<i>b</i>	<i>SE b</i>	β	<i>p</i>
Model 1				
Constant	6.06 [5.14, 6.94]	0.43		.000
Self-identification Catalonia	1.66 [1.23, 2.09]	0.21	.366	.000
AO Africa	0.52 [-0.58, 1.59]	0.53	.048	.374
AO Latin America	-0.61 [-1.71, 0.55]	0.53	-.065	.249
AO Asia	-0.02 [-1.81, 1.59]	0.83	-.001	.979
Model 2				
Constant	6.31 [5.34, 7.16]	0.44		.000
Self-identification Catalonia	2.20 [1.41, 2.91]	0.36	.484	.000
AO Africa	0.19 [-0.88, 1.25]	0.53	.018	.758
AO Latin America	-0.81 [-2.02, 0.57]	0.62	-.085	.198
AO Asia	-0.23 [-1.98, 1.34]	0.86	-.012	.796
Self-identification Catalonia x AO Africa	-0.97 [-1.94, 0.05]	0.51	-.104	.091
Self-identification Catalonia x AO Latin America	-0.48 [-1.50, 0.59]	0.51	-.082	.351
Self-identification Catalonia x AO Asia	-1.07 [-2.36, 0.83]	0.83	-.057	.230

Note: $R^2 = .167, p < .001$ for Model 1; $R^2 = .172, p < .001$; $\Delta R^2 = .006, p = .339$ for Model 2

Table 102. Summary of simple analyses of the effect of self-identification with Catalonia on attitudes toward Catalan for each area of origin. 95% BCa CIs are reported in brackets.

Area of origin	R^2	<i>b</i>	<i>SE b</i>	β	<i>p</i>
Europe	.23	2.19 [1.50, 2.92]	0.37	.48	.001
Africa	.10	1.22 [0.57, 1.90]	0.34	.32	.001
Latin America	.10	1.71 [0.97, 2.44]	0.36	.32	.001
Asia and Oceania	.08	1.13 [0.08, 2.76]	0.75	.27	.121

Attitudes toward Spanish

Regarding the attitudes toward Spanish, there was no significant interaction effect between self-identification with Catalonia and area of origin ($\Delta R^2 = .007$, $F_{change(3, 492)} = 1.17$, $p = .320$). Table 103 presents the corresponding results of the hierarchical regression.

Table 103. Summary of the hierarchical regression of the interaction effect of self-identification with Catalonia and area of origin on attitudes toward Spanish 95% BCa CIs are reported in brackets

	<i>b</i>	<i>SE b</i>	β	<i>p</i>
Model 1				
Constant	6.68 [6.15, 7.23]	0.28		.000
Self-identification Catalonia	-0.06 [-0.32, 0.19]	0.13	-.022	.635
AO Africa	-0.75 [-1.57, 0.12]	0.42	-.108	.057
AO America	0.80 [0.15, 1.44]	0.33	.131	.026
AO Asia	-2.13 [-3.53, -0.82]	0.68	-.175	.000
Model 2				
Constant	6.66 [6.12, 7.22]	0.28		.000
Self-identification Catalonia	-0.11 [-0.63, 0.46]	0.27	-.036	.706
AO Africa	-0.80 [-1.66, 0.10]	0.44	-.114	.056
AO America	1.06 [0.35, 1.77]	0.36	.174	.012
AO Asia	-2.09 [-3.61, -0.78]	0.69	-.172	.001
Self-identification Catalonia x AO Africa	-0.28 [-1.09, 0.50]	0.42	-.047	.466
Self-identification Catalonia x AO America	0.30 [-0.32, 0.92]	0.31	.080	.385
Self-identification Catalonia x AO Asia	-0.27 [-1.36, 0.93]	0.58	-.023	.647

Note: $R^2 = .086$, $p < .001$ for Model 1; $R^2 = .092$, $p < .001$; $\Delta R^2 = .007$, $p = .320$ for Model 2

Furthermore, the effect of self-identification with Catalonia on attitudes toward Spanish was examined for each area of origin. The results indicated that the already small effect found for the whole immigrant group disappeared when splitting the group by area of origin. In other words, self-identification with Catalonia and attitudes toward Spanish was not significantly related, regardless of area of origin (see table 104). In this situation, caution is required since the statistically significant effect found for the immigrant group might be due to a type I error.

Table 104. Summary of simple analyses of the effect of self-identification with Catalonia on attitudes toward Spanish for each area of origin. 95% BCa confidence intervals are reported in brackets.

Area of origin	R^2	b	$SE\ b$	β	p
Europe	.00	-0.11 [-0.62, 0.42]	0.26	-.04	.688
Africa	.01	-0.39 [-1.08, 0.20]	0.32	-.11	.222
Latin America	.00	0.19 [-0.14, 0.55]	0.17	.07	.266
Asia and Oceania	.01	-0.38 [-1.26, 0.63]	0.49	-.10	.568

Attitudes toward English

The results of the hierarchical regression analysis conducted with attitudes toward English as criterion are summarized in table 106. Accordingly, no significant interaction effect between self-identification with Catalonia and area of origin was found ($\Delta R^2 = .003$, $F_{change(3, 492)} = 0.51$, $p = .675$).

Furthermore, when examining the relationship between self-identification with Catalonia and attitudes toward English for each area of origin no significant effects were found (table 105).

Table 105. Summary of simple analyses of the effect of self-identification with Catalonia on attitudes toward English for each area of origin. 95% BCa CIs are reported in brackets.

Area of origin	R^2	b	$SE\ b$	β	p
Europe	.00	-0.17 [-0.36, 0.72]	0.48	-.04	.722
Africa	.01	0.47 [1.06, 0.29]	0.44	.09	.292
Latin America	.00	-0.02 [-0.07, 0.94]	0.27	.00	.944
Asia and Oceania	.00	-0.23 [-0.31, 0.75]	0.74	-.06	.755

Table 106. Summary of the hierarchical regression of the interaction effect of self-identification with Catalonia and area of origin on attitudes toward English. 95% BCa CIs are reported in brackets.

	<i>b</i>	<i>SE b</i>	β	<i>p</i>
Model 1				
Constant	5.63 [4.58, 6.64]	0.52		.000
Self-identification Catalonia	0.06 [-0.34, 0.45]	0.21	.014	.772
AO Africa	-0.20 [-1.56, 1.09]	0.69	-.019	.743
AO Latin America	0.77 [-0.29, 1.84]	0.57	.086	.157
AO Asia & Oceania	1.33 [-0.46, 3.06]	0.90	.075	.140
Model 2				
Constant	5.53 [4.33, 6.71]	0.58		.000
Self-identification Catalonia	-0.17 [-1.06, 0.76]	0.48	-.040	.689
AO Africa	-0.01 [-1.42, 1.37]	0.73	-.001	.986
AO Latin America	0.80 [-0.50, 2.12]	0.69	.090	.211
AO Asia & Oceania	1.46 [-0.32, 3.14]	0.94	.082	.113
Self-identification Catalonia x AO Africa	0.64 [-0.66, 1.92]	0.65	.073	.275
Self-identification Catalonia x AO Latin America	0.15 [-0.94, 1.24]	0.55	.028	.773
Self-identification Catalonia x AO Asia & Oceania	-0.06 [-1.54, 1.55]	0.75	-.003	.946

Note: $R^2 = .012$, $p = .205$ for Model 1; $R^2 = .015$, $p = .385$; $\Delta R^2 = .003$, $p = .675$ for Model 2

In conclusion, self-identification with Catalonia influenced attitudes toward Catalan and Spanish, but in different directions, the relationship being positive for attitudes toward Catalan and negative for attitudes toward Spanish. For both languages, the effect was stronger for the autochthonous students than for the immigrant students. Regarding attitudes toward English, the results showed the presence of a significant positive relationship for autochthonous students, but no significant effect was uncovered for immigrant students.

Therefore, the effect of self-identification with Catalonia on attitudes toward language was moderated by origin, but not by area of origin.

5.1.2.13. The effect of self-identification with Spain

The effect of self-identification with Spain on attitudes toward Catalan, Spanish, and English was examined. As it can be seen in table 107, self-identification with Spain was negatively associated with attitudes toward Catalan and positively associated with attitudes toward Spanish. Besides, there was no significant relationship between self-identification with Spain and attitudes toward English.

Table 107. Descriptive statistics and correlation matrix for self-identification with Spain and attitudes toward language

Variables	<i>M</i>	<i>SD</i>	Attitudes twd. Catalan	Attitudes twd. Spanish	Attitudes twd. English
1. Self-identification with Spain	2.54 [2.48, 2.61]	1.11	-.17** [-.23, -.11]	.44** [.39, .48]	-.05 [-.11, .01]
2. Attitudes toward Catalan	4.91 [4.51, 5.31]	4.49		-.31** [-.35, -.27]	.07* [.01, .11]
3. Attitudes toward Spanish	6.72 [6.43, 6.99]	4.43			.15** [.09, .21]
4. Attitudes toward English	5.99 [5.62, 6.39]	4.56			

Note: * $p < .05$, ** $p < .001$

5.1.2.13.1. The effect of self-identification with Spain on attitudes toward language by origin

Attitudes toward Catalan

Self-identification with Spain was found to be significantly related to attitudes toward Catalan. Origin moderated this relationship, as showed by the results presented in table 108.

Table 108. Summary of the multiple regression of the interaction effect of self-identification with Spain and origin on attitudes toward Catalan. 95% BCa CIs are reported in brackets.

	<i>B</i>	<i>SE b</i>	β	<i>p</i>
Attitude toward Catalan				
Constant	6.28 [6.06, 6.50]	0.11		< .001
Origin	-2.03 [-2.51, -1.56]	0.24	-.22	< .001
Self-identification Spain	-0.81 [-1.03, -0.58]	0.12	-.49	< .001
Self-identification Spain x Origin	2.76 [2.29, 3.23]	0.24	.43	< .001

Note: $R^2 = .19$, $p < .001$

Simple slopes analysis indicated that the relationship between self-identification with Spain and attitudes toward Catalan was significantly negative for autochthonous students, whereas for immigrant students it was positive and less accentuated (see figure 69).

Moreover, self-identification with Spain accounted for 28% of the variance of attitudes toward Catalan in the autochthonous group and 3% in the immigrant group (see table 109).

Table 109. Summary of simple analyses of the effect of self-identification with Spain on attitudes toward Catalan for each group of origin. 95% BCa CIs are reported in brackets.

Origin	R^2	b	$SE\ b$	β	p
Autochthonous group	.28	-1.98 [-2.22, -1.73]	0.12	-.53	<.001
Immigrant group	.03	0.79 [0.38, 1.19]	0.20	.18	<.001

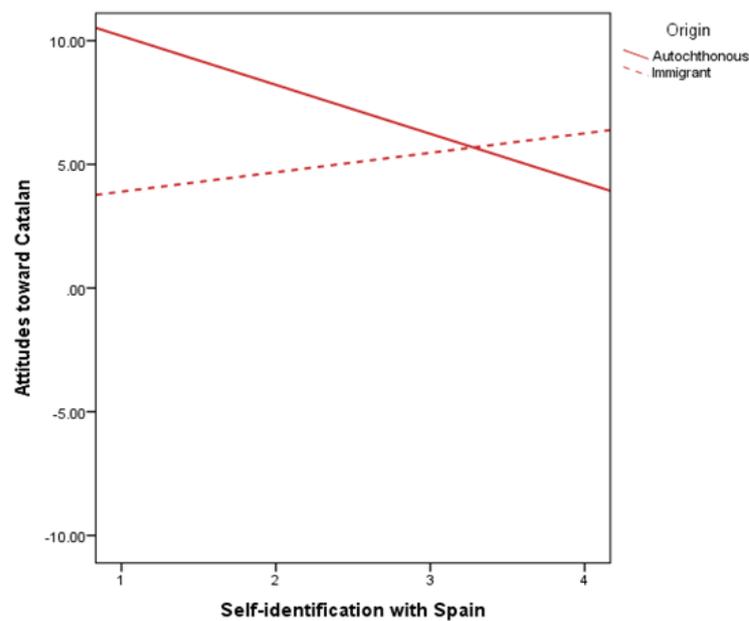


Figure 69. Interaction effect of self-identification with Spain and origin on attitudes toward Catalan

Attitudes toward Spanish

The results of the Origin moderated the relationship between self-identification with Spain and attitudes toward Spanish (see table 110).

Table 110. Summary of the multiple regression of the interaction effect of self-identification with Spain and origin on attitudes toward Spanish. 95% BCa confidence intervals are reported in brackets.

	<i>B</i>	<i>SE b</i>	β	<i>p</i>
Attitude toward Spanish				
Constant	5.34 [5.13, 5.54]	0.11		< .001
Origin	2.51 [2.11, 2.92]	0.21	.28	< .001
Self-identification Spain	1.90 [1.72, 2.09]	0.09	.81	< .001
Self-identification Spain x Origin	-3.10 [-3.47, -2.73]	0.19	-.49	< .001

Note: $R^2 = .43, p < .001$

Thus, in the autochthonous group a positive significant relationship was uncovered, whereas in the immigrant group no significant relationship between the two variables was found (see table 111). Moreover, self-identification with Spain explained 50% of the variance of the attitudes toward Spanish manifested by autochthonous students and none of the variance of the attitudes toward Spanish corresponding to immigrant students. The simple slopes are plotted in figure 70.

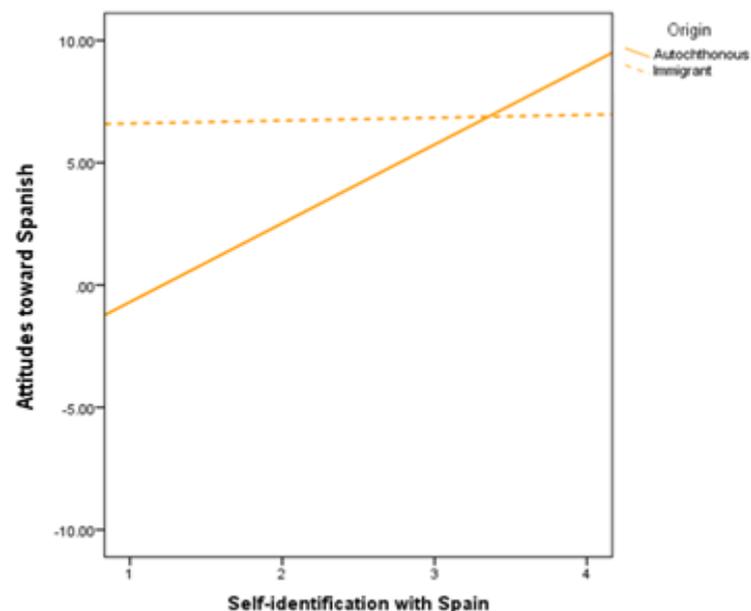


Figure 70. Interaction effect of self-identification with Spain and origin on attitudes toward Spanish

Table 111. Summary of simple analyses of the effect of self-identification with Spain on attitudes toward Spanish for each group of origin. 95% BCa CIs are reported in brackets.

Origin	R^2	b	$SE\ b$	β	p
Autochthonous group	.50	3.22 [2.95, 3.48]	0.14	.71	<.001
Immigrant group	.00	0.12 [-0.13, 0.37]	0.13	.04	.359

Attitudes toward English

Further, self-identification with Spain was not found to be significantly related to attitudes toward English, regardless of origin (see table 112).

Table 112. Summary of the multiple regression of the interaction effect of self-identification with Spain and origin on attitudes toward English. 95% BCa CIs are reported in brackets.

	B	$SE\ b$	β	p
Attitude toward English				
Constant	5.60 [5.33, 5.87]	0.14		< .001
Origin	0.52 [-0.03, 1.06]	0.28	.06	.064
Self-identification Spain	-0.16 [-0.40, 0.09]	0.12	.01	.207
Self-identification Spain x Origin	-0.47 [-0.97, 0.03]	0.25	-.07	.064

Note: $R^2 = .01$, $p = .008$

In addition, no significant variations were found between autochthonous and immigrant students by origin (see table 113). Although a significant negative effect was found for the immigrant students, in which case 1% of the variance of attitudes toward English was explained by self-identification with Spain, it was an effect of reduced practical significance. Meanwhile, self-identification with Spain did not account for any of the variance of attitudes toward English expressed by the autochthonous students.

Table 113. Summary of simple analyses of the effect of self-identification with Spain on attitudes toward English for each group of origin. 95% BCa confidence intervals are reported in brackets.

Origin	R^2	b	$SE\ b$	β	p
Autochthonous group	.00	0.04 [-0.28, 0.36]	0.16	.01	.806
Immigrant group	.01	-0.43 [-0.81, -0.05]	0.19	-.10	.026

5.1.2.13.2. The effect of self-identification with Spain on language attitudes by area of origin

Attitudes toward Catalan

A hierarchical multiple regression analysis with attitudes toward Catalan as the criterion as conducted to test the interaction effect of self-identification with Spain and area of origin. Accordingly, the relationship between self-identification with Spain and attitudes toward Catalan was moderated by area of origin, since the product terms reflecting the interaction between the two variables increased significantly the variance explained ($\Delta R^2 = .027$, $F_{change(3, 492)} = 4.87$, $p = .002$), as seen in table 114.

Table 114. Summary of the hierarchical regression of the interaction effect of self-identification with Spain and area of origin on attitudes toward Catalan. 95% BCa confidence intervals are reported in brackets.

	<i>b</i>	<i>SE b</i>	β	<i>p</i>
Model 1				
Constant	5.32 [4.37, 6.36]	0.50		.000
Self-identification Spain	0.61 [0.18, 1.05]	0.20	.137	.002
AO Africa	0.96 [-0.27, 2.12]	0.60	.088	.123
AO Latin America	-1.16 [-2.40, 0.01]	0.60	-.122	.039
AO Asia	0.73 [-1.26, 2.39]	0.89	.039	.431
Model 2				
Constant	5.28 [4.35, 6.27]	0.49		.000
Self-identification Spain	-0.59 [-1.55, 0.44]	0.48	-.134	.209
AO Africa	1.00 [-0.17, 2.16]	0.59	.092	.102
AO Latin America	-0.87 [-2.11, 0.27]	0.59	-.091	.122
AO Asia	1.05 [-0.61, 2.53]	0.80	.055	.259
Self-identification Spain x AO Africa	1.30 [0.07, 2.50]	0.62	.138	.038
Self-identification Spain x AO Latin America	1.74 [0.63, 2.78]	0.56	.292	.002
Self-identification Spain x AO Asia	-0.53 [-2.64, 1.20]	0.95	-.027	.587

Note: $R^2 = .067$, $p < .001$ for Model 1; $R^2 = .095$, $p < .001$; $\Delta R^2 = .027$, $p = .002$ for Model 2

The results also indicated that self-identification with Spain was significantly and positively related to the attitudes toward Catalan of students from Africa and Latin America, but not to those of students from Europe and Asia and Oceania (see table 115).

Table 115. Summary of simple analyses of the effect of self-identification with Spain on attitudes toward Catalan for each area of origin. 95% BCa CIs are reported in brackets.

Area of origin	R^2	b	$SE\ b$	β	p
Europe	.02	-0.59 [-1.49, 0.37]	0.48	-.12	.232
Africa	.03	0.71 [-0.01, 1.47]	0.39	.19	.038
Latin America	.06	1.14 [0.64, 1.68]	0.27	.25	<.001
Asia and Oceania	.07	-1.12 [-3.14, 0.46]	0.79	-.26	.173

Further, we compared the slopes corresponding to the four areas of origin (see figure 71).

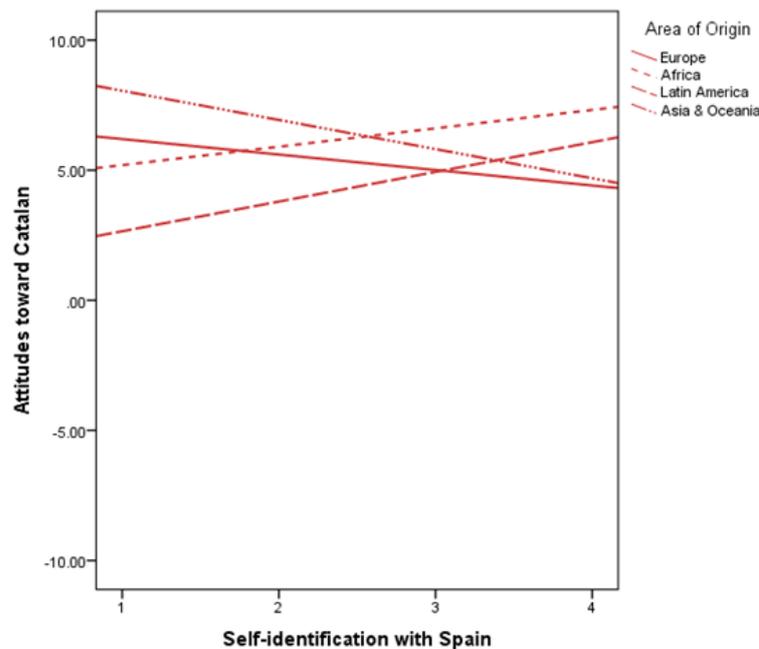


Figure 71. Interaction effect of self-identification with Spain and area of origin on attitudes toward Catalan

Thus, the slope for the group of students from Europe was significantly different from the ones corresponding to Africa and Latin America. Similarly, there were differences between the slope for Asia and Oceania and the slopes for Africa and Latin America (see table 116). In other words, regarding the relationship between self-identification with Spain and attitudes toward Catalan, the students of immigrant origin can be divided in two subgroups: a group comprising students from Africa and Latin America, who show

more positive attitudes toward Catalan the more they identify with Spain, and a second group, consisting of students from Europe and Asia and Oceania, whose attitudes toward Catalan were not associated to their self-identification with Spain.

Table 116. Z values for the comparisons between the regression slopes for the effect of self-identification with Spain on attitudes toward Catalan

Slopes	Africa	Latin America	Asia and Oceania
Europe	-4.65	-4.35	0.84
Africa		-1.53	2.66
Latin America			2.08
Asia and Oceania			

Attitudes toward Spanish

The results of the hierarchical multiple regression conducted to test the interaction effect of self-identification with Spain and area of origin on attitudes toward Spanish are summarized in table 118.

The interaction terms did not significantly increase the proportion of variance explained ($\Delta R^2 = .005$, $F_{change(3, 492)} = 0.95$, $p = .415$), indicating that there were no significant variations of the effect of self-identification with Spain on attitudes toward Spanish determined by area of origin.

Therefore, self-identification with Spain did not significantly influence attitudes toward Catalan, regardless of the area of origin (see table 117).

Table 117. Summary of simple analyses of the effect of self-identification with Spain on attitudes toward Spanish for each area of origin. 95% BCa confidence intervals are reported in brackets.

Area of origin	R^2	b	$SE\ b$	β	p
Europe	.02	0.34 [-0.27, 0.94]	0.30	.12	.231
Africa	.02	0.52 [-0.04, 1.12]	0.30	-.11	.100
Latin America	.00	0.13 [-0.19, 0.42]	0.15	.06	.394
Asia and Oceania	.05	0.88 [-0.44, 2.41]	0.83	.23	.195

Table 118. Summary of the hierarchical regression of the interaction effect of self-identification with Spain and area of origin on attitudes toward Spanish. 95% BCa CIs are reported in brackets.

	<i>b</i>	<i>SE b</i>	β	<i>p</i>
Model 1				
Constant	6.72 [6.18, 7.26]	0.27		.000
Self-identification Spain	0.30 [0.06, 0.55]	0.13	.104	.019
AO Africa	-0.77 [-1.62, 0.08]	0.42	-.110	.050
AO Latin America	0.96 [0.31, 1.57]	0.32	.157	.007
AO Asia & Oceania	-2.22 [-3.69, -0.87]	0.69	-.183	.000
Model 2				
Constant	6.72 [6.18, 7.27]	0.27		.000
Self-identification Spain	0.34 [-0.25, 0.95]	0.31	.119	.259
AO Africa	-0.76 [-1.59, 0.07]	0.42	-.109	.053
AO Latin America	0.88 [0.23, 1.50]	0.33	.144	.015
AO Asia & Oceania	-2.31 [-3.92, -0.78]	0.75	-.190	.000
Self-identification Spain x AO Africa	0.18 [-0.64, 1.04]	0.43	.029	.657
Self-identification Spain x AO Latin America	-0.21 [-0.89, 0.47]	0.34	-.056	.540
Self-identification Spain x AO Asia & Oceania	0.54 [-1.00, 2.27]	0.82	.043	.386

Note: $R^2 = .096$, $p < .001$ for Model 1; $R^2 = .101$, $p < .001$; $\Delta R^2 = .005$, $p = .415$ for Model 2

Attitudes toward English

Further, another hierarchical regression with attitudes toward English as criterion was conducted. The results, as summarized in table 119, indicated that the interaction effect of self-identification with Spain and area of origin on attitudes toward English was not significant ($\Delta R^2 = .005$, $F_{change(3, 492)} = 0.79$, $p = .498$).

Simple analysis also confirmed that there was no significant relationship between self-identification with Spain and attitudes toward English, for any of the four areas of origin (see table 120).

Table 119. Summary of the hierarchical regression of the interaction effect of self-identification with Spain and area of origin on attitudes toward Spanish. 95% BCa confidence intervals are reported in brackets.

	<i>b</i>	<i>SE b</i>	β	<i>p</i>
Model 1				
Constant	5.59 [4.61, 6.62]	0.50		.000
Self-identification Spain	-0.40 [-0.78, -0.02]	0.20	-.095	.040
AO Africa	-0.19 [-1.53, 1.17]	0.66	-.018	.756
AO Latin America	0.57 [-0.56, 1.72]	0.57	.064	.292
AO Asia & Oceania	1.44 [-0.36, 3.24]	0.85	.081	.107
Model 2				
Constant	5.58 [4.56, 6.61]	0.51		.000
Self-identification Spain	-0.67 [-1.59, 0.26]	0.49	-.161	.145
AO Africa	-0.15 [-1.51, 1.19]	0.66	-.015	.797
AO Latin America	0.51 [-0.72, 1.72]	0.60	.057	.353
AO Asia & Oceania	1.43 [-0.43, 3.21]	0.88	.080	.114
Self-identification Spain x AO Africa	0.79 [-0.50, 2.08]	0.65	.089	.195
Self-identification Spain x AO Latin America	0.13 [-1.06, 1.24]	0.57	.023	.813
Self-identification Spain x AO Asia & Oceania	0.42 [-1.28, 2.17]	0.92	.023	.657

Note: $R^2 = .021, p = .039$ for Model 1; $R^2 = .025, p = .087; \Delta R^2 = .005, p = .498$ for Model 2

Table 120. Summary of simple analyses of the effect of self-identification with Spain on attitudes toward Spanish for each area of origin. 95% BCa CIs are reported in brackets.

Area of origin	R^2	<i>b</i>	<i>SE b</i>	β	<i>p</i>
Europe	.02	-0.67 [-1.57, 0.25]	0.48	-.13	.159
Africa	.00	0.12 [-0.67, 0.98]	0.42	.02	.789
Latin America	.02	-0.55 [-1.10, -0.01]	0.27	-.15	.020
Asia and Oceania	.00	-0.25 [-1.64, 1.17]	0.77	-0.06	.743

In conclusion, self-identification with Spain proved to influence attitudes toward Catalan and Spanish, under the moderation of origin and to not be related to attitudes toward English. Autochthonous students that identified with Spain held more positive attitudes

toward Spanish and less favorable attitudes toward Catalan. Concerning immigrant students, a strong self-identification with Spain on the part of students from Africa and Latin America generated more positive attitudes toward Catalan, but had no effect for the other areas of origin. Also, there was no effect on attitudes toward Spanish, regardless of area of origin.

5.1.2.14. The effect of self-identification with area of origin

In the case of the group of students of immigrant origin, the effect of self-identification with area of origin on attitudes toward language was analyzed. Table 121 presents the corresponding means and standard deviations, as well as the correlation coefficients that capture the association between self-identification with area of origin and attitudes toward Catalan, Spanish, and English.

Table 121. Descriptive statistics and correlation matrix for self-identification with area of origin and attitudes toward language

Variables	<i>M</i>	<i>SD</i>	Attitudes twd. Catalan	Attitudes twd. Spanish	Attitudes twd. English
1. Self-identification with area of origin	3.54 [3.47, 3.60]	0.75	-.08 [-.17, .01]	.10* [.01, .21]	.05 [-.05, .15]
2. Attitudes toward Catalan	4.91 [4.51, 5.31]	4.49		-.10* [-.18, -.02]	.01 [-.08, .11]
3. Attitudes toward Spanish	6.72 [6.43, 6.99]	4.43			.16** [.07, .25]
4. Attitudes toward English	5.99 [5.62, 6.39]	4.56			

Note: * $p < .05$, ** $p < .001$

5.1.2.14.1. The effect of self-identification with area of origin on attitudes toward language for the immigrant group

Attitudes toward Catalan

A simple linear regression analysis was conducted to examine the influence of self-identification with area of origin on attitudes toward Catalan. Self-identification with area of origin was not significantly related to attitudes toward Catalan ($R^2 = .08$, $b = -0.49$ [-1.11, 0.13], $SE_b = 0.29$, $\beta = -.08$, $p = .095$).

Attitudes toward Spanish

The results of the simple regression analysis carried out revealed a significant effect of self-identification with area of origin on attitudes toward Spanish ($b = 0.41$ [0.05, 0.81], $SE_b = 0.20$, $\beta = .10$), which accounted for 10% of the explained variance ($p = .026$) (see figure 72).

