

The impact of the mandatory nature of bilingual programmes on the attitudes and perceptions regarding bilingual education among secondary education content subject teachers

El impacto de la obligatoriedad de los programas bilingües en las actitudes y percepciones sobre la educación bilingüe del profesorado de asignaturas de contenido de educación secundaria

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Abstract

The different legislative developments of the Spanish Autonomous Communities in relation to bilingual education in compulsory secondary education allow schools in various territories to offer bilingual education on a voluntary basis. However, in others all students enrolled in a particular school are forced into this type of education. The aim of this work was to investigate secondary school teachers' attitudes, self-efficacy and perceptions about students' achievements, establishing a comparison between content subject teachers from schools where bilingual education is compulsory and teachers who work in schools where students can choose whether to join the bilingual programme or not. To this aim, an ex-post-facto research design was used. Data have been collected using different questionnaires designed to measure the constructs involved in the research. To answer the research questions, psychometric analyses were carried out to ensure the validity and reliability of the instruments as well as descriptive analyses, mean differences analyses, and a binary logistic regression. The results reveal better perceptions in teachers from schools where bilingual education is not compulsory for all students. Teachers in these schools show more positive attitudes towards this type of teaching, especially in instrumental attitudes, greater self-efficacy and better perceptions of student results and their involvement in the classroom. In view of these results, it would be convenient for the educational administrations to open a debate with teachers on the issue of bilingual education being obligatory for all students.

Keywords: secondary education, bilingual education, teachers' perceptions, obligatoriness, attitudes, self-efficacy

Resumen

Los diferentes desarrollos legislativos de las Comunidades Autónomas españolas en relación con la enseñanza bilingüe en educación secundaria obligatoria permiten que en algunos territorios los centros oferten de manera voluntaria dichas enseñanzas. Sin embargo, en otros, todos los estudiantes matriculados en un centro bilingüe se ven obligados a cursar este tipo de enseñanzas. Este trabajo se planteó como objetivo investigar las actitudes, la autoeficacia y las percepciones sobre los logros de los estudiantes del profesorado de asignaturas de contenido en centros de educación secundaria bilingües, estableciendo una comparación entre profesorado de centros en los que la enseñanza bilingüe es obligatoria y profesorado que trabaja en centros en los que los estudiantes pueden elegir si se unen al programa bilingüe o no. Para llevar a cabo el trabajo, se ha utilizado un diseño de investigación ex-post-facto. Los datos se han recogido utilizando diferentes cuestionarios diseñados para medir los constructos implicados en la investigación. Para contestar a las preguntas de investigación, se han llevado a cabo análisis psicométricos para asegurar la validez y la fiabilidad de los instrumentos así como análisis descriptivos, análisis de diferencias de medias y de regresión logística binaria. Los resultados muestran percepciones más positivas en el profesorado de centros en los que la educación bilingüe no es obligatoria para todo el alumnado. El profesorado de estos centros muestra actitudes más favorables hacia este tipo de enseñanza, especialmente en las actitudes instrumentales, una mayor autoeficacia y mejores percepciones sobre los resultados de los estudiantes y su implicación en el aula. En vista de estos resultados, resultaría conveniente que las

administraciones educativas abriesen un debate con el profesorado sobre la cuestión de la obligatoriedad de la enseñanza bilingüe para todo el alumnado.

Palabras clave: educación secundaria, educación bilingüe, percepciones del profesorado, obligatoriedad, actitudes, auto-eficacia

Introduction

Bilingual education (BE), understood as teaching contents in a foreign language, has been developed in the Spanish education system for decades. BE began in Spain through a pilot programme promoted by the Ministry of Education and the British Council in 1996. In 2004 the Community of Madrid launched its first own BE programme and, between 2004 and 2009, it was followed by the rest of the Autonomous Communities. Cantabria took longer and it did not implement the bilingual programme until 2013 and, finally in 2016, the Ministry of Education completed the process in the autonomous cities of Ceuta and Melilla. According to Lacasa et al. (2021), 1 out of 4 students at obligatory secondary education (ESO) in Spain are enrolled in bilingual programmes.

At present, the legislative programme regarding BE in Spain is complex. The Autonomous Communities have been transferred part of the educational powers and bilingual programmes in Spain are regulated in the different Autonomous Communities, normally through an order which is complemented by annual publications which include operating instructions. It can be stated that nowadays there are as many bilingual programmes in Spain as educational administrations (17 Autonomous Communities plus the Ministry of Education and Vocational Training). As an example, the Community of Madrid is the only region which has the *sección/programa* structure. The 'section' was created for those students coming from bilingual primary schools with a good command of the foreign language. The 'programme' was aimed at students coming from bilingual primary schools with a lower command of the foreign language or from non-bilingual primary schools.

Overall, there is a great degree of heterogeneity in the compulsory/voluntary nature of bilingual programmes in Spain. In the Region of Murcia, for example, the Order 5085 of June 3rd 2016 raises the obligation to implement the bilingual programme in all infant and primary education schools as well as the "foreign language teaching system" in any of the modalities established by the order, in all educational centres in the Region for the 2018-2019 academic year. Therefore, the voluntary criterion which prevailed in the orders which regulated the selection of bilingual schools in the previous years has been abandoned.

