

STUDENT RECOGNITION OF  
SOME SPANISH-ENGLISH COGNATES

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## CHAPTER I

### THE PROBLEM AND DEFINITION OF TERMS USED

Background of the Study. Although many teachers of foreign languages have for years appreciated the value of inference in the acquisition of the ability to read a foreign language, there has to date been little experimentation to determine just what the possibilities of such an approach actually are. The necessity for a careful study of cognates has been more apparent since the publication of the results of the Modern Foreign Language Study.<sup>1</sup> In his report Professor Coleman, acting as spokesman for the committee in charge of the Study, advocated a reading method of instruction as the one most nearly satisfying the needs of American students.

One of the basic experiments with such a reading method was that of Michael West, who taught Bengali children of India to read English.<sup>2</sup> His problem was made considerably more difficult than that of the language teacher in America by the fact that there was no common source of derivation between the mother tongue and the language he was trying to teach.

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<sup>1</sup> The Modern Foreign Language Study, organized in 1924, was financed over a three-year period by the Carnegie Corporation. The services of three special investigators, Professors Algernon Coleman, V. A. G. Hermon, and Ben D. Wood were secured. The results have been published by the Macmillan Company and the University of Toronto (Canada) Press in eighteen volumes.

<sup>2</sup> Robert D. Cole and James Burton Tharp, Modern Foreign Languages and Their Teaching (New York: D. Appleton-Century Company, 1937), pp. 90-92.

While advocates of the reading method have indicated the use of cognates in teaching recognition of vocabulary, there have been few experiments to determine which cognates are most likely to be recognized by high school students. The most extensive study of cognates to date is that of L. H. Limper,<sup>3</sup> who tested high school and college students to determine their ability to recognize French-English cognates. Dr. Limper found the percentages of correct response relatively low, a fact which he attributes to limited English vocabularies on the part of the students. His conclusion was that teachers and educators should not assume that simply because a cognate seems to them to be easily recognizable that it will seem so to the student.

Several Spanish texts, such as Spanish Taught in Spanish by O. F. McHale<sup>4</sup> and Shortcut to Spanish by T. H. Terry,<sup>5</sup> contain subjectively compiled lists of Spanish cognates. In an article entitled "Palabras españolas e inglesas," A. M. Espinosa<sup>6</sup> gives a long list of cognates which are identical or similar in form in the Spanish and English, and which he classifies according to terminations. Similar lists, which will

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<sup>3</sup> L. H. Limper, "Student Knowledge of Some French English Cognates," (unpublished Doctor's dissertation, Iowa City, Iowa: University of Iowa, 1931), 180 pp.

<sup>4</sup> O. F. McHale, Spanish Taught in Spanish (Boston: Houghton Mifflin Company, 1919), 156 pp.

<sup>5</sup> T. H. Terry, Shortcut to Spanish (Boston: Houghton Mifflin Company, 1920), 543 pp.

<sup>6</sup> A. M. Espinosa, "Palabras españolas e inglesas," Hispania, 5:219-228, October, 1922.



be cited in a later chapter, have been compiled of deceptive cognates in Spanish.<sup>7</sup>

Purpose of the study. Although several lists of Spanish-English cognates have been compiled by capable linguists, as yet no experimental evidence has been presented to show that the words contained in such lists suggest to the minds of high school students, with their less specialized training and more limited English vocabularies, what is perfectly apparent to the compiler. It has been the purpose of this study to determine through experimentation which Spanish-English cognates are most readily recognized by high school students, and to indicate from such data those cognates which may be used in high school texts with some assurance of student comprehension.

Such information would have a three-fold use: (1) as a supplement to Spanish word counts in the writing of material for graded reading texts, (2) as a supplement to the word counts in the evaluation of the difficulty of texts already in use, and (3) as a check list for cognates which may safely be omitted from the vocabularies of school texts, or which may safely be defined by using the English equivalent.

The need for such a cognate list is becoming more and more apparent since modern language teachers are now laying greater emphasis on the development of reading ability. The demand for easy and more

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<sup>7</sup> Op. post., p. 100.

scientifically graded reading material has been met in two ways: (1) by specially written material, and (2) by adaptation of well-known material to the proper levels of advancement. In both of these processes the word counts have usually been the sole criteria for the selection and limitation of vocabulary. Little specific consideration has been given to the possibility of the student's inferring the meaning of a certain percentage of words which are recognizable cognates.

