

The Effect of Knowledge About the L1 on Foreign Language Skills and Grammar

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Cummins's (1978, 1979) Developmental Interdependence hypothesis states that a learner's competence in a second language is partly dependent on the level of competence already achieved in the first language. Likewise, this author's Common Underlying Proficiency model of bilingualism (Cummins, 1980) suggests that a bilingual or multilingual person's thoughts that accompany reading, writing, talking and listening stem from a common underlying proficiency or central operating system. Therefore it can be concluded that there is one integrated source of thought, irrespective of the language in which the bilingual/multilingual person is functioning. However, it has been observed (Cummins, 2000) that it takes considerably longer to attain a higher level of competence in academic language tasks than in everyday conversational situations. With these theories in mind, this paper examines the effect of knowledge about language on the learning of foreign language skills and grammar. The data were collected through a questionnaire, a metalinguistic awareness test, Raven's Progressive Matrices Test, a linguistic creativity test, and English tests completed by 252 students. It was hypothesised that: (1) student's knowledge about language would have a significant effect on the writing, reading and grammar English tests, and (2) the effect of this knowledge will lessen as regards the listening and speaking tests.

Cummins's (1978, 1979) Developmental Interdependence hypothesis is based on the existing relationship between the two languages of the bilingual subject. This hypothesis states that a learner's competence in a second language is partly dependent on the level of competence already achieved in the L1, since bilinguals are able to transfer skills from their first language for use in their second language. Therefore, if the L1 is highly developed, this will positively affect the L2 learning. However, if the L1's degree of development is low or inadequate to a particular cognitive stage, the outcome will be difficulties on the part of the learner to attain an adequate level of competence in the L2. This hypothesis has received widespread support, since there are many studies which have demonstrated that previous L1 proficiency has a direct influence on later L2 achievement (Bild & Swain, 1989; Wen & Johnson, 1997).

In this sense Cummins's (1980) Common Underlying Proficiency model of bilingualism suggests that a bilingual or multilingual person's thoughts that accompany reading, writing, talking and listening stem from a common underlying proficiency or central operating system. It can thus be concluded that there is one integrated source of thought, irrespective of the language in which the bilingual/multilingual person is functioning, which is illustrated in the analogy of an iceberg (Baker & Jones, 1998: 82) (Figure 1). Although two icebergs are visible above the surface, since the two languages can be kept separate in conversation, beneath there is a common area which both languages can have access to and use. This central and unified processing system is called Common Under-

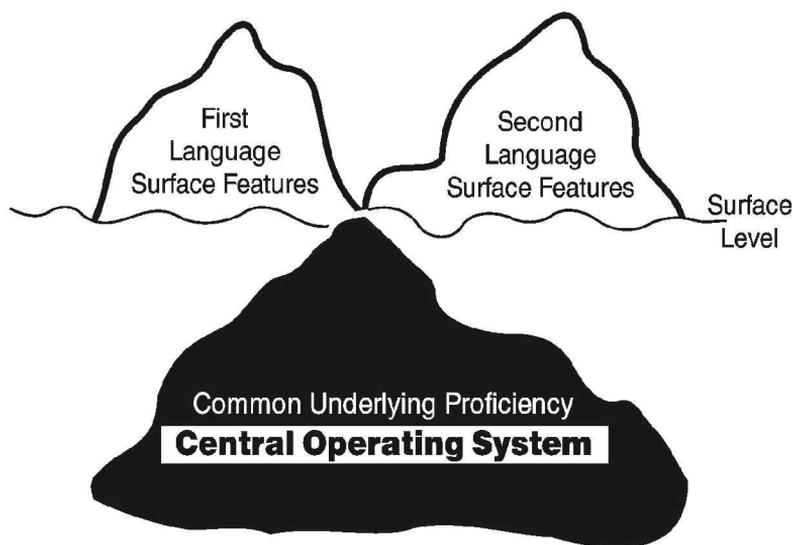


Figure 1 The Iceberg analogy

lying Proficiency. Similarly, 'beneath the surface are storage, associations between concepts, and representations (e.g. in words and images) that belong specifically and separately to the two languages' (Baker & Jones, 1998: 82).

However, Cummins (1984, 2000) observed that minority language students took considerably longer to attain a higher level of competence in academic language tasks, such as reading and writing, than in everyday conversational situations, such as speaking and listening. This led Cummins to the distinction between *conversational* and *academic* aspects of language proficiency due to the differences observed in minority students when it came to catching up with their class-peers in these two respects: conversational fluency and academic aspects. The case of Turkish returnees from Germany is a very good example of this, as many of their teachers complain about the lack of academic language of the returnees in both German and Turkish, although their everyday language proficiency seems to be native-like, the teachers' impression having been confirmed by several research studies (Daller & Grotjahn, 1999).