In Andalusia, the Instruction 21/2022, July 21, of the General Directorate of Educational Planning and Evaluation, states that BE must be implemented progressively in schools in all groups. Those bilingual schools where all the groups are not yet bilingual, because they are covered by the first transitory provision of the Order of June 28, 2011, must progressively increase them until they all become bilingual groups.

Most studies carried out up to now have analysed the impact of the bilingual programmes on the development of students' foreign language competence, most if not all showing their positive effects (Lorenzo et al., 2010). Other studies have analysed the impact on students' mother tongue (Pérez Cañado, 2018), while some others have focused on the impact on the contents of subjects taught in the foreign language (Hunt, 2011).

In general, there is a paucity of research on the topic of the compulsory/voluntary nature of bilingual programmes. Doiz & Lasagabaster (2017) carried out a study on the management teams' and teaching staff's beliefs about obligatory Content and Language Integrated Learning (CLIL) programmes in three schools in the Basque Country with the aim to see whether CLIL should be optional or obligatory for the students. The study reveals that there is no consensus among the school management teams which participated in the study. As for the teachers, the study revealed that they

Senra-Silva, I., Ardura, D. THE IMPACT OF THE MANDATORY NATURE OF BILINGUAL PROGRAMMES ON THE ATTITUDES AND PERCEPTIONS REGARDING BILINGUAL EDUCATION AMONG SECONDARY EDUCATION CONTENT SUBJECT TEACHERS tend to agree with their management teams on the CLIL model for their schools, and that experience seems to be a key factor in the school decisions. According to Doiz & Lasagabaster (2017):

The implementation of obligatory CLIL generates tensions as some teachers and management teams (i.e. school B) are concerned about the need to make it available to all students, whereas others (i.e. school A and school C for the near future) opt for non-compulsory CLIL due to the different problems brought about by its universalization. Throughout this process strains are created between some teachers and their management teams, because, despite the fact that equalizing opportunity is one of the basic tenets of state education, students' selection is jeopardizing it. However, some CLIL teachers clash with the harsh classroom reality which leads them to conclude that obligatory CLIL is not an asset but rather a liability. (p. 106)

In 2021 the Spanish Association of Bilingual Education (Gisbert et al., 2022) carried out a study among primary and secondary BE teachers with the aim of collecting their impressions and information about bilingual programmes in Spain. When asked about when a school must become bilingual, 71.25% of the participants believed the school should decide on this matter, followed by teachers (17.56%), the administration (7.37%) and parents (3.82%). Participants were also asked on whether or not bilingual programmes should be offered. 69.97% believed that these programmes should be implemented only in the schools which apply for it, followed by in all schools (25.30%) and those schools determined by the administration (4.73%).

Paran (2013) discusses some contextual factors needed to be present in order for a CLIL programme to be successful. According to him, the first element which contributes to the success of CLIL is selective implementation. He believes that, in general, self-selection is likely to mean higher initial competence as well as higher motivation. Paran mentions other elements, such as the fact that CLIL works best with high achievers, where teachers' L2 level is high, and in countries which have a higher academic achievement and a higher literacy level in general, among others.

Bruton (2011a, 2011b) suggests that in much of the research on CLIL in Spain there are social and motivational differences between the CLIL and the non-CLIL groups. Furthermore, Bruton (2011b) maintains that there is every reason to believe that some students may be prejudiced by CLIL. When talking about voluntary CLIL streams, open to everyone, it is generally acknowledged that essentially the students who opt for, and are very often encouraged into, the bilingual programmes are those who are highly motivated and whose parents are generally in the higher socioeconomic classes. Therefore, there is an implicit selection.

Senra Silva (2021) carried out a study with content subject teachers, and one of the conclusions was that BE was felt to be a form of discrimination and selection by many informants who believed that, in general, BE is a covert form of student selection and discrimination and it marginalises those who cannot function in bilingual settings, often because they come from disadvantaged social classes. Many informants explained that they had noticed that the students with the best results (in terms of knowledge of the subject and competence in English), usually have some English language academic support outside high school, such as private English lessons in private language schools. The main concern is for those families which cannot afford such lessons. In addition, students increasingly come to school with a higher level of English certified by official and authorised bodies; so that, when going up to higher forms, the level of difference between those who do not study, or progressively pass official language tests during the following courses of the ESO, becomes evident. Some teachers also maintained that the positive segregation of bilingual students is a problem for the life of the school.

Gortazar & Taberner (2020) conducted a study aimed at analysing the influence of the implementation of the bilingual programme in Madrid from the academic year 2004/2005 on school segregation and student performance. The data analysis concluded that school segregation by socioeconomic characteristics in secondary education in the Autonomous Community of Madrid is the highest in Spain and the second highest amongst OECD countries. Segregation gradually increased between 2009 and 2018, and these authors indicate two reasons for this, namely, the expansion of publicly funded private schools over the previous decade and the expansion of the

bilingual programme. Furthermore, they maintain that in 2015, when the bilingual programme reached the last course of secondary education in public schools, school segregation notably increased within the public system. Likewise, in 2018, school segregation notably increased within publicly funded private schools, consistent with the arrival of the bilingual programme in the publicly funded private sector at the end of secondary education.