Although cognates are included and adequately defined in the vocabularies of many texts, it has not been an uncommon practice to explain them by giving their English equivalents, regardless of whether or not these words could reasonably be assumed to be in the English vocabulary of the average student. Checking with such a list of cognates would preclude the definition of ocultismo merely as "occultism" or of perspicacia as "perspicacity." Examples of such a proceeding can be found in textbooks now in use. Some texts omit most cognates from the vocabulary on the assumption that they are self-evident. Others classify them according to orthographical differences from the English and omit certain of these classifications.

Definition of terms. The term "cognate" is relative rather than absolute in its implications, since a word which may be recognized with perfect ease by one person through association with a word in another language may mean nothing to a second individual. The term is employed throughout this study to refer to either of a pair of words from two languages, such as Spanish and English, which are similar in meaning and appearance. Various shades of meaning are supplied by the use of

such expressions as "good," "poor," "easily recognized," or "recognized with difficulty."

By a "deceptive cognate" is meant a word which suggests some word in another language when in reality it means something entirely different. Golfo, for example, is deceptive in that it seems to suggest the English "golf" when in reality it means "gulf." Subtle shades of meaning and slight differences in the connotations of cognates in the two languages are not used in this study as bases of differentiation.

The term "exact cognate" refers to those words, such as idea and religión, which, if accents are disregarded, are identical in spelling and meaning in two languages.

## CHAPTER II

### METHOD OF PROCEDURE

Preparation of the list. The cognates used in this experiment were selected from the five thousand Spanish words given the highest merit rating in A Graded Spanish Word Book by Milton A. Buchanan.<sup>8</sup> An attempt was made to include every cognate possibility, and only words of a technical nature such as nave and cráneo were eliminated on the assumption that the English equivalent would not be in the vocabulary of the average high school student. The resulting list was then alphabetized and given as a test to a graduate student who was majoring in French with minors in English and Latin, but who had never studied Spanish. The words missed by this student were tried successively on at least two other students of advanced college standing but without specialized training in languages. If any one of these subjects saw in the word its English equivalent, it was retained in the list. Only a very few words were eliminated in this way as being poor cognates. Words such as "patio" and "corral" which have obviously come into the English from the Spanish have been omitted from the list.

The list was further reduced by eliminating all exact cognates of which the English equivalents occur in the five thousand words of

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<sup>8</sup> Milton A. Buchanan, A Graded Spanish Word Book (3rd edition; Toronto: University of Toronto Press, 1932), 195 pp. Professor Buchanan arrives at his merit rating by the formula  $\frac{\text{frequency}}{\text{range}}$ .

highest frequency and range as listed by Edward L. Thorndike in his Teacher's Word Book of 20,000 Words.<sup>9</sup> The only other class of cognates arbitrarily eliminated as being almost certainly recognizable by a majority of the students was composed of those words which are spelled the same in the two languages except for the substitution of ción in the Spanish for tion in the English. These words were omitted only if the English equivalent appeared in the first five thousand words of the Thorndike list.

Words were then grouped according to derivation, with similarity of the English equivalent being taken into consideration. For example, determinar and determinación were grouped, as were continuación, continuar, and continuo. On the other hand, período and periódico, although undoubtedly of the same general origin, were not so grouped because the latter has acquired a specialized meaning. For the same reason, publicar and público were not grouped together. Words which differ only in prefix, such as perfecto and imperfecto were not paired together because they resolve into English words of entirely different meanings.

When the words were so grouped, from each group the one of highest rating in the Buchanan word book was selected for inclusion in the final list compiled for experimentation among high school students. In the results of the test the other words in the groupings were made to depend for their rating upon the one so selected. Although such an

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<sup>9</sup> Edward L. Thorndike, A Teacher's Word Book of 20,000 Words (New York: Teachers College, Columbia University, 1932), 182 pp.

arrangement is admittedly arbitrary and not entirely satisfactory, some sort of elimination was necessary in order to reduce the final list to manageable length for administrative purposes. For the following reasons the device decided upon was considered more satisfactory than the alternatives of choosing the word most nearly resembling its English equivalent or of selecting the word of highest frequency according to Thorndike:

1. Subjectivity of word selection was eliminated.
2. Neither the hardest nor the easiest word from the standpoint of recognizability was thereby necessarily selected, since frequency in the Spanish does not always insure frequency in English, and since the form of the word occurring most often in Spanish is sometimes one part of speech and sometimes another. The word selected, therefore, was not necessarily that resembling most closely its English equivalent.
3. The student was given a chance to recognize the form of the word which, if we accept the word counts as reliable, he would find most often were he attempting to read the language.