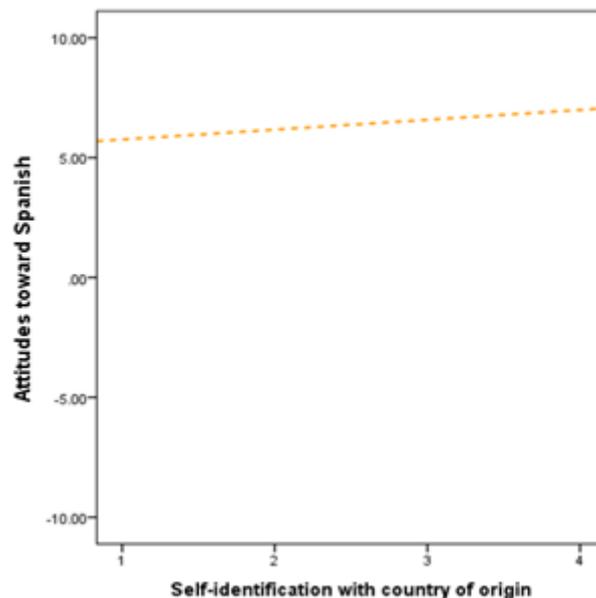


Figure 72. The effect of self-identification with area of origin on attitudes toward Spanish

Attitudes toward English

According to the results of the simple regression analysis conducted, self-identification with area of origin was not significantly associated with attitudes toward English ($R^2 = .05$, $b = 0.37$ [-0.34, 0.91], $SE_b = 0.32$, $\beta = .04$, $p = .327$).

5.1.2.14.2. The effect of self-identification with area of origin on attitudes toward language by area of origin

Attitudes toward Catalan

The results of the hierarchical multiple regression analysis conducted for attitudes toward Catalan, summarized in table 122, indicated that area of origin did not moderate the effect

of self-identification with the area of origin on attitudes toward Catalan ($\Delta R^2 = .01$, F change_(3, 492) = 1.61, $p = .187$).

Table 122. Summary of the hierarchical regression of the interaction effect of self-identification with area of origin and area of origin on attitudes toward Catalan. 95% BCa CIs are reported in brackets.

	<i>b</i>	<i>SE b</i>	β	<i>p</i>
Model 1				
Constant	5.17 [4.17, 6.08]	0.49		.000
Self-identification others	-0.42 [-1.04, 0.16]	0.30	-.067	.141
AO Africa	1.06 [-0.09, 2.82]	0.60	.097	.102
AO Latin America	-1.36 [-2.50, -0.21]	0.60	-.143	.019
AO Asia & Oceania	0.87 [-0.91, 2.59]	0.87	.046	.364
Model 2				
Constant	5.14 [4.07, 6.08]	0.51		.000
Self-identification others	0.06 [-1.68, 1.70]	0.87	.009	.938
AO Africa	1.08 [-0.13, 2.31]	0.61	.098	.098
AO Latin America	-1.32 [-2.50, -0.15]	0.61	-.138	.023
AO Asia & Oceania	1.14 [-0.43, 2.71]	0.80	.060	.240
Self-identification others x AO Africa	-0.89 [-2.77, 0.97]	0.95	-.070	.349
Self-identification others x AO Latin America	-0.71 [-2.54, 1.34]	0.97	-.082	.402
Self-identification others x AO Asia & Oceania	1.40 [-1.32, 4.35]	1.53	.064	.263

Note: $R^2 = .055$, $p < .001$ for Model 1; $R^2 = .065$, $p < .001$; $\Delta R^2 = .01$, $p = .187$ for Model 2

Following, the effect of self-identification with Catalonia on attitudes toward Spanish was examined for each area of origin. The results showed that the relationship between self-identification with the area of origin and attitudes toward Catalan was not significant for any area of origin (see table 123).

Table 123. Summary of simple analyses of the effect of self-identification with area of origin on attitudes toward Catalan for each area of origin. 95% BCa CIs are reported in brackets.

Area of origin	R^2	b	$SE\ b$	β	p
Europe	.00	0.06 [-1.78, 1.73]	0.90	.01	.941
Africa	.03	-0.83 [-1.64, -0.02]	0.42	-.16	.077
Latin America	.01	-0.66 [-1.53, 0.30]	0.45	-.10	.128
Asia and Oceania	.09	1.46 [-0.43, 3.68]	1.19	.30	.095

Attitudes toward Spanish

The effect of self-identification with area of origin on attitudes toward Spanish was not moderated by area of origin ($\Delta R^2 = .012$, $F_{change(3, 492)} = 2.15$, $p = .097$)(see table 124).

Table 124. Summary of the hierarchical regression of the interaction effect of self-identification with area of origin and area of origin on attitudes toward Spanish. 95% BCa CIs are reported in brackets.

	b	$SE\ b$	β	p
Model 1				
Constant	6.81 [6.23, 7.35]	0.28		.000
Self-identification area of origin	0.34 [-0.06, 0.72]	0.20	.086	.055
AO Africa	-0.84 [-1.67, -0.02]	0.43	-.121	.038
AO Latin America	0.71 [0.11, 1.31]	0.32	.117	.050
AO Asia & Oceania	-2.08 [-3.60, -0.80]	0.69	-.174	.001
Model 2				
Constant	6.86 [6.26, 7.45]	0.27		.000
Self-identification area of origin	-0.39 [-1.27, 0.41]	0.45	-.098	.400
AO Africa	-0.90 [-1.73, -0.10]	0.43	-.130	.026
AO Latin America	0.64 [0.07, 1.21]	0.32	.106	.074
AO Asia & Oceania	-2.18 [-3.69, -0.93]	0.69	-.182	.000
Self-identification others x AO Africa	0.43 [-0.82, 1.67]	0.61	.053	.465
Self-identification others x AO Latin America	1.14 [0.12, 2.22]	0.52	.207	.031
Self-identification others x AO Asia & Oceania	0.35 [-1.41, 2.22]	0.98	.025	.652

Note: $R^2 = .088$, $p < .001$ for Model 1; $R^2 = .101$, $p < .001$; $\Delta R^2 = .012$, $p = .097$ for Model 2

Moreover, simple regression analysis conducted for each area of origin showed that self-identification with area of origin was positively related to attitudes toward Spanish only for students coming from Latin America, no significant effects being found for the other areas of origin (see table 125).

Table 125. Summary of simple analyses of the effect of self-identification with area of origin on attitudes toward Spanish for each area of origin. 95% BCa CIs are reported in brackets.

Area of origin	R^2	b	$SE\ b$	β	p
Europe	.10	-0.39 [-1.32, 0.50]	0.47	-.10	.363
Africa	.01	0.04 [-0.76, 0.75]	0.38	.01	.933
Latin America	.23	0.75 [0.22, 1.31]	0.28	.23	<.001
Asia and Oceania	.01	-0.04 [-1.60, 1.51]	0.88	-.01	.956

Attitudes toward English

The moderated effect of self-identification with the area of origin on attitudes toward English was examined with the help of a hierarchical regression analysis, whose results are presented in table 126.

The interaction terms did not contribute significantly to the variance explained, suggesting that the interaction effect between self-identification with area of origin and area of origin was not significant ($\Delta R^2 = .006$, $F\ change_{(3, 492)} = 0.92$, $p = .431$). Moreover, when analyzing the relationship between self-identification with the area of origin and attitudes toward English for each group separately, the results also showed that the effect was not statistically significant, regardless of area of origin (see table 127table 127).

Table 126. Summary of the hierarchical regression of the interaction effect of self-identification with area of origin and area of origin on attitudes toward English. 95% BCa CIs are reported in brackets.

	<i>b</i>	<i>SE b</i>	β	<i>p</i>
Model 1				
Constant	5.47 [4.42, 6.50]	0.54		.000
Self-identification others	0.28 [-0.33, 0.90]	0.33	.047	.307
AO Africa	-0.03 [-1.50, 1.47]	0.72	-.003	.957
AO Latin America	0.88 [-0.23, 2.15]	0.61	.098	.112
AO Asia & Oceania	1.81 [-0.08, 3.51]	0.87	.102	.048
Model 2				
Constant	5.43 [4.36, 6.48]	0.56		.000
Self-identification others	0.87 [-0.98, 2.78]	0.96	.146	.230
AO Africa	-0.02 [-1.52, 1.55]	0.73	-.002	.976
AO Latin America	0.91 [-0.28, 2.26]	0.63	.102	.100
AO Asia & Oceania	1.75 [-0.20, 3.51]	0.90	.099	.059
Self-identification others x AO Africa	-1.13 [-3.54, 1.24]	1.21	-.095	.214
Self-identification others x AO Latin America	-0.36 [-2.44, 1.64]	1.05	-.044	.656
Self-identification others x AO Asia & Oceania	-1.43 [-3.84, 0.95]	1.17	-.070	.233

Note: $R^2 = .017, p = .087$ for Model 1; $R^2 = .023, p = .144; \Delta R^2 = .006, p = .431$ for Model 2

Table 127. Summary of simple analyses of the effect of self-identification with area of origin on attitudes toward English for each area of origin. 95% BCa CIs are reported in brackets.

Area of origin	R^2	<i>b</i>	<i>SE b</i>	β	<i>p</i>
Europe	.01	0.87 [-0.80, 2.50]	0.95	.11	.296
Africa	.00	-0.26 [-1.72, 1.23]	0.73	-.04	.672
Latin America	.01	0.51 [-0.36, 1.36]	0.43	.10	.132
Asia and Oceania	.02	-0.56 [-1.98, 0.85]	0.70	-.13	.494

To sum up, self-identification with area of origin was found to influence only attitudes toward Spanish, so that students that identified with their countries of origin held positive attitudes toward Spanish. No significant relationships were uncovered between self-identification with area of origin and attitudes toward Catalan or toward English.

5.1.2.15. The effect of length of residence

Another variable characteristic of students of immigrant origin was length of residence. Table 128 summarizes the descriptive statistics and the correlations between length of residence, attitudes toward Catalan, Spanish, and English.

Table 128. Descriptive statistics and correlation matrix for length of residence and attitudes toward language

Variables	<i>M</i>	<i>SD</i>	Attitudes twd. Catalan	Attitudes twd. Spanish	Attitudes twd. English
1. Length of residence	5.67 [5.26, 6.09]	4.45	.12** [.03, .21]	-.02 [-.12, .07]	.11* [.03, .19]
2. Attitudes toward Catalan	4.91 [4.51, 5.31]	4.49		-.10* [-.18, -.02]	.01 [-.08, .11]
3. Attitudes toward Spanish	6.72 [6.43, 6.99]	4.43			.16** [.07, .25]
4. Attitudes toward English	5.99 [5.62, 6.39]	4.56			

Note: * $p < .05$, ** $p < .001$

5.1.2.15.1. The effect of length of residence on attitudes toward language for the immigrant group

Attitudes toward Catalan

Following a simple regression analysis, length of residence was found to influence attitudes toward Catalan ($b = 0.13$ [0.03, 0.22], $SE_b = 0.05$, $\beta = .12$, $p = .002$), explaining 1.4% of their variance. Figure 73 presents the relationship between length of residence and attitudes toward Catalan.

Attitudes toward Spanish

The results showed that length of residence was not significantly related to attitudes toward Spanish ($R^2 = .00$, $b = -0.01$ [-0.07, 0.04], $SE_b = 0.03$, $\beta = -.02$, $p = .628$).

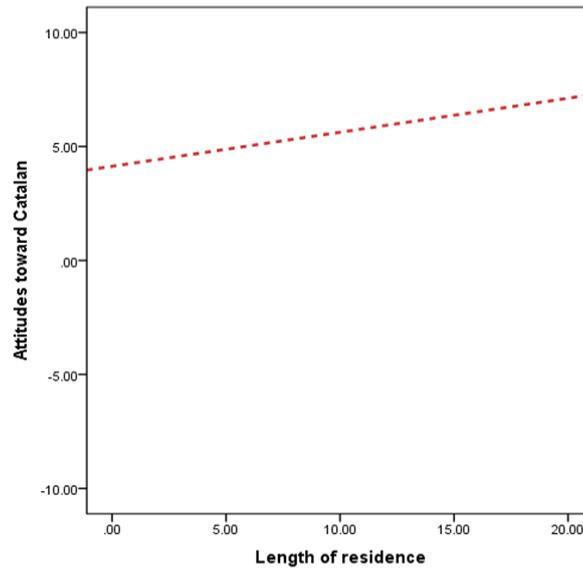


Figure 73. The effect of length of residence on attitudes toward Catalan

Attitudes toward English

There was an effect of length of residence on attitudes toward English, accounting for 1% of the variance ($R^2 = .01$, $b = 0.11$ [0.03, 0.18], $SE_b = 0.04$, $\beta = .11$, $p = .015$) (see figure 74).

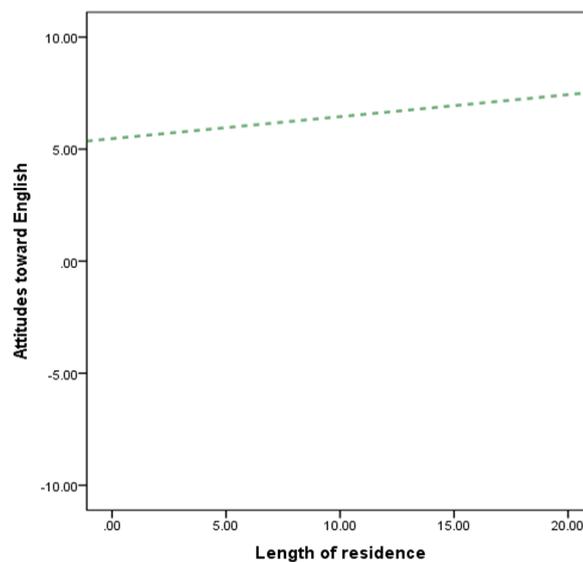


Figure 74. The effect of length of residence on attitudes toward English

5.1.2.15.1. The effect of length of residence on attitudes toward language by area of origin

Attitudes toward Catalan

In order to investigate if the effect of length of residence on attitudes toward Catalan varied by area of origin a hierarchical multiple regression was conducted. The results, summarized in table 129, indicated that area of origin did not moderate the relationship between length of residence and attitudes toward Catalan.

Simple analysis confirmed that regardless of area of origin, length of residence was not significantly related to attitudes toward Catalan (see table 130).

Table 129. Summary of the hierarchical regression of the interaction effect of length of residence and area of origin on attitudes toward Catalan. 95% BCa CIs are reported in brackets.

	<i>b</i>	<i>SE b</i>	β	<i>p</i>
Model 1				
Constant	5.276 [4.28, 6.23]	0.49		.000
Length of residence	0.08 [-0.03, 0.18]	0.05	.07	.135
AO Africa	0.93 [-0.26, 2.11]	0.61	.08	.158
AO Latin America	-1.17 [-2.3, -0.01]	0.58	-.12	.037
AO Asia & Oceania	0.68 [-1.28, 2.35]	0.92	.04	.474
Model 2				
Constant	5.32 [4.29, 6.31]	0.51		.000
Length of residence	0.15 [-0.13, 0.39]	0.13	.14	.197
AO Africa	1.09 [-0.08, 2.25]	0.63	.10	.113
AO Latin America	-1.17 [-2.34, -0.01]	0.60	-.12	.043
AO Asia & Oceania	0.65 [-1.34, 2.35]	0.92	.03	.506
Length of residence x AO Africa	-0.14 [-0.4, 0.15]	0.15	-.08	.324
Length of residence x AO Latin America	-0.04 [-0.34, 0.28]	0.16	-.02	.798
Length of residence x AO Asia & Oceania	-0.08 [-0.49, 0.3]	0.19	-.02	.700

Note: $R^2 = .05$, $p < .001$ for Model 1; $\Delta R^2 = .002$, $p = .748$ for Model 2

Table 130. Summary of simple analyses of the effect of length of residence on attitudes toward Catalan for each area of origin. 95% BCa CIs are reported in brackets.

Area of origin	R^2	b	$SE\ b$	β	p
Europe	.01	0.09 [-0.21, 0.37]	0.14	.08	.460
Africa	.00	0.00 [-0.15, 0.15]	0.08	.00	.970
Latin America	.00	0.08 [-0.13, 0.25]	0.10	.06	.398
Asia and Oceania	.00	0.02 [-0.33, 0.30]	0.15	.02	.912

Attitudes toward Spanish

The coefficients corresponding to the hierarchical multiple regression used to investigate how the effect of Spanish competences on attitudes toward Spanish varied by area of origin are presented in table 131.

Table 131. Summary of the hierarchical regression of the interaction effect of length of residence and area of origin on attitudes toward Spanish. 95% BCa CIs are reported in brackets.

	b	$SE\ b$	β	p
Model 1				
Constant	6.71 [6.17, 7.24]	0.27		.000
Length of residence	0.05 [-0.02, 0.11]	0.04	.07	.139
AO Africa	-0.81 [-1.71, 0.04]	0.44	-.11	.056
AO Latin America	0.82 [0.19, 1.44]	0.32	.13	.022
AO Asia & Oceania	-2.01 [-3.6, -0.62]	0.71	-.16	.001
Model 2				
Constant	6.67 [6.11, 7.26]	0.28		.000
Length of residence	-0.003 [-0.15, 0.15]	0.08	.00	.972
AO Africa	-1.00 [-1.93, -0.11]	0.47	-.14	.022
AO Latin America	0.79 [0.13, 1.4]	0.34	.13	.033
AO Asia & Oceania	-1.97 [-3.66, -0.58]	0.73	-.16	.002
Length of residence x AO Africa	0.13 [-0.05, 0.3]	0.10	.12	.154
Length of residence x AO Latin America	-0.002 [-0.19, 0.18]	0.09	.00	.979
Length of residence x AO Asia & Oceania	0.05 [-0.24, 0.34]	0.16	.02	.709

Note: $R^2 = .07$, $p < .001$ for Model 1; $\Delta R^2 = .01$, $p = .316$ for Model 2

The interaction terms obtained by multiplying length of residence with the dummy variables of area of origin did not increase the explained variance of attitudes toward Spanish ($\Delta R^2 = .01$, $F_{change(3, 465)} = 1.18$, $p = .316$), indicating that there were no significant variations determined by area of origin.

Following, we examined the effect of length of residence on attitudes toward Spanish for each group defined by area of origin. The results showed that no significant effects were found, as it can be seen in table 132.

Table 132. Summary of simple analyses of the effect of length of residence on attitudes toward Spanish for each area of origin. 95% BCa CIs are reported in brackets.

Area of origin	R^2	b	$SE\ b$	β	p
Europe	.00	0.00 [-0.16, 0.16]	0.08	.01	.963
Africa	.04	0.13 [0.00, 0.26]	0.06	.19	.046
Latin America	.00	-0.02 [-0.14, 0.09]	0.06	-.03	.643
Asia and Oceania	.00	0.04 [-0.24, 0.30]	0.15	.04	.816

Attitudes toward English

A hierarchical regression analysis was conducted to investigate the interaction effect of length of residence and area of origin on attitudes toward English. The results (see table 133), showed that this interaction was not significant ($\Delta R^2 = .01$, $F_{change(3, 465)} = 1.99$, $p = .114$).

According to the results obtained through simple regression analysis, length of residence influenced the attitudes toward English of students from Africa and Asia and Oceania. Furthermore, there was no significant relationship between the two variables for the other areas of origin (see table 134).

Table 133. Summary of the hierarchical regression of the interaction effect of length of residence and area of origin on attitudes toward English. 95% BCa CIs are reported in brackets.

	<i>b</i>	<i>SE b</i>	β	<i>p</i>
Model 1				
Constant	5.74 [4.68, 6.71]	0.49		.000
Length of residence	0.14 [0.05, 0.24]	0.05	0.15	.003
AO Africa	-0.67 [-2.05, 0.67]	0.68	-0.07	.277
AO Latin America	0.78 [-0.26, 1.8]	0.56	0.09	.137
AO Asia & Oceania	1.35 [-0.33, 2.91]	0.80	0.08	.130
Model 2				
Constant	5.66 [4.62, 6.62]	0.49		.000
Length of residence	0.03 [-0.16, 0.21]	0.09	0.03	.804
AO Africa	-0.95 [-2.4, 0.49]	0.74	-0.09	.137
AO Latin America	0.73 [-0.35, 1.82]	0.57	0.08	.176
AO Asia & Oceania	1.28 [-0.55, 3.06]	0.85	0.07	.155
Length of residence x AO Africa	0.24 [-0.002, 0.49]	0.13	0.15	.074
Length of residence x AO Latin America	0.02 [-0.23, 0.26]	0.12	0.01	.896
Length of residence x AO Asia & Oceania	0.27 [-0.05, 0.64]	0.17	0.08	.165

Note: $R^2 = .03$, $p = .005$ for Model 1; $\Delta R^2 = .01$, $p = .114$ for Model 2

Table 134. Summary of simple analyses of the effect of length of residence on attitudes toward English for each area of origin. 95% BCa CIs are reported in brackets.

Area of origin	R^2	<i>b</i>	<i>SE b</i>	β	<i>p</i>
Europe	.00	0.02 [-0.16, 0.19]	0.09	.02	.862
Africa	.11	0.30 [0.15, 0.48]	0.08	.33	<.001
Latin America	.00	0.04 [-0.14, 0.18]	0.08	.03	.637
Asia and Oceania	.15	0.32 [0.02, 0.64]	0.15	.38	.037

5.1.2.16. The effect of place of birth

Another variable specific to the students of immigrant descent was place of birth. A mixed-design ANOVA was used to investigate if being born in Catalonia or in a foreign country had any effect on attitudes toward language. Place of birth was introduced as the between-subjects factor and attitudes toward language as the within-subjects factor (see table 135 and figure 75).

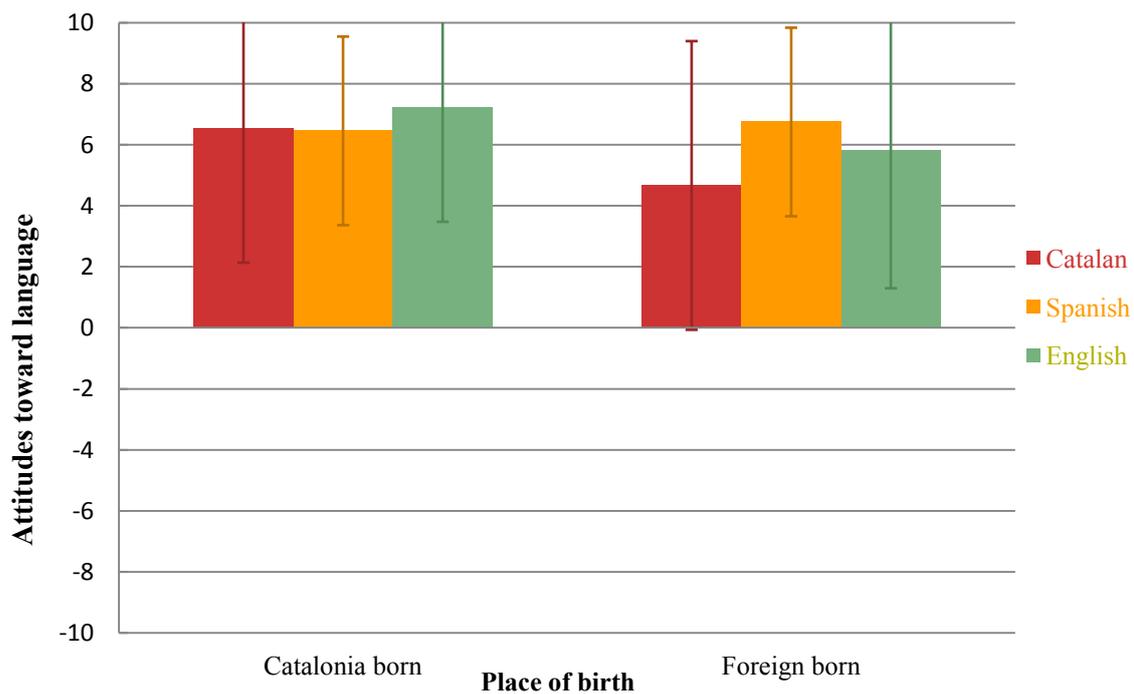


Figure 75. Means of attitudes toward Catalan, Spanish, and English by place of birth. Error bars represent plus and minus one standard deviation.

Table 135. Descriptive statistics for attitudes toward language in function origin. 95% BCa CIs based on 2000 bootstrap samples are reported in brackets.

Place of birth	N	Language attitudes					
		Catalan		Spanish		English	
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Catalonia	65	6.54 [5.41, 7.51]	4.40	6.46 [5.71, 7.23]	3.09	7.21 [6.17, 8.11]	3.73
Foreign born	435	4.67 [4.21, 5.12]	4.73	6.75 [6.45, 7.05]	3.09	5.81 [5.34, 6.25]	4.51

The results²⁴ showed that there was an interaction effect between place of birth and attitudes toward language ($F_{(1.84, 918.13)} = 4.38, p = .015$)²⁵. The interaction was broke down by analyzing the simple effects of each variable. First, the simple effect of place of birth was analyzed. The corresponding results are summarized in table 136. Students born in Catalonia held more positive attitudes toward Catalan and toward English in comparison with students born in their countries of origin, whereas the attitudes toward Spanish were not significantly different by place of birth.

Table 136. Bonferroni adjusted tests for the simple effects of origin

Place of birth		Attitudes toward language								
		Catalan			Spanish			English		
		<i>t</i>	<i>p</i>	<i>r</i>	<i>t</i>	<i>p</i>	<i>r</i>	<i>t</i>	<i>p</i>	<i>r</i>
Catalonia born	Foreign born	3.00	.003	.13	-0.72	.474	.03	2.39	.017	.11

Second, the differences between languages were analyzed for each of the two groups of students. Catalan, Spanish, and English were rated similarly by students born in Catalonia ($F_{(2, 497)} = 0.80, p = .451$), as it can be seen in table 137. Foreign-born students differentiated between languages ($F_{(2, 497)} = 29.31, p < .001$), rating Spanish higher than English and both languages higher than Catalan.

Table 137. Bonferroni adjusted tests for the simple effects of language

Attitudes toward language		Place of birth					
		Catalonia born			Foreign born		
		<i>t</i>	<i>p</i>	<i>r</i>	<i>t</i>	<i>p</i>	<i>r</i>
Catalan	Spanish	0.11	1.000	.01	-7.44	<.001	-0.34
	English	-0.85	1.000	.11	-3.71	.001	-0.17
Spanish	English	-1.23	.653	.15	4.00	<.001	0.18

In conclusion, being born or not in Catalonia affected attitudes toward Catalan and toward English, which were more positive for students born in Catalonia than for those foreign born.

²⁴ The results indicated that there were was a significant main effect of attitudes toward language ($F_{(1.84, 918.13)} = 4.17, p = .018$) and of place of birth ($F_{(1,498)} = 9.48, p = .002$).

²⁵ Mauchly's test of sphericity indicated that the assumption of sphericity was not respected, requiring the Huynh-Feldt adjustment for the degrees of freedom ($\chi^2_{(2)} = 47.31, p < .001, \epsilon = .922$).

5.1.2.17. Summary

Previously in this chapter we have examined the effects of various variables on attitudes toward Catalan, Spanish, and English. We also examined if these effects differed between autochthonous and immigrant students, finding several significant interactions. The results are summarized in table 138. For each language, the results are presented in three columns: the first two columns describe the effect of each variable for the autochthonous group, while the next two indicate if there was a moderation effect of origin and area of origin, respectively.

Therefore, it can be seen that gender, socio-cultural status, socio-professional status, Catalan competences, use of Catalan, use of Spanish, self-identification with Catalonia, and self-identification with Spain had significant effects on the attitudes toward Catalan held by autochthonous students. Whereas, gender, Catalan competences, Use of Catalan, use of Spanish, use of L1, self-identification with Catalonia, self-identification with Spain, length of residence, area of origin, and place of birth were the variables that had an impact on the attitudes toward Catalan expressed by students of immigrant origin.

Similarly, the attitudes toward Spanish of autochthonous students were influenced by grade, gender, socio-cultural status, socio-professional status, Catalan competences, use of Catalan, use of Spanish, self-identification with Catalonia, and self-identification with Spain. The attitudes toward Spanish held by immigrant students were influenced by grade, gender, Catalan competences, Spanish competences, use of Catalan, use of Spanish, use of L1, self-identification with Catalonia, self-identification with the area of origin, and area of origin.

Finally, autochthonous students' attitudes toward English were influenced by grade, gender, socio-cultural status, Catalan competences, Spanish competences, use of Catalan, and self-identification with Catalonia. Meanwhile, grade, gender, socio-cultural status, Catalan competences, Spanish competences, use of Spanish, use of L1, self-identification with Spain, length of residence and place of birth had significant effects on attitudes toward English.