Although there is strong evidence that age at onset of L2 learning – as measured by age at immigration – very strongly influences immigrants' ultimate attainment in an L2 (Stevens, 1999), this dichotomy helps to depict the degree of second language proficiency which learners require in order to complete school learning tasks. Cummins proposes that a great deal of classroom activities are cognitively demanding and frequently have to be sorted out independently by the student without any help from the context. The ability to perform such tasks in a second language is also known as CALP (Cognitive Academic Language Proficiency). This kind of language proficiency contrasts with the so-called BICS (Basic Interpersonal Communicative Skills). The latter refers to the language proficiency needed to carry out other sorts of tasks which are more related to interpersonal communication. This interpersonal communication is not so

cognitively demanding as CALP and relies heavily on context in order to clarify meaning; a face-to-face speaking activity could be a very good case in point, or even a listening activity wherein intonation, stress or the speaker's mood is usually very helpful when trying to decode the intended message. Although migrant children attain the proficiency level of their monolingual peers in simple communication skills rather quickly, this may hide their inadequacy to cope with the cognitive and academic demands of the classroom activities, which needs much more time.

It is important to underline that this distinction has come in for criticism¹ on the following grounds (Baker, 1997: 152):

- (1) Language learning is a dynamic process which cannot be easily compartmentalised in static and simplified dichotomies.
- (2) It lacks direct empirical support, because it is considered that this distinction is difficult to operationalise in research.
- (3) Several other factors have to be borne in mind. Language acquisition is not just limited to cognitive factors, on the contrary, many other factors are involved in this process; affective variables, political situation, institutional support, and so on and so forth.

Nevertheless, Corson's (1993) results coincide with this distinction. This author pointed out that whereas about 60% of all the words in written English are of Graeco-Latin origin, the lexicon used in everyday conversation is basically of Anglo-Saxon origin, despite the fact that this Anglo-Saxon lexicon represents only 1% of the *Oxford English Dictionary* (Bryson, 1990). A further distinction has to do with word length, since the former tend to be longer (three or four syllables), while the latter are shorter (one or two syllables). 'Thus, at least in English, the lexicon used in conversational interactions is dramatically different from that used in more literate and academic contexts' (Cummins, 2000: 67). Carter (2000) also shares this idea and states that lexical choices are very different in oral and written discourse.

Knowledge about Language 1/Metalinguistic Awareness and Foreign Language Learning

Since metalinguistic awareness includes looking inwardly at each language and accumulating knowledge about the language itself (Baker & Jones, 1998), in this paper the terms knowledge about language and metalinguistic awareness are used interchangeably, in accordance with Andrews (1999). In fact, one of the main objectives of language awareness consists in making explicit the students' implicit knowledge of their first language or languages (James & Garrett, 1991).

There is widespread agreement regarding the questions that metalinguistic awareness and language learning are closely interrelated and that the development of metalinguistic awareness is narrowly associated with the reading-writing process. The beginning of the literacy process plays a paramount role, since it is at this moment that there is an attention shift from the linguistic content to the linguistic form (Ryan & Ledger, 1984). It is a fact that skilled readers outperform poor readers in knowledge about language (Bowey, 1986; Short & Ryan, 1984; Willows & Ryan, 1986), which is the reason why, whether independently

(Warren-Leubecker & Carter, 1988) or together with other abilities (Bowey & Patel, 1988), all authors agree on the fact that metalinguistic awareness and knowledge of the written language interact and facilitate each other's growth (Chaney, 1992). However, and probably due to the widespread interest in establishing when metalinguistic awareness begins to develop (Van Damme, 1994), the lack of research involving pupils above the age of 10 is worthy of note, as most studies centre around the metalinguistic behaviour of schoolchildren up to the age of nine.

The research studies carried out in contexts where there is a presence of two or more languages in contact have clearly shown that bilingualism fosters the development of metalinguistic awareness (Klein, 1995; Lasagabaster, 1998a, 2000a; Merriman & Kutlesic, 1993), and not only in elite or privileged language learning situations, but also in disadvantaged contexts (Francis, 1999; Pinto *et al.*, 1999; Yelland *et al.*, 1993). What does seem to have been consistently supported is that early exposure to a second language is one of the factors or activities that promotes metalinguistic activity. A number of researchers have hypothesised that this effect is due to the fact that early bilingual exposure makes separating the sound of the word from its meaning easier. In other words, it eases the understanding of the arbitrary relationship between the word and the referent, as it does the comparison of different languages. It is certainly true that of the various aspects of metalinguistic awareness which benefit from early bilingualism the word-referent is the most studied, while others have hardly been looked at. In this sense it would be very interesting to analyse whether or not other areas are connected with bilingualism.

Research also supports the relationship between early bilingual schooling and enhancement of both L2 and L1 skills (Genesee, 1983; Harley *et al.*, 1986), and as a result of this, a further development of the students' knowledge about language seems to benefit their foreign language learning (Cenoz, 2000; Cummins, 1993; Hurd, 1993; Lasagabaster, 1998a). Jessner (1999: 207) underlines that 'metalinguistic awareness, which is seen as enhanced in multilinguals, plays a central and facilitating role in the acquisition of additional languages'. Consequently an extension of the interdependence hypothesis to a trilingual situation would suggest that bilinguals are also capable of transfer from their first two languages into a third one.

Yet it is not so evident whether this knowledge about language exerts the same influence on every language skill. It is worth considering that 'metalinguistic awareness lies at the core of the proficiencies that underlie Cummins's CALP' (Francis, 1999: 534), and hence it plays a paramount role in L2 learning in a formal setting like the school (Lasagabaster, 1998c; Sharwood-Smith, 1991). Most studies so far have dealt with the relationship between students' knowledge about the target language and ultimate achievement in that language. In fact, whether explicit L2 knowledge contributes to the development of implicit L2 knowledge is considered to be a key issue in applied linguistics (Han & Ellis, 1998; Krashen, 1981; Prabhu, 1987; Sharwood-Smith, 1981; VanPatten & Cadierno, 1993). Nevertheless, we intend to analyse the effect of the learners' knowledge about the L1 on foreign language learning.