Administration of the test. A final list of 1,323 cognates was then prepared in the form of a direct-recall test for administration in three Kansas high schools.<sup>10</sup> Two of these have a rating of third class and one of second class. The direct-recall test has the rather serious disadvantage of having subjectivity enter into the checking, but it was

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<sup>10</sup> The following high schools cooperated in the administration of this test: Osage City, Lebo, and Madison.

selected in preference to the multiple-choice type because it seemed more nearly to approximate the normal reading situation where no suggestion other than that of context is given as to the meaning of the Spanish word. It had the additional advantage of decreasing to some extent the probability of successful guessing. The students were given no aids to recognition and only these directions: "Following is a list of Spanish words similar to English words. In the blank following each Spanish word write the English word it suggests to you. Work as rapidly as possible and do not spend too much time on any one word. Skip the harder words and return to them later if you have time."

Two hundred subjects, none of whom had studied Spanish in school or heard it spoken at home, were used in this experiment. Of these students, chosen with only the stipulation that they should not be familiar with Spanish, seventy-seven were freshmen, twenty-eight sophomores, forty-seven juniors, and forty-two seniors. Of these, sixty-five had studied a semester or more of Latin, nine a semester or more of German, and one hundred thirty-two had studied no foreign language. A few came from homes where French, Italian, or Swedish was spoken. The majority of these students ranged between the ages of fourteen and eighteen.

Each student covered the entire list of words and was allowed sufficient time to finish at his own rate of speed. In most cases approximately three hours were necessary to complete the test. The time spent in working on the tests was divided into two or three periods as the individual required and as the administrative set-up permitted.

All tests were personally administered under conditions as nearly uniform as the organization of the various schools would allow.

Checking of the test. When the tests were checked, the student was given credit for any related word, even though the part of speech corresponding to the word in the test was not given. For example, "agitator" or "agitation" would be considered satisfactory answers for agitar. In cases of misspelling the students were given credit for a correct response.

The preliminary scoring of the tests was done entirely by the writer in order to insure as high a degree of consistency as possible. All tests were rechecked for possible errors in scoring.



## CHAPTER III

### RESULTS OF THE TESTS

To facilitate more ready interpretation of the findings of the tests given in the high schools, a tabulation of the results appears on succeeding pages.<sup>11</sup>

In the first column of Table I appears a complete list of the cognates selected from the five thousand words given the highest rating by Buchanan. Those words which actually appeared on the list submitted to the high school students are indicated with an asterisk. Single spacing is used between words grouped together because of common derivation, whereas double spacing is used between independent words and groupings. Those words which were first eliminated from the list as being quite obvious are placed in parenthesis. This includes cognates the English equivalents of which appear in the first five thousand words as listed by Thorndike and which (1) are exact cognates or (2) substitute sión for the English tion. For purposes of experimentation and verification, a small number of the words in this second group were included in the test given in the high schools. These words were not, however, included in the total of 1,523 words given for this test. The results, appearing in Table II, are remarkably uniform and seem to justify the assumption that words of this group are quite easily recognized.<sup>12</sup>

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<sup>11</sup> Cf. post, pp. 15-92.

<sup>12</sup> Cf. post, p. 93.

The first column of Roman numerals indicates the position of the cognate in the Buchanan word book. The following system of identification is used in this study:

- I includes words 1 - 1,000 with an honor rating of 33.5 - 135
- II includes words 1,001 - 2,000 with an honor rating of 20.2 - 33.5
- III includes words 2,001 - 3,000 with an honor rating of 13.5 - 20.2
- IV includes words 3,001 - 4,000 with an honor rating of 9.6 - 13.5
- V includes words 4,001 - 5,000 with an honor rating of 7.3 - 9.6

The apparent overlapping in honor ratings is due to the fact that the division between thousands does not exactly coincide with the change in honor ratings. In a few cases, therefore, words given the same honor rating appear in different thousands. Instances of this were so few, however, as to make no appreciable difference.