Teachers' attitudes towards bilingual education

An attitude is a relatively enduring set of beliefs, feelings, and behaviours towards an object or a situation (Dragojevic, 2016). Previous studies on BE have shown the high relevance of stakeholders' attitudes in students' language performance, proficiency self-perception (Botes et al., 2020; Garrett et al., 2003; Li & Wei, 2022a, 2022b, Rubio-Alcalá, et al. 2019), and motivation for learning a language (Merisuo-Storm, 2006; Oxford, 2001). In addition, teachers' attitudes towards BE may be influenced by the lack of, for example, support, adequate teaching materials, unified curricula (Lazarević, 2022), preparation time, training, or teachers' linguistic skills (Senra Silva, 2021). Although Spanish teachers show general positive attitudes towards BE (Pladevall-Ballester, 2015), they also express some concerns regarding diversity outreach, how they can help and motivate low-achieving students or, as stated above, the fact that some students could be left behind in bilingual programmes (Senra Silva, 2021).

Content subject teachers' job satisfaction

Several factors have been addressed as sources of bilingual educators' job dissatisfaction. Among them, the lack of language proficiency (Vázquez & Ellison, 2013) or the responsibility to ensure students' second language learning (Cammarata & Tedick, 2012; Mehisto & Asser, 2007; Vázquez & Ellison, 2013) have been highlighted in previous research. Some studies stressed the impact of teachers' emotions on their satisfaction. For instance, Breeze & Azparren (2021) related teachers' satisfaction to their experience and confidence. Moreover, Pappa et al. (2017) uncovered the existence of anxiety in bilingual teachers related to reaching teaching demands and standards. At the administration level, Hofstadler et al. (2020) pointed out the relevance of avoiding the ambiguity in BE standards and policies. Interestingly, when teachers compare bilingual and non-bilingual teaching, the former seems to be more stressful than the latter. In addition, it was found that training protects BE teachers' well-being (Hessel et al., 2020).

Teachers' self-efficacy

Self-efficacy can be defined within the context of the Bandura's Social Cognitive Theory (Bandura, 1997, p.3) as the "beliefs in one's capabilities to organise and execute courses of action required to produce a given attainment". Teachers' self-efficacy (TSE) in the context of language teaching and learning has been the subject of previous studies (see, for a review, Hoang, 2018). These studies linked high levels of TSE to very relevant aspects of language teaching, such as self-reported English proficiency (Chacon, 2005), reflecting teaching practices (Chacón, 2005; Karimi et al., 2016), teachers' self-regulation (Ghonsooly & Ghanizadeh, 2013), teachers' democratic values (Zehir & Yavuz, 2011), organisational commitment (Gao, 2022), work engagement (Yang, 2021), and teaching satisfaction (Klassen & Chiu, 2011). Moreover, previous studies have also related TSE with students' outcomes as it positively affects students' confidence and learning approaches in different contexts of education (Blazar & Kraft, 2017). Fewer studies have been conducted on TSE in the context of BE. Some of them have suggested that BE could be a good environment to enhance teachers' self-efficacy due to its challenging nature (Iwaniec & Halbach, 2021; San Isidro, 2018).

Teachers' perceptions on students' outcomes in the bilingual classroom

Research on students' outcomes within the context of BE has been profuse in the last decades (see Graham, et al., 2018, for a review). Studies on teachers' perceptions about the outcomes of their students are, however, scarce. Trang & Nga (2015) reported a general satisfaction of teachers with their students' performance. In the same vein, Brevik & Moe (2012) suggested that teachers in Norway find BE rewarding since they perceive improvements in their students' language skills and content learning. However, Yang et al. (2014) reported a different teachers' perception regarding their students' progress in tertiary education, since they were more satisfied with their pupils' language improvements than with their content learning.

Purpose of the study

In the present study we gather data from high school content subject teachers in Spain on the optional/compulsory nature of bilingual programmes in secondary education. By addressing one of the stakeholders working on the ground, namely content subject teachers, we intent to obtain better insights into the research problem we are tackling in this investigation. We present obligatory vs optional as a contextual factor which may contribute to the success or failure of bilingual programmes.

As stated above, the way students join a bilingual programme may be key to both the students' and the programme's success (Bruton, 2011a, 2011b, 2013, 2015; Paran, 2013), as self-selection seems to be highly relevant. However, in Spain, depending on the territory, some students will be forced to enrol in BE if this type of education is compulsory in their school, whereas other students in other schools will be able to choose if they want to join the bilingual programme or go to the monolingual stream. Despite the growing importance of BE in Spain, there is a lack of studies about the possible effects of obligatory BE on stakeholders. As a result, the purpose of this study is to look into the effects of mandatory BE at secondary schools on content subject teachers' attitudes towards BE, job satisfaction, and perceptions of students' outcomes. To accomplish this goal, two research questions guided this study: The first research question (RQ1) seeks to compare the perspectives of teachers who work in schools with optional BE to those of instructors who work in schools where BE is compulsory.