The main objective of this paper is therefore to examine the effect that students' knowledge about their L1 has on the development of foreign language

skills and grammar, taking the distinction between academic and conversational proficiency as a basis. As a result of this, the speaking and listening skills will be related to a more conversational dimension, whereas reading, writing and grammar exercises will be closer to the academic dimension; as the latter are more decontextualised in nature, they should show a closer relationship to the metalinguistic awareness measures. The degree of planning in the academic and conversational dimensions should similarly be reflected in different ways; the need for greater deliberate attention on language forms in the reading, writing and grammar tests should entail a closer relationship between these tasks and the metalinguistic awareness indices.

The results obtained by Francis in 1999 support our hypothesis. This author compared the performance of bilingual subjects in Spanish and Náhuatl (a Mexican vernacular language) in three literacy measures (oral, reading and writing tasks) and metalinguistic awareness, observing a significant correlation between reading, writing and metalinguistic awareness in both languages, but no such relationship in either language as far as the oral narrative and metalinguistic awareness measures were concerned.

Hypothesis

Bearing in mind the previously presented theories, this study was undertaken with a view to testing two main hypothesis:

- HP1: students' metalinguistic knowledge of their L1 will have a significant effect on the writing, reading and grammar English tests.
- HP2: the effect of this knowledge will lessen as regards the English listening and speaking tests.

Method

Subjects

This study was carried out in Vitoria-Gasteiz, the capital of the Basque Autonomous Community (BAC), a community in which both Basque and Spanish are official languages and taught at school from the outset. Therefore all the participants were bilingual subjects, although their degree of bilingualism varied considerably. The sample was made up of 126 Grade 5 students with an average age of 10 years 3 months, and of 126 Grade 8 students with an average age of 13 years 3 months. Since the passing in 1983 of the law establishing the use of the Basque language at pre-university levels in the BAC, and owing to the existence of different social attitudes towards bilingualism, there are three linguistic models in which children can complete their studies:

Model A

This is a regular programme in which Spanish is the vehicle language and Basque is taught only as a subject (4 to 5 hours per week). The L1 of the students is Spanish. Although it was originally designed to include some subjects in Basque in the last years of compulsory education, which would make it comparable with the Canadian late partial immersion (Genesee, 1983), this original resolution has been discarded. Eighty-four subjects (33.3% of the sample) were enrolled in this linguistic model. The Basque language objectives in model A are:

- (1) To understand Basque well;
- (2) To be able to give basic explanations in Basque on everyday matters;
- (3) To prepare the student for participation in Basque environments;
- (4) To strengthen positive attitudes towards Basque.

Model B

This is an early partial immersion programme in which both Basque and Spanish are used as means of instruction. These students' L1 is usually Spanish, although there may be some rare exceptions with Basque as their L1. In this model the first three schooling years (kindergarten) are generally taught through Basque. At the age of six, that is to say, the first year of primary education, they start to learn the reading–writing process and mathematics in Spanish. Some schools evolved towards a more intensive model B (as is the case of the participants in this study), in which the reading–writing process and part or the whole subject of mathematics is performed in Basque. Eighty-four subjects (33.3% of the sample) were enrolled in model B. The Basque language objectives in this model are:

- (1) to acquire suitable competence to perform in Basque as well as securing a high level of comprehension;
- (2) to prepare students to carry out further studies in Basque.

Model D

This is a total immersion programme for those students whose L1 is Spanish and a maintenance programme for those with Basque as L1 (unlike Finland or Canada, where total immersion programmes are only used with students who have no knowledge of the vehicle language). Spanish is only taught as a subject (4 to 5 hours per week). Eighty-four subjects (33.3% of the sample) were enrolled in this linguistic model. The Basque language objectives in this model are:

- (1) to strengthen competence in Basque, enriching language skills and converting Basque into an instrument of communication for conversation and teaching.
- (2) to strengthen the community of Basque-speaking students to stand up to the pressures of the Spanish-speaking environment and to make it a driving force in the Basquisition of the inhabitants of the BAC.

The students were enrolled in six different schools, 50.4% of the sample being male and 49.6% female. All the students had English as a subject for three hours a week, those in Grade 5 having started learning the foreign language in Grade 4 (so they had been learning English for a year and a half), whereas those in Grade 8 started learning it in Grade 6 (so they had been learning English for two and a half years).

Instruments

The data were collected through the following tests.

Intelligence

The non-verbal cognitive ability was measured by means of the Raven's Progressive Matrices Test.

Background information

Through a general questionnaire the students were asked about their personal data and some background information: gender, age, socioeconomic status, sociocultural status, English classes outside school, parents' knowledge of English, importance given to English or motivation (for further details see Lasagabaster, 1998b).