The second column of figures indicates the position of the equivalent English word in Thorndike according to the following system of tabulation:<sup>13</sup>

1a = 1 - 500	3b = 2,501 - 3,000
1b = 501 - 1,000	4a = 3,001 - 3,500
2a = 1,001 - 1,500	4b = 3,501 - 4,000
2b = 1,501 - 2,000	5a = 4,001 - 4,500
3a = 2,001 - 2,500	5b = 4,501 - 5,000

The abbreviation n.l. is used to designate those words the exact English equivalents of which were not listed by Thorndike. As in the system of

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<sup>13</sup> Thorndike, op. cit., p. iii.

tabulation used to represent the various honor rating divisions made for the Buchanan word book, the word of highest frequency is given the lowest numerical value.

The next four columns of figures show, according to high school classification, the percentages of correct response on each word submitted in the test. Column three gives the percentages for freshmen, column four those for the sophomores, column five for the juniors, and column six for the seniors. No claim of reliability is made for these class percentages. In the first place, the number of subjects from each classification (seventy-seven, twenty-eight, forty-seven, and forty-two for the freshmen, sophomores, juniors, and seniors respectively) was quite small. In the second place, for administrative reasons, it was impossible to obtain an equal division of the students from each classification among the three schools in which the experiment was conducted. Almost all of the freshmen taking the test, for example, were from one school. These percentages are therefore submitted merely as an indication of what might be a general tendency. Groups of subjects were selected, insofar as selection was possible or advisable, only with the idea of securing results which might be applicable to as many high schools as possible. An attempt was made to secure students with as wide a range of intelligence and of language experience as possible. For this purpose information on the language experience and intelligence quotient of each student was obtained, although this data has not been correlated with the results of the test. The experiment was conducted in several schools so that similarity of instruction might not become a determining factor.

In view of these considerations, and in view of the fact that the total percentages were based on a much larger number of responses than were those for the individual classes, the percentage of correct response for the entire group of students on each word is submitted in the seventh column with some assurance that it is reliable and representative of the response of any comparable group.

For greater convenience in classification, each word in the test has been given a cognate rating of I, II, III, or IV according to the recognizability of the cognate as revealed by the total percentage of correct responses on each word. These divisions have the following meanings:

- I = cognates recognized by 95.0 - 100%, showing high recognizability.
- II = cognates recognized by 50.0 - 92.9%, showing fair recognizability.
- III = cognates recognized by 7.0 - 49.9%, showing poor recognizability.
- IV = cognates recognized by 0 - 6.9%, showing negligible recognizability.

It will be observed that each of these divisions represents an equal amount of difficulty value on a normal distribution curve. On the assumption that the difficulty value of the cognate is normally distributed between the limits of  $\pm 3$  sigma, 1.5 sigma would be the value allotted to each division. According to the percentages listed above, that is approximately the case.<sup>14</sup>

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<sup>14</sup> The writer is indebted to Dr. H. E. Schrammel, Director of the Bureau of Educational Measurements, Kansas State Teachers College, Emporia, Kansas, for this statistical computation.

TABLE I  
 FREQUENCY RATINGS AND PERCENTAGES OF CORRECT RESPONSE  
 ON EACH SPANISH WORD INCLUDED IN THE  
 DIRECT-RECALL TEST GIVEN TO  
 HIGH SCHOOL STUDENTS