- **RQ1.** Are teachers' attitudes towards BE, their job satisfaction, their self-efficacy, and their perceptions about their students' outcomes affected by the compulsory nature of BE programmes?

Our second research question (RQ2) aims to elucidate the most relevant variables from those included in this study—attitudes toward BE, job satisfaction, and views of student outcomes—to classify the teachers into mandatory and optional bilingual schools. This will allow us to model how the variables compared to answer the first research question contribute to explaining the distribution of teachers in both types of schools (i.e., which of them are statistically significant and to what extent they contribute to the model). This model will provide information about what variables from those included in this investigation better define the profile of teachers in non-compulsory bilingual schools compared to teachers working in mandatory bilingual schools.

- **RQ2.** What variables from those included in this study better classify the teachers depending on whether they are working in compulsory or non-compulsory bilingual schools?

Method

Research design

A cross-sectional ex-post-facto research design was used to undertake this investigation. This type of non-experimental design is used when events have already occurred at the time the study was carried out. In our case, the teachers who participated in the study were already working at the high schools when the data were gathered. According to the type of school they work at, teachers were classified into two groups depending on whether or not BE is compulsory for all the students in their school.

Sampling and participants

A convenient sampling based on the accessibility of the schools and the teachers was carried out to select the participants in the study. A total of 32 Spanish schools (26 public and 6 charter schools) from four Spanish Autonomous Communities (Andalusia, Cantabria, Madrid and Principality of Asturias) volunteered for the data gathering. The sample comprised 209 secondary school teachers who work as content subject teachers in bilingual programmes (59.8% males, 36.8% females, and 3.3% who preferred not to classify themselves in either. The teachers averaged 43.83 years of age with a standard deviation of 9.31. Their average teaching experience was 14.82 years and they had been involved in bilingual programmes as content subject teachers for 6.35 years on average. Of the total, 73 (34.9%) worked at a school in which BE was mandatory for all students whereas the rest of the teachers in the sample (136; 65.1%), worked at a school where BE was optional.

Instruments and variables

Teachers' attitudes towards bilingual education

The measurement of teachers' attitudes towards BE was carried out using a semantic scale proposed by Gardner (1985). This instrument has been previously used in the context of BE research (see, for example, Lasagabaster and Sierra, 2009) and consists of presenting a series of antonyms (unnecessary/necessary, awful/nice, unappealing/appealing, unpleasant/pleasant, insignificant/important, useless/useful, boring/interesting, and relaxing/stressful) intended to characterise both ends of teachers' possible attitudes towards bilingual education. To avoid central responses, participants were asked to express their answers on a 6-point Likert-type scale from 1 to 6. For instance, regarding necessity, 1 and 6 would mean totally unnecessary and totally necessary, respectively.

Teachers' job satisfaction

This construct was measured using an instrument designed *ad hoc* for this investigation. The scale consisted of five items, such as "I am satisfied with my job in the bilingual programme" (see Appendix). A 5-point Likert-type scale was used to measure the perceptions of the participants from 1 (totally disagree) to 5 (totally agree). The writing of the items was based on previous instruments (Macdonald & MacIntyre, 1997; Hessel et al., 2020). This instrument was validated for the study sample. Validation was ensured by Exploratory Factor Analyses (EFA) of the five items of the scale. The Kaiser-Meyer-Olkin statistic confirmed the sampling adequacy for this analysis (KMO=.758), and the correlation between items was large enough to proceed with the EFA, $\chi^2(10) = 194.44$, $p < 0.001$. Using the Kaiser-Guttman rule, only one factor, which accounted for 58.8% of the variance, was extracted (see the factor loadings in the Appendix). Then, this computation allowed the definition of the variable job satisfaction. The Cronbach's alpha of this variable was .714, showing reasonable reliability (Cohen et al., 2011).

Teachers' self-efficacy for bilingual education

The measurement of the teachers' self-efficacy for BE was carried out using the scale proposed by Vilkancienė et al. (2017) which consists of 10 items. The participants' answers were collected using a 5-point Likert-type scale from 1 (totally disagree) to 5 (totally agree). To measure teachers' self-perceptions of their own competencies to teach in a bilingual classroom, items like "I am able to identify the appropriate content to be taught in my CLIL lesson" were employed (all the items of the instrument are collected in the Appendix). To ensure the instruments' validity, an EFA was carried out. The Barlett's test ($\chi^2(45) = 823.04, p < 0.001$) and the KMO statistic (0.788) confirmed a suitable degree of item correlations and the sample adequacy to proceed with the factor analysis. Using the Kaiser-Guttman rule, this analysis allowed the extraction of a single factor which explained 56.8% of the variance (see the factor loadings in the Appendix). The reliability analysis rendered a Cronbach alpha of .877.