Table 138. Summary of results - first study

VARIABLES	Attitudes toward Catalan				Attitudes toward Spanish				Attitudes toward English			
	Autochthonous	Immigrant	O	AO	Autochthonous	Immigrant	O	AO	Autochthonous	Immigrant	O	AO
Origin	$M_{\text{autochthonous}} > M_{\text{immigrant}}$		///	///	$M_{\text{autochthonous}} < M_{\text{immigrant}}$		///	///	$M_{\text{autochthonous}} < M_{\text{immigrant}}$		///	///
Grade	∅		NO	NO	$M_{4\text{th}} > M_{2\text{nd}}$		NO	NO	$M_{4\text{th}} > M_{2\text{nd}}$		NO	NO
Gender	$M_{\text{girls}} > M_{\text{boys}}$		NO	NO	$M_{\text{girls}} > M_{\text{boys}}$		NO	NO	$M_{\text{girls}} > M_{\text{boys}}$		NO	NO
Socio-cultural status	$M_{\text{univ}} > M_{\text{sec}}$ $M_{\text{univ}} > M_{\text{elem}}$	∅	YES	NO	$M_{\text{univ}} < M_{\text{sec}}$ $M_{\text{univ}} < M_{\text{elem}}$ $M_{\text{sec}} < M_{\text{elem}}$	∅	YES	NO	$M_{\text{univ}} > M_{\text{elem}}$ $M_{\text{sec}} > M_{\text{elem}}$	$M_{\text{univ}} > M_{\text{elem}}$ $M_{\text{sec}} > M_{\text{elem}}$	NO	NO
Socio-professional status	$M_{\text{high}} > M_{\text{low}}$	∅	YES	NO	$M_{\text{high}} < M_{\text{medium}}$ $M_{\text{high}} < M_{\text{low}}$ $M_{\text{medium}} < M_{\text{low}}$	∅	YES	NO	∅		NO	NO
Catalan competences	$R^2 = .07, b = 0.1$	$R^2 = .02, b = 0.04$	NO	NO	$R^2 = .02, b = -0.07$	$R^2 = .04, b = 0.04$	YES	NO	$R^2 = .13, b = 0.15$	$R^2 = .04, b = 0.05$	YES	NO
Spanish competences	∅		NO	NO	∅	$R^2 = .08, b = 0.05$	NO	NO	$R^2 = .14, b = 0.15$	$R^2 = .04, b = 0.05$	YES	NO
Use of Catalan	$R^2 = .48, b = 3.34$	$R^2 = .17, b = 2.3$	YES	NO	$R^2 = .25, b = -.96$	$R^2 = .03, b = -.61$	YES	NO	$R^2 = .03, b = 0.89$	∅	NO	NO
Use of Spanish	$R^2 = .22, b = -.22$	$R^2 = .08, b = -1.78$	NO	YES	$R^2 = .43, b = 3.81$	$R^2 = .13, b = 1.48$	YES	NO	∅	$R^2 = .01, b = 0.54$	NO	NO
Use of L1	///	$R^2 = .01, b = 0.63$	///	NO	///	$R^2 = .04, b = -.92$	///	NO	///	$R^2 = .01, b = -0.72$	///	NO
S.ident. Catalonia	$R^2 = .50, b = 3.04$	$R^2 = .16, b = 1.80$	YES	NO	$R^2 = .22, b = -2.49$	$R^2 = .01, b = -0.34$	YES	NO	$R^2 = .03, b = 0.78$	∅	YES	NO
S.ident. Spain	$R^2 = .28, b = -.98$	$R^2 = .03, b = 0.79$	YES	YES	$R^2 = .50, b = 3.22$	∅	YES	NO	∅	$R^2 = .01, b = -0.43$	NO	NO
S.ident AO	///	∅	///	NO	///	$R^2 = .10, b = 0.41$	///	NO	///	∅	///	NO
Length of residence	///	$R^2 = .01, b = 0.13$	///	NO	///	∅	///	NO	///	$R^2 = .01, b = 0.11$	///	NO
Area of origin	///	$M_{\text{Africa}} > M_{\text{America}}$	///	NO	///	$M_{\text{Europe}} > M_{\text{Asia}}$ $M_{\text{America}} > M_{\text{Africa}}$ $M_{\text{America}} > M_{\text{Asia}}$	///	NO	///	∅	///	NO
Place of birth	///	$M_{\text{Catalonia}} > M_{\text{foreign}}$	///	NO	///	∅	///	NO	///	$M_{\text{Catalonia}} > M_{\text{foreign}}$	///	NO

Note: O – Presence of a moderation effect by origin, AO – Presence of a moderation effect by area of origin; ∅ – absence of significant effects; ■ - significant effect; □ - non-significant effect; /// - not applicable.

5.1.3. Explanatory models

After seeing the individual effect of each investigated variable, we examined the combined effect of all the variables on attitudes toward language. For this purpose a series of multiple regression analyses were conducted separately for autochthonous and immigrant students. We chose simultaneous multiple regression because the objective was to see how the investigated variables behave when examined at the same time and if there are some variables with more weight than the others in explaining attitudes toward language. We also included all the variables to allow the discovery of possible suppressor effects.

In addition, in order to conduct the regression analysis, categorical variables with more than 2 categories were transformed into dummy variables, which are proxy dichotomous variables with values of 0 or 1 that indicate if a participant belongs to a specific group or category.

Furthermore, multicollinearity was diagnosed with the help of the variance inflation factor (VIF) and tolerance indicators. For all regression analyses these indicators suggested that there were no problems of multicollinearity, seeing that all VIF values were lower than the recommended cut-off of 5 and no tolerance indicator surpassed the threshold of 0.20 (Field, 2013; Sava, 2004).

5.1.3.1. Explanatory models for autochthonous students

For each attitude toward language, a simultaneous multiple regression was conducted to analyse the combined effect of the investigated variables. The descriptive statistics and the correlations between variables can be seen in table 139 and table 140, respectively.

Table 139. Means and standard deviations for the variables investigated. 95% BCa CIs based on 2000 bootstrap samples are reported in brackets.

Variables	M	95% BCa CIs	SD
1. Attitudes toward Catalan	6.80	[6.47, 7.14]	4.13
2. Attitudes toward Spanish	4.20	[4.99, 6.19]	5.64
3. Attitudes toward English	5.51	[4.83, 6.18]	4.49
4. Grade	.51	[0.43, 0.58]	0.50
5. Gender	.45	[0.38, 0.52]	0.50
6. SPS Medium	.31	[0.24, 0.37]	0.46
7. SPS Low	.45	[0.38, 0.52]	0.50
8. SCS Secondary	.45	[0.38, 0.52]	0.50
9. SCS Elementary	.21	[0.16, 0.25]	0.41
10. Catalan competences	72.97	[71.22, 74.70]	11.28
11. Spanish competences	66.48	[64.77, 68.31]	11.77
12. Use of Catalan	2.37	[2.25, 2.50]	0.81
13. Use of Spanish	2.09	[1.94, 2.21]	0.90
15. Self-identification Catalonia	3.18	[3.05, 3.32]	0.97
16. Self-identification Spain	2.64	[2.48, 2.81]	1.14

Table 140. Correlation matrix for the variables examined in the multiple regressions explaining attitudes toward Catalan, Spanish, and English. Autochthonous group

Variables	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Attitudes toward Catalan			.01	.03	-.03	-.10	-.07	.03	.27*	.11	.63*	-.39*	.65*	-.50*
2. Attitudes toward Spanish			.01	.08	-.06	.24*	.11	.06	-.13*	.02	.43*	.69*	-.46*	.72*
3. Attitudes toward English			-.03	.17*	.17*	-.20*	.09	-.23*	.35*	.37*	.10	.05	.13*	.00
4. Grade				.09	.04	-.03	-.08	.09	.23*	.03	.08	-.01	.06	.06
5. Gender					.01	.07	.10	.06	.06	.08	-.03	.12	.04	.00
6. SPS Medium						-.60*	.09	-.12	.22*	.16*	.12	-.09	.07	-.07
7. SPS Low							.17*	.27*	-.22*	-.12	-.27*	.24*	-.21*	.24*
8. SCS Secondary								-.46*	.00	-.03	-.05	.08	.05	.10
9. SCS Elementary									.16*	-.12	-.10	.12	-.16*	.13*
10. Catalan competences										.71*	.31*	-.24*	.30*	-.23*
11. Spanish competences											.08	-.03	.04	.01
12. Use of Catalan												-.63*	.73*	-.66*
13. Use of Spanish													-.56*	.71*
14. S. ident. Catalonia														-.61*
15. S. ident. Spain														

Note: * $p < .05$; SPS – socio-professional status; SCS – socio-cultural status;

Attitudes toward Catalan

A simultaneous multiple regression was conducted to investigate the influence of grade, gender, socio-professional status, socio-cultural status, Catalan competences, Spanish competences, use of Catalan, use of Spanish, self-identification with Catalonia, and self-identification with Spain on attitudes toward Catalan (see table 141).

The combined effect of the investigated variables was found to explain 51% of the variance of attitudes toward Catalan. However, among the ten factors examined, only three were significant predictors: socio-cultural status, use of Catalan, and self-identification with Catalonia. The standardised coefficients indicated that the most important factors in explaining attitudes toward Catalan were self-identification with Catalonia ($\beta = .41, p < .001$) and use of Catalan ($\beta = .32, p = .001$), followed by socio-cultural status ($\beta = .15, p = .046$).

Table 141. Summary of multiple regression for the predictors of attitudes toward Catalan in the case of autochthonous students

	<i>b</i>	<i>SE b</i>	β	<i>p</i>
Constant	-5.54 [-10.46, -0.52]	2.63		.023
Grade	-0.48 [-1.44, 0.51]	0.46	-.06	.347
Gender	-0.02 [-0.96, 0.89]	0.47	.00	.976
SPS Medium	-0.99 [-2.29, 0.37]	0.67	-.11	.155
SPS Low	-0.10 [-1.37, 1.09]	0.60	-.01	.884
SCS Secondary	0.09 [-1.01, 1.30]	0.62	.01	.881
SCS Elementary	1.53 [0.19, 2.95]	0.74	.15	.046
Catalan competences	0.02 [-0.04, 0.08]	0.03	.05	.626
Spanish competences	0.03 [-0.04, 0.08]	0.03	.07	.387
Use of Catalan	1.70 [0.52, 2.88]	0.60	.32	.001
Use of Spanish	0.59 [-0.11, 1.30]	0.37	.12	.144
Self- identification with Catalonia	1.80 [0.97, 2.73]	0.44	.41	<.001
Self- identification with Spain	-0.54 [-1.14, 0.10]	0.31	-.14	.114

Note: $R^2 = .51, p < .001$

Attitudes toward Spanish

A similar simultaneous multiple regression was conducted to test the possible predictors of attitudes toward Spanish. The results of this analysis are summarized in table 142. The model was significant and accounted for 63% of the variance of autochthonous students' attitudes toward Spanish.

Many of the variables analyzed did not significantly influence the attitudes toward Spanish, the corresponding standardized coefficients being non-significant. However, the results suggested that autochthonous students from a family with low socio-professional status ($\beta = .14$, $p = .049$), that use Catalan ($\beta = .27$, $p = .001$) and Spanish ($\beta = .40$, $p < .001$) frequently and with a high level of self-identification with Spain ($\beta = .58$, $p < .001$) held more positive attitudes toward Spanish. Among these, self-identification with Spain and use of Spanish were the most important predictors.

Table 142. Summary of multiple regression for the predictors of attitudes toward Spanish in the case of autochthonous students

	<i>b</i>	<i>SE b</i>	β	<i>p</i>
Constant	-12.96 [-17.68, -8.44]	2.55		<.001
Grade	-0.56 [-1.68, 0.60]	0.57	-.05	.342
Gender	0.57 [-0.45, 1.58]	0.57	.05	.322
SPS Medium	0.74 [-1.13, 2.65]	0.90	.06	.359
SPS Low	1.63 [-0.23, 3.59]	0.92	.14	.049
SCS Secondary	-0.62 [-2.06, 0.80]	0.75	-.05	.395
SCS Elementary	-1.45 [-3.06, 0.13]	0.86	-.10	.101
Catalan competences	0.05 [-0.02, 0.13]	0.04	.10	.193
Spanish competences	-0.04 [-0.12, 0.04]	0.04	-.08	.278
Use of Catalan	1.86 [0.93, 2.78]	0.45	.27	.001
Use of Spanish	2.53 [1.56, 3.44]	0.47	.40	<.001
Self-identification with Catalonia	-0.52 [-1.16, 0.23]	0.35	-.09	.238
Self-identification with Spain	2.85 [2.08, 3.65]	0.41	.58	<.001

Note: $R^2 = .63$, $p < .001$

Attitudes toward English

Another simultaneous multiple regression with attitudes toward English as criterion was conducted. The results, presented in table 143, indicated that the model was significant and explained 25% of the variance of the attitudes toward English held by autochthonous students. However, only gender was found to be a significant predictor ($\beta = .15$, $p = .045$).

Table 143. Summary of multiple regression for the predictors of attitudes toward English in the case of autochthonous students

	<i>b</i>	<i>SE b</i>	β	<i>p</i>
Constant	-9.53 [-17.13, -1.97]	3.81		.003
Grade	-0.85 [-2.08, 0.35]	0.63	-.10	.206
Gender	1.31 [0.04, 2.59]	0.66	.15	.045
SPS Medium	0.24 [-1.48, 2.03]	0.86	.03	.788
SPS Low	-1.02 [-2.72, 0.68]	0.87	-.11	.272
SCS Secondary	-0.06 [-1.43, 1.41]	0.76	-.01	.943
SCS Elementary	-1.70 [-3.86, 0.44]	1.07	-.15	.090
Catalan competences	0.07 [-0.03, 0.17]	0.05	.18	.114
Spanish competences	0.07 [-0.01, 0.15]	0.04	.19	.080
Use of Catalan	0.49 [-0.98, 1.73]	0.73	.09	.442
Use of Spanish	0.89 [-0.11, 1.78]	0.50	.18	.094
Self- identification with Catalonia	0.53 [-0.52, 1.92]	0.55	.11	.292
Self- identification with Spain	0.39 [-0.42, 1.28]	0.41	.10	.384

Note: $R^2 = .25$, $p < .001$

5.1.3.2. Explanatory models for immigrant students

A series of simultaneous multiple regressions analyses were carried out to investigate the role played by the variables of interest in explaining the attitudes toward Catalan, Spanish, and English held by students of immigrant origin. Several variables, specific to the immigrant population (area of origin, place of birth, length of residence, use of L1, and self-identification with area of origin) were added. First, the explanatory models were tested for the whole group of students of immigrant origin. Following, similar models were constructed for each area of origin, except Asia and Oceania because the small number of participants did not allow the implementation of a multiple regression analysis.

5.1.3.2.1. Explanatory models for the whole group of immigrant students

Concerning the entire group of immigrant students, three multiple regression were carried out, one for each attitude toward language. The descriptive statistics and correlations between variables are presented in table 144 and table 145, respectively.

Table 144. Descriptive statistics for the investigated variables. Immigrant group

Variables	M	95% BCa CIs	SD
1. Attitudes toward Catalan	4.89	[4.44, 5.32]	4.77
2. Attitudes toward Spanish	6.83	[6.55, 7.12]	3.01
3. Attitudes toward English	6.05	[5.64, 6.46]	4.37
4. Grade	0.48	[0.44, 0.52]	0.50
5. Gender	0.51	[0.46, 0.55]	0.50
6. SPS Medium	0.18	[0.15, 0.22]	0.39
7. SPS Low	0.68	[0.63, 0.72]	0.47
8. SCS Secondary	0.41	[0.36, 0.45]	0.49
9. SCS Elementary	0.21	[0.17, 0.24]	0.41
10. Catalan competences	53.47	[51.96, 55.00]	16.76
11. Spanish competences	53.55	[51.96, 55.12]	17.75
12. Use of Catalan	1.63	[1.55, 1.71]	0.84
13. Use of Spanish	2.46	[2.39, 2.53]	0.72
14. Use of L1	0.42	[0.35, 0.48]	0.68
15. S. ident. Catalonia	2.10	[2.02, 2.20]	1.01
16. S. ident. Spain	2.29	[2.19, 2.39]	1.07
17. S. ident. area of origin	3.54	[3.47, 3.61]	0.75
18. AO Africa	0.24	[0.20, 0.28]	0.43
19. AO Latin America	0.49	[0.44, 0.53]	0.50
20. AO Asia & Oceania	0.07	[0.05, 0.09]	0.25
21. Place of birth	0.89	[0.86, 0.92]	0.31
22. Length of residence	5.50	[5.11, 5.88]	4.34

Table 145. Correlation matrix for the variables examined in the multiple regressions explaining attitudes toward Catalan, Spanish, and English. Immigrant group

Variables	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
1. Attitudes Catalan			.06	.12*	-.07	.06	-.05	.06	.13*	-.02	.42*	-.29*	.11	.39*	.17*	-.07	.18*	-.21*	.06	-.08*	.10*
2. Attitudes Spanish			.08	.12*	.05	-.02	.02	-.11*	.19*	.26*	-.14*	.34*	-.19*	-.12*	.05	.11*	-.13*	.22*	-.19*	.03	.00
3. Attitudes English			.11*	.02	.05	-.10*	.05	-.12*	.21*	.19*	.08	.08*	-.07	-.02	-.09*	.05	-.05	.06	.07	-.13*	.13*
4. Grade				.02	-.06	.00	.08	-.11*	.09*	.16*	.06	-.01	.09*	-.01	-.03	-.01	-.03	.06	-.01	.07	.00
5. Gender					-.01	.04	.04	.01	.03	.03	-.03	.02	.06	.00	.01	.02	.04	-.03	.00	-.03	-.03
6. SPS Medium						-.68*	.08*	-.17*	.01	.05	.00	.05	-.11*	-.03	-.01	-.04	-.03	.01	.10*	.02	.01
7. SPS Low							.14*	.29*	-.11*	-.16*	.02	-.11*	.14*	.00	-.01	.04	.16*	-.09*	-.10*	-.03	-.05
8. SCS Secondary								-.42*	.06	.07	.01	.04	-.01	-.05	-.03	-.05	.01	.03	.00	-.08	.01
9. SCS Elementary									-.14*	-.21*	.08	-.20*	.15*	.18*	.16*	.02	.28*	-.24*	.06	-.05	.07
10. Catalan competences										.75*	.23*	.14*	-.22*	.10*	-.07	-.07	.00	.00	-.13*	-.26*	.50*
11. Spanish competences											-.06	.41*	-.38*	-.12*	-.14*	-.08	-.22*	.30*	.22*	-.15*	.32*
12. Use of Catalan												-.43*	.03	.48*	.16*	-.13*	.31*	-.41*	.12*	-.22*	.30*
13. Use of Spanish													-.53*	-.39*	-.08*	-.01	-.30*	.56*	-.22*	.05	-.02
14. Use of L1														.12*	.08	.17*	.16*	-.54*	.18*	.05	-.11*
15. S. ident. Catalonia															.58*	-.18*	.24*	-.33*	.18*	-.26*	.23*
16. S. ident. Spain																-.21*	.12*	-.22*	.08	-.15*	.10*
17. S. ident. area of origin																	-.04	.03	-.06	.27*	-.25*
18. AO Africa																		-.55*	-.15*	-.31*	.37*
19. AO Latin America																			-.26*	.22*	-.27*
20. AO Asia & Oceania																				-.05	.06
21. Place of birth																					-.73*
22. Length of residence																					

Note: * $p < .05$; SPS – socio-professional status; SCS – socio-cultural status; AO – area of origin

Attitudes toward Catalan

A simultaneous regression analysis was conducted to examine which were the most important predictors of the attitudes toward Catalan held by immigrant students. The results, presented in table 146, showed that the model was significant and accounted for 27% of the variance.

Table 146. Summary of multiple regression for the predictors of attitudes toward Catalan in the case of immigrant students

	<i>b</i>	<i>SE b</i>	β	<i>p</i>
Constant	-1.13 [-5.36, 2.84]	2.28		.620
Grade	0.17 [-0.67, 1.02]	0.41	.02	.682
Gender	1.15 [0.40, 1.86]	0.40	.12	.004
SPS Medium	-0.20 [-1.71, 1.40]	0.78	-.02	.788
SPS Low	0.60 [-0.81, 2.05]	0.70	.06	.379
SCS Secondary	-0.88 [-1.97, 0.20]	0.53	-.09	.081
SCS Elementary	-0.87 [-2.14, 0.49]	0.64	-.07	.177
Catalan competences	0.02 [-0.02, 0.06]	0.02	.07	.324
Spanish competences	0.02 [-0.02, 0.06]	0.02	.06	.448
Use of Catalan	1.59 [0.94, 2.27]	0.31	.28	<.001
Use of Spanish	-0.72 [-1.44, 0.01]	0.36	-.11	.079
Use of L1	0.46 [-0.44, 1.43]	0.45	.07	.291
Self- identification with Catalonia	1.14 [0.54, 1.75]	0.31	.24	<.001
Self- identification with Spain	0.02 [-0.47, 0.54]	0.25	.00	.949
Self-identification with area of origin	-0.14 [-0.71, 0.50]	0.32	-.02	.632
AO Africa	1.16 [-0.06, 2.25]	0.62	.10	.097
AO Latin America	0.88 [-0.44, 2.23]	0.69	.09	.200
AO Asia & Oceania	0.49 [-1.35, 2.17]	0.89	.03	.609
Place of birth	0.37 [-1.34, 2.14]	0.87	.02	.706
Length of residence	-0.09 [-0.27, 0.09]	0.09	-.08	.286

Note: $R^2 = .27, p < .001$

However, when considering jointly all variables of interest, only three variables were found to be statistically significant predictors. These were, in descending order of

importance: use of Catalan ($\beta = .28, p < .001$), self-identification with Catalonia ($\beta = .24, p < .001$), and gender ($\beta = .12, p = .004$).

In other words, girls of immigrant origin who used more frequently Catalan and had a stronger identification with Catalonia tended to hold more positive attitudes toward Catalan.

Attitudes toward Spanish

The predictors of attitudes toward Spanish were analyzed with the help of a simultaneous multiple regression (see table 147). The model tested explained 22% of the variance of the attitudes toward Spanish held by students of immigrant origin.

The statistically significant predictors were, in descending order of their importance: use of Spanish ($\beta = .23, p < .001$), self-identification with Spain ($\beta = .19, p = .001$), Catalan competences ($\beta = .17, p = .035$), low socio-professional status ($\beta = .16, p = .024$), medium socio-professional status ($\beta = .16, p = .012$), self-identification with area of origin ($\beta = .15, p = .002$), gender ($\beta = .10, p = .019$), and being from Asia and Oceania ($\beta = -.10, p = .048$).

Therefore, favorable attitudes toward Spanish are more likely to be expressed by girls from families of low or medium socio-professional status, who use frequently Spanish, have a relatively strong self-identification with both Spain and their area of origin, and have a good command of Catalan. Their positive attitudes toward Spanish were also slightly favored by being from Europe than from Asia and Oceania.

Table 147. Summary of multiple regression for the predictors of attitudes toward Spanish in the case of immigrant students

	<i>b</i>	<i>SE b</i>	β	<i>p</i>
Constant	-0.82 [-4.02, 2.38]	1.58		.584
Grade	0.45 [-0.10, 1.01]	0.27	.08	.105
Gender	0.62 [0.12, 1.12]	0.25	.10	.019
SPS Medium	1.25 [0.22, 2.35]	0.51	.16	.012
SPS Low	1.01 [0.17, 1.96]	0.44	.16	.024
SCS Secondary	-0.40 [-0.97, 0.17]	0.30	-.07	.220
SCS Elementary	-0.49 [-1.28, 0.29]	0.42	-.07	.241
Catalan competences	0.03 [0.01, 0.05]	0.01	.17	.035
Spanish competences	.00 [-0.02, 0.03]	0.01	.01	.901
Use of Catalan	-0.05 [-0.43, 0.34]	0.20	-.01	.812
Use of Spanish	0.97 [0.36, 1.58]	0.32	.23	<.001
Use of L1	-0.10 [-0.76, 0.57]	0.33	-.02	.726
Self- identification with Catalonia	-0.23 [-0.65, 0.17]	0.20	-.08	.226
Self- identification with Spain	0.54 [0.21, 0.86]	0.17	.19	.001
Self-identification with area of origin	0.59 [0.16, 1.01]	0.22	.15	.002
AO Africa	-0.44 [-1.30, 0.48]	0.43	-.06	.334
AO Latin America	0.09 [-0.82, 0.99]	0.44	.02	.846
AO Asia&Oceania	-1.23 [-2.73, 0.25]	0.77	-.10	.048
Place of birth	-0.15 [-1.46, 1.09]	0.66	-.02	.810
Length of residence	-0.01 [-0.11, 0.10]	0.05	-.10	.906

Note: $R^2 = .22, p < .001$

Attitudes toward English

Finally, a simultaneous multiple regression was conducted to investigate the predictors of attitudes toward English. The model accounted for 11% of the variance. Among the variables analyzed, only place of birth ($\beta = -.17$, $p = .018$) and being from Asia and Oceania ($\beta = .13$, $p = .018$) had a significant effect.

Table 148. Summary of multiple regression for the predictors of attitudes toward English in the case of immigrant students

	<i>b</i>	<i>SE b</i>	β	<i>p</i>
Constant	2.39 [-2.33, 7.09]	2.54		.302
Grade	0.72 [-0.07, 1.57]	0.44	.08	.092
Gender	0.08 [-0.76, 0.91]	0.41	.01	.853
SPS Medium	-0.07 [-1.55, 1.41]	0.80	-.01	.924
SPS Low	-0.58 [-2.12, 1.05]	0.80	-.10	.404
SCS Secondary	0.03 [-1.05, 1.12]	0.56	.00	.958
SCS Elementary	-0.47 [-1.83, 0.95]	0.70	-.04	.468
Catalan competences	0.04 [-0.01, 0.07]	0.02	.14	.107
Spanish competences	0.01 [-0.03, 0.06]	0.02	.05	.573
Use of Catalan	0.55 [-0.13, 1.27]	0.34	.11	.097
Use of Spanish	0.43 [-0.44, 1.28]	0.43	.07	.300
Use of L1	0.19 [-0.74, 1.08]	0.46	.03	.664
Self- identification with Catalonia	-0.14 [-0.73, 0.47]	0.29	-.03	.626
Self- identification with Spain	-0.23 [-0.73, 0.26]	0.25	-.06	.346
Self-identification with area of origin	0.54 [-0.19, 1.23]	0.35	.09	.064
AO Africa	0.23 [-1.35, 1.82]	0.81	.02	.749
AO Latin America	0.72 [-0.71, 2.25]	0.73	.08	.302
AO Asia&Oceania	2.29 [0.54, 4.10]	0.90	.13	.018
Place of birth	-2.35 [-4.10, -0.69]	0.86	-.17	.018
Length of residence	-0.06 [-0.22, 0.09]	0.08	-.06	.480

Note: $R^2 = .11$, $p < .001$

5.1.3.2.2. Explanatory models for the group from Europe

Following, a series of simultaneous multiple regression were carried out to investigate the predictors of attitudes toward Catalan, Spanish, and English in the case of students from Europe (see table 149 and table 150).

Table 149. Descriptive statistics for the investigated variables. Europe

Variables	M	95% BCa CIs	SD
1. Attitudes toward Catalan	5.19	[4.17, 6.21]	4.84
2. Attitudes toward Spanish	6.78	[6.22, 7.31]	2.68
3. Attitudes toward English	5.52	[4.36, 6.51]	4.99
4. Grade	0.45	[0.35, 0.55]	0.50
5. Gender	0.51	[0.40, 0.61]	0.50
6. SPS Medium	0.16	[0.09, 0.24]	0.37
7. SPS Low	0.67	[0.57, 0.77]	0.47
8. SCS Secondary	0.36	[0.26, 0.46]	0.48
9. SCS Elementary	0.18	[0.11, 0.25]	0.38
10. Catalan competences	56.08	[52.83, 59.34]	15.35
11. Spanish competences	53.61	[50.08, 57.15]	16.18
12. Use of Catalan	1.80	[1.62, 1.99]	0.86
13. Use of Spanish	2.12	[1.96, 2.28]	0.79
14. Use of L1	0.94	[0.80, 1.08]	0.76
15. S. ident. Catalonia	2.18	[1.97, 2.39]	1.01
16. S. ident. with Spain	2.49	[2.31, 2.67]	0.97
17. S. ident. area of origin	3.61	[3.48, 3.72]	0.63
18. Place of birth	0.94	[0.89, 0.99]	0.23
19. Length of residence	4.63	[3.94, 5.39]	3.67

Table 150. Correlation matrix for the variables examined in the multiple regressions explaining attitudes toward Catalan, Spanish, and English. Europe

Variables	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1. Attitudes Catalan			-.05	.09	-.06	.08	-.05	.01	.23*	-.01	.45*	-.38*	.01	.51*	-.09	-.03	-.10	.00
2. Attitudes Spanish			.06	.25*	.09	.04	.13	-.17	.31*	.25	-.11	.24*	-.13	-.01	.08	-.07	.03	.11
3. Attitudes English			.07	-.13	.05	-.15	.05	-.36*	.16	.03	.03	-.02	-.03	-.03	-.12	.04	-.14	.05
4. Grade				.04	-.14	.15	.22*	-.19*	.13	.27*	-.07	.06	.17	-.05	-.18*	-.05	.12	.05
5. Gender					-.07	.27*	.13	.05	-.03	.04	-.29*	.08	.02	-.09	.02	-.05	.05	-.09
6. SPS Medium						-.62*	.19*	-.12	.10	.12	-.09	.09	-.23*	-.11	-.03	.07	-.03	.07
7. SPS Low							.07	.26*	-.18*	-.07	-.03	-.10	.17	-.14	-.04	.02	.25*	-.28*
8. SCS Secondary								-.35*	.29*	.35*	-.07	.05	.01	-.18*	-.22*	.02	-.02	.02
9. SCS Elementary									-.28*	-.19*	-.07	-.07	.09	.03	.25*	.06	.11	-.04
10. Catalan competences										.76*	.38*	.01	-.32*	.17	-.16	-.31*	-.36*	.54*
11. Spanish competences											.08	.19*	-.27*	-.07	-.18*	-.34*	-.21*	.48*
12. Use of Catalan												-.33*	-.28*	.34*	-.09	-.11	-.15	.29*
13. Use of Spanish													-.29*	-.23*	.28*	-.11	.01	.13
14. Use of L1														.04	-.07	.39*	.19*	-.28*
15. S. ident. Catalonia															.35*	-.05	-.20*	.13
16. S. ident. Spain																-.05	.08	.02
17. S. ident. area of origin																	.47*	-.48*
18. Place of birth																		-.64*
19. Length of residence																		

Note: * $p < .05$; SPS – socio-professional status; SCS – socio-cultural status;

Attitudes toward Catalan

A simultaneous multiple regression analysis was conducted to investigate which variables are the most influential with respect to the attitudes toward Catalan held by students from Europe. The results, which are included in table 151, show that model proposed was significant and explained 51% of the variance. The most influential variables were found to be self-identification with Catalonia ($\beta = .48, p < .001$), use of Catalan ($\beta = .31, p = .014$), and gender ($\beta = .19, p = .044$).