Spanish Word	Buchanan	Thorndike	Freshmen	Sophomores	Juniors	Seniors	Total C.C.	
*abandonar abandono	I III	4a 4a	49.35	72.41	67.35	84.44	65.0	II
*abismo	II	6	6.49	3.45	10.20	17.78	9.5	III
*abnegación	V	20	15.58	13.79	44.90	44.44	29.0	III
*abreviar	IV	16	49.35	68.97	79.59	84.44	65.5	II
*abril	II	2a	5.19	24.14	32.65	35.56	21.5	III
*absoluto	I	2b	96.10	96.55	97.96	100.00	97.5	I
*absorber	III	6	80.52	89.66	91.84	97.78	88.5	II
*abstracto	V	8	76.62	93.10	97.76	97.78	89.0	II
*absurdo	II	6	55.84	75.86	81.63	80.00	70.5	II
abundancia	III	3b						
*abundante	II	3b	80.52	86.21	95.92	93.33	88.0	II
*abusar abuso	IV IV	3b 3b	58.44	75.86	81.63	82.22	72.0	II
*academia académico	III IV	6 8	41.56	72.41	83.67	80.00	65.0	II

(Table Continued)

NOTE: This table should be read as follows: The word abandonar is among the thousand most frequent Spanish words as listed by Buchanan, and its English equivalent appears in the first half of the fourth thousand of the words listed in Thorndike. Percentages of correct responses according to high school classification were 49.35% for the freshmen, 72.41% for the sophomores, 67.35% for the juniors, and 84.44% for the seniors. Of the total number of students taking the test, 65.0% responded correctly to this word, giving it a cognate classification of II.

TABLE I (continued)

Spanish Word	Buchanan	Thorn-dike	Freshmen	Sophomores	Juniors	Seniors	Total	C.C.
*accidente	II	3a	93.51	93.10	93.88	100.00	95.0	I
*acción	I	2b	53.25	58.62	69.39	66.67	61.0	II
*acento	II	4b	64.94	89.66	83.67	84.44	77.5	II
*aceptar	I	2a	75.32	82.76	93.88	82.22	82.5	II
*ácido	V	6	62.34	72.41	63.27	75.56	67.0	II
*acomodar	II	5b	32.47	51.72	69.39	68.89	52.5	II
*acompañar	I	2b	50.65	65.52	91.84	73.33	68.0	II
*acostumbrar	I	3a	27.27	55.17	55.10	55.56	44.5	III
*acreditar	IV	15	24.68	31.03	42.86	42.22	34.0	III
*actitud	II	5b	31.17	34.48	28.57	37.78	32.5	III
*actividad activo	II III	7 3a	49.35	55.17	79.59	82.22	65.0	II
*acto (actor)	I III	1b 5a	90.91	82.76	87.76	93.33	89.5	II
*actualidad	V	n.l.	42.86	48.28	73.47	71.11	57.5	II
*acusar	II	3b	63.64	82.76	87.76	84.44	77.0	II
*adaptar	IV	8	77.92	79.31	91.84	91.11	84.5	II
*adjetivo (administración)	III IV	8 5a	90.91	93.10	93.88	97.78	93.5	I
administrador	V	10						
*administrar	IV	7	92.21	93.10	95.92	95.56	94.0	I
admirable	II	6						
*admirar	I	2b	85.71	86.21	93.88	95.56	90.0	II

TABLE I (continued)

Spanish Word	Buchanan	Thorn-dike	Freshmen	Sophomores	Juniors	Seniors	Total	G. C.
(admiración)	II	4a						
*admitir	I	2b	71.43	93.10	79.59	86.67	80.0	II
*adoptar	III	3b	92.21	93.10	93.88	91.11	92.5	II
*adorar adoración	I V	4b 10	80.52	82.76	93.92	93.33	87.5	II
*adornar adorno	II III	4a 4a	61.04	68.52	85.71	75.56	71.0	II
*adversario adverso	III V	6 6	28.57	37.93	61.22	53.33	43.5	III
*afable	III	10	9.09	13.79	46.94	42.22	26.5	III
afirmación *afirmar afirmativo	III I V	15 5a 11	51.95	55.17	89.80	84.44	69.0	II
*aflicción	III	5b	49.33	62.07	87.76	80.00	67.5	II
*africano	IV	2b	80.52	72.41	83.67	84.44	81.0	II
*agente	III	4b	77.92	93.10	93.92	93.33	88.0	II
*ágil	IV	12	18.18	17.24	71.43	62.22	41.0	III
agitación *agitar	III II	7 7	19.48	24.14	42.86	55.56	34.0	III
*agonía	V	4a	23.38	48.28	55.10	53.33	41.5	III
*agregar	II	12	2.60	3.45	22.45	31.11	14.0	III
*agresivo	V	9	58.44	72.41	81.63	86.67	72.5	II
agrícola *agricultura	V IV	3a 3a	97.40	100.00	97.96	100.00	98.5	I
*aire	I	1a	92.21	86.21	91.84	93.33	66.5	II
*ajustar	II	6	80.52	86.21	85.71	88.69	84.5	II