Teachers' perceptions of students' outcomes in the bilingual classroom

Teachers' perceptions of students' linguistic competence and outcomes were measured using an adaptation of the scale proposed by Lancaster (2016) which consisted of 10 items to be answered on a 5-point Likert-type scale from 1 (totally disagree) to 5 (totally agree). To study the validity of the instrument, an EFA was carried out. The value of the KMO statistic (.893) and the sphericity test ($\chi^2(45) = 1269.56, p < .001$) confirmed the fulfillment of the sample and correlation conditions to proceed with this analysis. The EFA rendered a 3-factor solution using the Kaiser-Guttman rule, which explained 76.12% of the variance. After a varimax rotation, the three factors were defined as teachers' perceptions of students' (i) linguistic competence (4 items), (ii) improvements associated with the bilingual programme (3 items), and (iii) involvement in the bilingual classroom (3 items), in light of the statements of the items associated to each factor (see the factor loadings in the Appendix). The reliability of the three sub-scales were, respectively, .894, .730, and .850.

Procedure

The research project was approved by the UNED's Research Ethics Committee ensuring the fulfillment of all ethical requirements for projects involving human beings. The schools were contacted, and the research team explained the aims of the data gathering and how it was going to take place. The collection of data was carried out through an online survey. This instrument comprised the aforementioned four scales: teachers' attitudes towards bilingual education (8 items), teachers' job satisfaction (5 items), teachers' self-efficacy (10 items), and teachers' perceptions of students' outcomes in the bilingual classroom (10 items). Besides, demographic information was gathered at the beginning of the survey (age, gender, teaching experience, and teaching experience in bilingual education) to characterise the participants. The teachers at each school were contacted via email to let them know the purpose of the research project, the instructions to fulfill the survey, and the link they needed in order to complete it. They were previously asked for their informed consent and a sincere response, being reminded that anonymity was ensured.

Statistical analyses

First, the validity of the scales was assessed by means of an Exploratory Factorial Analysis (EFA) using the principal axis factorisation (Goretzko et al., 2021). When more than one factor was extracted, a varimax rotation was used to facilitate the interpretation of the factors. The reliability of each scale was estimated using Cronbach's alpha. Once the latent variables were defined, descriptive and inferential analyses were conducted using the software SPSS v.27 (Arbuckle, 2010). The Kolmogorov-Smirnov test confirmed the non-normality of the variables related to attitudes. However, the values of asymmetry and kurtosis of these variables rendered values below 2 and 7, respectively. Thus, the distributions of the latent variables are close to normality (Mishra et al., 2019). The means of the complete sample were compared using Repeated Measure Analysis of the Variance (RM-

ANOVA). Mauchly's test revealed that the assumption of sphericity ($\epsilon=0.74$) was violated ($\chi^2=207.71, p<.01$). Consequently, the Greenhouse-Geisser corrected results are reported. In the case of teachers' job satisfaction and teachers' self-efficacy, the group comparisons were undertaken by means of the Students' t-test, and the effect size was estimated using Cohen's d statistic, being the threshold values for its interpretation < 0.20 very small, $0.20-0.49$ small, $0.50-0.79$ moderate, > 0.80 large (López-Martín & Ardura, 2023). However, given the correlations between the attitudes and the correlations between the teachers' perceptions about their students' outcomes, mean comparisons were computed on both sets of variables using a factorial Multivariate Analysis of the Variance (MANOVA) accompanied by an estimation of the effect size using the eta-squared statistic (η^2). The cut-off values for its interpretation were > 0.01 very small, $0.01-0.05$ small, $0.06-0.13$ moderate, > 0.14 large (López-Martín & Ardura, 2023).

To investigate what variables, from those included in this investigation, better classify the teachers in the sample as teachers working in non-compulsory vs. compulsory bilingual schools, a sequential stepwise binary logistic regression was carried out. This statistical technique allows contrasting models which can classify the participants into the levels of a dichotomous variable (criterion variable) by means of a linear combination of a series of variables (classification variables). In this investigation, the criterion variable was the type of school in which the teachers work comprising two levels: compulsory bilingual schools and non-compulsory bilingual schools. In our analyses, the classification variables were introduced in blocks, the first block being the teachers' attitudes towards BE, the second block being the three variables related to teachers' perceptions about students' outcomes in the bilingual classroom, and the third block being teachers' job satisfaction and self-efficacy. This sequential procedure allows to test whether adding a new set of variables improves the statistical model's predictability. To study the statistical significance of the models, we carried out a chi-squared test. Besides, the percentage of well-classify participants by the models and the Nagelkerke's R^2 were computed to assess the quality of the models. The Hosmer and Lemeshow test confirmed the data fit to the model. All computations were made using SPSS v.27 (Arbuckle, 2010).