Metalinguistic awareness

The metalinguistic tasks used in this study were taken from the MAT-2, a test aimed at measuring metalinguistic abilities (Pinto & Titone, 1995; Pinto *et al.*, 1999). The metalinguistic test for Grade 5 students consisted of three tests (synonymy, acceptability and ambiguity), and that for Grade 8 students of four tests (synonymy, acceptability, ambiguity and phonemic segmentation). Since the students had different L1s (Basque, Spanish or both languages), they were given the possibility of completing the test in the language of their choice, Basque or Spanish (see the Appendix for a few examples in English taken from the MAT-2). These tests have been standardised and are highly reliable (see Pinto *et al.*, 1999). The construction of the MAT-2 springs from an attempt to move beyond the age limit of the existing studies (which, as has already been said, stop at the age of 10 or 11), in the conviction that this limit in the experimentation already carried out does not correspond to a limit in the real development of the person/learner.

Linguistic creativity

This was measured via Torrance's (1990) *Thinking creatively with words. Verbal booklet A*. This test consists of six activities which are scored for fluency, flexibility and originality, the average score being obtained by calculating the mean score of these three components of creativity (for further details see Lasagabaster, 2000b).

English proficiency

The dependent variable English was measured by means of English tests corresponding to the four language skills and a vocabulary and grammar test. The tests related to the four skills are tests which measure global communication aspects, whilst the lexis and syntax test concentrates on measuring more specific linguistic aspects. In this way we have been able to evaluate all the pupils in the sample even though there were differences amongst them as regards communicative and/or linguistic competence. The tests were as follows.

Reading comprehension

Grade 5

This test consisted of two activities. In the first the pupils had to read a text about an extraterrestrial being (Zarkon the Alien) and answer five multiple-choice questions, each with four possible answers, of which only one was correct. For the second activity, the students had to read six phrases and match them to their corresponding pictures. The average score attained by the students was 8.03 (*S.D.* = 2.41) out of a possible total of 11 points.

Grade 8

The students read a text about several well-known places of interest that a tourist could visit in the capital of England, London. The text offered a descrip-

tion of these places, as well as their opening hours. Ten questions had been prepared in order to evaluate the students' ability to understand general and specific information. Five of them were multiple-choice, with four possible answers each, of which only one was correct. In the other five questions the student was asked to help a visiting couple, who for various reasons (it being a rainy, miserable day; they only had an hour free; etc.) were very limited in what they could do. Out of a possible ten points in this written comprehension test, the average score was 5.42 (*S.D.* = 2.57).

Listening comprehension

Grade 5

The participants listened to a specially prepared short text (about 40 seconds) in which a boy called John described his likes and dislikes, stated his age and gave details of the members of his family. The text was recorded by a native speaker and included simple vocabulary and syntactic structures to aid understanding. After listening, the students had to answer five multiple-choice questions with four possible answers each, of which only one was correct. The average mark for this aural comprehension test was 2.44 (*S.D.* = 1.24) out of a possible total of five points.

Grade 8

The testees listened to a short text (1 minute 50 seconds) created by the author for the occasion and recorded by native speakers, in which a mother is talking about her daughter to her daughter's teacher. It was hoped this would prove interesting to the students, being a theme all too well-known to them. The objective was for the students to grasp the general idea of what was said, and then afterwards glean more specific information, a task needing greater concentration and understanding. The questions were multiple-choice as above, and the Grade 8 students obtained an average score of 5.14 (*S.D.* = 2.04) out of a possible total of nine.

Writing

Grade 5

The students were not asked to perform a written test as at this level little attention is given to this type of activity, due to the current methodology used in the teaching of English. During the first years greater emphasis is placed on developing the other three linguistic skills, particularly listening comprehension and oral production. Thus it was considered that this type of test would prove too difficult for the pupils, and that possible differences in the students' output would be neither important nor significant.

Grade 8

The students were asked to write a letter to a young English girl of their age with the aim of becoming penfriends. The participants had to write at least eight lines. They were given total freedom regarding the approach to use, and could utilise the syntactic structures and vocabulary they thought best. The average score obtained in this written test was 73.16 (*S.D.* = 8.86) out of a total of 100 points.

Speaking

This test was the same for both Grade 5 and 8 students. The participants had to explain what they could see in a series of six pictures which made up a story. In the story a cat and a dog take advantage of the family being away from home. They play with an apple, but during the game they break several coffee cups and are scolded when the family return home. The idea behind this test was to give the children the opportunity to make full use of supposedly basic knowledge (colours, pets, parts of the house, clothing). It is important to point out that at no time was the student's production interrupted for correction. Grade 8 students were asked to tell what they saw, as supposedly they should be able to provide the necessary information at the same time as their opinion. Grade 5 students were asked questions in order to help them, as they were not in possession of such a wide vocabulary or syntactic structures. Their output was recorded on cassettes for evaluation. The average mark obtained by Grade 5 students was 26.52 (*S.D.* = 7.49), whilst those in Grade 8 scored an average of 28.59 (*S.D.* = 4.96), the maximum possible for both groups being 50 points.

Lexical and syntactical competence

Grade 5

This test was made up of six activities. In the first two the students' command of vocabulary regarding parts of the body and clothing was evaluated (the vocabulary was given in one column, and drawings in the other; the students had to link them). The third activity required knowledge of a greater range of vocabulary (animals, classroom objects etc.) and the students had to write the word next to the corresponding picture, in this way their spelling was tested also. The fourth activity consisted in putting a simple dialogue in order, and the fifth was to complete the days of the week. In the last activity the students were shown a picture of a room and had to link sentence beginnings with their endings in accordance with what they saw in the picture. The average mark attained was 29.07 (*S.D.* = 6.96) out of a total of 38.

