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ABSTRACT

A study investigated the role of bilingualism (Basque/Spanish) and motivation in third (English) language acquisition in Spain's Basque country. Subjects were 321 secondary school students in two programs, one with instruction primarily in Spanish and one with instruction primarily in Basque. The following independent variables were analyzed in the subjects: bilingualism (early or late); competence in Basque; monolingual versus bilingual mother; principal language of instruction; general intelligence; attitude toward English; effort made to learn English relative to other subjects; visits to English-speaking countries; and English language instruction outside school. Dependent variables that were examined include achievement in the four language skills (listening, speaking, reading, writing), vocabulary, and grammar. Data were gathered by questionnaire, written tests of English, and interviews in English. Results indicate that: bilinguals performed better in English than monolinguals; highly motivated students performed best; and there were complex interaction effects of bilingualism, motivation, family bilingualism, Basque as the primary language of instruction, and intelligence on English achievement. Contains 32 references. Results of data analyses are appended. (MSE)

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BILINGUALISM AND THIRD LANGUAGE ACQUISITION

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The use of Basque and Spanish both as vehicular languages and subjects in Basque schools and the role of English as a language of international communication have resulted in a new linguistic situation in education in the Basque Country. Nowadays, Spanish monolingual students are learners of a second and a foreign language (Basque and English) while Basque-Spanish bilingual students learn a foreign language, English.

The Basque language has been used as a vehicular language since the 1960's when the first Basque language schools were founded by groups of Basque speaking parents and teachers. Later on, in the 70's, Basque became a non compulsory subject in state schools but it was not until 1982 that the presence of Basque in the school system was regularized. In May 1982 the Basque Government published a law establishing three linguistic models: A, B and D.

Model A: Spanish is the vehicular language and Basque is one of the school subjects and is taught three or four hours per week. This model is aimed at Spanish speaking students.

Model B: Both Spanish and Basque are the languages of instruction and the model is also aimed at students whose first language is Spanish.

Model D: Basque is the vehicular language and Spanish is a school subject which is taught three hours per week. This model is aimed at Basque speaking students although is frequently chosen by Spanish speaking ones.

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Recent data (Euskal Irakaskuntza, 1990) show that there has been a striking increase in the number of students who use Basque as a vehicular language in kindergarten and primary school. Ten years ago 27% of the Basque Autonomous Community children used Basque as the language of instruction of some (B model) or all (D model) the school subjects. In 1990-91 49% of the students were enrolled in the B or D models. As a consequence the study of a foreign language, English (and in some cases French) in the Basque Country cannot be separated from bilingualism and bilingual education.

Bilingualism has been considered both as an independent and a dependent variable. Either the influence of the learner's bilingualism on third language acquisition has been examined or the influence of several variables on the process of becoming bilingual has been studied. This paper discusses the first considering bilingualism as an independent variable.

Several disciplines (linguistics, sociolinguistics, social psychology, anthropology) have approached the study of bilingualism and its various dimensions. Some of these dimensions (Hamers & Blanc, 1989) are language proficiency (balanced vs dominant bilinguals), age (childhood, adolescent and adult bilingualism) and the relative status of the two languages (additive vs subtractive bilingualism).

Recent studies (Cummins, 1981; Diaz, 1983) have shown that bilingualism can positively influence cognitive and social development. This positive effect of bilingualism has been explained by Cummins (1981) who proposed a threshold level of bilingual proficiency below which cognitive deficits will result

and a higher threshold of proficiency above which advantages will result, while proficiency between these two levels will have neither advantages nor disadvantages.

The role of sociocultural aspects has also been reported to be relevant (Genesee, 1987). Bilingualism has sometimes been associated with cognitive disadvantages and Lambert (1974) proposed the term 'subtractive bilingualism' for minority language children who acquire a second language at the expense of native language development. In contrast, in bilingual additive contexts as that of the Basque Country studied in the present research, bilingualism is not expected to produce negative effects. The status of the bilingual's two languages within the family, the school or the community will influence the type and consequences of bilingualism. Bilingualism in the context of the present research means competence in Basque, a language which is increasingly valued and used in education in the Basque Country.