Results

The mean values and standard deviations of the teacher's attitudes for the sample as a whole and as a function of whether the participants work in a school in which BE is compulsory for all the students or not are shown in Table I. The mean comparison across positive attitudes for the total sample was carried out using a one-way RM-ANOVA. Statistically significant mean differences were found among attitudes ($F(4.57, 949.81)=4.64, p<.01, \eta^2=0.02$). The highest mean scores among all positive attitudes were found in the necessity (4.91) and usefulness (4.96) of BE, being the difference between these two mean values non-significant. *Post hoc* comparisons also uncovered significant differences between the usefulness and niceness of BE (4.77), its pleasantness (4.74), its importance (4.73), and its appealingness (4.71).

Regarding the comparison of the teachers' attitudes depending on whether BE is compulsory or not in the schools they are working at (see Table I), MANOVA found significant mean differences in all the positive attitudes ($V=0.16, F(6,203)=6.57, p <.001, \eta^2=0.16$) across these two groups of teachers. Follow-up univariate ANOVA allowed the comparison of each individual attitude. The highest effect sizes for this comparison were found in pleasantness with a large size effect followed by niceness, appealingness, importance, usefulness, and interest, with moderate to large effect sizes. Finally, even though statistically significant differences were found in necessity, this particular difference presented a small effect size ($\eta^2=0.04$) (see Table I).

Table I. Descriptive and inferential results for the attitudes towards BE group comparisons.

Attitudes	Total	Compulsory	Non-compulsory	p	
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	M	SD	M	SD	M	SD		η^2
Necessary	4.91	1.18	4.58	1.39	5.09	1.01	.003	0.04
Nice	4.77	1.30	4.15	1.52	5.10	1.02	<.001	0.12
Appealing	4.71	1.17	4.15	1.27	5.01	0.99	<.001	0.12
Pleasant	4.74	1.26	4.07	1.42	5.03	0.97	<.001	0.15
Important	4.73	1.25	4.18	1.52	5.03	0.96	<.001	0.11
Useful	4.96	1.23	4.42	1.54	5.25	0.91	<.001	0.10
Interesting	4.83	1.21	4.34	1.39	5.10	1.01	<.001	0.09
Stressful	3.85	1.17	4.04	1.01	3.75	1.24	.094	0.01

As shown in Table II, the Students' t-test found that teachers' job satisfaction is significantly higher in the case of those who work in a school in which BE is taken voluntarily by students ($t=4.55$, $p < 0.01$, $d=0.60$). In the same fashion, teachers' self-efficacy for teaching in bilingual classrooms is significantly higher when BE is not compulsory ($t=3.00$, $p=.03$, $d=0.50$). The effect of the type of school on teachers' perceptions of their students' outcomes related to BE was studied by means of a MANOVA which found significant mean differences in students' improvements, involvement, and linguistic competence ($V=0.24$, $F(3,205)=20.99$, $p < .001$, $\eta^2=.24$) across the two groups of teachers. Follow-up univariate ANOVA showed statistically significant mean differences in the three traits, with large effect sizes (see Table II).

Table II. Descriptive and inferential results of teachers' perceptions about their job satisfaction, their own competence, and their students' outcomes.

Variable	Total		Compulsory		Non-compulsory		p	Effect-size
	M	SD	M	SD	M	SD		
Job satisfaction	3.63	0.63	3.37	0.65	3.77	0.58	<.01	$d = 0.60$
Self-efficacy	3.87	0.51	3.73	0.53	3.95	0.49	.03	$d = 0.50$
Improvements	3.61	0.66	3.35	0.68	3.76	0.61	<.01	$\eta^2 = 0.09$
Involvement	3.45	0.74	2.99	0.71	3.69	0.63	<.01	$\eta^2 = 0.20$
Competence	3.36	0.76	2.91	0.68	3.60	0.69	<.01	$\eta^2 = 0.19$

Source: Compiled by the authors

The role of the variables included in this investigation to classify the teachers in terms of whether or not they are working at a compulsory or non-compulsory bilingual school was studied by means of a sequential logistic regression model. Table III shows the results for the two statistically significant binomial logistic regression models developed in this study. In each model, the chi-squared tests, the percentage of classification, and the value of Nagelkerke's R^2 are displayed along with the model coefficients (B), the standard errors (SE) and the odd ratios (OR) for each classification variables.

The significant first model (Model I) was constructed using the students' attitudes as the classifying variables and grouped 71.3% of teachers adequately (R^2 Nagelkerke = .220). In turn, in the second model (Model II), the three latent variables regarding the teachers' perceptions of the students' outcomes were included in the analyses. This new model increases the classification percentage up to 82.3% and the Nagelkerke R^2 up to .349. Finally, the inclusion of teachers' job satisfaction and self-efficacy in the model did not render a statistically significant model.

As shown in Table III, pleasantness towards BE was the only significant classifying variable of working in a non-compulsory bilingual school among all attitudes ($B=0.72$; $p<.01$). For an increment of one unit in this variable, the probability of being a teacher who works in a non-compulsory bilingual school doubles ($OR=2.05$). When variables related to teachers' perceptions about students' outcomes were included in the analysis (Model II), positive effects of students' involvement ($B=0.87$; $p<.01$; $OR=2.39$) and students' competence ($B=0.65$; $p<.01$; $OR=1.92$) were found. Thus, as the level of the teachers' perception of students' involvement and linguistic competence increases, the probability of being classify as a teacher working in a non-compulsory school becomes higher. Interestingly, teachers' perceptions about students' improvements is not a significant classifying variable of the type of school they work at.