TABLE I (continued)

Spanish Word	Buchanan	Thorn-dike	Fresh-men	Sopho-mores	Jun-iors	Sen-iors	Total	O.O.
*alarma alarmar	IV V	2b 2b	93.51	89.66	100.00	97.78	95.5	I
*álbum	V	10	80.52	82.76	93.88	97.78	88.0	II
*alcohol	IV	7	96.10	93.10	100.00	97.78	97.0	I
*alianza (altar)	V III	7 3b	3.90	17.24	14.29	24.44	13.0	III
alteración *alterar	V II	7 3b	79.22	75.86	85.71	82.22	81.0	II
*amable amabilidad (ambición)	II V III	6 n.l. 3b	19.48	13.79	36.73	57.78	31.5	III
*americano	II	1b	97.40	96.55	100.00	95.56	97.5	I
*amoroso	II	12	27.27	13.79	38.78	37.78	30.5	III
*analizar	IV	7	71.43	86.21	85.71	86.67	80.5	II
*análogo	IV	13	12.98	13.79	44.90	48.89	31.0	III
*anarquía	V	9	1.30	3.45	14.29	22.22	9.5	III
*anciano (ángel)	II I	2a 2a	45.45	58.62	71.43	75.56	60.5	II
*ángulo	III	4b	29.87	31.03	59.18	42.22	40.0	III
animación *animar (animal)	V I I	14 6 1b	3.90	10.34	4.08	13.33	7.0	III
*anónimo	IV	14	6.49	6.90	18.38	33.33	15.5	III



TABLE I (continued)

Spanish Word	Buchanan	Thorn-dike	Freshmen	Sophomores	Juniors	Seniors	Total	C.C.
*antecedente	III	11	76.62	75.86	75.51	88.89	79.0	II
*anterior	I	9	6.49	15.79	28.57	35.86	19.5	III
*anticipar	IV	7	51.95	65.52	83.67	84.44	69.0	II
*antiguo	I	6	11.69	37.93	36.73	44.44	29.0	III
*anual	III	3a	83.12	96.55	97.96	97.78	92.0	II
*anunciar	I	5b	28.57	41.38	40.82	42.22	36.5	III
*aparato	III	7	12.98	6.90	26.53	22.22	17.5	III
*aparente	III	4b	59.74	68.97	95.92	84.44	75.5	II
*aparición	III	9	6.49	20.69	32.65	37.78	22.0	III
*aparte	I	2a	75.32	86.21	89.80	88.89	83.5	II
*apetito	III	5b	45.45	86.21	75.51	66.67	63.5	II
aplaudir	II	6						
*aplauzo	II	5a	67.53	86.21	97.96	93.33	83.5	II
aplicación	II	3b						
*aplicar	I	2a	18.18	20.69	61.22	54.44	39.5	III
*apóstol	IV	9	35.77	55.17	75.47	75.56	56.0	II
*apreciación	V	8	67.53	86.21	87.76	88.89	80.0	II
*aprobación	IV	9	9.09	27.59	59.18	53.33	34.0	III
*aproximar	II	7	59.74	75.86	89.80	88.89	76.0	II
*aptitud	IV	14	12.98	20.69	63.27	60.00	37.0	III
*arco	III	2b	46.75	51.72	65.31	64.44	56.0	II
*archipiélago	IV	14	5.19	10.34	36.74	33.33	20.0	III
*ardiente	II	8	27.27	41.38	59.18	62.22	45.0	III
ardor	III	8						

TABLE I (continued)

