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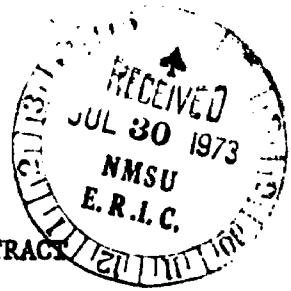
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**ABSTRACT**

The ability of bilingual students to profit educationally when Spanish is the vehicle of instruction was inferred from a qualitative analysis of their responses to matched Spanish-English vocabulary tests. The responses of 53 bilingual junior high school students with strong Spanish language histories were classified as qualitatively higher or lower definitions. Higher level definitions were considered more abstract and conceptual in nature. No significant differences were found between the proportion of higher level definitions given in Spanish and those given in English, nor for the same proportions when the sample was grouped by sex and by Spanish language history. It was inferred that students could profit equally well from instruction that used Spanish or English as the vehicle of communication. (Author/SK)

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THE RELATIVE DEVELOPMENT OF SPANISH AND ENGLISH AS ABSTRACT  
AND CONCEPTUAL LANGUAGES IN BILINGUALS

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The ability of bilingual Ss to profit educationally when Spanish is the vehicle of instruction was inferred from a qualitative analysis of their responses to matched Spanish-English vocabulary tests. The responses of 53 bilingual junior high school Ss with strong Spanish language histories were classified as qualitatively higher or lower definitions. Higher level definitions were considered more abstract and conceptual in nature. No significant differences were found between the proportion of higher level definitions given in Spanish and those given in English, nor for the same proportions when the sample was grouped by sex and by Spanish language history. It was inferred that Ss could profit equally well from instruction that used Spanish or English as the vehicle of communication.

The decision to use Spanish as the primary vehicle for teaching regular school subjects in bilingual classrooms or in classrooms oriented toward the preservation of Spanish as a mother tongue should be based upon the relative ability of the students concerned to benefit from instruction communicated through that language. The determination of this ability is especially important for organizers and directors of such programs at the secondary level of education. It is in the junior and senior high school that the student is expected to learn concepts and propositions which are increasingly removed from his own direct experiences, expected to learn this more abstract subject matter through language exclusive or language dominant modes of instruction, and expected to perform the more mature classes of mental operations which Piaget has classified as formal and which Ausubel (1968) has identified as abstract relations.

To experience school success under these conditions, the student must have attained not only a high level of mental maturity, but the necessary sophistication in language as well. The influence of language upon the development of mental maturity and upon one's ability to profit from higher levels of education is put in this way by a leading educational psychologist (Ausubel, 1968).

Verbalization...does more than just attach a symbolic handle to an idea so that one can record, verify, classify and communicate it more readily. It constitutes rather, an integral part of the very process of acquiring new abstract ideas and influences both the nature and product of the cognitive processes involved in generating new concepts and abstract propositions [p. 81].

Thus, in establishing procedures for classrooms in which Spanish has been legitimized, it is important to know whether students' Spanish is the qualitative equal of their English. By implication, much is also learned about their capacity to function at higher mental levels and to learn in both of these languages. The measure of bilingual students' relative language development used here was the relative frequency that responses in Spanish and in English to a Spanish-English word list were classified as abstract and conceptual in nature.

Background. There is evidence that as youngsters approach secondary school age, the type of definitions they give to word list items changes significantly. In general, younger children give definitions which emphasize

the concrete, the isolated, and the particularistic aspect of the word whereas older children more often stress the abstract or class features (conceptual nature) of word meanings (Feifel and Lorge, 1950; Reichard and Rapaport, 1943). These differences have been interpreted as indicative of changes in cognitive style which occur with maturity (Feifel and Lorge, 1950).

In general, the type of response which is most characteristic of the mind that perceives the abstract relations or the conceptual possibilities of a word is the synonym class of definition. (Green, 1931) The less mature mind ad relates words to their concrete referents rather than to their abstract or class meaning. This study tried to infer the relative language position of a group of bilingual students on this concrete-abstract continuum as they were asked to respond in both languages to a matched Spanish-English word list.

Word list. The English language list contained words from the Stanford-Binet Revised Vocabulary Test or modifications thereof. The Spanish equivalent words were acquired by back translations from two sets of two Chicano students attending a local university. Only those Spanish words which produced the original English words were used. In this way, eleven Stanford-Binet words and their local dialect translations were obtained (orange; naranja, envelope; sobre, puddle; charco, peculiarity; peculiaridad, rule; regla, tolerate; aguantar, juggler; malabarista, insure; asegurar, roar; grumir, eyelash; pestana, and lecture; lectura). In addition, two other words were also included after a consultation with the translators (dress; vestido and ability; abilidad).