The cognitive and social advantages of bilingualism have also been reported in association with linguistic ability and specifically with third language learning (Jacobsen & Imhoof, 1974; Lerea & Kohut, 1961; Lerea & Laporta, 1971; Ringbom, 1985; Saif & Sheldon, 1969; Starck et al., 1977).

Apart from linguistic background, a large number of dependent and independent variables are involved in the process of second and foreign language acquisition. One of the most recent classifications of factors related to second language acquisition is that of Gardner & Clément (1990) who divide them into two groups: individual and contextual factors.

Among individual differences two major cognitive variables are included: linguistic aptitude and learning strategies. Linguistic aptitude is important in formal teaching situations and has been found to be related to general intelligence (Skehan, 1991). Various personality traits, such as field dependence-independence, extroversion and anxiety have also been reported to influence language acquisition. Several research studies (Burstall, 1978; Gardner, 1983; Lambert et al., 1963;) have related attitudinal and motivational variables to different aspects of second language acquisition suggesting that these social psychological variables play an important role in second language acquisition. The concept of motivation is multi-faceted and involves motivational intensity, desire and attitudes towards learning the language (Gardner, 1985). Motivation has been found to be one of the most relevant factors involved in second language acquisition (Gardner, 1980; Lalonde & Gardner, 1984; Clément, 1980).

Regarding contextual factors two different situations must be considered according to the presence or absence of target language speakers in the community where the second language is being acquired. If the second language is present in the community the quality and quantity of the interaction with speakers of the target language will be the most relevant factor. The relative status and vitality of the languages will also play an important role when there is contact between the first and the second language communities. In other situations, as that of English language acquisition in the Basque Country, educational factors (course, teacher), parental encouragement and direct or

indirect contact with native speakers of the second language will be better predictors of language proficiency.

Apart from the large number of variables involved the complexity of second language acquisition is also due to the direct and indirect relationships among independent and dependent variables. Several scholars have attempted to explain some of these complex relationships by proposing theoretical models of second language acquisition (Giles & Byrne, 1982; Clément, 1980; Gardner, 1985; Lambert, 1963; Schumann, 1986; etc.). Similarly, causal modelling (Lisrel, EQS) is being used increasingly in order to evaluate the chains of causality proposed in the theoretical models (Gardner, 1985).

The present research analyses the role of bilingualism and motivation in third language acquisition in the Basque Country. According to the research studies on the consequences of additive bilingualism, bilingual students are expected to attain higher levels of achievement in English than monolingual students. Furthermore, social motivation will also influence English language acquisition and bilingual motivated students are expected to obtain the best results in English. Regarding direct and indirect relationships, the effect of bilingualism on third language acquisition is expected to be mediated by social motivation and following Gardner (1985) we expect that social psychological (social motivation) and cognitive (IQ) factors will be directly related to English language achievement. Causal modelling procedures will be used in order to tease out the chains of causation involved in a hypothesized model of foreign language acquisition.

Method

Subjects

Subjects were 321 secondary school students enrolled in two different school programmes: Models A and D. Spanish was the vehicular language for A model students (52%) while D model students (48%) were instructed in Basque. Respondents attended state (185) and private (136) schools. They were 161 males and 160 females aged between 17 and 19.

Variables

Independent Variables

1. *Bilingualism*: Although no direct measures of bilingual proficiency were obtained the multidimensionality of bilingualism was reflected in the following measures:

i. *Early bilingualism*. According to the subject's first language two categories were distinguished: early (X_2) and late bilinguals (X_1).

ii. *Bilingual competence*. Three categories were distinguished according to the individual's perception of his/her competence in Basque: 1) no knowledge of Basque (X_1), 2) receptive competence (X_2) 3) productive competence (X_3).

iii. *Family bilingualism*. The subjects were sorted out into two groups corresponding to the monolingual (X_1) and bilingual mothers (X_2).

iv. *Educational bilingualism*. Two models were considered according to the language of instruction: Spanish (X_1) and Basque (X_2).

2. *General Intelligence*. It was measured via the Otis-Lennon Mental Ability test.