Table 151. Summary of multiple regression for the predictors of attitudes toward Catalan in the case of immigrant students from Europe

	<i>b</i>	<i>SE b</i>	β	<i>p</i>
Constant	-0.78 [-11.72, 8.52]	5.61		.865
Grade	-0.32 [-2.42, 1.49]	1.02	-.03	.735
Gender	1.83 [0.21, 3.41]	0.86	.19	.044
SPS Medium	2.42 [-1.74, 6.64]	2.12	.18	.141
SPS Low	1.84 [-1.82, 5.78]	1.98	.18	.188
SCS Secondary	-0.62 [-3.33, 2.28]	1.35	-.06	.557
SCS Elementary	0.42 [-1.94, 2.53]	1.29	.03	.746
Catalan competences	0.07 [-0.04, 0.17]	0.05	.22	.197
Spanish competences	-0.03 [-0.11, 0.06]	0.05	-.10	.518
Use of Catalan	1.74 [0.49, 3.07]	0.60	.31	.014
Use of Spanish	-0.30 [-1.47, 1.01]	0.59	-.05	.649
Use of L1	0.54 [-0.73, 2.15]	0.65	.09	.447
S. ident. Catalonia	2.33 [1.21, 3.36]	0.55	.48	.000
S. ident. Spain	-1.07 [-2.07, 0.11]	0.54	-.21	.052
S. ident. area of origin	-0.57 [-2.32, 1.38]	0.91	-.07	.501
Place of birth	-0.73 [-6.73, 5.73]	3.19	-.04	.783
Length of residence	-0.24 [-0.64, 0.35]	0.23	-.18	.206

Note: $R^2 = .51, p < .001$

Attitudes toward Spanish

Similarly, the explanatory model built for the attitudes toward Spanish held by immigrant students from Europe was significant and accounted for 30% of the variance of attitudes toward Spanish (see table 152). Among the variables investigated, only Catalan competences was found to be a significant predictor ($\beta = .56, p = .005$).

Table 152. Summary of multiple regression for the predictors of attitudes toward Spanish in the case of immigrant students from Europe

	<i>b</i>	<i>SE b</i>	β	<i>p</i>
Constant	-1.74 [-7.97, 5.71]	3.34		.565
Grade	-0.19 [-1.50, 1.19]	0.67	-.04	.755
Gender	0.87 [-0.32, 1.87]	0.59	.16	.144
SPS Medium	1.58 [-0.93, 4.38]	1.30	.22	.145
SPS Low	1.65 [-0.55, 4.13]	1.08	.29	.074
SCS Secondary	-0.53 [-2.11, 1.01]	0.75	-.10	.440
SCS Elementary	-1.31 [-2.95, 0.70]	0.88	-.19	.127
Catalan competences	0.10 [0.04, 0.15]	0.03	.56	.005
Spanish competences	-0.04 [-0.10, 0.03]	0.03	-.22	.247
Use of Catalan	-0.67 [-1.46, 0.22]	0.43	-.22	.143
Use of Spanish	0.60 [-0.16, 1.27]	0.43	.18	.174
Use of L1	0.06 [-0.83, 0.79]	0.46	.02	.907
S. ident. Catalonia	0.15 [-0.74, 1.15]	0.47	.06	.671
S. ident. Spain	0.17 [-0.81, 1.02]	0.49	.06	.643
S. ident. area of origin	-0.04 [-1.24, 1.04]	0.60	-.01	.946
Place of birth	2.52 [-1.06, 6.78]	2.00	.22	.150
Length of residence	0.12 [-0.17, 0.31]	0.13	.16	.351

Note: $R^2 = .30, p = .029$

Attitudes toward English

A simultaneous multiple regression with attitudes toward English as criterion was conducted to investigate its respective predictors. The results, presented in table 153, showed that the model was significant and explained 20% of the total variance of attitudes toward English. However, having parents with elementary level education was the only variable that had a significant influence ($\beta = -.34, p = .011$).

Table 153. Summary of multiple regression for the predictors of attitudes toward English in the case of immigrant students from Europe

	<i>b</i>	<i>SE b</i>	β	<i>p</i>
Constant	7.55 [-6.92, 20.68]	6.84		.213
Grade	0.90 [-1.73, 3.66]	1.24	.09	.466
Gender	-1.16 [-3.33, 0.92]	1.07	-.12	.325
SPS Medium	0.24 [-4.65, 5.36]	2.59	.02	.911
SPS Low	0.37 [-4.31, 6.04]	2.51	.04	.838
SCS Secondary	-1.28 [-4.66, 2.34]	1.70	-.12	.355
SCS Elementary	-4.41 [-8.11, 0.41]	1.99	-.34	.011
Catalan competences	0.09 [-0.06, 0.24]	0.07	.28	.190
Spanish competences	-0.06 [-0.19, 0.07]	0.07	-.19	.348
Use of Catalan	-0.60 [-2.74, 1.71]	1.10	-.10	.508
Use of Spanish	-0.38 [-2.09, 1.28]	0.87	-.06	.664
Use of L1	-0.31 [-2.21, 1.29]	0.98	-.05	.739
S. ident. Catalonia	-0.58 [-1.94, 0.96]	0.74	-.12	.410
S. ident. Spain	0.19 [-1.37, 1.46]	0.67	.04	.788
S. ident. area of origin	1.12 [-1.51, 3.99]	1.39	.14	.311
Place of birth	-3.90 [-12.05, 2.39]	3.61	-.18	.264
Length of residence	-0.05 [0.64, 0.37]	0.27	-.04	.830

Note: $R^2 = .20, p = .350$

5.1.3.2.3. Explanatory models for the group from Africa

A series of simultaneous multiple regression was conducted to investigate the combined effect of the variables of interest on the attitudes toward Catalan, Spanish, and English of immigrant students coming from Africa (see table 154 and table 155).

Table 154. Descriptive statistics for the investigated variables. Africa

Variables	M	95% BCa CIs	SD
1. Attitudes toward Catalan	6.42	[5.67, 7.24]	0.37
2. Attitudes toward Spanish	6.12	[5.45, 6.82]	3.49
3. Attitudes toward English	5.66	[4.71, 6.50]	4.66
4. Grade	0.45	[0.36, 0.55]	0.05
5. Gender	0.54	[0.44, 0.63]	0.05
6. SPS Medium	0.16	[0.09, 0.23]	0.04
7. SPS Low	0.81	[0.73, 0.88]	0.04
8. SCS Secondary	0.42	[0.33, 0.50]	0.05
9. SCS Elementary	0.41	[0.31, 0.50]	0.05
10. Catalan competences	53.48	[49.86, 57.03]	1.77
11. Spanish competences	46.69	[43.13, 50.23]	1.83
12. Use of Catalan	2.10	[1.95, 2.25]	0.07
13. Use of Spanish	2.08	[1.92, 2.23]	0.08
14. Use of L1	0.60	[0.48, 0.73]	0.06
15. S. ident. Catalonia	2.54	[2.33, 2.74]	0.10
16. S. ident. Spain	2.52	[2.33, 2.71]	0.10
17. S. ident. area of origin	3.49	[3.34, 3.63]	0.07
18. Place of birth	0.72	[0.63, 0.80]	0.04
19. Length of residence	8.36	[7.39, 9.33]	0.49

Table 155. Correlation matrix for the variables examined in the multiple regressions explaining attitudes toward Catalan, Spanish, and English. Africa

Variables	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1. Attitudes Catalan			.18*	.23*	-.04	-.01	.09	-.10	.09	.03	.35*	-.27*	.02	.32*	.15	-.13	.07	-.01
2. Attitudes Spanish			.00	.15	.04	-.02	.06	-.17*	.24*	.26*	-.05	.35*	-.10	-.15	.17*	.02	-.12	.22*
3. Attitudes English			.05	.20*	.04	-.06	.02	.05	.31*	.27*	.03	.15	-.09	.05	.11	.01	-.27*	.33*
4. Grade				.05	-.14	.05	.08	-.13	.05	.03	.05	-.11	.17*	.00	.02	.06	.15	-.09
5. Gender					.04	-.06	-.06	-.01	.12	.09	-.07	.07	.12	.12	.10	-.15	-.12	.13
6. SPS Medium						-.91*	.21*	-.31*	.02	.16	-.01	.07	-.25*	-.06	-.02	-.19*	.05	-.08
7. SPS Low							-.13	.35*	-.03	-.20*	-.03	-.09	.29*	.02	-.04	.19*	.04	.05
8. SCS Secondary								-.70*	.10	.12	-.07	.07	.00	.01	.04	-.12	-.02	.01
9. SCS Elementary									-.05	-.12	.09	-.14	.01	.14	.07	.05	.01	.00
10. Catalan competences										.83*	.27*	.31*	-.37*	.13	.00	-.16*	-.32*	.63*
11. Spanish competences											.06	.46*	-.44*	.00	-.03	-.16*	-.30*	.58*
12. Use of Catalan												-.32*	-.41*	.37*	.09	-.24*	-.05	.13
13. Use of Spanish													-.17*	-.27*	-.02	.01	-.14	.24*
14. Use of L1														-.24*	-.16	.32*	.16*	-.28*
15. S. ident. Catalonia															.63*	-.25*	-.23*	.14
16. S. ident. Spain																-.17*	-.26*	.15
17. S. ident. area of origin																	.19*	-.16
18. Place of birth																		-.75*
19. Length of residence																		

Note: * $p < .05$; SPS – socio-professional status; SCS – socio-cultural status;

Attitudes toward Catalan

A hierarchical multiple regression was conducted to investigate the most influential variables with respect to the attitudes toward Catalan of students from Africa. The model was significant and explained 33% of the variance of attitudes toward Catalan, as it can be seen in table 156. The most influential variables were use of Catalan ($\beta = .35$, $p = .004$) and gender ($\beta = .21$, $p = .026$).

Table 156. Summary of multiple regression for the predictors of attitudes toward Catalan in the case of immigrant students from Africa

	<i>b</i>	<i>SE b</i>	β	<i>p</i>
Constant	-1.20 [-9.76, 6.76]	4.21		.775
Grade	0.29 [-1.21, 1.82]	0.71	.04	.694
Gender	1.62 [0.10, 3.32]	0.75	.21	.026
SPS Medium	-0.90 [-4.24, 2.66]	1.73	-.09	.703
SPS Low	-0.20 [-3.66, 3.11]	1.69	-.02	.932
SCS Secondary	0.14 [-1.88, 2.24]	1.03	.02	.893
SCS Elementary	-1.24 [-3.56, 1.23]	1.65	-.16	.255
Catalan competences	-0.03 [-0.12, 0.05]	0.04	-.16	.416
Spanish competences	0.06 [-0.04, 0.15]	0.04	.30	.125
Use of Catalan	1.86 [0.59, 3.06]	0.68	.35	.004
Use of Spanish	-0.77 [-1.71, 0.17]	0.48	-.16	.156
Use of L1	1.20 [-0.38, 2.68]	0.83	.21	.092
S. ident. Catalonia	0.82 [-0.31, 2.05]	0.59	.21	.117
S. ident. Spain	0.17 [-0.77, 1.16]	0.48	.05	.714
S. ident. area of origin	-0.16 [-1.05, 0.74]	0.46	-.03	.746
Place of birth	1.56 [-0.82, 4.40]	1.19	.19	.199
Length of residence	0.03 [-0.20, 0.26]	0.12	.04	.836

Note: $R^2 = .33$, $p = .001$

Attitudes toward Spanish

The model constructed for the attitudes toward Spanish held by immigrant students from Africa was significant and explained 32% of the total variance (see table 157). Accordingly, among the variables examined, self-identification with Spain ($\beta = .47, p < .001$), self-identification with Catalonia ($\beta = -.40, p = .004$), and having parents with elementary level education ($\beta = -.29, p = .047$) had a significant influence.

Table 157. Summary of multiple regression for the predictors of attitudes toward Spanish in the case of immigrant students from Africa

	<i>b</i>	<i>SE b</i>	β	<i>p</i>
Constant	-3.04 [-9.79, 4.14]	3.49		.436
Grade	-0.07 [-1.43, 1.38]	0.74	-.01	.924
Gender	0.96 [-0.38, 2.40]	0.69	.14	.151
SPS Medium	3.11 [-0.83, 6.47]	1.85	.33	.160
SPS Low	3.76 [0.33, 7.13]	1.73	.42	.083
SCS Secondary	-1.20 [-3.21, 0.97]	0.99	-.17	.218
SCS Elementary	-2.03 [-4.31, 0.27]	1.01	-.29	.047
Catalan competences	0.03 [-0.04, 0.09]	0.03	.13	.508
Spanish competences	0.01 [-0.06, 0.08]	0.03	.05	.787
Use of Catalan	0.49 [-0.57, 1.50]	0.58	.10	.409
Use of Spanish	0.78 [-0.33, 1.87]	0.56	.18	.125
Use of L1	-0.18 [-1.46, 1.15]	0.67	-.03	.786
S. ident. Catalonia	-1.43 [-2.42, -0.30]	0.53	-.40	.004
S. ident. Spain	1.64 [0.62, 2.59]	0.48	.47	.000
S. ident. area of origin	0.24 [-0.70, 1.07]	0.48	.05	.601
Place of birth	0.52 [-1.93, 2.95]	1.10	.07	.646
Length of residence	0.05 [-0.20, 0.34]	0.12	.07	.668

Note: $R^2 = .32, p = .003$

Attitudes toward English

The simultaneous multiple regression conducted to explain the attitudes toward English of immigrant students coming from Africa did not yield significant results (see table 158).

Table 158. Summary of multiple regression for the predictors of attitudes toward English in the case of immigrant students from Africa

	<i>b</i>	<i>SE b</i>	β	<i>p</i>
Constant	-1.07 [-12.64, 11.19]	6.00		.849
Grade	0.80 [-1.02, 3.01]	1.00	.09	.417
Gender	1.55 [-0.69, 3.54]	1.15	.17	.109
SPS Medium	-0.18 [-5.53, 5.75]	2.84	-.01	.955
SPS Low	-1.76 [-6.60, 3.13]	2.45	-.15	.572
SCS Secondary	1.47 [-1.10, 4.16]	1.35	.16	.297
SCS Elementary	2.18 [-0.32, 5.08]	1.34	.23	.136
Catalan competences	0.05 [-0.05, 0.15]	0.05	.19	.360
Spanish competences	-0.01 [-0.12, 0.09]	0.05	-.04	.854
Use of Catalan	0.08 [-1.56, 1.51]	0.81	.01	.930
Use of Spanish	0.23 [-1.10, 1.49]	0.70	.04	.758
Use of L1	-0.10 [-2.07, 1.92]	1.03	-.02	.913
S. ident. Catalonia	-0.44 [-1.79, 0.80]	0.71	-.09	.530
S. ident. Spain	0.37 [-0.95, 1.86]	0.69	.08	.554
S. ident. area of origin	0.81 [-1.18, 2.48]	0.94	.13	.227
Place of birth	-1.32 [-4.20, 1.73]	1.50	-.13	.414
Length of residence	0.13 [-0.20, 0.48]	0.16	.14	.472

Note: $R^2 = .20$, $p = .166$

5.1.3.2.4. Explanatory models for the group from Latin America

Following, we examined the predictors of attitudes toward Catalan, Spanish, and English in the case of students coming from Latin America. Table 159 contains the means and standard deviations for the variables investigated, while the correlation matrix can be found in table 160.

Table 159. Descriptive statistics for the investigated variables. Europe

Variables	M	95% BCa CIs	SD
1. Attitudes toward Catalan	3.87	[3.21, 4.58]	5.03
2. Attitudes toward Spanish	7.50	[7.14, 7.83]	2.55
3. Attitudes toward English	6.30	[5.74, 6.82]	3.98
4. Grade	0.51	[0.45, 0.58]	0.50
5. Gender	0.49	[0.43, 0.56]	0.50
6. SPS Medium	0.19	[0.14, 0.24]	0.39
7. SPS Low	0.63	[0.57, 0.70]	0.48
8. SCS Secondary	0.42	[0.36, 0.49]	0.50
9. SCS Elementary	0.11	[0.07, 0.15]	0.31
10. Catalan competences	53.52	[51.39, 55.75]	16.08
11. Spanish competences	58.95	[57.15, 60.82]	14.28
12. Use of Catalan	1.28	[1.18, 1.38]	0.73
13. Use of Spanish	2.87	[2.84, 2.90]	0.23
14. Use of L1	0.04	[0.02, 0.07]	0.23
15. S. ident. Catalonia	1.77	[1.66, 1.88]	0.91
16. S. ident. Spain	2.05	[1.90, 2.20]	1.12
17. S. ident. area of origin	3.57	[3.45, 3.67]	0.78
18. Place of birth	0.96	[0.93, 0.98]	0.20
19. Length of residence	4.32	[3.89, 4.77]	3.43

Table 160. Correlation matrix for the variables examined in the multiple regressions explaining attitudes toward Catalan, Spanish, and English. Immigrant group

Variables	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1. Attitudes Catalan			.13	.08	-.04	.00	-.07	.02	.12	.09	.36	-.24	.05	.30	.24	-.08	-.06	.05
2. Attitudes Spanish			.11	.10	.03	-.04	-.09	.03	.15*	.15*	-.02	.19*	-.13*	.06	.04	.24*	.05	-.04
3. Attitudes English			.15*	.04	.05	-.07	.02	-.05	.19*	.23*	.17*	-.03	.08	-.03	-.19*	.11	-.03	.03
4. Grade				.01	-.01	-.09	-.01	-.02	.11	.18	.21	-.08	.14	.07	.03	-.02	-.02	.06
5. Gender					.01	-.04	.06	-.04	.00	.00	.07	.03	.06	-.05	-.05	.13	-.07	-.16
6. SPS Medium						-.63	-.02	-.13	-.01	.00	.02	.01	.08	.02	-.01	.01	.04	.04
7. SPS Low							.28	.23	-.10	-.13	.02	-.03	-.12	-.04	-.04	.00	-.06	-.10
8. SCS Secondary								-.30	-.03	-.04	.10	-.04	.06	.00	.00	-.04	-.20	.01
9. SCS Elementary									-.09	-.05	-.09	.05	-.04	.06	.06	.02	.07	-.07
10. Catalan competences										.74	.16	-.04	.03	.08	-.07	.07	-.17	.46
11. Spanish competences											.06	-.01	.03	.07	-.05	.06	-.14	.34
12. Use of Catalan												-.38	-.06	.45	.19	-.13	-.15	.15
13. Use of Spanish													-.30	-.29	-.16	.04	.09	-.10
14. Use of L1														.05	.12	-.06	-.01	-.07
15. S. ident. Catalonia															.62	-.19	-.13	.12
16. S. ident. Spain																-.26	-.07	.00
17. S. ident. area of origin																	.21	-.18
18. Place of birth																		-.67
19. Length of residence																		

Note: * $p < .05$; SPS – socio-professional status; SCS – socio-cultural status;

Attitudes toward Catalan

The results of the simultaneous multiple regression carried out for the attitudes toward Catalan of students from Latin America, summarized in table 161, showed that the model was significant and accounted for 20% of the variance of attitudes toward Catalan.

Table 161. Summary of multiple regression for the predictors of attitudes toward Catalan in the case of immigrant students from Latin America

	<i>b</i>	<i>SE b</i>	β	<i>p</i>
Constant	6.98 [-4.87, 17.48]	5.97		.274
Grade	0.56 [-0.67, 1.84]	0.67	.06	.414
Gender	0.73 [-0.43, 1.90]	0.66	.07	.270
SPS Medium	-0.29 [-2.10, 1.44]	0.97	-.02	.793
SPS Low	0.29 [-1.47, 1.95]	0.94	.03	.775
SCS Secondary	-1.19 [-2.69, 0.23]	0.75	-.12	.124
SCS Elementary	-0.01 [-2.57, 2.52]	1.28	.00	.995
Catalan competences	0.03 [-0.03, 0.08]	0.03	.10	.344
Spanish competences	0.00 [-0.06, 0.07]	0.03	.01	.920
Use of Catalan	1.61 [0.48, 2.85]	0.57	.24	.004
Use of Spanish	-2.43 [-5.66, 0.89]	1.53	-.11	.144
Use of L1	-0.08 [-6.26, 2.71]	2.36	.00	.961
S. ident. Catalonia	0.44 [-0.71, 1.81]	0.55	.08	.388
S. ident. Spain	0.59 [-0.11, 1.23]	0.39	.13	.128
S. ident. area of origin	-0.13 [-1.05, 0.87]	0.49	-.02	.763
Place of birth	-1.35 [-5.53, 2.43]	2.12	-.05	.559
Length of residence	-0.12 [0.44, 0.15]	0.16	-.08	.414

Note: $R^2 = .20, p < .001$

Nonetheless, only use of Catalan was found to have a significant influence on the attitudes toward Catalan ($\beta = .24, p = .004$).

Attitudes toward Spanish

The results of the simultaneous multiple regression, presented in table 162, indicated that the model was significant and explained 18% of the total variance.

Table 162. Summary of multiple regression for the predictors of attitudes toward Spanish in the case of immigrant students from Latin America

	<i>b</i>	<i>SE b</i>	β	<i>p</i>
Constant	-3.16 [-11.78, 4.05]	4.26		.336
Grade	0.65 [-0.01, 1.31]	0.34	.13	.064
Gender	0.34 [-0.25, 0.94]	0.31	.07	.314
SPS Medium	0.55 [-0.49, 1.77]	0.53	.09	.329
SPS Low	0.34 [-0.71, 1.36]	0.50	.06	.515
SCS Secondary	-0.50 [-1.32, 0.35]	0.41	-.10	.214
SCS Elementary	-0.12 [-1.35, 1.13]	0.62	-.01	.853
Catalan competences	0.02 [-0.01, 0.06]	0.02	.14	.177
Spanish competences	0.01 [-0.02, 0.04]	0.02	.05	.626
Use of Catalan	-0.09 [-0.69, 0.54]	0.30	-.03	.746
Use of Spanish	2.06 [0.17, 4.52]	1.10	.19	.015
Use of L1	-1.28 [-3.06, 2.50]	1.23	-.11	.120
S. ident. Catalonia	0.27 [-0.21, 0.81]	0.25	.10	.297
S. ident. Spain	0.24 [-0.12, 0.62]	0.19	.10	.227
S. ident. area of origin	0.78 [0.17, 1.38]	0.30	.24	.001
Place of birth	-0.89 [-3.67, 1.97]	1.34	-.07	.455
Length of residence	-0.09 [-0.26, 0.07]	0.08	-.12	.242

Note: $R^2 = .18$, $p = .001$

Furthermore, self-identification with the area of origin ($\beta = .24$, $p = .001$) and use of Spanish ($\beta = .19$, $p = .015$) were significant predictors of the attitudes toward Spanish held by students from Latin America.

Attitudes toward English

A simultaneous multiple regression model was conducted for attitudes toward English. As it can be seen in table 163, the model was significant, accounting for 15% of the variance. The attitudes toward English of students from Latin America was influenced mainly by self-identification with Spain ($\beta = -.22, p = .011$) and use of Catalan ($\beta = .22, p = .010$).

Table 163. Summary of multiple regression for the predictors of attitudes toward English in the case of immigrant students from Latin America

	<i>b</i>	<i>SE b</i>	β	<i>p</i>
Constant	0.60 [-11.50, 11.86]	5.82		.908
Grade	0.50 [-0.61, 1.59]	0.57	.06	.366
Gender	-0.17 [-1.19, 0.82]	0.51	-.02	.756
SPS Medium	0.01 [-1.53, 1.51]	0.86	.00	.987
SPS Low	-0.48 [-2.27, 1.37]	0.92	-.06	.558
SCS Secondary	0.14 [-1.05, 1.31]	0.65	.02	.822
SCS Elementary	0.10 [-1.77, 1.96]	0.94	.01	.918
Catalan competences	0.00 [-0.06, 0.06]	0.03	.01	.947
Spanish competences	0.06 [-0.01, 0.12]	0.03	.20	.042
Use of Catalan	1.18 [0.17, 2.22]	0.48	.22	.010
Use of Spanish	0.96 [-1.90, 3.80]	1.51	.06	.481
Use of L1	1.85 [-1.08, 4.04]	1.49	.11	.155
S. ident. Catalonia	0.09 [-0.75, 0.93]	0.41	.02	.821
S. ident. Spain	-0.80 [-1.50, -0.17]	0.35	-.22	.011
S. ident. area of origin	0.37 [-0.55, 1.32]	0.46	.07	.310
Place of birth	-1.38 [-5.42, 2.82]	2.07	-.07	.462
Length of residence	-0.12 [-0.38, 0.13]	0.13	-.11	.316

Note: $R^2 = .15, p = .001$

5.2. RESULTS - STUDY 2

The results of the second longitudinal study are presented in this chapter. First, we compared the attitudes expressed by participants in second and fourth grade to see if there were any changes. We also described the attitude change variables constructed by computing the difference between the attitudes expressed in 4th and in 2nd grade.

Second, we investigated the effects of the variables of interest on attitude change. Third, we explored the combined effect of these variables on attitude change, aiming to identify the most influential variables and to construct an explanatory model.

5.2.1. Description of attitudes change toward language

In order to see if the attitudes toward language changed significantly in the two-year period we used paired-samples t tests. However, these comparisons are at group level and it is possible that there is individual change that by being in both directions cancels itself out. In other words, if within the group there are students whose attitudes toward language decline and other students that show an improvement in attitudes, at group level it is possible that no change would be noticed.

Therefore, to obtain information regarding individual change, we used the raw difference between the attitudes toward language expressed in 4th grade and those expressed in 2nd grade. Following we present the corresponding results for each language.

5.2.1.1. Attitudes and attitude change toward Catalan

Generally, the attitudes toward Catalan expressed by students of immigrant origin were positive. At group level, there was an improvement from 2nd grade ($M = 5.31$ [4.30, 6.24], $SD = 4.24$) to the 4th grade ($M = 6.38$ [5.57, 7.12], $SD = 3.28$), students holding significantly more positive attitudes in 4th grade in the 2nd grade ($t_{(71)} = -2.37$, $p = .021$, $r = .14$). Figure 76 represents the corresponding means.

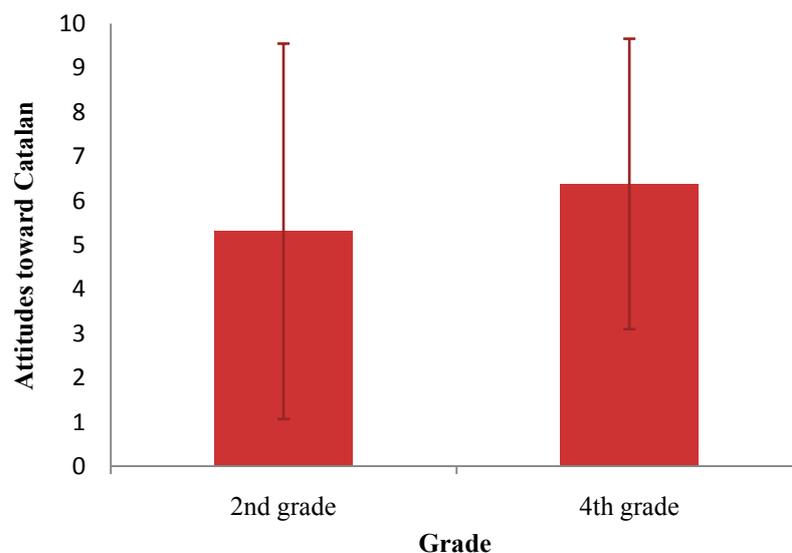


Figure 76. Means of attitudes toward Catalan by grade. Error bars represent plus and minus one standard deviation.

The next step consisted in computing the raw difference between the attitudes toward Catalan showed in 4th grade and those expressed in 2nd grade. The variable attitude change toward Catalan had a mean of 1.07 [0.21, 1.96] and a standard deviation of 3.83, also indicating that there was a general improvement of attitudes.

However, there was interindividual variation in the amount and direction of change. Of the total, 47.2% showed an increase in favorability, 26.4% maintained their attitudes at the same level, and 26.4% expressed less positive attitudes toward Catalan (see figure 77).

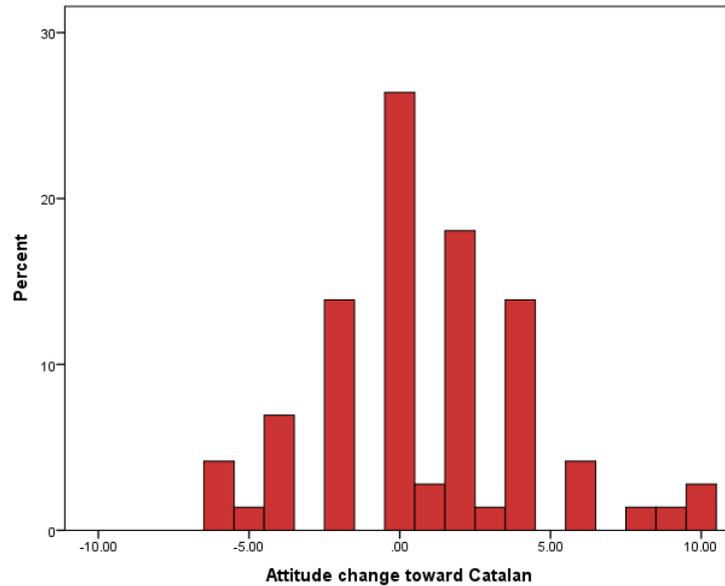


Figure 77. Distribution of attitude change toward Catalan

5.2.1.2. Attitudes and attitude change toward Spanish

The attitudes toward Spanish of immigrant students were positive both in 2nd ($M = 6.76$ [6.06, 7.41], $SD = 2.85$) and 4th grade ($M = 6.89$ [6.04, 7.65], $SD = 3.45$), as represented in figure 78.