Subjects. The Ss used were enrolled in the seventh and eighth grades at a nearby junior high school. Only students who reported an exclusive Spanish first language history (ES) or a dominant Spanish history (DS) prior to their

enrollment in English language schools were used in this study. In addition, all of these students continued to use Spanish as a regular vehicle of communication with at least one member of their families. These Ss, then, entered the study with probably a stronger Spanish language history than most so-called bilingual students.

In the final analysis, the responses of 53 Ss comprised the data that were gathered. There were 24 male Ss and 29 female. Thirty-seven were classified as ES and 16 as DS.

Classification of responses. There were 3 categories used in classifying the responses. The first was the category of incorrect definitions or non-responses. This category was not used in the study.

The second included those definitions adjudged to be synonym level responses, either unmodified or modified. Some examples of the former were "rule" defined as a "law" and "orange" as a "fruit." This type of response demonstrated the identification of word meanings in terms of their class membership and without recourse to their particularized or concretistic qualities. This class of definition was also deemed to represent the higher level of mental maturity and the greater sophistication of language prerequisite for school success at the secondary level. Credit for a synonym level response was also given for a modified synonym definition, such as the response "a law we obey" given to the word "rule," and "something" when properly modified. The modified definitions were included in the synonym category since they were clearly conceptual in nature, although lacking in independence from concrete referents.

All other correct responses were sorted into the third category and were considered to be lower level definitions. The third category contained responses which identified words in terms of their use, description, location or origin.

Repetition responses were also included in this category. These responses lacked both the identification of the word with a class and the manifestation of mental independence from concrete experience. They were adjudged to arise from more immature levels of cognitive functioning and language development.

Procedure. Five hypotheses of no difference were tested. The first proposed that the total proportion of synonym class definitions in English (class 2 responses in English/class 2 and class 3 responses in English) would not be significantly different (.05 level) from the total proportion of synonym level responses in Spanish. The other hypotheses proposed the same when the responses for the F, M, ES and DS groupings of the total sample were analyzed.

To test these hypotheses, the Ss were divided into two groups at random. Group one Ss were asked to respond to the English list first, and then to the Spanish list. Group two students reversed the order. The Ss were asked to respond to both lists during the same session with no time interval between their presentation. The verbatim responses of all Ss to both word lists were recorded and classified as described. In all, 498 English and 361 Spanish languages responses were sorted into the several categories as shown in Table 1.

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Insert Table 1 about here

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A proportion of Spanish and English synonym responses for each group of Ss was determined. These proportions were then examined for significant differences through procedures outlined by Senter (1969, pp. 143-152). The proportion of synonym responses given in Spanish and in English for each group are given in Table 2.

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Insert Table 2 about here

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Results. Analysis for critical differences between proportions failed to uncover differences between the proportions of synonym responses in Spanish and English for any of the groups which were significant at the .05 level. All of the proportional differences which did exist favored the English language category over the Spanish, but not at significant levels. Hence, none of the hypotheses of no difference could be rejected.

Discussion. The general sense of cognitive and language development implied by the analysis of S's responses did not favor either language or the mental operations associated with either language. Thus, this measure indicates that bilingual students with a rather strong Spanish language history will not be held back in their learning when instruction is given in Spanish as compared to English. Whether language differences exist relative to the specialized vocabularies found in many school subjects found in junior and senior high schools is not known.

From these data some support was given to the notion that the decision to use Spanish as a primary vehicle for instruction can be made without educational penalty to this type of student. Program directors may well base their decision to use Spanish in the classroom on other considerations, such as the desire to promote cultural awareness and pride or the desire to help Latino students maintain true bilingual abilities.

TABLE I

Classified Responses of 53 Junior High School  
Bilinguals to a Spanish - English Word List

GROUP	Synonym Class Responses		Lower Level Responses	
	English	Spanish	English	Spanish
Exclusive Spanish	157	110	193	162
Dominant Spanish	67	36	81	53
Male	116	74	122	94
Female	108	72	152	121
TOTAL	224	146	274	215

TABLE 2  
Proportion of Synonym Responses in  
Spanish and English for 53 Bilinguals

GROUP	SPANISH	ENGLISH	z
Exclusive Spanish	.404	.449	1.57
Dominant Spanish	.404	.453	.95
Male	.440	.487	1.26
Female	.394	.415	1.16
TOTAL	.404	.449	1.79

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