3. *Social Motivation*. This variable integrates four measures which correspond to Gardner's (1985) components of motivation: attitudes towards the language, motivational intensity and desire to learn the language.

i. Attitude towards learning English. A Likert format questionnaire adapted from Gardner (1985) was used to measure this variable.

ii. Motivational Intensity. It was measured in the course of an interview and the subjects were sorted out into three groups according to the effort they made in English as compared to other subjects.

iii. Visits to English-speaking countries. It was measured via questionnaire items and the following categories were distinguished: subjects who had lived, at least for a few weeks, in an English speaking country and those who had not.

iv. English language instruction outside school. A questionnaire was used and students were divided into three categories: 1) no instruction in English outside school, 2) students attending evening classes 3) those who had taken an English language course in an English speaking country.

The standardized scores of these four elements were summed and the composite index was used for the statistical analyses.

Dependent Variables

The dependent variables were those related to English language achievement and included the four language skills (speaking, listening, reading and writing) and a test of vocabulary and grammar.

Procedure

Respondents from six Basque schools were asked to complete the questionnaires and tests in February and March of 1990. The written tests of English language and the questionnaires were completed in two sessions of two hours each. The ability to speak English was measured in the course of a personal interview with each of the students. This interview was recorded for later evaluation. At the end of each speaking test the subjects were asked a few questions in their first language in order to assess motivational intensity.

The evaluation of the speaking and writing tests was based on a holistic approach. These tests were evaluated independently by two blind judges. The oral interviews were rated on content, fluency, pronunciation, vocabulary and grammar and the ESL Composition Profile (Jacobs et al., 1981) was used to evaluate the students' compositions. This technique includes five component scales: content, organization, language use, vocabulary and mechanics.

A composite index was created to measure English language achievement by summing the standardized scores of the five dimensions already mentioned. This index was used for the ANOVA bivariate analyses examining the effects of bilingualism and social motivation on English language achievement. An equational structures analysis (Bentler, 1990) was also performed in order to specify the chains of causality.

Results

Presentation of the results has been organized as follows. First, the independent effect of each of the four measures of bilingualism on English language achievement is presented. Then,

the relationship between social motivation and bilingualism is discussed analysing the interaction effects of these two variables on English language achievement. Finally, a model showing the direct and indirect relationships between intelligence, social motivation, bilingualism and English language achievement is proposed.

Bilingualism and English language achievement

Insert table I about here

The ANOVA analyses show that the independent effects of three of the four dimensions of bilingualism, competence, family, education, on English language competence are significant. The results indicate that bilingual students get higher scores than monolinguals, even though the differences do not reach significance for the variable first language.

Bilingualism, social motivation and English language achievement

The bivariate ANOVA analyses were further examined in order to study the relationship between bilingualism and social motivation as related to English language achievement. The independent effects of motivation were significant ($P < .01$) for all the analyses, and highly motivated students get the best scores. The independent effects of bilingualism were also significant for three of the four analyses as it has already been stated.

Insert figure 1 about here

Regarding the social motivation and early bilingualism, the

data confirm our hypothesis because motivated early bilinguals achieve the best scores in English. The results also show that the advantage of early bilingual students over monolinguals is more significant for high motivated groups, the interaction effect between these two variables being significant, $F_{(1, 230)}=5.706$, $P<.05$.

Insert figure 2 about here

The results in figure 2 also show that active bilinguals belonging to the motivated group achieve the highest scores followed by passive bilinguals and monolinguals. The differences between monolinguals, passive bilinguals and active bilinguals are strengthened when the high motivation groups are compared. The interaction effect of bilingual competence by motivation on English language achievement is significant $F_{(2, 230)}=2.957$ $P<.05$.

Insert figure 3 about here

The results on figure 3 also show that when family bilingualism is considered motivated bilinguals present the highest achievement. The advantage of bilingual students increases when the high motivation groups are compared although the interaction effect is only moderately significant $F_{(1, 229)}=3.25$, $P<.07$.

Insert figure 4 about here

Motivated students who have Basque as the language of instruction achieve the best scores in English. The interaction effects between motivation and linguistic program are not significant: $F_{(1, 230)}=2.011$ $P>.05$.

Bilingualism, social motivation, intelligence and English

language achievement.

An Structural Equation Analysis (EQS) was performed in order to test the plausibility of the proposed relationship.