Grade 8

There were four parts to this specially prepared test. The first was multiple-choice, the students having to complete a phrase with one of four options, of which only one was the correct one. This part was designed to test the students' knowledge of vocabulary, prepositions, pronouns, tenses, expressions and contractions. The second part was to check their command of interrogative structures using question particles (*Wh-*). The students were required to write questions, the answers to which would correspond with the underlined part of the sentence. The third exercise involved completing some sentences, each of which was missing an element. As no options were offered to the student, the possibility of getting them right by chance was considerably reduced. In the final section the students had to complete sentences using the correct form (present, present continuous or past) of a verb which appeared in brackets. The average score achieved in this lexis and syntax test was 24.95 (*S.D.* = 8.16) out of a possible total of 40.

Design and procedure

All the tests, apart from the speaking test, were written exercises and carried out in groups. The speaking test was undertaken on an individual basis in a separate class with just the examiner present; this was recorded for later evaluation. Except for the English speaking and writing tests, they were marked following objective criteria, which significantly simplified the marking process. Nevertheless, it is worth reiterating that all of the tests have been standardised, and are highly reliable. The tests were administered in three sessions, each lasting between 45 minutes and an hour, and there was always an interval of two or three days between one session and the next. The results were recorded on answer sheets, which, after having been marked and codified, were statistically treated. The statistical analyses were carried out by means of the SPSS (Statistical Package for Social Sciences).

However, it has to be stressed that the speaking and writing English tests had to be scored following more subjective criteria, thus making the procedure more complicated. A holistic approach, as has already been used in other studies (Cenoz, 1991; Lasagabaster, 1998a, b; Pennington & So, 1993), was used for the writing as well as the speaking tests. Two assessors are needed for this, who must first have a good understanding of the mechanics of the marking scales, as the final scores are the result of two independent assessments and are therefore more reliable. The 'profile' technique designed by Jacobs *et al.* (1981) was used to check both the Grade 5 and Grade 8 groups. This method falls within the holistic approach, as it does not just count the number of mistakes or the presence of certain elements, but also takes into account the communicative effect that the written text produces in the reader. At the same time any subjectivity which can be attributed to this technique is reduced, as the tests are marked independently by two people.

Jacobs *et al.* (1981) have demonstrated that as long as the requisite conditions are complied with, the reliability of this technique can be seen clearly. The authors have in fact observed that when the texts have been checked by two assessors, the reliability coefficient has been above 0.85. The 'profile' consists of five scales referring to the different aspects under consideration in the writing test: content (30 points), organisation (20 points), vocabulary (20 points), use of language (25 points), and mechanics (5 points). Within each of these scales there are four bands ('excellent to very good', 'good to average', 'fair to poor' and 'very poor') which give the person marking a series of keywords on which to base the specific evaluation criteria. The overall score is arrived at by adding the scores for each of the scales, which varies between a minimum of 34 points and a maximum of 100. The final score for each individual in this written part is the average of the totals of the two assessors. As regards the trustworthiness of this instrument as a measure for testing written work, it is worth pointing out that the correlation coefficient between the two examiners was 0.959.

In order to evaluate the speaking test, we resorted to the instrument created by Cenoz (1991) for her study, which employs a holistic approach consisting of five scales: pronunciation (10 points), vocabulary (10 points), grammar (10 points), fluency (10 points) and content (10 points). As in the written test, each scale consisted of four bands. The minimum points total in this test was five points,

and the maximum 50, and the tool was used both for grade 5 and for grade 8. This tool allowed us to use some parameters like those employed in the written test (though of course, owing to the inherent differences between the two types of text, they could not be the same). The final score for each individual as regards oral production is the average of the totals of the two markers. As regards the trustworthiness of this instrument as a measure for testing spoken work, it is worth pointing out that the correlation coefficient between the two examiners was 0.9438.

Results

Correlational analyses were performed in order to check what sort of relationship there was between the metalinguistic awareness index and the four language skills and grammar. The results in Grade 5 are given in Table 1 (as was explained before, these subjects did not complete the writing test owing to their lack of experience in this type of task).

Table 1 Correlations, Grade 5

	<i>Metalinguistic awareness</i>	<i>Listening</i>	<i>Reading</i>	<i>Speaking</i>
Listening	0.254** ($p = 0.004$)			
Reading	0.530** ($p = 0.000$)	0.382** ($p = 0.000$)		
Speaking	0.370** ($p = 0.000$)	0.399** ($p = 0.000$)	0.523** ($p = 0.000$)	
Grammar	0.629** ($p = 0.000$)	0.468** ($p = 0.000$)	0.691** ($p = 0.000$)	0.635** ($p = 0.000$)

** Significant correlation at the 0.01 level (bilateral).

As could have been expected, the results exhibit a very high correlation between the different skills. The correlation scores are also high as regards metalinguistic awareness, the highest ones being those related to grammar (0.629) and reading (0.530). The lowest significance, however, is that between metalinguistic awareness and listening (0.254; $p = 0.004$). As far as the Grade 8 sample is concerned, the results of the correlational analyses are presented in Table 2.