Spanish Word	Buchanan	Thorn-dike	Freshmen	Sophomores	Juniors	Seniors	Total	C.C.
*argentino	III	6	67.53	72.41	89.80	91.11	79.0	II
*argumento	III	3b	90.91	89.66	95.92	91.11	92.0	II
*árido	V	1f	16.88	24.14	53.06	55.56	35.5	III
*armar	II	1a	71.43	68.97	83.67	91.11	78.5	II
*armonía	II	3b	0	3.45	8.16	8.89	4.5	IV
armónico	V	13						
armonioso	IV	7						
*aroma	IV	15	32.47	37.93	77.55	75.56	54.0	II
*arpa	V	4a	6.49	10.34	14.29	15.56	11.0	III
*arquitecto	V	7	33.77	34.48	59.18	48.89	43.5	III
arquitectura	V	7						
arrogancia	IV	8						
*arrogante	IV	9	11.69	34.48	61.22	57.78	37.5	III
*arte	I	1b	83.12	86.21	89.80	88.89	86.5	II
*artículo	II	8	20.78	48.28	51.02	53.33	39.5	III
(artificial)	IV	5a						
artificio	V	14						
*artificio	III	9	80.52	89.66	89.80	88.89	86.0	II
*artista	II	3b	64.94	82.76	75.51	91.11	76.0	II
artístico	II	5b						
*ascender	III	3a	51.95	68.97	79.59	80.00	67.0	II
*asesinar	III	11	3.90	0	10.20	13.33	7.0	III
asociación	V	4b						
*asociar	IV	3b	25.97	37.93	67.35	62.22	46.0	III
*aspecto	I	5b	57.14	68.97	87.76	71.11	69.5	II

TABLE I (continued)

Spanish Word	Buchanan	Thorn-dike	Fresh-men	Sophomores	Juniors	Seniors	Total	C.C.
aspiración	III	8						
*aspirar	I	6	32.47	48.28	71.43	75.56	84.0	II
*astuto	III	17	12.98	24.14	44.90	48.89	50.5	III
*atacar	III	2b	0	10.34	14.29	20.00	9.5	III
ataque	III	2b						
*atención	I	2b	61.04	62.07	81.63	91.11	82.5	II
atender	I	1b						
atento	II	5a						
*atmósfera	III	5b	54.35	65.52	91.84	88.89	73.0	II
*átomo	IV	8	59.74	65.52	65.51	71.11	64.5	II
*atormentar	III	5b	20.78	10.34	20.41	28.89	21.0	III
atracción	III	5b						
*atractivo	III	4a	95.51	89.66	100.00	95.56	95.0	I
*atribuir	II	5b	32.47	51.72	75.51	73.33	55.0	II
atributo	V	5b						
*audacia	IV	8	3.90	10.34	24.49	33.33	15.0	III
*audiencia	IV	4a	63.64	68.92	85.72	80.00	73.5	II
*auditorio	III	13	46.75	72.41	71.43	73.33	62.5	II
*augurar	V	11	15.58	17.24	30.63	28.89	22.5	III
*augusto	III	18	36.36	51.72	38.76	37.78	39.5	III
*aumentar	I	7	2.60	10.34	4.08	15.56	7.0	III
aumento	II	16						
*aurora	II	11	5.19	6.50	34.70	44.44	21.5	III
*austero	IV	8	1.30	10.34	24.49	24.44	13.5	III
*auténtico	V	7	9.09	6.50	30.61	35.36	20.0	III

TABLE I (continued)

Spanish Word	Buchanan	Thorn-dike	Freshmen	Sophomores	Juniors	Seniors	Total	C.C.
(auto)	V	5a						
*automóvil	III	2b	70.13	68.97	85.71	93.33	79.0	II
*autor	I	3a	28.57	34.48	20.41	37.78	29.5	III
*autoridad	I	2b	11.69	3.45	22.45	37.78	19.0	III
autorizar	III	7						
*auxilio	II	10	19.48	48.28	79.60	64.44	48.5	III
*avanzar	II	2a	14.29	13.79	26.53	33.33	21.5	III
*avaricia	V	6	1.30	3.45	14.29	24.44	10.0	III
*aventura	II	3b	64.94	79.31	91.84	91.11	79.5	II
aventurar	IV	3b						
aventurero	IV	10						
*ávido	V	n.1.	16.88	24.14	48.98	26.67	28.0	III
*bala	IV	1a	7.79	10.34	26.53	28.89	17.5	III
*balanza	IV	2b	35.06	34.48	69.39	64.44	50.0	II
*balcón	II	10	23.38	58.62	61.22	55.56	45.0	III
*bálsamo	IV	16	25.97	31.03	59.18	44.44	39.0	III
*banco	II	1a	23.38	41.38	42.86	48.89	36.5	III
*banda	III	1b	63.64	75.86	81.63	66.67	70.5	II
*banquete	III	3b	79.22	100.00	97.96	100.00	91.5	II
barbarie	V	12						
*bárbaro	II	5b	12.98	20.69	53.06	44.44	31.0	III
*barbero	III	5a	63.64	75.86	81.63	77.78	73.0	II
(base)	III	2a						