Insert figure 5 about here

The structural model (figure 5) shows three latent variables represented by circles: English language achievement (F1), social motivation (F2), bilingualism (F3) and a measured variable: intelligence (V14). The measured variables (represented by small boxes) are related to the latent variables by loadings, which indicate their contribution. Achievement (F1) loads significantly on the five measures of English language: speaking, writing, listening, reading and grammar. Similarly, social motivation (F2) loads significantly on the following measures: motivational intensity (effort), residence in English speaking countries (country), English language instruction outside school (extra) and attitude towards learning the language (attitude). Bilingualism (F3) is well defined by early bilingualism (L1), bilingual competence (competence), family bilingualism (mother) and educational bilingualism (model) which contribute significantly to this latent variable.

The construct achievement is accounted for by social motivation with a loading of 0.602 and general intelligence with a loading of 0.413. There is also a path (0.207) linking bilingualism to social motivation.

The significant paths and the loading with which each of the measures contributes to the latent variable support our hypothesis because they demonstrate the direct effect of social motivation and intelligence on English language achievement. They

also show that the relationship between achievement and bilingualism is indirect, social motivation being the mediating variable.

The χ^2 analysis demonstrates that the model fits the data well. The goodness-of-fit statistic is 86.659 which at 79 degrees of freedom is not significant ($P=0.82$), the Bentler-Bonett normed fit index is 0.940, the Bentler-Bonett nonnormed fit index is 1.012 and the comparative fit index 1.000. These values show that the model fits the correlation matrix.

Discussion

Results confirm our first hypothesis because they show that bilingualism has a positive influence on foreign language achievement. Subjects who are competent in Basque and subjects whose first language is Basque obtain higher scores although the differences regarding first language do not reach significance. Similarly, subjects whose mother is bilingual and those instructed in Basque (D model) also experience higher achievement in the foreign language.

Basque is a minority heritage language which is known by approximately 25% of the population in the Basque Country. Nevertheless, Basque speakers can be regarded as bilingual because Spanish is the main vehicle of communication in the Basque Country. Several linguistic evaluations (EIFE, 1986, 1989, 1990) have demonstrated that in the educational context there are no significant differences between the competence Spanish and Basque-Spanish speakers present in Spanish. Therefore, the measures of Basque correspond in this context to measures of bilingualism and bilingualism has positive outcomes regarding

English language achievement. Thus, our results are consistent with most research on the effects of bilingualism and third language acquisition (Jacobsen & Imhoof, 1974; Lerea & Kohut, 1961; Ringbom, 1985).

Results also show the influence of motivation and motivated bilinguals obtain the best results in English. The different achievement of monolinguals and bilinguals is more relevant when high motivation groups are involved. The interaction effects between bilingualism and social motivation have also been found to be significant for early bilingualism and bilingual competence and moderately significant for family bilingualism. A possible explanation of the interaction between Sociocognitive (Bilingualism) and Motivational (Social Motivation) processes might be related to the concept of Intergroup distinctiveness developed by Tajfel (1978, 1982). Bilingual students, who perceive their position illegitimate and the intergroup situation unstable, might be more motivated to learn a third language because they search for characteristics to differentiate themselves favourably from the outgroup. The hypothesis suggesting that social motivation mediates the relationship between bilingualism and English language achievement is supported by the Equational Structures Analysis which establishes clear paths of causality for the proposed relationships. Our model also supports Gardner's educational model (1985) showing that achievement presents high loadings on intelligence and motivation. The relationship between bilingualism and social motivation has also been found elsewhere. Genesee (1978) reported that double immersion students presented better

attitudes towards learning a second language and Lavallée (1975; in Gulutsan, 1976) also found that bilinguals presented better attitudes towards the language.

The present study analyses the role of bilingualism in foreign language acquisition as well as the direct and indirect relationships between bilingualism, social motivation, intelligence and English language achievement. The results provide interesting information about bilingualism and direct and indirect relationships between several elements and second language acquisition. However, the phenomenon of acquiring a language is a lot more complex than what has been discussed in this paper and it involves a great variety of individual and contextual factors as well as indirect and in some cases bidirectional relationships between the different elements and second language acquisition (Burstall, 1978). The inclusion of other measures and the study of different stages of language acquisition in future research could provide interesting data about bilingualism and the process of learning a third language.