Once again there is a high correlation between the language skills. Similarly, there is a close relationship between the metalinguistic awareness index and the four language skills, Cummins's interdependence hypothesis being thus borne out in both grades. Yet, although the lowest correlation is between metalinguistic awareness and listening (0.232; $p = 0.009$) – as happened in Grade 5 – the highest ones are related to the writing (0.469), grammar (0.387) and speaking (0.363) scores, followed by reading (0.286). Thus, and contrary to expectations, in Grade 8 there seems to be a closer relationship between metalinguistic awareness and speaking.

As a result of this, and in order to measure the real effect of metalinguistic awareness on the language skills and grammar, regression analyses were carried out. As this sort of analysis allows us to establish the final contribution of those

Table 2 Correlations, Grade 8

	<i>Metalinguistic awareness</i>	<i>Listening</i>	<i>Reading</i>	<i>Speaking</i>	<i>Grammar</i>
Listening	0.232** (<i>p</i> = 0.009)				
Reading	0.286** (<i>p</i> = 0.001)	0.528** (<i>p</i> = 0.000)			
Speaking	0.363** (<i>p</i> = 0.000)	0.475** (<i>p</i> = 0.000)	0.582** (<i>p</i> = 0.000)		
Grammar	0.387** (<i>p</i> = 0.000)	0.493** (<i>p</i> = 0.000)	0.659** (<i>p</i> = 0.000)	0.683** (<i>p</i> = 0.000)	
Writing	0.469** (<i>p</i> = 0.000)	0.395** (<i>p</i> = 0.000)	0.484** (<i>p</i> = 0.000)	0.578** (<i>p</i> = 0.000)	0.611** (<i>p</i> = 0.000)

** Significant correlation at the 0.01 level (bilateral).

variables likely to have an influence on the foreign language skills, especially if they correlate (Rojo *et al.*, 1998), as is the case. By means of this statistical technique we can estimate or predict a value for the dependent variable (the four language skills and grammar) from a set of independent variables. Apart from the metalinguistic awareness index, the regression analyses (method = stepwise) also included the following independent variables, due to their effect on foreign language learning (Ellis, 1994; Lasagabaster, 1998b; Skehan, 1991): English classes outside school, gender, socioeconomic status, sociocultural status, importance given to English, parents’ knowledge of English, motivation, intelligence, and linguistic creativity. First of all, and in order to check our first hypothesis, the relationship between metalinguistic awareness and the reading, grammar and writing scores (the academic aspect) will be analysed.

In both grades the independent variable metalinguistic awareness exerts a significant influence on the reading test (Tables 3 and 4). In Grade 5 it explains 25% of the variability of the dependent variable, and 19% (together with the English outside school variable) in the Grade 8 sample.

Table 3 Reading, Grade 5

	<i>R</i> ²	<i>T</i>	<i>Sig.</i>
Metalinguistic awareness	0.256	6.424	0.000
Motivation	0.288	2.335	0.021

Table 4 Reading, Grade 8

	<i>R</i> ²	<i>T</i>	<i>Sig.</i>
English classes outside school	0.109	4.237	0.000
Metalinguistic awareness	0.194	2.578	0.011
Intelligence	0.232	2.354	0.020

As far as the grammar and vocabulary test is concerned (Tables 5 and 6), both the extrascholastic English classes and metalinguistic awareness variables account for more than 40% of the variability in both grades, their influence being thus very significant (0.000).

Table 5 Grammar, Grade 5

	R^2	T	<i>Sig.</i>
Metalinguistic awareness	0.362	8.061	0.000
English classes outside school	0.460	5.074	0.000
Creativity	0.489	2.618	0.010

Table 6 Grammar, Grade 8

	R^2	T	<i>Sig.</i>
English classes outside school	0.243	7.519	0.000
Metalinguistic awareness	0.415	3.780	0.000
Intelligence	0.496	3.448	0.000
Motivation	0.517	2.211	0.029

There is also an important relationship between metalinguistic awareness and the writing results in Grade 8 ($R^2 = 0.200$) (Table 7), therefore it seems that our first hypothesis is corroborated. It is also noteworthy that the independent variable intelligence does exert a significant influence on reading, grammar and writing in Grade 8 but not in Grade 5.

Table 7 Writing, Grade 8

	R^2	T	<i>Sig.</i>
Metalinguistic awareness	0.200	3.799	0.000
Importance given to English	0.269	3.344	0.001
Intelligence	0.334	3.307	0.001

With the aim of testing the second hypothesis – the effect of metalinguistic awareness on the listening and speaking results – regression analyses were also performed, the apportioned results being given in Tables 8–11. As expected, knowledge about language does not show up as one of the most influential variables with respect to the listening test (Tables 8 and 9).

Table 8 Listening, Grade 5

	R^2	T	<i>Sig.</i>
English classes outside school	0.067	3.600	0.000
Creativity	0.147	2.994	0.003
Gender	0.174	1.986	0.049

Table 9 Listening, Grade 8

	R^2	T	<i>Sig.</i>
Intelligence	0.072	2.927	0.004
Sociocultural status	0.130	2.911	0.004
English classes outside school	0.180	2.602	0.011

Once again the English classes outside school variable has a significant effect (0.000) on the results of both grades (Tables 10 and 11). Yet, the metalinguistic awareness variable helps also to explain the variability of the speaking results, to such an extent that it accounts for 39% of the variability in Grade 5, together with the extrascholastic English, and for 29% in Grade 8, in this case together with the extrascholastic English and intelligence variables. As happened with respect to the academic skills, intelligence does also appear as highly influential in the conversational skills in Grade 8.