Table III. Results from the sequential logistic regression model

Classifying variables	Model I ($\chi^2=32.70$, $p<.001$; 71.3%; $R^2=.220$)			Model II ($\chi^2=61.00$, $p<.001$; 82.3%; $R^2=.349$)		
	B	SE	OR	B	SE	OR
Constant	-2.71	0.67	0.07	-5.55	0.97	0.01
Pleasant	0.72**	0.14	2.05	0.42**	0.15	1.52
Involvement	-	-	-	0.87**	0.33	2.39
Competence	-	-	-	0.65*	0.29	1.92

NOTE: only significant classifying variables from each block were included in this table, B: regression coefficient; SE: standard error; OR: odds ratio
* $p < .05$; ** $p < .01$. Source: Compiled by the authors.

Discussion and conclusions

According to Paran (2013), there is a need to understand the contexts in which BE succeeds or not. As stated above, Spanish secondary schools can offer their students bilingual programmes on a mandatory or optional basis depending on the Autonomous Community. The main goal of the present investigation was to study the effect of the mandatory nature of BE in secondary Spanish schools on content subject teachers' attitudes towards BE, job satisfaction, and perceptions of students' outcomes in bilingual programmes.

Our first research question (RQ1) was meant to assess how the fact that BE is mandatory in schools can affect teachers' attitudes towards BE, their job satisfaction, and their perceptions about their students' outcomes. Overall, the most positive attitudes in the sample of teachers were usefulness and necessity. Both attitudes are related to instrumental reasons to value BE rather than attitudes such as intrinsic interest or appealingness. Besides, there seems to be a correspondence between the teachers' attitudes uncovered in our study and the students' attitudes investigated in a previous study (Lasagabaster & Sierra, 2009). When the attitudes of teachers who work in schools where BE is voluntary were compared to the attitudes of those teachers who work in bilingual schools where BE is mandatory, our results showed significant differences in all positive attitudes, with the highest effect sizes in pleasantness, niceness, appealingness, importance, usefulness, and interest. Although the effect sizes do not vary much across the different attitudes, it is interesting to note that the largest effect sizes were found in those related to enjoyment (pleasantness, appealingness, and niceness). Although further studies should confirm it, this fact could be related to the better predisposition towards learning of students who voluntarily choose bilingual education compared to those who do not.

Differences have also been observed in attitudes such as importance, usefulness, and interest of BE in favor of teachers who work in schools with voluntary BE. In this case, the lower attitudinal levels found in schools with compulsory BE could be related to the fact that, as shown in this study, teachers' perceptions of students outcomes are worse than those of teachers in schools where BE is optional. Interestingly, the lowest effect size was located in necessity. This result shows that, regardless of the type of school, all the teachers consider BE a need for today's students, and instrumental attitudes are less impacted by the fact that BE is mandatory.

Teachers' perceptions about the stress level in BE does not seem to be related to the type of school they work at. In the same vein, teachers' job satisfaction is higher in schools where BE is voluntary. This trait has been previously linked to teachers' emotions (Pappa et al., 2017; Breeze & Azparren, 2021). Considering our results, the students' possibility to choose whether or not they want to join BE may be key to understanding the differences found in teachers' job satisfaction. The fact that students who opt for BE voluntarily may have better language skills would help alleviate teachers' anxiety (Pappa et al., 2017). According to our results, teachers in voluntary bilingual programmes had higher self-efficacy than those who work in schools where BE is mandatory. Thus, the fact that having students who choose whether or not they join BE (self-selection) may be playing an important role in teachers' self-perceptions of their own competence to teach in bilingual

programmes. Given the importance of TSE and the challenging nature of BE, this finding could be particularly relevant to support voluntary BE policies in Spanish schools. It is interesting to note that TSE has been suggested by previous studies as an important predictor of teachers' skills for diversity outreach in other educational contexts (Yang et al., 2014), and it could also play an important role in bilingual approaches. Teachers' perceptions of students' outcomes were more positive in the case of those who are working in a school in which BE is voluntary. First, teachers seem to perceive that their students learn more than those in compulsory bilingual schools, with a moderate effect size. The same trend was found in teachers' perceptions of their students' language competence in the classroom; in both cases, large effect sizes were observed. Regarding students' language competence, self-selection can clearly play an important role, as those students who do not feel ready in terms of their language skills would opt out of BE. Interestingly, teachers' perceptions about students' involvement were also higher in schools where the bilingual programme is voluntary. The fact that students can have the opportunity to choose may allow for a specific selection of motivated and eager-to-learn students. This could be a potential explanation, which merits further investigation, for the differences found in teachers' attitudes and perceptions as a function of the compulsory/non-compulsory nature of BE in the school they work at.