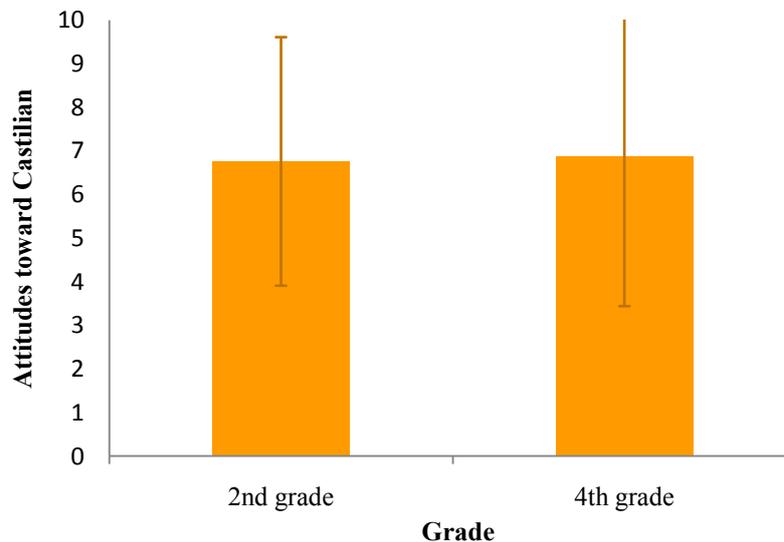


Figure 78. Means of attitudes toward Spanish by grade. Error bars represent plus and minus one standard deviation.

Furthermore, the attitudes toward Spanish seemed to be rather stable, as no significant difference between the two year levels was found ($t_{(71)} = -0.27$, $p = .789$, $r = .02$).

The change in attitudes toward Spanish had a group mean of 0.13 [-0.74, 0.99] and a standard deviation of 3.95. As it can be seen in figure 79, 50% of all students showed an increase in positive attitudes, 19.4% maintained their attitudes at a constant level, and 30.6% showed less positive attitudes toward Spanish.

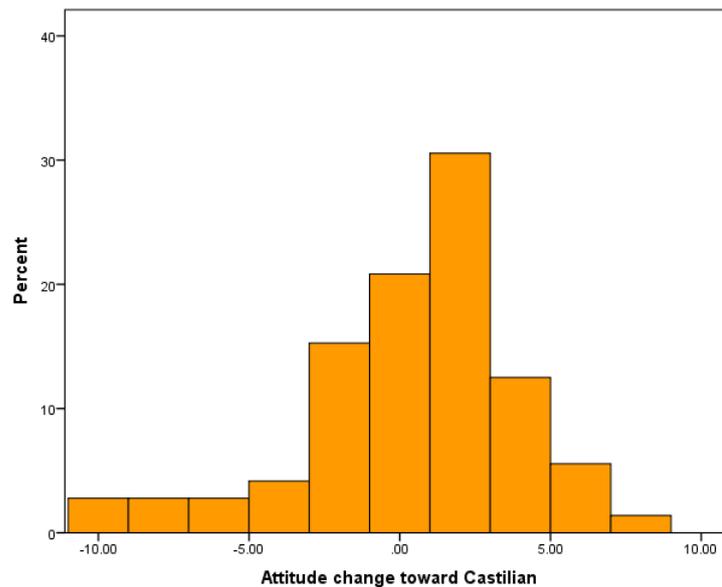


Figure 79. Distribution of attitude change toward Spanish

5.2.1.3. Attitudes and attitude change toward English

Overall, students of immigrant origin showed favorable attitudes toward English in 2nd grade ($M = 6.29$ [5.36, 7.19], $SD = 3.96$), as well as in 4th grade ($M = 6.42$ [5.38, 7.29], $SD = 4.24$). Moreover, no significant change in attitudes was found in the two year period investigated ($t_{(71)} = -0.27$, $p = .790$, $r = .02$), as it can be seen in figure 80.

At group level, there also seemed to be no relevant change, considering that the mean had a value of 0.13 [-0.76, 1.08]. However, the standard deviation, which had a value of 3.97, suggests that the individuals varied among themselves. Figure 81 shows the distribution of attitude change toward English. Thus, 34.7% of all students showed a decline, 26.4% maintained their attitudes, whereas 38.9% improved their attitudes toward English.

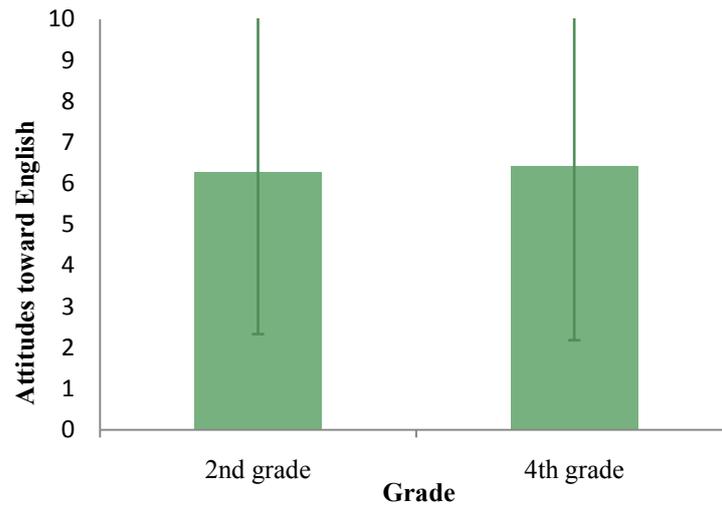


Figure 80. Means of attitudes toward English by grade. Error bars represent plus and minus one standard deviation.

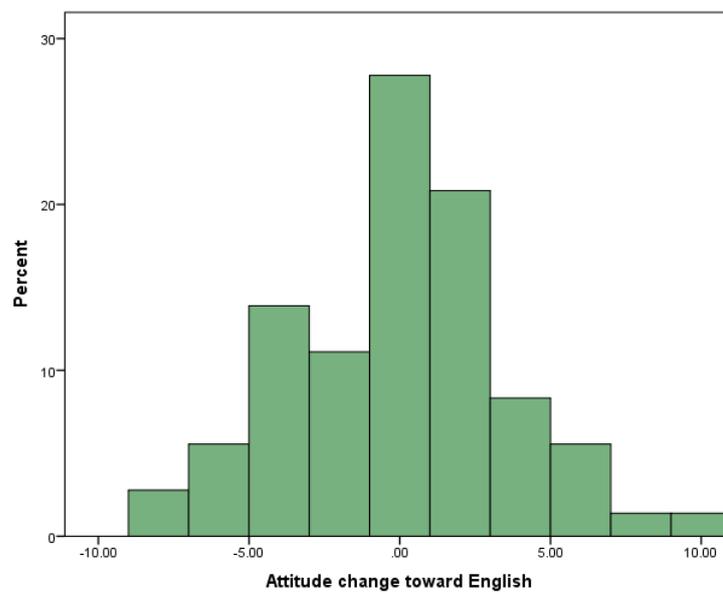


Figure 81. Distribution of attitude change toward English

5.2.1.4. Relationship between attitude changes toward language

Using Pearson correlations, we examined how attitude changes toward Catalan, Spanish, and English relate to one another. The results showed that changes in attitudes toward Spanish were positively associated with changes in attitudes toward English ($r_{(72)} = .31, p = .008$), while attitude change toward Catalan was not significantly related to attitude change toward Spanish ($r_{(72)} = .13, p = .270$) or English ($r_{(72)} = .04, p = .715$).

In conclusion, the only significant attitude change was found in the case of Catalan, as the attitudes toward Spanish and English seemed to remain relatively stable, as well as being positively correlated.

5.2.2. The effect of various variables on language attitudes

5.2.2.1. The effect of gender

A mixed-design ANOVA was used to investigate the effect of gender on patterns of attitude change. Gender was introduced as the between-subjects variable and attitude change as the within-subjects factor (see table 164).

Table 164. Descriptive statistics of attitude change by gender. 95% BCa confidence intervals based on 2000 bootstrap samples are reported in brackets.

Gender	N	Attitude change					
		Catalan		Spanish		English	
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Boys	32	0.81 [-0.41, 2.16]	3.92	-0.34 [-2.19, 1.22]	4.62	-0.41 [-1.56, 0.66]	3.33
Girls	40	1.27 [0.02, 2.51]	3.80	0.50 [-0.67, 1.50]	3.33	0.55 [-0.65, 1.85]	4.41

Similarly, a mixed-design ANOVA with language attitude change as the within-subjects factor and gender as the between-subjects factor showed that there was no significant effect of gender ($F_{(1, 70)} = 1.499, p = .225$), or of attitude change ($F_{(2, 140)} = 1.712, p = .184$). The interaction was also not significant ($F_{(2,140)} = .092, p = .912$), as it can be seen in figure 82. Thus, it seems that gender did not significantly influenced attitude change for none of the languages investigated.

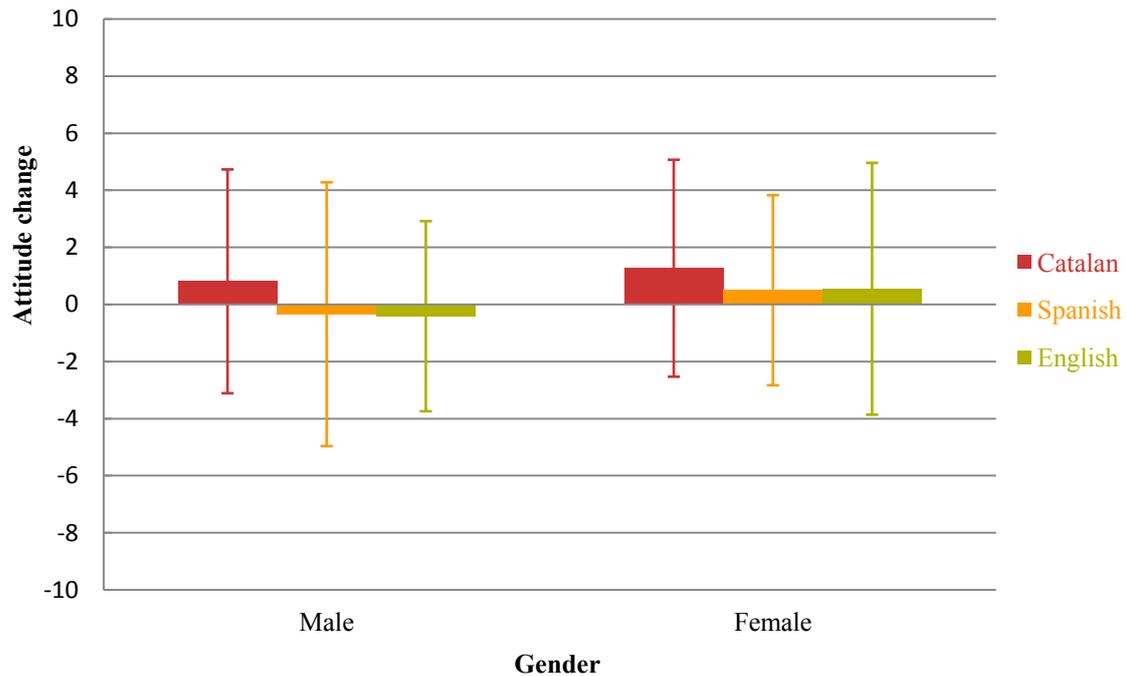


Figure 82. Means of attitude change toward Catalan, Spanish, and English by gender. Error bars represent plus and minus one standard deviation

5.2.2.2. *The effect of area of origin*

A possible factor that could determine the direction and the degree of attitude change is the area of origin of the students of immigrant descent. A mixed-design ANOVA was conducted to examine if there are different patterns of language attitude change for groups of students coming from Europe, Africa, Latin America, and Asia and Oceania.

This technique was chosen because it enables to simultaneously test if there are differences among the four areas of origin in attitude change toward a specific language, on one hand, and if there are differences in attitude change among the three languages studied for a particular area of origin, on the other hand. More precisely, it allowed identifying the areas where attitudes toward one of the languages changed to a higher degree, as well as seeing if for some languages attitudes changed more than for the other languages.

Area of origin was introduced as the between-subjects factor and attitudes change toward language as the within-subjects factor (see table 165).

Table 165. Descriptive statistics for attitude change by language and area of origin

Area of origin	N	Language attitude change					
		Catalan		Spanish		English	
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Europe	18	0.05 [-1.67, 1.93]	3.76	-0.61 [-2.67, 1.11]	4.07	0.50 [-1.72, 3.00]	5.33
Africa	20	2.45 [0.85, 4.30]	4.21	-0.70 [-3.10, 1.50]	5.00	-1.15 [-2.90, 0.80]	4.20
Latin America	28	1.25 [-0.07, 2.78]	3.56	0.82 [-0.28, 1.93]	3.14	0.53 [-0.57, 1.68]	2.94
Asia & Oceania	6	-1.33 [-3.67, 0.00]	2.42	1.83 [-0.17, 3.50]	2.32	1.33 [0.67, 2.00]	2.06

The results²⁶ showed that the interaction effect was significant ($F_{(6, 136)} = 2.249, p = .042$)²⁷, indicating that the attitudes of the three languages changed in different directions and at different degrees by the area of origin (see figure 83).

In order to examine the patterns of attitude change we tested the simple effects of each variable. According to the results of Bonferroni adjusted post hoc tests, significant differences were found only in the group from Africa, whose attitude change toward Catalan differed from Spanish and English. The change of attitudes toward Catalan registered for students coming from Africa was greater than the attitude change toward Spanish and English. The other comparisons failed to reach statistical or practical significance, as it can be seen in table 166 and table 167.

Table 166. Bonferroni adjusted post-hoc tests for the simple effects of area of origin

		Attitude change								
		Catalan			Spanish			English		
Area of origin		t	p	r	t	p	r	t	p	r
Europe	Africa	-1.97	.317	.23	0.07	1.000	.01	1.28	1.000	.15
	Latin America	-1.06	1.000	.12	-1.21	1.000	.14	-0.03	1.000	.00
	Asia	0.79	1.000	.09	-1.32	1.000	.16	-0.45	1.000	.05
Africa	Latin America	1.10	1.000	.13	-1.32	1.000	.16	-1.45	.909	.17
	Asia	2.17	.199	.26	-1.38	1.000	.16	-1.34	1.000	.16
Latin America	Asia	1.54	.775	.18	-0.57	1.000	.07	-0.45	1.000	.05

²⁶Mauchly's test of sphericity showed that the assumption of sphericity was met ($\chi^2_{(2)} = .988, p = .671$).

²⁷There were no significant main effects of language ($F_{(2, 136)} = .117, p = .890$), or of area of origin ($F_{(1, 68)} = 1.291, p = .260$).

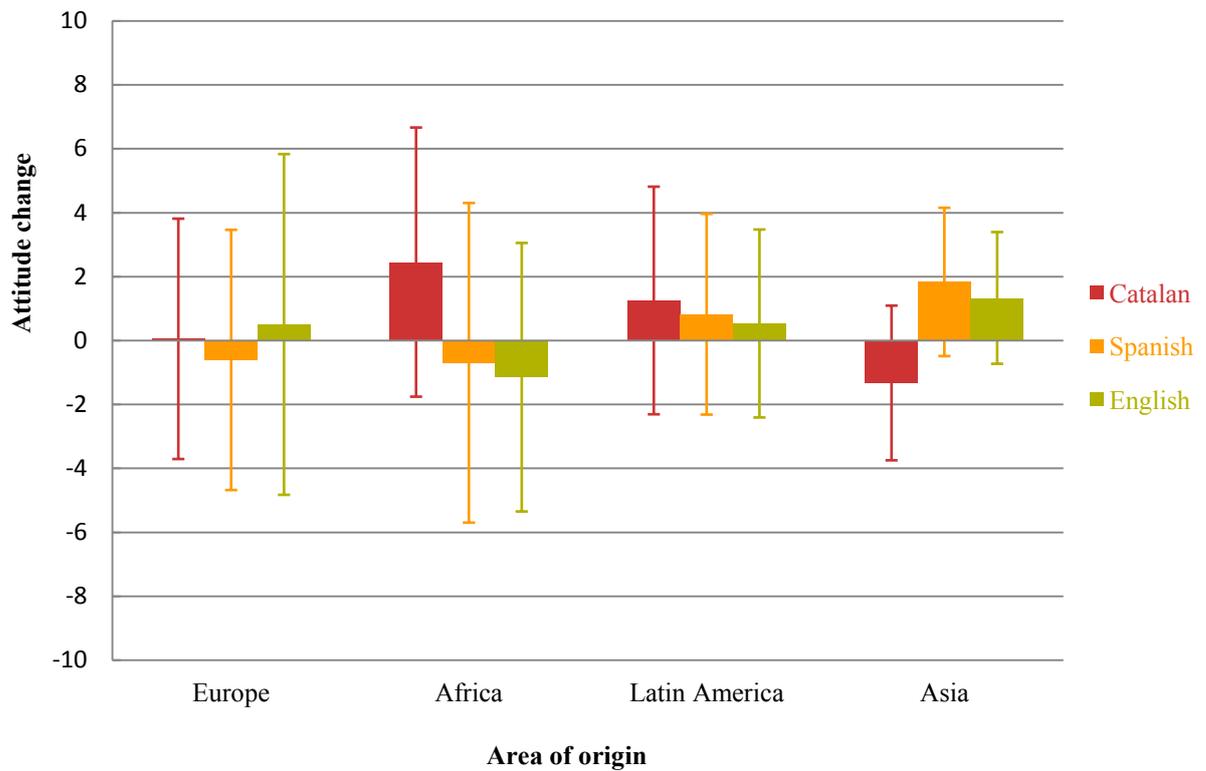


Figure 83. Means of attitude change by language and area or origin. Error bars represent plus and minus one standard deviation

Table 167. Bonferroni adjusted post-hoc tests for the simple effects of language

Attitude change		Area of origin											
		Europe			Africa			Latin America			Asia		
		t	p	r	t	p	r	t	p	r	t	p	r
Catalan	Spanish	0.57	1.000	.05	2.85	.017	0.24	0.46	1.000	.04	-1.57	.363	.13
	English	-0.37	1.000	.03	3.12	.008	0.27	0.73	1.000	.06	-1.27	.630	.11
Spanish	English	-1.00	.957	.09	0.43	1.000	0.04	0.32	1.000	.03	0.26	1.000	.02

In conclusion, the effect of area of origin was noticed only for the group that came Africa, who showed a more accentuated improvement of their attitudes toward Catalan in comparison with Spanish and English.

5.2.2.3. The effect of place of birth

To analyze the effect of place of birth a mixed-design ANOVA with place of birth as the between-subjects and attitude change as the within-subjects factor was used (see table 168).

Table 168. Descriptive statistics for attitude change by place of birth. 95% bias corrected and accelerated confidence intervals based on 2000 bootstrap samples are reported in brackets.

Place of birth	N	Attitude change					
		Catalan		Spanish		English	
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Catalonia	12	2.42 [0.08, 5.11]	5.07	0.67 [-1.25, 2.42]	3.92	-1.33 [-3.17, 0.42]	3.58
Foreign born	60	0.80 [-0.12, 1.70]	3.53	0.02 [-0.94, 1.00]	3.98	0.42 [-0.57, 1.50]	4.01

The results indicated that the interaction effect between attitude change and place of birth was not significant ($F_{(2, 1761, 09)} = 2.39, p = .095$). Since no interaction effect was found, we examined the main effects. The effect of place of birth was not significant ($F_{(1, 70)} = 0.04, p = .836$), as it can be seen in figure 84.

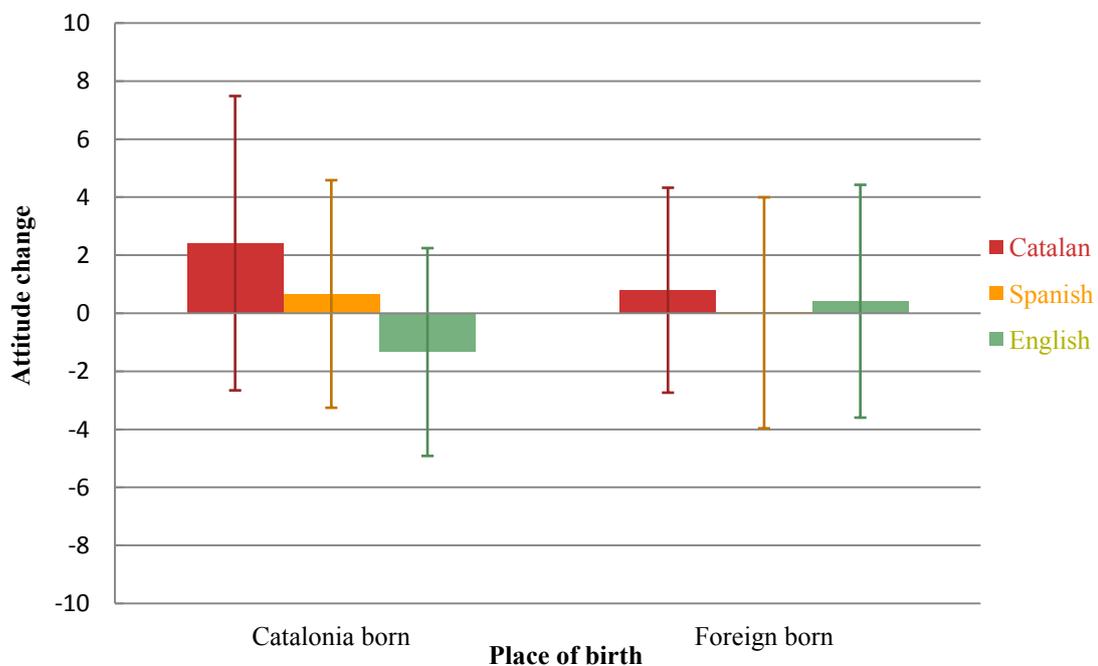


Figure 84. Means of attitude change toward Catalan, Spanish, and English by place of birth. Error bars represent plus and minus one standard deviation

Attitude change toward language was found to have a significant effect ($F_{(2, 1761, 09)} = 3.45, p = .034$). Significant differences were found between attitude change toward Catalan and toward English ($t_{(71)} = 2.48, p = .047, r = .29$), indicating that, regardless of place of birth, students changed to a higher degree their attitudes toward Catalan in comparison with their attitudes toward English. Attitude change toward Spanish was not significantly different from attitude change toward Catalan ($t_{(71)} = 1.56, p = .373, r = .19$) and English ($t_{(71)} = 1.10, p = .821, r = .29$).

5.2.2.4. The effect of socio-professional level

The socio-professional level of parents was also examined to see if it determines varied patterns of attitude change. A quick inspection of the descriptive statistics, presented in table 169, showed that most means are relatively close to the zero value of no change. In addition, the standard deviations suggest that the groups with medium and low socio-professional status show more variability of attitude change than the high-level group.

Table 169. Descriptive statistics for language attitude change by socio-professional level

Socio-professional level	N	Attitude change					
		Catalan		Spanish		English	
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
High	12	0.50 [-0.17, 1.33]	1.73	1.58 [0.00, 3.17]	3.17	1.92 [0.67, 3.46]	2.84
Medium	16	2.19 [0.25, 4.19]	3.87	-0.25 [-2.00, 1.25]	3.78	0.56 [-1.62, 3.06]	4.84
Low	44	0.82 [-0.53, 2.18]	4.20	-0.14 [-1.79, 1.25]	4.17	-0.52 [-1.61, 0.64]	3.79

A mixed-design ANOVA with a within-subjects factor of language (Catalan, Spanish, and English) and a between-subject factor of socio-professional level (low, medium, and high) was conducted.

According to the results²⁸ obtained the interaction between language and socio-professional level was not significant ($F_{(4, 138)} = 1.207, p = .311$). Furthermore, no main effects of change of attitudes toward language ($F_{(2, 138)} = .644, p = .527$) and socio-professional level ($F_{(2, 69)} = 1.387, p = .257$) were not significant. Thus, students whose

²⁸ Mauchly's test of sphericity ($\chi^2_{(2)} = 1.682, p = .431$) confirmed that the assumption of sphericity was met.

parents have a low, medium or high socio-professional level appeared to manifest a similar pattern of uniform attitude change (see figure 85).

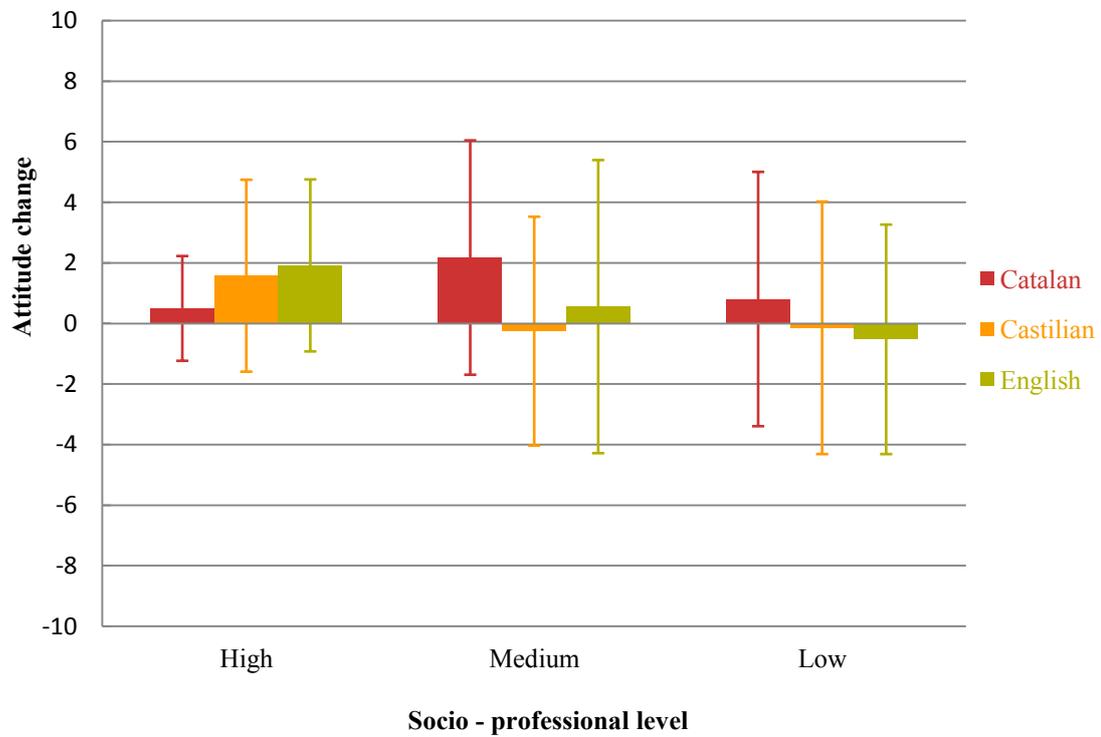


Figure 85. Means for language attitude change by socio-professional level. Error bars represent plus and minus one standard deviation

5.2.2.5. The effect of socio-cultural status

Another factor considered was parents' socio-cultural status. Its influence on attitude change, as well as its possible interaction with language, was tested through a mixed-design ANOVA where socio-cultural status was introduced as the between-subjects factor and attitude change toward Catalan, Spanish, and English as the within-subjects factor (see table 170 and figure 86).

Table 170. Descriptive statistics of attitudes toward language by area of origin. 95% BCa confidence intervals based on 2000 bootstrap samples are reported in brackets.

Socio-cultural status	N	Language attitude change					
		Catalan		Spanish		English	
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
University	28	0.21 [-0.78, 1.15]	2.90	1.00 [0.11, 1.89]	2.62	0.75 [-0.43, 1.96]	3.09
Secondary	28	1.32 [-0.03, 2.64]	3.87	-0.11 [-1.50, 1.18]	3.96	-0.04 [-1.53, 1.53]	4.57
Elementary	16	2.12 [0.00, 4.37]	4.98	-1.00 [-3.57, 1.31]	5.50	-0.69 [2.53, 1.47]	4.30

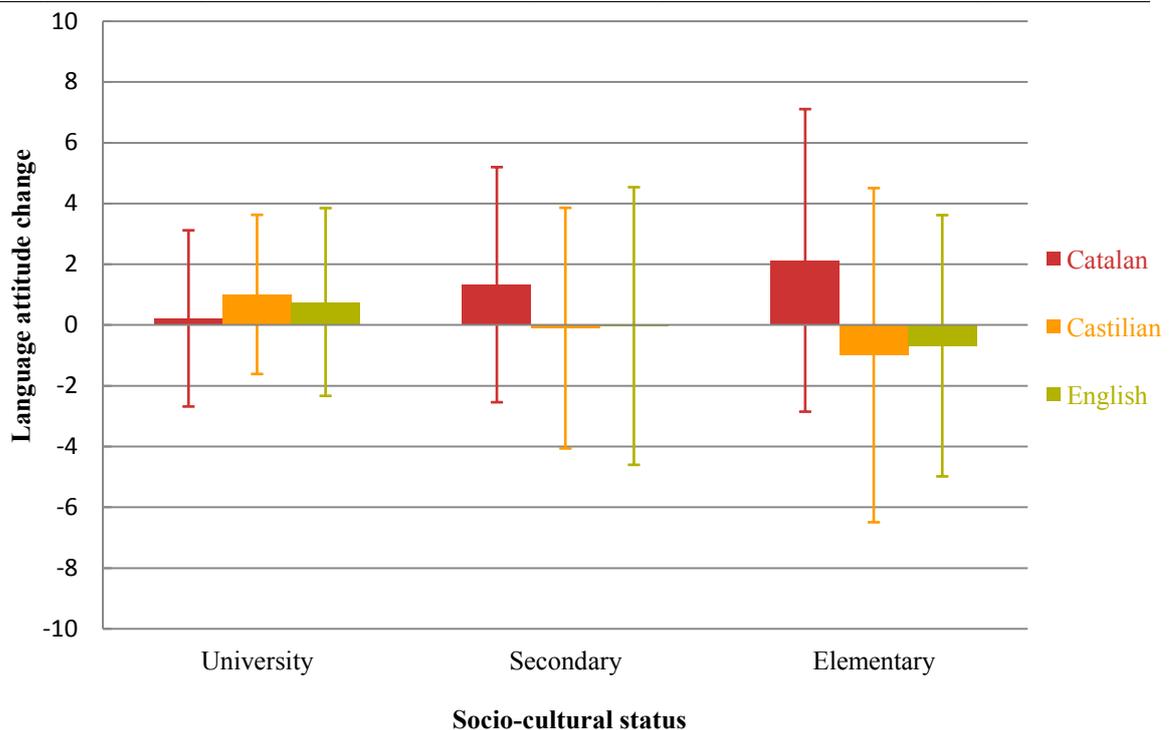


Figure 86. Means of attitude change toward Catalan, Spanish, and English by socio-cultural status. Error bars represent plus and minus one standard deviation.