Table 10 Speaking, Grade 5

	R^2	T	<i>Sig.</i>
English classes outside school	0.323	7.773	0.000
Metalinguistic awareness	0.397	2.923	0.004
Sociocultural status	0.437	2.558	0.012
Creativity	0.463	2.413	0.017

Table 11 Speaking, Grade 8

	R^2	T	<i>Sig.</i>
English classes outside school	0.115	4.095	0.000
Intelligence	0.226	2.730	0.007
Metalinguistic awareness	0.299	2.455	0.016
Importance given	0.329	2.148	0.034
Creativity	0.354	2.034	0.044

Conclusions

Our initial predictions prompted us to expect a positive correlation between the students' knowledge about language and the reading, writing and grammar tasks, since they represented the more typical decontextualised language activities of foreign language learning at school, and in fact this hypothesis was confirmed.

However, our second hypothesis was only borne out in part, since metalinguistic awareness surprisingly had an important effect on the speaking results and in both grades, although our expectations were fulfilled with regards

to the listening test, in which the students' knowledge about their L1 did not appear among the main variables responsible for the listening results' variability.

It should be borne in mind that in order to elicit the data in the oral English test, the students' narrations were produced under relatively context-embedded conditions, since they were shown a series of illustrations that represented familiar sequences of events and in which they were given the opportunity to make full use of supposedly basic knowledge (colours, family members, pets, parts of the house, or clothing). Had the oral narration been a more decontextualised task, one in which students would have to fall back more on purely linguistic abilities, we could have expected to find a closer relationship between this task and the metalinguistic awareness index.

As was pointed out in the introduction, Francis (1999) found a significant correlation between the reading/writing skills in Spanish and Náhuatl and metalinguistic awareness in bilingual speakers of these two languages, but not between speaking and metalinguistic awareness, results that support the academic/conversational distinction (Cummins's proficiency model is also borne out by Daller & Grotjahn's (1999) results) and are contrary to ours. Nonetheless, another factor worth bearing in mind in order to cope with our results concerns the relationship between metalinguistic awareness and formal education. Multilingual subjects from the Vai tribe in Liberia, for example, had very underdeveloped metalinguistic abilities, despite being multilinguals, because they could not take advantage of formal education (Scribner & Cole, 1981). In comparison with the Vai, Western students are metalinguistically sophisticated, yet notorious for their failure to master the target language (Birdsong, 1989). Metalinguistic awareness cannot therefore account on its own for the reasons why a person fails or succeeds in learning an L2, L3 or Lx. However, the important role played by metalinguistic awareness cannot be ruled out, at least as far as formal education is concerned (Lasagabaster, 1998a).

Thus it could be implied that in the Basque context,² where English is only taught as a subject and used orally in a formal context (it is only spoken in the classroom but not out of it) metalinguistic awareness plays a much more important role in speaking the foreign language, which is the reason why this relationship happens to be significant. The significant effect on speaking but not on the listening skill is a question which needs further research. In speaking 'we make conscious decisions about the messages we want to convey, but the lower-level choices of structure and vocabulary occur more or less automatically' (Littlewood, 1986: 89) in the case of second language learning in a natural context, but this seems not to be the case in a formal context, at least at the language proficiency level of the participants in this research study. In this sense, Carter (2000) points out that when native speakers know they are being recorded, they suddenly start speaking in 'written English', an opinion shared by Edwards (1982: 32) who states that of all aspects of human behaviour, 'speech is the most rapid to change when attention is focused upon it'. The students in the Basque Country do not have the opportunity to move from a less formal to a more formal spoken English mode, since their spoken English is too close to the written version of the language and too dependent on their metalinguistic awareness/knowledge about language. If Grade 5 and Grade 8 native speakers

of English (or English as L2 learners who had the opportunity to use it out of school, in a natural context) were administered the same oral test, their output would probably show important differences with respect to that of our sample; it would be less formal and written-like, and therefore less affected by their metalinguistic awareness, as in Francis's (1999) and Daller and Grotjahn's (1999) contexts, where the L2 is spoken both inside and outside the classroom.

Finally, I would like to draw the reader's attention to the role played by three variables; English classes outside school, linguistic creativity and intelligence. Firstly, it has to be said that English outside school turns out to be the most influential variable together with metalinguistic awareness, which leads us to conclude that the amount of exposure to the foreign language is crucial in the final competence achieved in English in a formal context. Secondly, it is worth analysing the effect of linguistic creativity and intelligence. The former plays a paramount role in Grade 5 (except for the reading skill) and none at all in grade 8 (except for the speaking skill), whereas the latter plays a crucial role in all the language skills and grammar in Grade 8 and none at all in Grade 5. These results could therefore be due to the effect of the age factor and explained by looking at the results of Moran *et al.* (1983), who in their study conclude that the child's schooling or socialisation makes them more wary of expressing ideas more removed from the usual; the older the child, therefore, the lesser the role of linguistic creativity and the greater that of intelligence. These results also coincide with those obtained in a study carried out by Genesee and Hamayan (1980), where intelligence was found to correlate less strongly with second-language learning in younger than in older learners.