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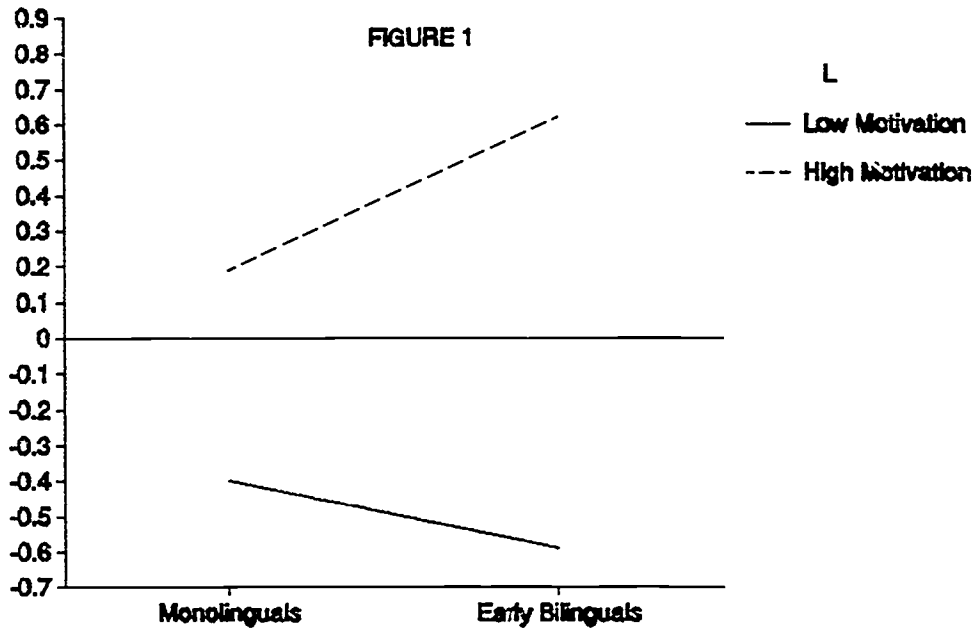
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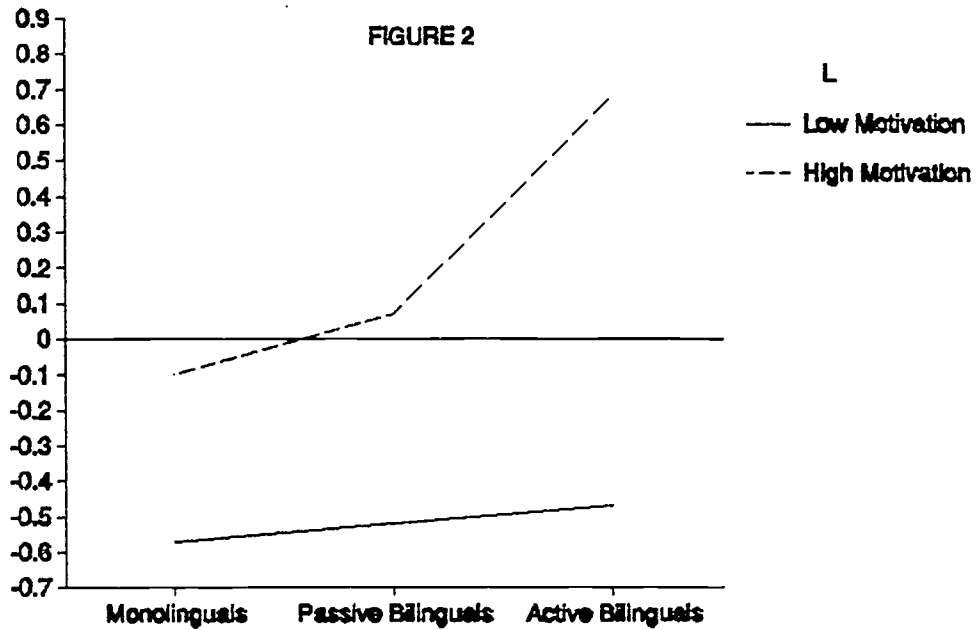
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TABLE I						
	BILINGUALISM AND ENGLISH LANGUAGE ACHIEVEMENT					
	X1	X2	X3	F	P	DF
L1	-0.08	0.06		1.96	.163	1
COMPETENCE	-0.29	-0.21	0.13	5.16	.006	2
MOTHER	-0.14	0.08		6.45	.012	1
MODEL	-0.16	0.16		5.14	.024	1