The results²⁹ revealed that the interaction effect between socio-cultural status and attitude change was not significant ($F_{(4, 138)} = 1.947, p = .106$). The main effects of socio-cultural status ($F_{(2, 69)} = .197, p = .822$) and of attitude change toward language ($F_{(2, 138)} = 2.732, p = .069$) were also not significant. Therefore, change of attitudes toward Catalan, Spanish, and English did not vary by socio-cultural status.

5.2.2.6. The effect of length of residence

We were interested to see if the length of residence in Catalonia played a role in the explanation of language attitude change. Simple regression analyses were used to see if length of residence predicted attitude change toward each of the three languages investigated (see table 171).

Table 171. Descriptive statistics and correlation matrix for length of residence and attitude change

Variables	<i>M</i>	<i>SD</i>	Att. change Catalan	Att. change Spanish	Att. change English
1. Length of residence	6.21 [5.22, 7.25]	4.60	.18 [-.09, .42]	-.05 [-.31, .20]	-.11 [-.33, .12]
2. Attitude change - Catalan	1.07 [0.26, 2.01]	3.83		.13 [-.07, .33]	.01 [-.17, .20]
3. Attitude change - Spanish	0.13 [-0.87, 1.00]	3.95			.11 [-.17, .41]
4. Attitude change - English	0.13 [-0.78, 1.06]	3.97			

The results showed that length of residence did not significantly predict attitude change toward any of the languages investigated (see table 172).

Table 172. Summary of simple analyses of the effect of length of residence on attitude change toward Catalan, Spanish, and English. 95% BCa confidence intervals are reported in brackets.

	R^2	<i>b</i>	<i>SE b</i>	β	<i>p</i>
Model 1 – attitude change Catalan	.03	0.15 [-0.07, 0.37]	0.12	.18	.123
Model 2 – attitude change Spanish	.00	-0.04 [-0.26, 0.16]	0.11	-.05	.686
Model 3 – attitude change English	.03	-0.15 [-0.32, 0.01]	0.09	-.18	.142

To sum up, length of residence had no influence on attitude change.

²⁹ Mauchly's test showed that the assumption of sphericity was met ($\chi^2_{(2)} = 1.368, p = .505$).

5.2.2.7. The effect of Catalan competences

Another aspect we looked into was the well-documented relationship between language competences and attitudes. Since in the context of our present research the objective was to investigate the influence of competences on attitude change, we focused only on this part of the complex bidirectional relationship that exists between the two variables.

First, regarding Catalan competences, simple regression analyses were performed to see how the Catalan competences affected attitude change toward Catalan (see table 173).

Table 173. Descriptive statistics and correlation matrix for Catalan competences and attitude change

Variables	<i>M</i>	<i>SD</i>	Att. change Catalan	Att. change Spanish	Att. change English
1. Catalan competences	59.34 [56.41, 62.18]	12.34	-.01 [-.21, .17]	-.01 [-.21, .18]	-.06 [-.29, .16]
2. Attitude change - Catalan	1.07 [0.26, 2.01]	3.83		.13 [-.07, .33]	.01 [-.17, .20]
3. Attitude change - Spanish	0.13 [-0.87, 1.00]	3.95			.11 [-.17, .41]
4. Attitude change - English	0.13 [-0.78, 1.06]	3.97			

According to the results, the Catalan competences did not significantly predict attitude change toward Catalan, Spanish, and English (see table 174).

Table 174. Summary of simple analyses of the effect of Catalan competences on attitude change toward Catalan, Spanish, and English. 95% BCa confidence intervals are reported in brackets.

	<i>R</i> ²	<i>b</i>	<i>SE b</i>	β	<i>p</i>
Model 1 – attitude change Catalan	.00	0.00 [-0.07, 0.05]	0.03	-.01	.917
Model 2 – attitude change Spanish	.00	0.00 [-0.07, 0.07]	0.03	-.01	.953
Model 3 – attitude change English	.00	-0.02 [-0.09, 0.06]	0.04	-.06	.622

In conclusion, attitude change was independent of the Catalan competences held by the participants in 2nd grade.

5.2.2.8. The effect of Spanish competences

A similar approach, based on simple regression analysis, was employed to examine the influence of Spanish competences on attitude change. The descriptive statistics and correlations between variables are presented in table 175.

Table 175. Descriptive statistics and correlation matrix for Spanish competences and attitude change

Variables	<i>M</i>	<i>SD</i>	Att. change Catalan	Att. change Spanish	Att. change English
1. Spanish competences	53.93 [50.46, 57.26]	1.72	.09 [-.19, .32]	.02 [-.18, .20]	.09 [-.19, .35]
2. Attitude change - Catalan	1.07 [0.26, 2.01]	3.83		.13 [-.07, .33]	.01 [-.17, .20]
3. Attitude change - Spanish	0.13 [-0.87, 1.00]	3.95			.11 [-.17, .41]
4. Attitude change - English	0.13 [-0.78, 1.06]	3.97			

The results showed that attitude change toward Catalan were not influenced by Spanish competences, for any of the languages (see table 176)

Table 176. Summary of simple analyses of the effect of Spanish competences on attitude change toward Catalan, Spanish, and English. 95% BCa confidence intervals are reported in brackets.

	<i>R</i> ²	<i>b</i>	<i>SE b</i>	β	<i>p</i>
Model 1 – attitude change Catalan	.01	0.02 [-0.05, 0.09]	0.04	.01	.465
Model 2 – attitude change Spanish	.00	0.00 [-0.07, 0.07]	0.03	-.01	.953
Model 3 – attitude change English	.01	-0.02 [-0.09, 0.06]	0.04	-.06	.622

Therefore, the Spanish competences registered in 2nd grade did not influence attitude change.

5.2.2.9. The effect of use of Catalan

Students' use of Catalan in second grade was analyzed to see if it determines attitude change. Simple regression analyses were used for this purpose (see table 177).

Table 177. Descriptive statistics and correlation matrix for use of Catalan and attitude change

Variables	<i>M</i>	<i>SD</i>	Att. change Catalan	Att. change Spanish	Att. change English
1. Use of Catalan	1.94 [1.75, 2.12]	0.82	-.23* [-.43, -.02]	-.13 [-.36, .12]	-.17 [-.41, .07]
2. Attitudes change - Catalan	1.07 [0.26, 2.01]	3.83		.13 [-.07, .33]	.01 [-.17, .20]
3. Attitudes change - Spanish	0.13 [-0.87, 1.00]	3.95			.11 [-.17, .41]
4. Attitudes change - English	0.13 [-0.78, 1.06]	3.97			

The results indicated a possible effect of use of Catalan, which was found to account for 5% of the variance of attitude change toward Catalan³⁰. According to the results, use of Catalan and attitude change toward Spanish were not significantly associated. In addition, no significant effect of use of Catalan on attitude change toward English was found (see table 178).

Table 178. Summary of simple analyses of the effect of use of Catalan on attitude change toward Catalan, Spanish, and English. 95% BCa confidence intervals are reported in brackets.

	<i>R</i> ²	<i>b</i>	<i>SE b</i>	β	<i>p</i>
Model 1 – attitude change Catalan	.05	-1.08 [-2.13, -0.03]	0.52	-.23	.052
Model 2 – attitude change Spanish	.02	-0.61 [-1.83, 0.57]	0.62	-.13	.292
Model 3 – attitude change English	.03	-0.80 [-1.93, 0.39]	0.56	-.17	.165

In conclusion, use of Catalan determined only attitude change toward Catalan.

³⁰ The classical test of significance and the bootstrap confidence interval were contradictory in their indication of significance. We preferred the bootstrap results because are considered to be more accurate, especially for small samples that deviate from normality.

5.2.2.10. The effect of use of Spanish

Simple regression analyses were employed to investigate the influence of use of Spanish on attitude change toward Catalan, Spanish, and English (see table 179).

Table 179. Descriptive statistics and correlation matrix for use of Spanish and attitude change

Variables	<i>M</i>	<i>SD</i>	Att. change Catalan	Att. change Spanish	Att. change English
1. Use of Spanish	2.31 [2.13, 2.48]	0.78	.10 [-.12, .32]	.23* [-.07, .47]	-.03 [-.28, .24]
2. Attitudes change - Catalan	1.07 [0.26, 2.01]	3.83		.13 [-.07, .33]	.01 [-.17, .20]
3. Attitudes change - Spanish	0.13 [-0.87, 1.00]	3.95			.11 [-.17, .41]
4. Attitudes change - English	0.13 [-0.78, 1.06]	3.97			

As the results showed, use of Spanish was not associated with attitude change toward Catalan. Attitude change toward Spanish was also independent of use of Spanish. Finally, the results indicated that use of Spanish was not associated with attitude change toward English (see table 180).

Table 180. Summary of simple analyses of the effect of use of Spanish on attitude change toward Catalan, Spanish, and English. 95% BCa confidence intervals are reported in brackets.

	<i>R</i> ²	<i>b</i>	<i>SE b</i>	β	<i>p</i>
Model 1 – attitude change Catalan	.01	0.47 [-0.60, 1.45]	0.52	.10	.423
Model 2 – attitude change Spanish	.05	1.16 [-0.30, 2.60]	0.76	.23	.052
Model 3 – attitude change English	.01	-0.16 [-1.55, 1.15]	0.70	-.03	.794

Therefore, use of Spanish did not significantly contributed to attitude change for none of the three languages investigated.

5.2.2.11. The effect of use of L1

The effect of use of L1 was also investigated with the help of simple regression analyses (see table 181). The results indicated that use of L1 was not related to attitude change toward Catalan, Spanish, and English (see

table 182).

Table 181. Descriptive statistics and correlation matrix for use of L1 and attitude change

Variables	<i>M</i>	<i>SD</i>	Att. change Catalan	Att. change Spanish	Att. change English
1. Use of L1	0.30 [0.20, 0.43]	0.54	.06 [-.17, .33]	-.11 [-.43, .24]	.05 [-.21, .28]
2. Attitudes change - Catalan	1.07 [0.26, 2.01]	3.83		.13 [-.07, .33]	.01 [-.17, .20]
3. Attitudes change - Spanish	0.13 [-0.87, 1.00]	3.95			.11 [-.17, .41]
4. Attitudes change - English	0.13 [-0.78, 1.06]	3.97			

Table 182. Summary of simple analyses of the effect of use of L1 on attitude change toward Catalan, Spanish, and English. 95% BCa confidence intervals are reported in brackets.

	<i>R</i> ²	<i>b</i>	<i>SE b</i>	β	<i>p</i>
Model 1 – attitude change Catalan	.00	0.40 [-1.11, 3.17]	1.03	.06	.644
Model 2 – attitude change Spanish	.01	-0.78 [-2.99, 2.03]	1.18	-.11	.376
Model 3 – attitude change English	.00	0.40 [-1.59, 2.72]	0.97	.05	.653

5.2.2.12. The effect of self-identification with Catalonia

Another variable analyzed was self-identification with Catalonia as reported in second grade. Simple regression analyses were used to see how it affects attitude change. The descriptive statistics and correlations are presented in table 183.

Table 183. Descriptive statistics and correlation matrix for self-identification with Catalonia and attitude change

Variables	<i>M</i>	<i>SD</i>	Att. change Catalan	Att. change Spanish	Att. change English
1. Self-identification with Catalonia	2.31 [2.09, 2.55]	1.06	-.07 [-.28, .15]	-.13 [-.37, .12]	-.05 [-.26, .16]
2. Attitudes change - Catalan	1.04 [0.16, 1.93]	3.86		.13 [-.07, .33]	.01 [-.17, .20]
3. Attitudes change - Spanish	0.44 [-.40, 1.26]	3.52			.11 [-.17, .41]
4. Attitudes change - English	0.21 [-0.73, 1.18]	3.99			

Self-identification with Catalonia was not significantly related to attitude change toward Catalan, Spanish, and English (see table 184).

Table 184. Summary of simple analyses of the effect of self-identification with Catalonia on attitude change toward Catalan, Spanish, and English. 95% BCa confidence intervals are reported in brackets.

	<i>R</i> ²	<i>b</i>	<i>SE b</i>	β	<i>p</i>
Model 1 – attitude change Catalan	.00	-0.10 [-0.91, 0.68]	0.41	-.03	.824
Model 2 – attitude change Spanish	.03	-0.67 [-1.54, 0.09]	0.42	-.18	.137
Model 3 – attitude change English	.00	-0.23 [-0.91, 0.50]	0.36	-.06	.613

5.2.2.13. The effect of self-identification with Spain

Similarly, simple regression analyses were used to investigate the effect of self-identification with Spain on attitude change. Table 185 summarizes the descriptive statistics and correlations between the analyzed variables.

Table 185. Descriptive statistics and correlation matrix for self-identification with Spain and attitude change

Variables	<i>M</i>	<i>SD</i>	Att. change Catalan	Att. change Spanish	Att. change English
1. Self-identification with Spain	2.29 [2.07, 1.93]	1.09	-.14 [-.34, .09]	-.10 [-.31, .10]	-.10 [-.30, .13]
2. Attitudes change - Catalan	1.04 [0.16, 1.93]	3.86		.13 [-.07, .33]	.01 [-.17, .20]
3. Attitudes change - Spanish	0.44 [-.40, 1.26]	3.52			.11 [-.17, .41]
4. Attitudes change - English	0.21 [-0.73, 1.18]	3.99			

The results showed that self-identification with Spain was not significantly associated with attitude change toward any of the three languages investigated (see table 186).

Table 186. Summary of simple analyses of the effect of self-identification with Spain on attitude change toward Catalan, Spanish, and English. 95% BCa confidence intervals are reported in brackets.

	<i>R</i> ²	<i>b</i>	<i>SE b</i>	β	<i>p</i>
Model 1 – attitude change Catalan	.02	-0.49 [-1.21, 0.26]	0.37	-.14	.243
Model 2 – attitude change Spanish	.01	-0.14 [-0.81, 0.53]	0.37	-.10	.750
Model 3 – attitude change English	.01	-0.41 [-1.16, 0.34]	0.40	-.11	.347

5.2.2.14. The effect of self-identification with area of origin

Another series of simple regression analyses was used to investigate the effect of self-identification with area of origin on attitude change (see table 187).

Table 187. Descriptive statistics and correlation matrix for self-identification with area of origin and attitude change

Variables	<i>M</i>	<i>SD</i>	Att. change Catalan	Att. change Spanish	Att. change English
1. Self-identification with area of origin	3.47 [3.30, 3.63]	0.75	-.07 [-.26, .14]	.03 [-.21, .25]	.08 [-.16, .30]
2. Attitudes change - Catalan	1.23 [0.30, 2.20]	3.98		.13 [-.07, .33]	.01 [-.17, .20]
3. Attitudes change - Spanish	0.35 [-0.56, 1.18]	3.52			.11 [-.17, .41]
4. Attitudes change - English	0.42 [-0.52, 1.43]	3.86			

According to the results, self-identification with the area of origin had no significant influence on attitude change toward Catalan, Spanish, and English (see table 188).

Table 188. Summary of simple analyses of the effect of self-identification with area of origin on attitude change toward Catalan, Spanish, and English. 95% BCa confidence intervals are reported in brackets.

	<i>R</i> ²	<i>b</i>	<i>SE b</i>	β	<i>p</i>
Model 1 – attitude change Catalan	.00	-0.22 [-1.17, 0.83]	0.51	-.04	.716
Model 2 – attitude change Spanish	.00	-0.08 [-0.93, 1.11]	0.52	.02	.899
Model 3 – attitude change English	.01	0.49 [-0.64, 1.97]	0.62	.09	.433

5.2.2.15. Summary

Previously, the effect of various demographic and socio-psychological variables on attitude change was investigated. As it can be seen in table 189, generally, the effects of the variables investigated had little or no statistical and practical significance, with the exception of a rather weak effect of use of Catalan on attitude change toward Catalan.

Table 189. Summary of the results of the longitudinal study.

VARIABLES	ATTITUDE CHANGE - CATALAN	ATTITUDE CHANGE - SPANISH	ATTITUDE CHANGE - ENGLISH
Gender	Ø	Ø	Ø
Area of origin	Ø	Ø	Ø
Place of birth	Ø	Ø	Ø
Socio-professional status	Ø	Ø	Ø
Socio-cultural status	Ø	Ø	Ø
Catalan competences	Ø	Ø	Ø
Spanish competences	Ø	Ø	Ø
Use of Catalan	$R^2 = .05, b = -1.08$	Ø	Ø
Use of Spanish	Ø	Ø	Ø
Use of L1	Ø	Ø	Ø
Self-identification with Catalonia	Ø	Ø	Ø
Self-identification with Spain	Ø	Ø	Ø
Self-identification with area of origin	Ø	Ø	Ø
Length of residence	Ø	Ø	Ø

5.2.3. Explanatory models

A series of multiple regression analysis was used to investigate the joint effect of the variables of interest on attitude change. The analyses were conducted to verify there are no suppressor effects that could mask the effect of some of the variables. Table 190 presents the means and standard deviations for the analyzed variable, while the correlations are summarized in table 191.

Table 190. Means and standard deviations for the variables investigated. 95% BCa confidence intervals based on 2000 bootstrap samples are reported in brackets.

Variables	<i>M</i>	95% BCa CIs	<i>SD</i>
1. Attitudes change - Catalan	1.07	[0.21, 1.92]	3.83
2. Attitudes change - Spanish	0.13	[3.15, 4.63]	3.95
3. Attitudes change - English	0.13	[-0.82, 1.13]	3.97
4. Gender	0.56	[0.46, 0.65]	0.50
5. AO Africa	0.29	[0.21, 0.38]	0.46
6. AO Latin America	0.38	[0.28, 0.47]	0.49
7. AO Asia and Oceania	0.08	[0.04, 0.14]	0.28
8. Place of birth	0.83	[0.75, 0.92]	0.38
9. SPS medium	0.22	[0.15, 0.31]	0.42
10. SPS low	0.61	[0.50, 0.71]	0.49
11. SCS secondary	0.39	[0.29, 0.49]	0.49
12. SCS elementary	0.22	[0.15, 0.31]	0.42
13. Catalan competences	59.33	[56.62, 62.10]	12.34
14. Spanish competences	53.93	[50.42, 57.34]	14.56
15. Use of Catalan	1.94	[1.75, 2.13]	0.82
16. Use of Spanish	2.31	[2.12, 2.48]	0.78
17. Use of L1	0.30	[0.19, 0.42]	0.54
18. Self-identification with Catalonia	2.32	[2.09, 2.54]	1.05
19. Self-identification with Spain	2.31	[2.07, 2.53]	1.10
20. Self-identification with area of origin	3.42	[3.25, 3.58]	0.77
21. Length of residence	6.21	[5.21, 7.29]	4.60

Table 191. Correlation matrix for the variables examined in the multiple regressions explaining attitude change toward Catalan, Spanish, and English.

Variables	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1. Attitudes change - Catalan			.06	.23*	.05	-.19	-.16	.16	-.08	.05	.15	-.01	-.04	-.23*	.10	.06	-.03	-.14	-.04	.18
2. Attitudes change -Spanish		.11		-.18	.16	.13	-.06	-.05	-.08	-.05	-.15	-.01	.02	-.13	.23*	-.11	-.18	-.04	.02	-.05
3. Attitudes change -English		.12		-.21*	.09	.09	.17	.06	-.21*	-.03	-.11	-.06	.09	-.17	-.03	.05	-.06	-.11	.09	-.18
4. Gender			.02		-.06	-.03	-.03	-.13	.20*	.14	.01	.16	.12	-.11	.02	.02	.09	.17	.09	-.02
5. AO Africa					-.50*	-.19	-.29*	-.05	.26*	-.01	.54*	-.05	-.39*	.32*	-.37*	.11	.22*	.16	-.11	.49*
6. AO Latin America						-.23*	.35*	-.07	-.09	-.09	-.28*	-.22*	.26*	-.55*	.60*	-.44*	-.35*	-.09	.07	-.42*
7. AO Asia & Oceania							.00	-.04	-.07	-.03	-.04	-.13	-.27*	.12	-.10	.08	.20*	-.04	.30*	.02
8. Place of birth								-.03	-.05	-.03	-.12	-.38*	-.14	-.24*	.05	.12	-.33*	-.08	.15	-.68*
9. SPS medium									-.67*	.12	-.13	.11	.02	.04	.04	-.04	.06	-.09	-.12	.08
10. SPS low										.11	.29*	-.15	-.09	.07	-.17	.10	.05	.20*	.06	-.02
11. SCS secondary											-.43*	.01	-.01	-.08	-.02	.13	.08	-.02	.09	-.08
12. SCS elementary												-.09	-.16	.28*	-.12	-.04	.16	.16	-.07	.33*
13. Catalan competences													.69*	.34*	-.04	-.18	.30*	-.13	.23*	.47*
14. Spanish competences														.03	.25*	-.37*	.05	-.13	.27*	.20*
15. Use of Catalan															-.46*	.02	.39*	.10	-.09	.39*
16. Use of Spanish																-.64*	-.26*	-.02	.12	-.15
17. Use of L1																	.08	-.05	-.05	-.19
18. Self-ident. Catalonia																		.52*	-.31*	.36*
19. Self-ident. Spain																			-.24*	.07
20. Self-ident. area of origin																				-.07
21. Length of residence																				

Note: * $p < .05$; SPS – socio-professional status; SCS – socio-cultural status; AO – area of origin

5.2.3.1. Explanatory model for attitude change toward Catalan

The results of the multiple regression analysis with attitude change toward Catalan as criterion, summarized in table 192, indicated that model was not significant ($R^2 = .32$, $p = .179$). Thus, the variables investigated do not explain the variance of attitude change toward Catalan.

Table 192. Summary of multiple regression for the predictors of attitude change toward Catalan

	<i>b</i>	<i>SE b</i>	β	<i>p</i>
Constant	1.48 [-9.65, 12.65]	6.05		.804
Gender	0.65 [-1.62, 2.94]	1.08	.08	.510
AO Africa	1.67 [-2.60, 6.20]	2.18	.20	.379
AO Latin America	1.67 [-2.75, 5.94]	1.93	.21	.345
AO Asia and Oceania	-1.77 [-6.57, 3.25]	2.37	-.13	.439
Place of birth	-0.82 [-4.52, 1.99]	2.08	-.08	.635
SPS medium	1.03 [-1.68, 3.90]	1.35	.11	.512
SPS low	-0.56 [-3.30, 2.44]	1.37	-.07	.707
SCS secondary	0.75 [-2.31, 3.65]	1.31	.10	.535
SCS elementary	1.82 [-2.01, 6.19]	2.03	.20	.278
Catalan competences	0.00 [-0.16, 0.14]	0.08	.01	.957
Spanish competences	-0.01 [-0.13, 0.12]	0.06	-.05	.819
Use of Catalan	-1.20 [-3.54, 1.38]	0.97	-.26	.136
Use of Spanish	0.82 [-1.30, 3.09]	0.96	.17	.401
Use of L1	1.89 [-1.80, 6.59]	1.88	.26	.178
Self-identification with Catalonia	0.34 [-0.98, 1.40]	0.72	.09	.621
Self-identification with Spain	-0.80 [-1.95, 0.69]	0.54	-.23	.163
Self-identification with area of origin	-0.38 [-1.80, 1.37]	0.70	-.08	.586
Length of residence	0.18 [-0.13, 0.49]	0.16	.22	.319

Note: $R^2 = .32$, $p = .179$

5.2.3.2. Explanatory model for attitude change toward Spanish

Another simultaneous multiple regression analysis was carried out with attitude change toward Spanish as criterion. The model tested did not contribute to the explanation of variance of attitude change toward Spanish ($R^2 = .18, p = .840$), as none of the predictors introduced was significant (see table 193).

Table 193. Summary of multiple regression for the predictors of attitude change toward Spanish

	<i>b</i>	<i>SE b</i>	β	<i>p</i>
Constant	-2.57 [-16.21, 9.38]	6.89		.703
Gender	1.08 [-1.19, 3.41]	1.18	.14	.333
AO Africa	0.46 [-3.87, 5.14]	2.27	.05	.831
AO Latin America	1.80 [-1.80, 5.11]	1.84	.22	.367
AO Asia and Oceania	3.44 [-2.20, 9.72]	3.11	.24	.185
Place of birth	-2.17 [-6.88, 2.08]	2.30	-.21	.272
SPS medium	-0.63 [-3.86, 2.49]	.178	-.07	.722
SPS low	-0.74 [-3.71, 1.88]	1.60	-.09	.659
SCS secondary	-0.44 [-3.17, 2.18]	1.24	-.05	.749
SCS elementary	-1.08 [-4.69, 1.89]	1.82	-.11	.570
Catalan competences	0.04 [-0.11, 0.17]	0.08	.12	.657
Spanish competences	-0.02 [-0.15, 0.13]	0.06	-.07	.772
Use of Catalan	0.59 [-1.47, 3.13]	1.07	.12	.515
Use of Spanish	1.09 [-1.42, 4.29]	1.36	.22	.323
Use of L1	1.16 [-2.95, 6.00]	2.08	.16	.464
Self-identification with Catalonia	-1.16 [-2.75, 0.38]	0.85	-.31	.134
Self-identification with Spain	0.50 [-0.88, 2.16]	0.74	.14	.431
Self-identification with area of origin	0.07 [-1.91, 2.11]	0.83	.01	.926
Length of residence	-.01 [-0.50, 0.48]	0.23	-.01	.961

Note: $R^2 = .18, p = .840$

5.2.3.3. Explanatory model for attitude change toward English

The results of the simultaneous multiple regression analysis conducted to test the predictors of attitude change toward English indicated that model was not significant ($R^2 = .22, p = .638$), as it can be seen in table 194.

Table 194. Summary of multiple regression for the predictors of attitude change toward English

	<i>b</i>	<i>SE b</i>	β	<i>p</i>
Constant	7.61 [-6.23, 20.39]	6.82		.252
Gender	1.49 [-0.81, 4.22]	1.28	.19	.173
AO Africa	-0.24 [-4.62, 4.58]	2.33	-.03	.910
AO Latin America	-0.89 [-5.55, 3.69]	2.15	-.11	.647
AO Asia and Oceania	1.33 [-4.36, 7.18]	2.90	.09	.598
Place of birth	-0.18 [-4.71, 4.12]	2.22	-.02	.927
SPS medium	-1.00 [-4.03, 2.21]	1.82	-.11	.563
SPS low	-3.00 [-6.52, 0.09]	1.80	.37	.072
SCS secondary	-0.27 [-3.44, 2.51]	1.46	-.03	.841
SCS elementary	0.40 [-3.24, 4.37]	1.90	.04	.827
Catalan competences	-0.13 [-0.31, 0.04]	0.08	-.39	.129
Spanish competences	0.10 [-0.06, 0.23]	0.08	.35	.158
Use of Catalan	-0.90 [-2.85, 1.08]	0.88	-.19	.311
Use of Spanish	-1.52 [-4.48, 1.27]	1.44	-.30	.160
Use of L1	-1.03 [-4.40, 3.09]	1.71	-.14	.506
Self-identification with Catalonia	0.63 [-1.04, 2.54]	0.92	.17	.400
Self-identification with Spain	-0.49 [-2.20, 1.07]	0.80	-.13	.439
Self-identification with area of origin	0.77 [-0.97, 2.86]	0.93	.15	.325
Length of residence	-0.14 [-0.70, 0.30]	0.24	-.16	.496

Note: $R^2 = .22, p = .638$

6. DISCUSSION AND CONCLUSIONS

6.1. DISCUSSION - STUDY 1

In the following chapter, we will discuss the results obtained in relation to the objectives and hypotheses of our research, as well as to previous studies.

One of the main results regards the differences between autochthonous and immigrant students, confirming our hypothesis (H1), as well as coinciding with previous findings that autochthonous students held more positive attitudes toward Catalan and less positive attitudes toward Spanish and English in comparison with students of immigrant origin (Janés, 2006a; Lapresta et al., 2009; Lapresta, Huguet, & Janés, 2010; Trenchs-Parera & Newman, 2009; Querol & Huguet, 2010; Madariaga, Huguet, & Lapresta, 2013).

These data were complemented with within-subjects comparisons of attitudes toward languages, which showed that autochthonous and immigrant students not only differed in their attitudes toward each language, but they also manifested different language hierarchies. In this sense, autochthonous rated first Catalan, followed by English, and, in the last place, Spanish. For immigrant students, the order was reversed, the language highest rated being Spanish, followed by English, and lastly Catalan.

Some directions of interpreting these results are suggested by the findings of Bernaus and her collaborators (2004) who obtained similar data and argued that the more positive attitudes toward Spanish and English emerged because the former was considered the dominant language of communication and the latter had instrumental value associated with its role as an international language. However, to obtain a deeper understanding of the attitudes toward language held by students residing in Catalonia, we additionally examined the influence of other related variables, hoping they will shed some light on the issue.