Nevertheless, it has to be underlined that the concept 'intelligence' has caused much disagreement and discussion. A key question in this controversy lies in the problems of defining and measuring intelligence; in fact, definitions of intelligence are easy to come by but difficult to agree on (Oller, 1981). Some researchers consider that intelligence is unitary (labelled 'g'), whereas others suggest that it comprises up to eight different multiple intelligences. Some investigators have also argued that there are various kinds of intelligence, such as practical intelligence and emotional intelligence (Sternberg, 1999). Therefore, it can be stated that our final conclusion regarding the role played by intelligence should be considered with caution. The relationship between intelligence and L2 learning is not clear-cut (Genesee, 1976; Nicoladis *et al.*, 1998), as IQ tests such as Raven's Progressive Matrices Test only measure a small sample of everyday intelligence and exclusively refer to 'pencil and paper' intelligence, and this despite the fact that these kinds of tests appear to measure what they are supposed to measure (Sasaki, 1993). Since research does not investigate 'all the components that might go under the wide heading of "intelligence"' (Baker, 1997: 119), our interpretation is simply aimed at endeavouring to explain the results obtained in the present study and on no account can it be regarded as definitive.

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Notes

1. For a comprehensive response to the critiques made of the BICS/CALP distinction see Cummins (2000).
2. Although the English language is in the ascendant in many parts of Europe, there are still sociolinguistic differences. In fact, the Basque context is very different from that in the Netherlands, Scandinavia or Finland, where knowledge of English or its presence out of the school setting (advertisements, TV channels, etc.) in the latter is very common, which has led some authors to the following questions: 'Can Swedish be expected to survive? ... Or, will Swedes of the 2080s be bilingual, with Swedish and English as native tongues?' (Findahl, 1996: 232).

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Appendix: The Metalinguistic Awareness/Knowledge About Language Test; MAT-2 (Pinto *et al.*, 1999)

1. Synonymy

Oral presentation: 'Now we're going to look at other sentences, and you're going to tell me if they mean the same thing or not'.

(1.1.a) *The queen kissed the frog.*

Linguistic question (LQ) : Who was kissed?

Linguistic answer (LA): _____

Metalinguistic question (MLQ): What makes you sure of that?

Metalinguistic answer (MLA): _____

(1.1.b) *The queen was kissed by the frog.*

LQ: Who was kissed?

LA: _____

MLQ: What makes you sure of that?

MLA: _____

(1.1.c) I'm going to repeat the previous sentences:

The queen kissed the frog. The queen was kissed by the frog.

LQ: Do they mean the same thing?

LA: _____

MLQ: What did you look at to be sure of that?

MLA: _____

(1.2.a) *The boy fed the dog before he watched TV.*

(1.2.b) *The boy watched TV after he had fed the dog.*

LQ: Do they mean the same thing?

LA: _____

MLQ: What makes you sure of that?

MLA: _____

2. Acceptability

Oral presentation: 'Now you're going to tell me if the following sentences can be used or not'.

(2.1.a) *The girl was patting the dog.*

LQ: Can this be said?

LA: _____

(2.1.b) *The girl was patting.*

LQ: Can this be said?

LA: _____

MLQ: Why did you give these answers?

MLA: _____

(2.2.a) *The teacher was reading a story.*

LQ: Can this be said?

LA: _____

(2.2.b) *The teacher was reading a hen.*

LQ: Can this be said?

LA: _____

MLQ: Why did you give these answers?

MLA: _____

3. Ambiguity

Oral presentation: 'In each of the following sentences there's a word with more than one meaning. You will need to say how many and what these meanings are'.

(3.1.a) *The plant was thriving.*

LQ: What – and how many – meanings do you see in the word 'plant'?

LA: _____

MLQ: Therefore, according to the first sense of the word, what does 'The plant was thriving' mean?

MLA: _____

MLQ: And in the second case, what does 'The plant was thriving' mean? (This question should be asked only if more than one meaning has been identified).

MLA: _____

(3.2.b) *The tables were made of stone.*

LQ: What – and how many – meanings do you see in the word 'tables'?

LA: _____

MLQ: What is the first meaning you found for 'The tables were made of stone'?

MLA: _____

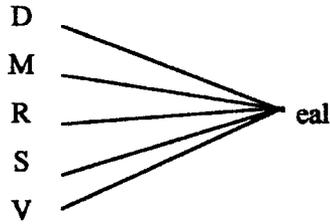
MLQ: What is the second meaning of that sentence?

MLA: _____

4. Phonemic segmentation/Word formation

Oral presentation: 'You will be shown individual letters with which you can form some words. The letters are on the left; part of a word is on the right. Try to form all the words you can by combining each letter with the word fragment provided'.

(4.1.a)



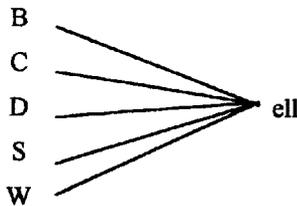
LQ: Form all the words you can by uniting all the letters with the word fragment to the right.

LA: _____

MLQ: Write next to each word whether it is a verb, an adjective, an adverb, a noun or a pronoun.

MLA: _____

(4.2.b)



LQ: Form all the words you can by uniting all the letters with the word fragment to the right.

LA: _____

MLQ: Write next to each word whether it is a verb, an adjective, an adverb, a noun or a pronoun.

MLA: _____