Our second research question (RQ2) was oriented to uncover what variables among those included in this study (teachers' attitudes towards BE, teachers' job satisfaction, teachers' self-efficacy, and teachers' perceptions about students' outcomes in BE) better classify whether the teacher is working at a compulsory or non-compulsory bilingual school. Despite the statistical differences noted in almost all the variables included in this investigation, only three were found to be significant classifying variables of the type of school the teachers work at. Among attitudes towards BE, only pleasantness increases the probability of teaching in a school where BE is voluntary. Interestingly, this result is in contrast with the mean difference analyses which yielded the largest size effects in the instrumental attitudes.

As one would expect, teachers' perceptions about students' language competence is an important classifying variable of the type of school. This finding could be related to the aforementioned self-selection of students as, in a school where BE is mandatory, all the students will end up in the bilingual classrooms despite their language command, whereas in schools where the bilingual programme is voluntary, the students with low standards in the second language are likely to be retained in the monolingual stream. Finally, it is interesting to note that teachers' perceptions about students' involvement in the bilingual classroom are more positive in schools where joining the bilingual programme is not compulsory. As previous studies have shown, students' involvement is key regarding performance, effort, initiative in learning, and interest (Groccia, 2018). Considering that all these traits are key in student-centred education, schools in which BE is voluntary for students seem to be in a better position to help students achieve their learning goals and boost their motivation to learn.

All in all, our study uncovered that content subject teachers' attitudes towards BE, their job satisfaction, their self-efficacy, and their perceptions about students' outcomes are better in the case of those who are working in schools where BE is voluntary for students compared to teachers who are working in schools where BE is compulsory. Interestingly, our binary logistic regression models pointed out that, among all the variables included in this investigation, only pleasantness towards BE and teachers' perceptions of students' outcomes in BE were key to classifying the teachers in one type of school or the other. In light of our results, a debate should be opened at the normative level since decisions that are made regarding the voluntary/compulsory nature of BE in schools have implications. For instance, diversity outreach could be highly affected by this sort of call. Administrations should discuss with the educational community if it is more convenient to implement BE selectively and if participation in bilingual programmes should be a family choice or not.

Limitations and prospective research

The results shown in this study present several limitations which should be considered in order to understand our findings. First, as an ex-post-facto research design was used, it is not feasible to establish causal relationships. If possible, further studies using experimental designs should be conducted. Second, only self-reported data were employed in this investigation. Consequently, social desirability could be a possible source of bias and replication studies could be convenient to support our findings. Third, future studies using mixed method approaches could be useful in gaining a deeper understanding of the teachers' views regarding the problem investigated in this research. Finally, future studies should be undertaken to add other stakeholders' views, such as students, families or headteachers, on the impact of the compulsory nature of BE to this debate.

Funding

This research was supported by the European Union under Grant 2020-1-ES01-KA201-081917. The authors would like to thank all the schools and the participants involved in the data gathering.

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Appendix

Items in each scale and factor loadings from the EFA

A. Job satisfaction scale

ITEMS	Loadings
Working in the bilingual programme has improved my academic and professional progression.	.809
My efforts in the bilingual programme have been acknowledged by my school.	.770
I am satisfied with my job in the bilingual programme.	.738
Teaching subjects using the foreign language generates additional paperwork and does not render positive academic results (reverse).	.556
Working in the bilingual programme classrooms presents working conditions benefits.	.504

B. Teachers' self-efficacy for bilingual education

ITEMS	Loadings
I am able to support learners in building their learning capacity.	.798
I am able to use strategies to support language learning in my content classes.	.783
I am able to design cognitively and linguistically appropriate learning/teaching materials.	.769
I am able to articulate CLIL-specific assessment needs and goals and to develop and implement related assessment tools.	.693
I am able to work with learners to jointly identify learners' needs in CLIL.	.691
I am able to create an authentic and meaningful safe learning environment for my learners (e.g., group work, pair work, etc.).	.665
I am able to use the language of appropriate complexity to ensure that my CLIL lesson goes smoothly.	.644
I am able to nurture cooperation with colleagues and have a repertoire of cooperation strategies and skills.	.624
I am able to plan content and language integrated lessons within the context of a general curriculum.	.617
I am able to identify the appropriate content to be taught in my CLIL lesson.	.610

C. Teachers' perceptions of students' outcomes in the bilingual classroom

ITEMS	Factor loadings		
	Competence	Engagement	Improvements
My students have adequate reading and writing skills in the foreign language.	.879		
My students have adequate linguistic awareness and reflect upon the foreign language.	.837		
My students have adequate listening and speaking skills in the foreign language.	.769		
My students have adequate knowledge of socio-cultural aspects and inter-cultural awareness in the foreign language.	.716		
My students are participative within the CLIL classroom.		.873	
My students are enthusiastic within the CLIL classroom.		.796	
My students are confident to get involved within the CLIL classroom.		.592	
My students' foreign language has improved due to my work in the CLIL classroom.			.834
My students' content knowledge of subjects taught in the foreign language has improved due to their participation in the CLIL classroom.			.728
My students' understanding of how language works has improved due to their participation in the CLIL classroom.			.554