Besides the different patterns of attitudes toward language determined by origin, the present research contributes by adding a new layer of information by uncovering that the effect of several variables on attitudes toward language varies by origin.

As predicted (H11), origin moderated the influence of socio-cultural status, socio-professional status, use of Catalan, self-identification with Catalonia, and self-identification with Spain on attitudes toward Catalan. Specifically, socio-cultural status and socio-professional status had a significant effect for the autochthonous group, but did not constitute determinants of the attitudes toward Catalan held by immigrant students. Regarding use of Catalan, self-identification with Catalonia, and self-identification with Spain, the effects were stronger for autochthonous than for immigrant students.

Further, origin moderated the effects of socio-cultural status, socio-professional status, Catalan competences, use of Catalan, self-identification with Catalonia, and self-identification with Spain on attitudes toward Spanish. Similarly, the attitudes toward Spanish of autochthonous participants were influenced by socio-cultural status and socio-professional status, whereas the attitudes of immigrant students were not. The effects of the other variables were more pronounced for autochthonous students than for those of immigrant origin.

The influence of Catalan competences, Spanish competences, and self-identification with Catalonia on attitudes toward English was also moderated by origin, the effects of these variables being more powerful for the autochthonous group than for the immigrant one.

There were also variables, such as grade and gender, whose influence on the attitudes toward Catalan, Spanish, and English did not vary by origin.

Therefore, being of autochthonous or immigrant origin determined both different attitudes toward the languages investigated and different effects of the related variables on these attitudes. This suggests that autochthonous and immigrant students follow different mechanisms and processes in constructing their attitudes toward language. Variables that are important in attitude formation for autochthonous students do not have the same relevance for students of immigrant origin, for whom other factors probably carry more weight. These could be variables specific to the immigrant population (e.g., length of residence, area of origin, place of birth, use of L1, and self-identification with area of origin).

Following, we look more closely into the relationships between each variable of interest and the attitudes toward Catalan, Spanish, and English.

Grade influenced attitudes toward language regardless of origin, as expected (H2). When comparing students by year level, it was uncovered that 4th graders expressed more positive attitudes toward Spanish and English than students in 2nd grade and had similar attitudes toward Catalan. These results seem to contradict previous research that has shown a decline in attitudes with year level (Baker, 1992; Bernaus et al., 2007; Chambers, 2000; Dörnyei & Csizér, 2002; Heining-Boynton & Haitema, 2007; Henry & Apelgren, 2008).

The highly favorably attitudes toward English could reflect the increasing importance of this language at worldwide level, as international lingua franca. Additionally, as they grow older, students start to focus more on instrumental reasons for language learning (Tragant, 2006). Subsequently, the more positive attitudes toward English of 4th grade students could reflect an increasing interest in the professional and contributory value of English.

The higher ratings received by Spanish from 4th graders could similarly show a focus on its instrumental value, considering that Spanish is the third most spoken language worldwide (Ethnologue, 2009). Attitudes toward Spanish are also connected with students' identities and socialization. Additionally, as Baker (1992) suggested, youngsters tend to become more attracted to the language of popular culture, which in the present context continues to be Spanish, despite the steady rise of the Catalan presence in the media (Corominas Piulats, 2007).

Attitudes toward Catalan were maintained at the same level, contrary to previous findings that showed a tendency of decline. The results seem to draw on the integrative and instrumental value carried by Catalan. In other words, students tend to perceive the social and linguistic context of Catalonia and to appreciate the importance of Catalan in both the social and the professional areas of life.

Lastly, we would like to note that, although comparisons between students of different ages are usually presented as longitudinal in nature (Dörnyei & Csizér, 2002; Heining-Boynton & Haitema, 2007; Henry & Apelgren, 2008) and used to infer change over time, this type of data is more appropriate for investigating differences between age groups. In other words, the results likely reflect cohort effects. We will revisit the issue of attitude change in time in the second longitudinal study.

Gender proved to be an important determinant of attitudes toward language, seeing that girls showed more favorable attitudes toward all three languages, regardless of origin. The findings confirm the hypothesis (H3), as well as the frequent observation that girls tend to have more positive attitudes than boys (Bilaniuk, 2002; Caruana, 2007; Dewaele, 2005; Dörnyei & Csizér, 2002; Heining- Boynton & Haitema, 2007; Henry & Apelgren, 2008; Lapresta et al, 2009; Lasagabaster & Sierra, 2009; Loredo Gutiérrez et al., 2007; Moriarty, 2010; Sharp et al, 1973). Nonetheless, there were also studies that did not find any attitudinal differences between girls and boys (Cortés, 2002; Huguet, 2007).

This gender difference in attitudes toward languages could be related to a general pattern of girls having more favorable attitudes regarding most aspects of school life (Wright & Scullion, 2007). In addition, scholars noted the emergence of a new gender gap characterised by academic underachievement of boys, especially in language(s) (Van de Gaer, Pustjens, Van Damme, & De Munter, 2006). The authors proposed as an explanatory factor the finding that boys are more influenced by the attitudes of peers. Another source could reside in motivational differences, seeing that boys' and girls' motivation and behaviors tend to follow gender role stereotypes, with boys reporting more interest in mathematics and science and girls in language, arts, and writing (Meece, Glienke, & Burg, 2006).

Despite the considerable evidence gathered in this sense, as Dörnyei and Csizér (2002) argued, “the amount of systematic sex-specific research has been meagre relative to the potential importance of the issue” (p. 427). Thus, the debate remains open as future studies are required to understand this gender difference.

Socio-professional and socio-cultural status partially capture the background of students, which plays an important role in language attitudes formation (Gardner, 1985). Parents' socio-professional status and their education are related to their attitudes, as well as their supporting and encouraging behaviors concerning their children's language learning. Nonetheless, the evidence can be described as contradictory, seeing that in some contexts the variables were found to influence language attitudes (Bokhorst-Heng & Santos Caleon, 2009; Caruana, 2007; Lasagabaster 2007, 2008; Loredo Gutiérrez et al., 2007; Mettwie & Janssens, 2007), while other studies showed that they had no significant effect (Lasagabaster, 2009; Safont, 2007; Ytsma, 2007).

Regarding attitudes toward Catalan and Spanish, socio-professional status influenced the attitudes of autochthonous students, but was not related to the attitudes held by immigrant students, confirming only partially our hypothesis (H4). Autochthonous students from high status families had more positive attitudes toward Catalan than those from low status families. On the contrary, attitudes toward Spanish increased in favorability as socio-professional status decreased, as the most positive attitudes were expressed by those from low status families.

Similarly, in terms of socio-cultural status (H4), students whose parents had university studies held more favorable attitudes toward Catalan than those with secondary and elementary education. Attitudes toward Spanish increased in favorability as level of education decreased.

These results possibly reflect the position of Catalan as the language of the high status group holding economic power (Woolard, 1989, Woolard & Gahng, 1990). There was indeed an association between socio-professional status, socio-cultural status, and home language indicating that Catalan speakers tended to belong to the high socio-professional status and have higher levels of education, whereas those of lower socio-professional and socio-cultural statuses tended to be Spanish speakers. This gap between Catalan and Spanish speakers represents a consequence of the internal wave of migration of the 1970s, as the Spanish speaking families from the poorer regions of Spain that moved to Catalonia concentrated mostly in the working class (Woolard, 1991).

Therefore, it is possible that these results are actually due to students' home language, as it has been demonstrated in various contexts that people tend to show more positive attitudes toward their home language, frequently also their first language (Baker, 1992; Caruana, 2007; Huguet, 2006; Huguet & González Riaño, 2004; Huguet & Llurda, 2001; Huguet, Lapresta, & Madariaga, 2008; Huguet, Suñls, & Janés, 2000; Lasagabaster, 2003, 2005, 2007; Laugharne, 2007; Madariaga, Huguet, & Lapresta, 2013; Mettewie & Janssens, 2007; Moriarty, 2010; Ó Laoire, 2007; Safont, 2007; Sharp et al., 1973; Ytsma, 2007).

To continue this argumentation, we note that no effect of socio-professional status was found in the case of autochthonous students from Aragon and Asturias, regions where the linguistic and economic particularities of majority and minority speakers are different

from those specific to Catalonia (Huguet, 2006; Huguet & González Riaño, 2004; Huguet, Lapresta, & Madariaga, 2008).

This hypothesis is also compatible with the lack of significant effects for the group of immigrant students, seeing that they have other home languages. Previous studies also confirmed the lack of an effect of socio-cultural status on attitudes toward Catalan and Spanish. However, some researchers also found that socio-professional status influenced immigrant students' attitudes toward Catalan and Spanish, in the sense that attitudes toward Catalan increased and attitudes toward Spanish decreased as socio-professional status lowered (Janés, 2006a, 2006b, Lapresta et al., 2009).

At this point, it is important to note that in the case of the immigrant population, the association between socio-professional status and educational level is drastically diminished, considering that having a high cultural status does not guarantee the achievement of a similar socio-professional status. This serves to deconstruct the myth that immigrant individuals have low levels of education (Janés, 2006a, 2006b; Navarro & Huguet, 2005; Sansó, 2010).

Furthermore, the effect of socio-professional and socio-cultural status seems to function differently in the case of English. To begin with, origin did not moderate the effect of the two variables. For both autochthonous and immigrant students, socio-professional status had no impact on attitudes toward English. In terms of socio-cultural status, students with parents that went to university or finished secondary education had more positive attitudes toward English than those with parents educated at elementary level. This could reflect a more instrumental focus or a stronger acknowledgement of the importance of English as international lingua franca on the part of those with higher education.

Consequently, further research is required to investigate the role of socio-professional status and socio-cultural status and the presence of any confounding effects.

As expected (H5), in most cases *language competences* were positively related to attitudes toward language. First, analyzing the relationships between competences and attitudes by corresponding language, we found that Catalan competences predicted attitudes toward Catalan, regardless of the origin of participants. The effect of Spanish competences was less straightforward, being moderated by origin. For immigrant students

Spanish competences predicted attitudes toward Spanish, while no relationship between the two variables was found for autochthonous students.

Therefore, the positive relationships between language competences and attitudes follow the well-known traditional and documented pattern (Baker, 1992; Huguet, Janés, & Chireac, 2008; Janés, 2006a, 2006b; Lapresta et al., 2009; Lasagabaster, 2005; Laugharne, 2007; Madariaga, Huguet, & Lapresta, 2013; Querol & Huguet, 2010). Meanwhile, Spanish competences and the attitudes toward Spanish of autochthonous students were independent. Some answers could be found by looking at the history and the socio-political coordinates of Catalonia. During the Franco regime, Spanish was the main medium of communication because it was imposed at the expense of Catalan. This placed the two languages in a conflicting situation, which remained tense to this day. Accordingly, social, political, and identity factors play central roles in forming attitudes toward Spanish. Also, achieving competence in Spanish, characterised by a high exposure in social interactions, media, and school, is probably more strongly connected to other variables than the ones traditionally considered in foreign and second language learning, such as attitudes and motivation.

The aforementioned particularities of the linguistic context of Catalonia also suggests an explanation for the lack of a relationship between Spanish competences and attitudes toward Catalan for both autochthonous and immigrant students. Additionally, the negative relationship between Catalan competences and attitudes toward Spanish in the case of autochthonous students could ensue from the negative association between attitudes toward Spanish and attitudes toward Catalan, the later being positively related to Catalan competences.

An interesting result was obtained regarding the attitudes toward English, which were predicted by both Catalan and Spanish competences. Also, it is worth mentioning that the effect was stronger for autochthonous students than for those of immigrant origin. Unfortunately, we lack data about English competences, which would have provided important information. Nonetheless, it is relevant to note the situation of English in Spain, generally characterized by a considerable gap between the favorable attitudes toward English as international lingua franca and the relatively low English competences of Spaniards (European Commission, 2012a, 2012b).

Finally, the effects noticed were of small size, language competences having a rather reduced power of explanation of attitudes' variation. This was contrary to Lasagabaster's (2005) and Moriarty's (2010) findings indicating language competences as the most influential predictor of language attitudes. The small effect sizes could be interpreted using the specificity principle (Fishbein & Ajzen, 1974), seeing that the attitudes toward Catalan, Spanish, and English were measured at a more general level that encompasses more aspects than just language learning and language competences.

Our interpretations do not discard the possibility of other intervening variables, such as self-perceived language competences, abilities, motivation, parental support, etc. Thus, further studies are needed to clarify the relationships between Catalan and Spanish competences and attitudes toward language.

Another category of variables analyzed concerned *language uses*, which were found to represent relevant determinant factors. Use of Catalan predicted attitudes toward both Catalan and Spanish, although the relationships had different directions. In other words, there was a positive relationship between use of Catalan and attitudes toward Catalan and a negative one in the case of attitudes toward Spanish. A similar, but inversed effect was found for use of Spanish. Attitudes toward Spanish were positively related, while attitudes toward Catalan were negatively related to use of Spanish.

The results confirm our hypothesis (H6) and go in line with previous studies that found positive correlations between language use and attitudes toward language learning (MacIntyre et al., 2002) and attitudes toward language use (Aziakpono & Bekker, 2010; Brown & Sachdev, 2009; Lawson & Sachdev, 2004).

Although the influence of language use on attitudes toward language have been scarcely analyzed, similarities can be found with other language related behaviors that were found to impact attitudes, such as effort (Ryan, 2009; Tragant, 2006), attendance at optional language classes (Donitsa-Schmidt et al., 2004; Huguet, 2006; Huguet & González Riaño, 2004; Huguet et al., 2008); following a specific educational model (Baker, 1992; Sharp et al., 1973), and visiting a country where the language in question is spoken (Caruana, 2007; Lasagabaster, 2007, 2008; Mettewie & Janssens, 2007; Safont, 2007). The common element of these studies is that they show voluntary behaviors affecting language attitudes. A possible explanation could be constructed based on the integrative view (Fazio, Zanna, & Cooper, 1977) of the dissonance theory (Festinger, 1962) and the self-

perception theory (Bem, 1965). According to these theories, the attitudes toward language held by students could be a result of a resolved dissonant cognitive conflict or a behavior based inference, depending on the behavior being attitude congruent or incongruent. To put it more bluntly, language use could affect attitudes through inferences similar to 'I use this language frequently so I must like it'. Familiarity could also play a role in the relationship between language use and attitudes, because it usually leads to an improvement in attitudes (Csizér & Kormos, 2008).

Nonetheless, the situation in our context appears to be more complex, seeing that we have found both positive and negative relations between language uses and attitudes. The results seem to reflect a competitive relationship between Catalan and Spanish. Use of Catalan and use of Spanish were negatively correlated, as well as attitudes toward Catalan and toward Spanish. In other words, an increase of Catalan use meant a decrease of Spanish use and vice versa. At the same time, an increase of Catalan use led to an improvement of attitudes toward Catalan, associated with a decline of Spanish use and attitudes toward Spanish. The tendency of preferring one language or the other confirms the observation made by Woolard (2009) that students tended to reject language mixing.

Furthermore, the effect of use of Catalan varied by origin, being stronger for autochthonous than for immigrant students. It is also relevant to note that use of Catalan was more strongly related to attitudes toward Catalan than to attitudes toward Spanish.

A similar, but inversed effect was found for use of Spanish. Use of Spanish was positively related to attitudes toward Spanish and negatively related to attitudes toward Catalan. The influence of use of Spanish on attitudes toward Spanish was more powerful for autochthonous students than for those of immigrant origin. However, origin did not moderate the effect on attitudes toward Catalan.

To understand and interpret these results, we have to take into account the social value of each language and their patterns of use depending on the interlocutor and context. Thus, speaking a particular language probably implies different representations and meanings for autochthonous and immigrant children.

These findings resonate with the linguistic ideologies identified by Trenchs-Parera and Newman (2009) on a one-dimension spectrum: parochial Catalan, mixed Catalan, cosmopolitan Catalan, cosmopolitan Spanish, mixed Spanish, and parochial Spanish. The

parochial extremes support monolingualism and are in conflict with the cosmopolitan ideologies, supportive of bilingualism. The six ideologies were specific to autochthonous students, whereas the Latin American immigrant participants tended to have more diffused ideologies. This difference in focus of linguistic ideologies between autochthonous and immigrant students could be related to the difference in the size of the effect of language use on attitudes depending on origin. Therefore, patterns of language use and attitudes could be related to super-ordinate constructs, such as ideologies.

Attitudes toward English were predicted by use of Catalan for the autochthonous group and by use of Spanish for the immigrant group. It seems that attitudes toward English were related to the language most used by each group. Although statistically significant, the effects had reduced practical significance, being of very small size.

For immigrant students, use of L1 was also considered. It seemed to influence attitudes toward Catalan, Spanish, and English, confirming the hypothesis H10. However, the small effect sizes suggested that this influence had little practical significance. Currently, the L1s of immigrant children are generally seen as having little social value. The corresponding treatment of immigrant minority languages in Catalonia could offer some interesting answers concerning the language attitudes of all students and the social integration of those of immigrant origin. Thus, studies that are more elaborate are needed in this scarcely researched area.

Next, we analyzed the role of *self-identification*. As expected, self-identification with Catalonia predicted attitudes toward Catalan. There was also a weaker negative relationship between self-identification with Catalonia and attitudes toward Spanish. In both cases, the effect was stronger for autochthonous than for immigrant students.

Self-identification with Spain influenced the attitudes toward Spanish of the autochthonous students, but was not related to the attitudes held by immigrant students. It also negatively related to the attitudes toward Catalan of autochthonous students and positively to those of immigrant students. Accordingly, the corresponding hypothesis (H7) received partial confirmation.

The results regarding self-identifications mirror those obtained for language uses. The variables clearly function better as predictors for autochthonous students, a possible indicator of the fact that their identifications with respect to Catalonia and Spain were

stronger and more developed. Moreover, autochthonous students' self-identifications tend to be mutually exclusive. Hence, the more an individual identifies with Catalonia, the less he or she will identify with Spain. This probably translated into the strong negative association between attitudes toward Catalan and Spanish on the part of autochthonous students, since part of affirming one's identity is adopting the attitudes of the group.

Interestingly, immigrant students do not seem to have adopted this pattern, because in their case self-identification with Catalonia and self-identification with Spain were positively correlated. Their main self-identification was with their area of origin, which was negatively correlated with self-identification with Catalonia and Spain. Subsequently, the negative correlation existent between attitudes toward Catalan and Spanish probably has other causes than the reflection of an identity clash.

Furthermore, self-identification with area of origin influenced attitudes toward Spanish and was not related to attitudes toward Catalan and English. Therefore, the hypothesis (H7) was confirmed in the case of attitudes toward Spanish, but infirmed for Catalan and English. The fact that immigrant students' attitudes toward Spanish were influenced by their self-identification with the area of origin but not with Spain raises several questions. It is possible that the results were influenced by the large group of students from Latin America, whose attitudes toward Spanish could be more connected with their Spanish speaking countries of origin than with the host country.

Considering that the questionnaire used to assess attitudes toward Spanish made no specification regarding the varieties of Spanish, students could have thought of either variety or of Spanish in general, an universal, supra-ethnic, and all-inclusive (Trenchs-Parera & Newman, 2009: 521). Future research is needed to investigate if students, and especially Spanish-speaking immigrants, have different attitudes toward the various varieties of Spanish, as suggested by Newman and collaborators (Newman, 2011; Trenchs-Parera & Newman, 2009).

Latin American students also represented the group with the most favorable attitudes toward Spanish and with the least favorable attitudes toward Catalan, when comparing immigrant students by their *area of origin*. This confirmed our hypothesis (H8), falling in line with the findings of previous studies conducted by Janés (2006a, 2006b), Huguet and Janés (2008), and Lapresta and associates (2009). Their positive attitudes toward Spanish

are most likely due to Spanish being their first language and a part of their identity and are reinforced by its instrumental value as one of the most spoken languages in the world.

To understand their less favorable attitudes toward Catalan we can extrapolate from the data obtained through previous qualitative studies, which uncovered that Latin American students tend to perceive Catalan as an obstacle to their integration and academic success (Newman, 2011). Additionally, they do not perceive the importance of knowing Catalan, considering it a necessity only for the immigrants whose L1 is different from the official languages of Catalonia (Lapresta et al., 2009). This is due in part to the immigrants' tendency to interact predominantly with their group and to live concentrated in the same territory or neighbourhood. The accommodation norm that refers to Catalan speakers switching to Spanish in interactions with Spanish speakers also contributes to the reduced utility attached to Catalan.

A different pattern of attitudes was showed by students from Africa, who had the most positive attitudes toward Catalan of the four groups. The collective with the largest tradition of immigration, Africans seem to be driven by the instrumental and integrative values of Catalan. Thus, they acknowledge that knowing Catalan increases the frequency and quality of interactions with autochthonous, as well as the opportunities on the labour market. Their interest might be accounted for their objective to settle permanently in Catalonia, as Østergaard-Nielsen (2009) has found in the case of the Moroccans, one of the most numerous collective forming the African group of immigrants. Additionally, many of the African students arrived in Catalonia without knowing any of its two official languages and it is possible that being educated in Catalan helped them develop positive attitudes.

Furthermore, students from Africa had relatively similar attitudes toward the three languages of interest. Their equilibrated attitudes suggest that they recognize the usefulness and the benefits of Spanish and English as well.

Students from European countries had generally favorable attitudes toward all languages in question, but they showed a preference for Spanish in comparison with Catalan. This could mean that they perceive Spanish as more useful, being a worldwide spoken language. In addition, they might have had more contact with Spanish before moving to Catalonia.

Students from Asia and Oceania stand out due to their positive attitudes toward English, which they rated higher than Spanish. This collective tends to interact especially with their own immigrant community and to be more focused on the practical advantages of knowing a language (Beltrán & García, 2001). Hence, they might value English for its international status and the economic opportunities entailed by knowing it.

Moreover, when investigating the moderator effect of area of origin on the relationship between the other independent variables and attitudes toward language, the only effects moderated were those of the use of Spanish and the self-identification with Spain on attitudes toward Catalan. No other significant moderation of area of origin was found. In other words, the effect of the variables analyzed is independent of area of origin, infirming thus our hypothesis (H12).

Therefore, although area of origin is considered one of the most important variables in studies regarding immigration, the results suggest that in the Catalan context, area of origin has a relatively reduced weight regarding attitudes toward language, which seem to form and relate to other factors in the same manner for all immigrant students, regardless of their provenience. More precisely, the condition of being immigrant carried more weight in the formation of attitudes than the area of origin. This is in agreement with the fact that having an immigrant origin has wide implications at all levels, which is reflected by the social perception, the informal interactions with peers and adults, and the educational system.

Another variable usually analyzed with respect to migration is *length of residence*. Partially confirming our hypothesis (H9), length of residence influenced attitudes toward Catalan and English, but had no effect on attitudes toward Spanish. Previous research showed that immigrant students improve their attitudes as they stay more time in the country or region where they moved (Janés, 2006a; Lapresta et al., 2009; Madariaga et al., 2013; Sharp et al., 1973). Nonetheless, Huguet and Janés (2008) did not find a significant effect of length of residence, although they noticed a tendency toward more favorable attitudes on the part of those who lived more time in Catalonia. The difference in results between these studies could be interpreted as a consequence of how length of residence was operationalized, seeing that both continuous and categorical versions of this variable were used.

However, the statistically significant effects found for attitudes toward Catalan and English had little practical significance. In other words, students might improve attitudes toward Catalan and English as they spend more years in Catalonia, but this improvement tends to be fairly reduced. It is possible that as more time passes, youngsters become more familiar with the Catalan reality and its particularities and, consequently, understand better the role and importance of Catalan in the host society.

The lack of relationship between length of residence and attitudes toward Spanish could be a result of students having already formed strong attitudes prior to their move to Catalonia. They knew beforehand that Spanish was an official language widely spoken in the territory and some of them also had previous contacts with it, and therefore they probably had built a set of expectancies and representations.

Due to its overlap with length of residence, age of arrival was not analyzed explicitly. However, *place of birth* was investigated to capture the distinction between being born in Catalonia and being born in the country of origin and arriving at a later age. Place of birth determined relevant differences, confirming our hypothesis (H10) and coinciding with previous findings (Huguet, Janés, & Chireac, 2008). Students born in Catalonia showed more favorable attitudes toward Catalan than students born abroad, at levels of positivity similar to those of the autochthonous students. However, their attitudes toward Catalan, Spanish, and English were balanced, suggesting that they did not recreate the autochthonous attitudinal pattern. Probably by being born in Catalonia, they felt more integrated and identified more with Catalonia. Immigrant students born in Catalonia were exposed to Catalan from infancy, considerably earlier than their foreign-born peers, which could have also played an important part in their early formation of positive attitudes toward Catalan and possibly the construction of a cosmopolitan ideology.

Among all the variables investigated, none was found to be a universal determinant of attitudes toward language, regardless of the group and language of interest. Although similar in many respects, attitudes toward Catalan, Spanish, and English seem to have slightly different basis and recipes of construction.

Looking at which variables were most influential, we have found that attitudes toward Catalan were predicted by self-identification with Catalonia, use of Catalan, and having parents with elementary level education for autochthonous students. For immigrant

students the main predictors were use of Catalan, self-identification with Catalonia, and gender.

Autochthonous students' attitudes toward Spanish were predicted by self-identification with Spain, use of Spanish, use of Catalan, and low socio-professional status, while the attitudes of immigrant students were most influenced by use of Spanish, self-identification with Spain, self-identification with area of origin, Catalan competences, socio-professional status, and gender.

Several interesting observations can be made. To begin with, for autochthonous students, attitudes toward Catalan and Spanish were mainly influenced by self-identification with and use of Catalan and Spanish, respectively. It seems that the identity valences of attitudes toward language were prevailing. The findings coincide with the conclusions of Lapresta and collaborators (2009, 2010) who also noted that the attitudes of autochthonous students were anchored in their identity. Furthermore, language use constitutes a marker, as well as a way of affirming one's identity. Attitudes toward language also serve to define and express the individual's identification. Self-identification, language use, and attitudes are most likely interrelated, reciprocally built constructs that strengthen each other.

Similarly, regarding the attitudes toward Catalan held by immigrant students, self-identification and language use had distinctively more weight than the other predictors did. Immigrant students' attitudes toward Spanish presented a more complex image in terms of influential variables. Thus, while the most important predictor was use of Spanish, all predictors had relatively similar weights. Contrary to the results obtained previously, following the individual analyses, Catalan competences and having a medium or a low socio-professional status in reference to the high status were positively related to attitudes toward Spanish³¹.

³¹ To understand these apparently contradictory results a parenthesis to introduce suppressor situations is needed.

A suppressor variable is a variable that improves the regression model to which is added by removing or suppressing criterion irrelevant variance from the initial predictor and, thus, boosting its beta weight (Paulhus, Robins, Trzesniewski, & Tracy, 2004). In other words, a suppressor variable increases the explanatory power of another variable. Holling (1983) drew attention to the fact that suppressors do not have to be simple variables, as they can consist of linear combination of variables. Consequently, to account for the complex patterns of change, Tzelgov and Henik (1985) proposed to work with 'suppressor situations'.

Returning to our results, we suspect that we are facing suppressor situations that determined a change of magnitude and direction for some of the predictors. Since the detailed analysis of the patterns of relations

Hence, in the case of immigrant students, self-identifications and language uses are also the most important determinants of attitudes toward Catalan and Spanish, reflecting the identity valences of attitudes.

With regard to the variables that were not significant predictors in the regression models, we would also like to note that the results do not necessarily negate their impact, because their influence could be indirect, mediated by language use and self-identification. Further studies, focused on the relationships between background socio-structural variables and language use and self-identification are needed to identify a more complex explanatory model.

The aforementioned findings emphasize the importance of considering the complex interplay of variables to understand attitude formation and to identify the key points where an intervention would have the most significant results.

Finally, the models constructed for autochthonous students explained more variance than those corresponding to immigrant students. Thus, while in the former case the regression models could be considered satisfactory, the explanatory models for immigrant students seem to need improvement, despite including variables specific to immigration contexts, such as area of origin, length of residence, and place of birth. There are probably other variables, which we did not consider in the present study, that have a more powerful influence on attitudes toward Catalan and Spanish. Such a variable could be the personal perception of school and social integration and appreciation, suggested by Serra (2006) and Lapresta and collaborators (2009). Students of immigrant origin who feel more accepted and appreciated tend to develop more positive attitudes toward Catalan and Spanish.

Finally, the regression models constructed for attitudes toward English showed that gender was the most influential variable in the case of autochthonous students, and place of birth and coming from Asia and Oceania were the determinant variables for immigrant students. Both models accounted for a rather small proportion of the variance of attitudes toward English. This suggests that the variables determining the attitudes toward Catalan

among the multiple predictors describing the suppressor situation does not represent an objective of this body of work, we will not go into further detail.

As a result, when the other variables of interest were controlled for, socio-professional status had an influence on the attitudes toward Spanish held by immigrant students. In addition, in the same situation, the effect of Catalan competences was reversed in direction.

and Spanish, are not the most relevant for attitudes toward English. To obtain a better model, English related variables, such as English competences and use of English, should probably be examined. Additionally, it is very likely that the process of attitude formation differs considerably depending on the language's role and status in the society. Since English is a foreign language, the focus should also be directed toward variables such as previous experiences, contact with the language and/or its speakers, the learning situation, and international posture, which takes into account its role as international lingua franca.

6.2. DISCUSSION - STUDY 2

Our longitudinal study aimed to investigate how the attitudes toward Catalan, Spanish, and English held by students of immigrant origin change over two years.

Overall, only attitudes toward Catalan changed, becoming more positive. Although some participants showed a decline in attitudes, the predominant tendency was one of improvement. Attitudes toward Spanish and English seemed to be more stable, as no significant change was found at group level. Thus, our hypothesis (H14) was partially confirmed.