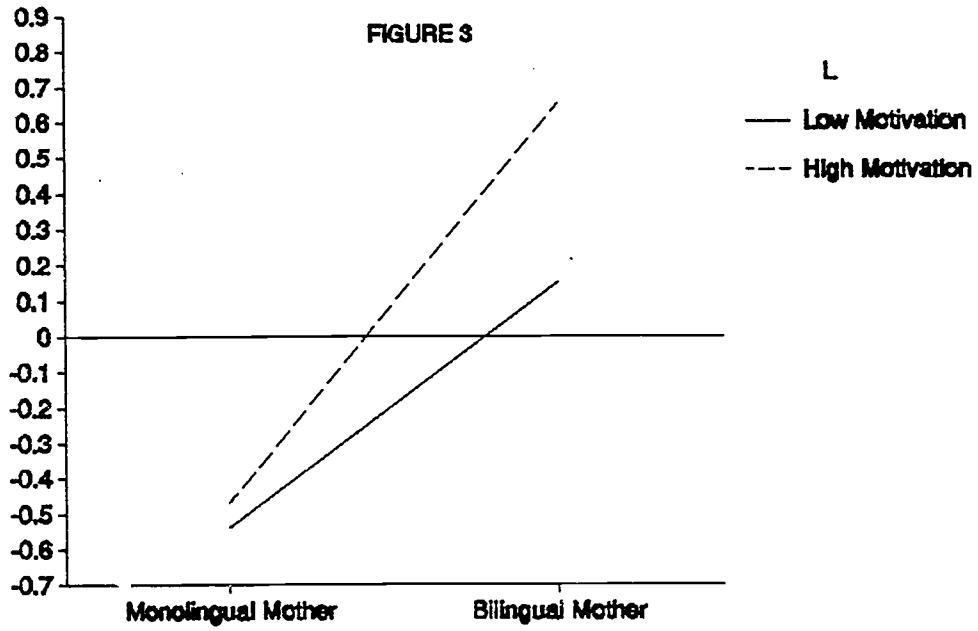
Early Bilingualism, Motivation and Achievement



Bilingual Competence, Motivation and Achievement



Family Bilingualism, Motivation and Achievement



Linguistic Program, Motivation and Achievement

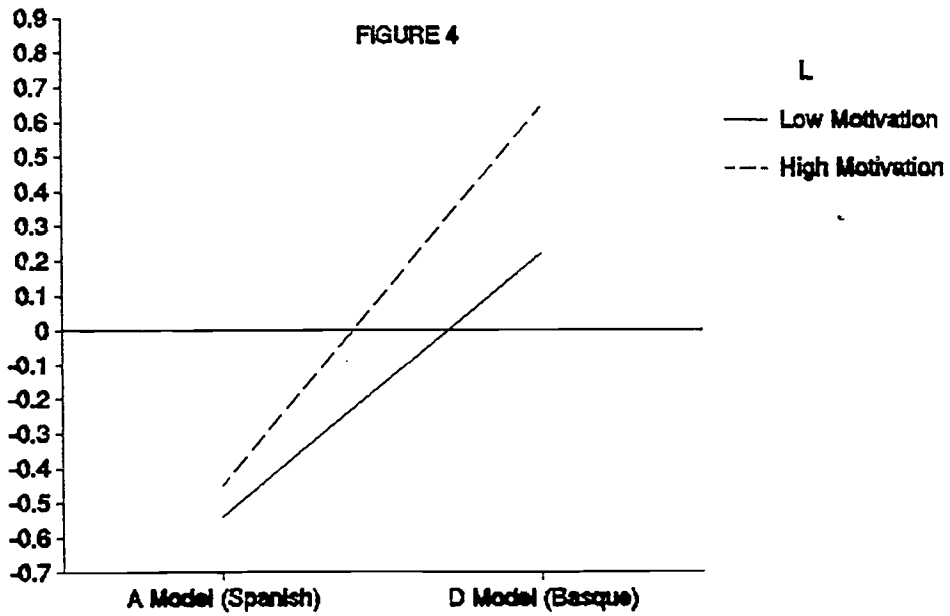


FIGURE 5