The results of the longitudinal study seem contradictory to our previous findings. Thus, in the first study 4th grade students had similar attitudes toward Catalan and more positive attitudes toward Spanish and English than students in the 2nd grade, whereas in the longitudinal study, the students showed an improvement in attitudes toward Catalan and no change regarding attitudes toward Spanish and English over the two years. We have to take into account the different nature of the two analyses, as one is longitudinal, capturing the evolution of attitudes, and the other is cross-sectional, reflecting cohort effects. Concerning the cross-sectional study, we cannot infer if the 4th grade students improved their attitudes or had more positive attitudes from the start, because we are lacking information about their previous attitudes.

There seems to be an apparent international norm of attitude decline in time (Baker, 1992; Bernaus et al., 2007; Chambers, 2000; Dörnyei & Csizér, 2002; Heining-Boynton & Haitema, 2007; Henry & Apelgren, 2008). However, attitude decline was found for minority or foreign languages. As no data regarding the majority language was included, we lack referents to which to compare Spanish, an official and majority language in Catalonia. Besides being related to popular culture, Spanish is also the third most spoken language worldwide, carrying thus a substantial instrumental value. Additionally, some of the students have Spanish as first language or had early contacts with the language, prior to their arrival in Catalonia. It is possible that their attitudes had been formed and strengthened by their previous experiences, being relatively stable as a result.

Furthermore, our findings regarding English coincide with results obtained in Hungary (Dörnyei & Csizér, 2002) and Sweden (Henry & Apelgren, 2008) that found English to

represent an exception from this trend of attitude decline among foreign languages, being the only one toward which students have maintained favorable attitudes. In all likelihood, due to its status as international lingua franca, English has a set of attitudinal and motivational particularities that distinguishes it from the other foreign languages, regardless of linguistic context. Continually gaining more ground and with a constantly increasing number of speakers, English has an undeniable instrumental value that students probably perceive and reflect in their attitudes.

An interesting result was obtained with regard to the attitudes toward Catalan that became more positive over the two-year period. Their improvement suggests several possibilities. It is very likely that at first Catalan is seen as an unpleasant and troublesome surprise, as students usually do not expect to encounter another official language besides Spanish, but in time, as they become more familiarized and understand the linguistic landscape of Catalonia they start to appreciate it.

In this regard, knowledge of Catalan increases opportunities to access jobs (Rendon, 2005). Catalan also accomplishes “the main functions of high culture, education and politics” (Alarcón & Garzón, 2011: 10). Catalan certainly confers certain advantages and represents a catalyst of social and professional advancement. These instrumental advantages could become more salient for students as they grow up and start to focus more on their professional lives.

The attitudes of immigrant students could also reflect the role of Catalan in fostering social integration, as children perceive the positive reactions elicited by their use of the local language. As a result, positive attitudes and increased use of Catalan enhance interactions with the autochthonous population. Accordingly, their will to integrate in the host society translates into positive attitudes toward Catalan.

Another possible explanation is that linguistic policies and measures implemented within the framework of the ‘Plan for the Actualisation of the Immersion Methodology in the Current Sociolinguistic Context 2007-2013’ (‘Pla per a l’Actualització de la Metodologia d’Immersion en l’Actual Context Sociolingüístic 2007-2013’) were successful in promoting more favorable attitudes toward Catalan. Although these signs are encouraging, we have to consider that the change observed was of little practical significance, as indicated by its small effect size. In other words, the improvement in attitudes toward Catalan was rather weak. This means that we are headed in the right

direction, but more is needed to achieve more powerful effects.

Within the group of immigrant students, there was also some interindividual variation, which was investigated in relation with a series of demographic and socio-psychological variables. Contrary to our expectations, the examined variables did not influence attitude change toward Catalan, Spanish, and English, infirming our hypotheses (H15 –H22).

The only exception was represented by the effect of use of Catalan on attitude change, which had reduced practical significance. The effect went against our expectations (H18), as the association between the two variables was negative. In other words, students who used more Catalan in second grade showed less attitude change toward Catalan. Based on the positive association between use of Catalan and attitudes toward Catalan in second grade, it seems that students who frequently used the local language had highly positive attitudes toward Catalan, which they maintained over the two years.

Due to its particularities, this result can also be interpreted as a statistical artefact. When the scores are confined within a closed interval, there is little space left for extreme scores to change. In this way, less change will be noticed for students who had a high score at the first measurement, because, even if their attitudes improved over time, they were not able to move higher on the scale, as they were already close or had reached the maximum value possible.

Despite the lack of statistical and practical significance of the effects analyzed, we tried to construct a series of explanatory models, because it was possible that when considered together, some variables might act as suppressors and reveal some hidden effects. The results showed that none of the multiple regression models was significant, also infirming the respective hypothesis (H23).

Before completely dismissing the investigated variables, we have to take into account that the lack of significance might be in part due to the small amount of attitude change or the lack of change observed in the context of our research. Future research is required to establish the influence of these variables on attitude change in different social and linguistic contexts.

Likewise, after seeing that the effects of the investigated variables were not statistically and practically significant, future research is needed to identify which variables determine attitude change.

6.3. CONCLUSIONS

Placed at the intersection of three important areas of research – attitudes, multilingual education, and immigration, this research aimed to investigate the attitudes toward Catalan, Spanish, and English and their change over a two-year period, focusing on students of immigrant origin.

After differentiating at theoretical level between types of language attitudes and specific research paradigms, the present body of work focused on attitudes toward language, following the research tradition initiated by Sharp and his collaborators (1973) and strengthened by Baker (1992).

The results obtained paint a complex picture of attitude formation and change with respect to language. Various languages entailed different determinants and processes of attitude formation and change. Specifically, the status and role of each language in a specific context tend to shape the corresponding attitudes and their relationships with related variables. In this fashion, attitudes toward the two official languages of the region, Catalan and Spanish, showed different patterns of construction and influence than attitudes toward the foreign language, English. Consequently, any linguistic and educational policies and measures would most likely benefit from accommodating the particularities of each language in each specific context.

Additionally, the characteristics of each target group should be considered when planning and implementing any linguistic and educational policy or action. The two main groups formed by origin showed not only different attitudinal patterns, but also reacted differently to a series of related variables. This suggests that the measures and recipes that were successful for autochthonous students might not lead to the same results in the case of immigrant students, who need actions tailored specifically for them.

Furthermore, besides being different from the autochthonous collective, the group of immigrant students tends to be homogenous, as there are relatively reduced differences within the group determined by area of origin. In this sense, the relationships between attitudes toward Catalan, Spanish, and English and the other variables examined did not vary significantly by area of origin. Therefore, it seems that regarding attitudes toward language, being an immigrant has more weight than the area of origin.

Although various socio-demographic and socio-psychological variables (i.e., gender, grade, socio-professional status, socio-cultural status, Catalan competence, Spanish competence, area of origin, length of residence, and place of birth) influenced the attitudes toward Catalan and Spanish, the most influential variables were self-identifications and language uses, underlining the strong link between attitudes and identity.

Due to their strong connections to identity, attitudes toward language could be described as strong attitudes, relatively resistant to change. However, as the longitudinal study showed by finding an improvement in attitudes toward Catalan, there is a possibility of attitude change, even if only a rather small one.

To foster the development of positive attitudes and to encourage attitude change on the part of immigrant students, efforts must be made not only at educational level, but outside schools too. Reward systems implemented outside the academic domain (Fishman, 1985) and encouragement of intercultural contact between autochthonous and immigrant groups could promote integration and social cohesiveness. The first steps in this direction seem to have been made with the 'Community Plan' ('Pla educatiu d'entorn') designed to involve the community in the creation of a support network outside school.

Another important aspect that needs to be improved to impel immigrants' social integration and positive attitudes toward the host society and its languages is represented by the personal perception of integration and appreciation in the social and educational areas. As Fishman (1976: 30) explained, "a minority student who is confident of and recognized in his more intimate primary-group membership relates more positively both to school and to society".

Subsequently, and also seeing the guiding effect of self-identification with Catalonia, Spain, or the area of origin on attitudes toward Catalan and Spanish, the promotion of a multilingual or cosmopolitan ideology, as well as of a multilingual identity becomes clearly necessary. Thus, by diminishing the occurrence of monolingual ideologies and mutually exclusive monolingual identities, languages might be seen as enriching one's identity, and cultural capital, instead of being perceived as obstacles and identity threats.

Finally, the implementation of linguistic and educational policies and measures would probably be more successful if they promoted voluntary language related behaviors, since

engaging voluntarily in a behavior has been proven to influence and change attitudes (Bem, 1965; Festinger, 1962; Fazio, Zanna, & Cooper, 1977) and it also helps avoiding reactions driven by reactance (Brehm, 1956). Concerning other language related behaviors, such as language uses, these could lead more effectively to attitude change if they are supported in such a way that makes them desirable without being perceived as imposed.

To conclude, this work of research brought evidence of the attitudinal and processing differences between autochthonous and immigrant students, highlighting the importance of considering the particularities of each group when designing and implementing social, linguistic, and educational measures and policies. It also reached its objective of identifying the main determinants of language attitudes formation and change in the multilingual context of Catalonia by uncovering the important role played by affective variables, such as self-identifications, and language uses. Thus, it suggested some directions and orientations to be followed in promoting positive attitudes by focusing on social constructed meanings, values, and representations regarding the languages of interest and the associate cultures.

Nonetheless, this investigation of the socio-psychological determinants of attitudes toward language has a series of limits. First, despite the large number of variables considered, there are variables that were not considered, and could have provided useful data. However, we have to bear in mind that it is unfeasible to measure all possible relevant variables.

Second, some of the categories used to differentiate between participants, especially in the case of area of origin, could be too general, as they fail to take into account the cultural complexity of each area of origin.

Furthermore, the longitudinal study suffers greatly from having a small sample of participants, which reduced power and hindered the realization of more complex statistical analysis. Additionally, it affected the possibility of generalizing the results obtained.

Similarly, there are possibly relevant variables with regard to attitude change that were not analyzed in this longitudinal study and which could have provided a better understanding of how and when attitudes toward language change.

Lastly, the two studies conducted were of quantitative nature and, consequently, they possess the associate limits, such as structural bias and lack of more in-depth information and qualitative aspects.

The aforementioned limits of the present work can be improved through future research projects. Accordingly, future studies could also consider qualitative aspects and combine the quantitative and the qualitative approaches.

Furthermore, the domain of language attitudes research is a rich one and with each advancement and discovery, more questions arise. In this sense, more studies are needed to examine the similarities, differences, and relationships between the different types of language attitudes (e.g., attitudes toward language, attitudes toward speakers, attitudes toward language learning, etc.).

Other aspects that require further attention are the relationships between motivation and attitudes toward languages, the gender differences with respect to language attitudes and competences, and the characteristics of the relationships between language attitudes and language competences, language use and identity. All these would be helpful in the construction of a structural model designed to explain how the variables relevant in the study of language attitudes, language learning, and social integration are interrelated.

Language attitude change still represents a relatively uncharted area, more research being necessary with regard to the conditions and variables that foster attitude change. Thus, there is a need for more longitudinal studies, conducted with larger samples and including autochthonous students.

Finally, we aim for future investigations that, starting from the current results, will focus on the improvement of language attitudes, as well as language acquisition, and their reflection in the educational practice.

Meanwhile, the findings of these studies, featuring the basic importance of attitudes toward language, reaffirm the value of affective factors and the striking repercussions of feeling or not feeling accepted and valued socially and educationally with regard to language learning and use, and social integration. All this could reverberate in the construction and consolidation of a social, educational, and linguistic model that would foster and promote future integration of all students in a plan of equality.

CONCLUSIONES

Situada en la intersección de tres importantes áreas de investigación - actitudes, educación multilingüe e inmigración-, este trabajo ha tenido como objetivo investigar las actitudes hacia el catalán, el castellano y el inglés, así como su variabilidad a lo largo de un período de dos años.

Después de diferenciar a nivel teórico entre los tipos de actitudes lingüísticas y los paradigmas de investigación, este estudio se ha centrado en las actitudes hacia la lengua, siguiendo la tradición de investigación iniciada por Sharp y sus colaboradores (1973) y reforzada por Baker (1992).

Los resultados obtenidos muestran una imagen compleja de la formación y el cambio de las actitudes lingüísticas. Lenguas diferentes implican determinantes y procesos de formación y el cambio de las actitudes diferentes. En concreto, el estatus y el papel de cada idioma en un contexto específico tienden a conformar las actitudes correspondientes y sus relaciones con otras variables relevantes. De esta manera, las actitudes hacia las dos lenguas oficiales de Cataluña, el catalán y el castellano, mostraron diferentes patrones de construcción e influencia en comparación con las actitudes hacia la lengua extranjera, inglés. Consecuentemente, cualquier política o medida lingüística o educativa muy probablemente debería acomodarse a las particularidades de cada lengua en cada contexto específico.

Además, las características de cada grupo específico deben ser consideradas en la planificación e implementación de cualquier política o acción lingüística y educativa. Los dos principales colectivos definidos por origen (autóctonos y migrados) mostraron no sólo patrones diferentes de actitud, sino también divergencias en el impacto que sobre ellas ejercen una serie de variables teórica y contextualmente relacionadas. Esto sugiere que probablemente las actuaciones que tuvieron éxito para los estudiantes autóctonos no tendrán los mismos resultados en el caso de los alumnos inmigrantes, ya que necesitan medidas diseñadas específicamente para ellos.

Por otra parte, además de otro patrón actitudinal respecto al colectivo autóctono, entre los migrados este comportamiento tiende a ser homogéneo, ya que dentro del grupo existen

diferencias relativamente reducidas determinadas por el área de origen. En esta línea, las relaciones entre las actitudes hacia el catalán, castellano e inglés y el resto de variables analizadas no varía significativamente por zonas de origen. Por lo tanto, parece que, al menos en lo que a las actitudes lingüísticas se refiere, el hecho de ser inmigrante tiene más peso que el origen concreto.

Aunque diversas variables socio-demográficas y socio-psicológicas (por ejemplo, género, grado, estatus socio-profesional, estatus socio-cultural, competencia en catalán, la competencia en castellano, la zona de origen, tiempo de residencia y lugar de nacimiento) influyen en la construcción de las actitudes hacia el catalán y el castellano, las variables con más peso son las autoidentificaciones y los usos de las lenguas, lo que subraya la estrecha relación entre las actitudes y la identidad.

Así, y debido a sus fuertes vínculos con la identidad, las actitudes hacia la lengua podrían describirse como actitudes robustas, relativamente resistentes al cambio. Pero sin embargo, tal como el estudio longitudinal muestra al encontrar una mejora en las actitudes hacia el catalán, siempre existe la posibilidad de una modificación de actitud, aunque sea relativamente pequeño.

Consecuentemente, para fomentar el desarrollo de actitudes positivas y potenciarlas por parte de los alumnos inmigrantes, los esfuerzos deben realizarse no sólo a nivel educativo, sino también fuera de las escuelas. La integración y la cohesión social se pueden promover a través de sistemas implementados fuera del ámbito académico y apoyando el contacto intercultural entre autóctonos e inmigrantes. Los primeros pasos en esta dirección parecen haberse hecho con el “Pla Educatiu d'Entorn”, diseñado para implicar a la comunidad en la creación de una red de apoyo extraescolar.

Otro aspecto importante que es necesario mejorar para impulsar la integración social de los inmigrantes y las actitudes positivas hacia la sociedad de acogida y sus lenguas está representado por la percepción personal de integración y reconocimiento en las áreas sociales y educativas. Como Fishman (1976: 30) explica, “un alumno minoritario que tiene confianza y está reconocido en su más íntima pertenencia al grupo primario se relaciona de manera más positiva tanto a la escuela como a la sociedad”.

En esta línea, y ahondando en el efecto de la auto-identificación con Cataluña, España, o la zona de origen en las actitudes hacia el catalán y el castellano, la promoción de una

ideología multilingüe o cosmopolita, así como de una identidad plurilingüe resulta claramente necesaria. Por este camino, fruto de la disminución de la fuerza de las ideologías e identidades monolingües y marcadamente excluyentes, las lenguas pueden llegar a ser percibidas como un elemento enriquecedor de la propia identidad y un capital cultural que posee la sociedad, alejadas de posturas que las convierten en “obstáculos” y “amenazas” para la identidad.

Por último, la aplicación de políticas y medidas lingüísticas y educativas sería probablemente más exitosa si se promovieran comportamientos lingüísticos voluntarios, ya que la participación voluntaria se ha demostrado como un aspecto que influye y posee la posibilidad de modificar las actitudes (Bem, 1965; Festinger, 1962; Fazio, Zanna, y Cooper, 1977), así como también ayuda a evitar reacciones impulsadas por reactancia (Brehm, 1956). En cuanto a los usos lingüísticos, éstos podrían vehicular con más eficacia un cambio de actitud si se promueven de una manera que los haga deseables sin ser percibidos como impuestos.

Para concluir, este trabajo de investigación aporta evidencias sobre las diferencias actitudinales y de procesamiento entre alumnos autóctonos e inmigrantes destacando la importancia de considerar las particularidades de cada grupo en el diseño e implementación de las medidas y las políticas sociales, lingüísticas y educativas. También se ha alcanzado el objetivo de identificar los principales determinantes de la formación y modificación de las actitudes lingüísticas en Cataluña al descubrir la importancia del papel de las variables más directamente relacionadas con la afectividad, tales como las auto-identificaciones y los usos de las lenguas. Por lo tanto, se debe tener en mente que directrices y orientaciones a seguir en la promoción de actitudes positivas, también deben tener en cuenta los significados sociales construidos, los valores y las representaciones de las lenguas y las culturas asociadas.

Sin embargo, y como no puede ser de otra manera, esta investigación tiene una serie de límites. En primer lugar, a pesar del gran número de variables contempladas, las hay que no fueron consideradas y que podrían haber proporcionado datos útiles. Sin embargo, se debe recordar que no es factible medir todas las variables relevantes posibles en un único trabajo.

En segundo lugar, algunas de las categorías utilizadas para diferenciar entre participantes, sobre todo en el caso de la zona de origen, podrían ser demasiado generales ya que no tienen en cuenta la complejidad cultural de cada lugar de origen.

Además, el estudio longitudinal sufre enormemente de tener una pequeña muestra de participantes, lo que redujo el poder e impidió la realización de análisis estadísticos más complejos. Además, afectó a la posibilidad de generalizar los resultados obtenidos.

Del mismo modo, posiblemente hay variables relevantes con respecto al cambio de actitudes que no fueron analizados en este estudio longitudinal y que podrían haber proporcionado una mejor comprensión de cómo y cuándo las actitudes se modifican.

Por último, los dos estudios llevados a cabo son de carácter cuantitativo y, en consecuencia, poseen sus límites asociados, como el sesgo estructural y la falta de más información en profundidad que se podría haber obtenido complementándolo con un trabajo cualitativo.

Todo ello debe ser tenido en cuenta en futuros proyectos de investigación.

Por otra parte, el área de investigación correspondiente a las actitudes lingüísticas es rica y con cada avance y descubrimiento, surgen más preguntas. En este sentido, se necesitan más estudios para examinar las similitudes, diferencias y relaciones entre los diferentes tipos de actitudes (por ejemplo, las actitudes hacia las lenguas, las actitudes hacia hablantes, las actitudes hacia el aprendizaje de lenguas, etc.).

Otros aspectos que requieren mayor atención son las relaciones entre la motivación y las actitudes, las diferencias de género con respecto a las actitudes y competencias lingüísticas, y las características de las relaciones entre las actitudes lingüísticas y los usos lingüísticos, las competencias lingüísticas y las identidades. Todo esto sería provechoso en la construcción de un modelo estructural diseñado para explicar cómo se interrelacionan las variables relevantes en el estudio de las actitudes lingüísticas, el aprendizaje de idiomas y la integración social.

El cambio de las actitudes lingüísticas todavía representa un área relativamente desconocida, siendo necesario investigar más con respecto a las condiciones y variables que fomentan dicho cambio. Por lo tanto, se necesitan más estudios longitudinales, realizados con muestras más grandes y incluyendo alumnado autóctono.

Por lo tanto, son necesarias futuras investigaciones que, partiendo de los resultados actuales, se centren en la mejora de las actitudes lingüísticas, la adquisición del lenguaje y su reflejo en la práctica educativa.

Mientras tanto, las conclusiones de estos estudios, que remarcan la importancia fundamental de las actitudes lingüísticas, reafirman el valor de los factores afectivos y las repercusiones notables de sentirse o no sentirse aceptado y valorado a nivel social y educacional con respecto al aprendizaje de las lenguas, los usos lingüísticos y la integración social. Todo esto podría repercutir en la construcción y consolidación de un modelo social, educativo y lingüístico que fomente y promueva la futura integración de todos los alumnos en un plano de igualdad.

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ANNEXES

Annex 1. Socio-linguistic survey and attitude questionnaire

ENQUESTA SOCIOLINGÜÍSTICA

Codi CENTER

Codi ALUMNE

NIVELL i GRUP

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L'objectiu de l'enquesta que tot seguit contestaràs, és realitzar una anàlisi de la situació de les llengües parlades a Catalunya. Dins d'aquesta enquesta trobaràs preguntes que et demanen informació d'algunes dades personals i opinions.

Has de tenir present que les persones responsables d'aquest estudi, et garantim una confidencialitat absoluta pel que fa a la totalitat de les teves respostes. La única finalitat que tenim és la de realitzar una interpretació del que ens diguis, el més objectiva possible.

És important que mentre omplis l'enquesta, no oblidis que **no existeixen respostes correctes o incorrectes** i que la interpretació d'allò que responguis és molt important per a tots.

D'aquesta manera, has d'entendre que:

1. No tenim interès en les qüestions personals i individuals que puguin aparèixer dins de l'enquesta, i que la **confidencialitat** i el caràcter anònim de les dades estan garantides.
2. Et demanem la màxima col·laboració i que responguis **lliurement i sincerament** en un exercici de responsabilitat que t'animem a portar a terme.

L'equip d'investigació responsable de l'aplicació d'aquesta enquesta vol agrair-te la teva col·laboració.

0. Edat Data de naixement

0.1. Quina és la teva llengua pròpia?

1. Noi Noia

2. Temps que fa que estudies en aquest center:

Des de primer d'ESO Des de

3. Els que viviu a casa us parreu:

Sempre en català

Sempre en castellà

En català i en castellà

Altres (.....)

4. Amb els companys al pati parles

sempre en català

més català que castellà

tant català com castellà

més castellà que català

sempre en castellà

Altres (.....)

5. Amb els teus amics de fora l'escola parles

sempre en català

més català que castellà

tant català com castellà

més castellà que català

sempre en castellà

Altres (.....)

- | | | |
|---|--------------------------|--------------------------|
| 6. Amb les persones grans de fora de casa
i de fora de l'escola parles | sempre en català | <input type="checkbox"/> |
| | més català que castellà | <input type="checkbox"/> |
| | tant català com castellà | <input type="checkbox"/> |
| | més castellà que català | <input type="checkbox"/> |
| | sempre en castellà | <input type="checkbox"/> |
| | Altres (.....) | <input type="checkbox"/> |
| 7. Llegeixes contes i historietes | sempre en català | <input type="checkbox"/> |
| | més català que castellà | <input type="checkbox"/> |
| | tant català com castellà | <input type="checkbox"/> |
| | més castellà que català | <input type="checkbox"/> |
| | sempre en castellà | <input type="checkbox"/> |
| | Altres (.....) | <input type="checkbox"/> |
| 8. Veus programes de televisió | sempre en català | <input type="checkbox"/> |
| | més català que castellà | <input type="checkbox"/> |
| | tant català com castellà | <input type="checkbox"/> |
| | més castellà que català | <input type="checkbox"/> |
| | sempre en castellà | <input type="checkbox"/> |
| | Altres (.....) | <input type="checkbox"/> |
| 9. Escrius als teus amics i familiars | sempre en català | <input type="checkbox"/> |
| | més català que castellà | <input type="checkbox"/> |
| | tant català com castellà | <input type="checkbox"/> |
| | més castellà que català | <input type="checkbox"/> |
| | sempre en castellà | <input type="checkbox"/> |
| | Altres (.....) | <input type="checkbox"/> |

10. Amb els professors de l'escola parles
- | | |
|--------------------------|--------------------------|
| sempre en català | <input type="checkbox"/> |
| més català que castellà | <input type="checkbox"/> |
| tant català com castellà | <input type="checkbox"/> |
| més castellà que català | <input type="checkbox"/> |
| sempre en castellà | <input type="checkbox"/> |
| Altres (.....) | <input type="checkbox"/> |

- | | SI | NO |
|---|--------------------------|--------------------------|
| 11. Em sembla bé que tots els nens de Catalunya estudiïn el català | <input type="checkbox"/> | <input type="checkbox"/> |
| 12. És desagradable aprendre el català | <input type="checkbox"/> | <input type="checkbox"/> |
| 13. És inútil aprendre el català perquè segurament no el faré servir mai | <input type="checkbox"/> | <input type="checkbox"/> |
| 14. Hauríem d'esforçar-nos tots per fer servir més el català | <input type="checkbox"/> | <input type="checkbox"/> |
| 15. És més important aprendre anglès o francès que no català | <input type="checkbox"/> | <input type="checkbox"/> |
| 16. Visc a Catalunya i per això he de conèixer, estudiar i parlar el català | <input type="checkbox"/> | <input type="checkbox"/> |
| 17. El català, només l'han d'estudiar els catalans | <input type="checkbox"/> | <input type="checkbox"/> |
| 18. El català és una llengua que sona malament | <input type="checkbox"/> | <input type="checkbox"/> |
| 19. M'agrada (o m'agradaria) parlar en català | <input type="checkbox"/> | <input type="checkbox"/> |
| 20. M'agrada sentir parlar en català | <input type="checkbox"/> | <input type="checkbox"/> |

- | | SI | NO |
|---|--------------------------|--------------------------|
| 21. El castellà és una llengua bonica | <input type="checkbox"/> | <input type="checkbox"/> |
| 22. Tots els catalans han de saber parlar el castellà | <input type="checkbox"/> | <input type="checkbox"/> |
| 23. El castellà només l'haurien d'aprendre i estudiar els qui el parlen | <input type="checkbox"/> | <input type="checkbox"/> |
| 24. M'agrada sentir parlar el castellà | <input type="checkbox"/> | <input type="checkbox"/> |
| 25. A Catalunya s'haurien d'estudiar altres idiomes abans que el castellà | <input type="checkbox"/> | <input type="checkbox"/> |

26. El català és més important que el castellà
27. El castellà és una llengua fàcil d'aprendre
28. És avorrit aprendre el castellà
29. El castellà l'haurien d'ensenyar a tots els països
30. Els catalans haurien de parlar menys castellà
- SI** **NO**
31. L'anglès és una llengua bonica.
32. Totes les persones que vivim a Catalunya, hauríem de saber parlar anglès.
33. L'anglès només l'haurien d'aprendre i estudiar a Anglaterra o en aquells països on es parla
34. M'agrada sentir parlar en anglès.
35. A Catalunya s'hauria d'estudiar més el francès que l'anglès .
36. M'agrada (o m'agradaria) saber parlar en anglès.
37. És inútil aprendre anglès perquè segurament no el necessitaré mai.
38. És avorrit aprendre anglès.
39. L'anglès l'haurien d'ensenyar a tots els països d'Europa.
40. El català i el castellà són més importants que l'anglès.
41. Posiciona't encerclant només **un** sol número en cada cas:
- A. Fins a quin punt et sents **català**:
- | | | | | |
|--|------|---------|-----|------|
| | 1 | 2 | 3 | 4 |
| | molt | bastant | poc | gens |
- B. Fins a quin punt et sents **espanyol**:
- | | | | | |
|--|------|---------|-----|------|
| | 1 | 2 | 3 | 4 |
| | molt | bastant | poc | gens |
- C. Fins a quin punt et sents **del teu país**
o àrea d'origen - o dels teus pares -
- | | | | | |
|--|---|---|---|---|
| | 1 | 2 | 3 | 4 |
|--|---|---|---|---|

(especificar país): molt bastant poc gens

On vas néixer?

42. Poble o ciutat on vas néixer:

Província:

País:

43. Poble o ciutat on va néixer el teu pare:

Província:

País:

44. Poble o ciutat on va néixer la teva mare:

Província:

País:

45. Professi3 dels pares:	PARE	MARE
a/ Gerent, director o propietari d' empresa amb m3s de 25 treballadors	<input type="checkbox"/>	<input type="checkbox"/>
b/ Titulat de grau superior (advocat, arquitecte, qu3mic, enginyer, metge, professor, economista, etc.)	<input type="checkbox"/>	<input type="checkbox"/>
c/ Titulat de grau mitj3 (professor d'infantil o prim3ria, enginyer t3cnic, ATS, etc.), o quadre mitj3 d'empresa sense titulaci3 superior (cap comercial, cap de producci3, cap administratiu, etc.)	<input type="checkbox"/>	<input type="checkbox"/>
d/ Propietari d'empresa o comerç de menys de 25 treballadors, auxiliar de cl3nica, administratiu, representant comercial, etc.	<input type="checkbox"/>	<input type="checkbox"/>
e/ Obrer especialitzat o treballador del sector serveis (mec3nic, xofer, policia, lampista, cambrer, paleta, electricista, etc.), agricultor o ramader.	<input type="checkbox"/>	<input type="checkbox"/>
f/ Pe3, temporer, vigilant, etc.	<input type="checkbox"/>	<input type="checkbox"/>
g/ Fa les feines de casa seva.	<input type="checkbox"/>	<input type="checkbox"/>
h/ Altres (especificar) Pare:		

Mare:

72. Estudis dels pares

PARE **MARE**

a/ Titulació universitària: diplomatura, llicenciatura

b/ Ensenyança secundària

c/ Estudis primaris

d/ Altres (especificar) Pare:

Mare:

MOLTES GRÀCIES PER LA TEVA COL·LABORACIÓ