TABLE I (continued)

Spanish Word	Such- annan	Thorn- dike	Fresh- man	Sopho- mores	Jun- iors	Sen- iors	Total	O.C.
*batalla	II	1b	18.18	24.14	28.57	46.67	28.0	III
*bateria	V	5a	3.90	13.79	10.20	8.89	8.0	III
*bendición	II	10	50.65	44.83	73.47	86.0	62.0	II
*beneficio benefico	II IV	2b 11	62.34	79.31	83.71	84.44	75.3	II
*benevolencia benfvolc	IV IV	9 16	32.47	55.17	83.67	64.44	55.3	II
*benigno	V	10	6.49	17.24	40.82	20.00	19.3	III
*bestia	II	1b	2.60	6.90	10.20	4.44	2.5	IV
*biblico	V	14	46.75	66.52	77.55	82.22	65.0	II
*bizarro	V	17	28.57	41.38	61.22	51.11	43.5	III
*blasfemia	IV	7	7.79	20.69	28.57	44.44	23.0	III
*bohemia	V	8	36.36	66.52	81.63	77.78	61.0	II
*bomba	V	9	66.23	68.52	83.67	84.44	74.5	II
*bordo	V	2a	38.06	31.03	67.35	53.33	46.5	III
*botella	III	2a	23.38	34.48	38.78	48.89	34.5	III
*bravo	II	1b	92.21	86.21	95.92	93.33	92.5	II
*brillante	II	4a	89.61	86.21	93.92	97.78	92.5	II
*británico	IV	2b	36.36	41.38	73.47	66.67	53.0	II
*bronce	III	6	23.38	24.14	28.57	13.33	22.5	III
brutal	III	6						
*bruto	III	4b	89.61	93.10	97.96	91.11	92.5	II
*burro	III	18	27.28	33.17	81.63	80.00	36.5	II

TABLE I (continued)

Spanish Word	Buchanan	Thorn-dike	Fresh-men	Sopho-mores	Jun-iors	Sen-iors	Total C.C.	
*busto	V	5a	75.52	58.62	81.63	66.67	72.5	II
(cable)	V	4b						
*cadáver	II	n.l.	5.19	6.90	18.37	20.00	12.0	III
*calamidad	IV	6	12.98	24.14	57.14	57.78	35.5	III
*calcular cálculo	III III	7 10	27.27	48.28	53.06	62.22	45.0	III
*calma calmar	I II	2b 2b	63.64	68.97	91.84	75.56	74.0	II
*calumnia calumniar	III IV	13 16	0	0	0	4.44	1.0	IV
*camarada	IV	4a	10.39	24.14	40.82	24.44	23.0	III
(canal)	III	3a						
*canario	IV	8	50.65	68.97	73.47	77.78	65.0	II
*cándido candor	IV III	12 12	27.27	31.03	55.10	62.22	42.5	III
*cañón	III	9	93.51	89.66	97.96	100.00	95.5	I
*capacidad	III	4a	27.27	34.48	65.31	71.11	47.5	III
(capital)	I	2b						
*capitán	II	1b	67.53	68.97	89.80	75.56	75.0	II
*capriche caprichoso	II III	11 10	3.90	3.45	18.37	20.00	11.0	III
*carácter característica caracterizar	I V IV	2a 5b 9	74.03	89.66	91.84	88.89	84.0	II
*carga	II	4b	83.12	93.10	91.84	93.33	89.0	II

TABLE I (continued)

Spanish Word	Buchanan	Thorn-dike	Fresh-men	Sopho-mores	Jun-iors	Sen-iors	Total	C.C.
(cargó)	I	4b						
*carpintero	V	3a	71.43	82.76	93.88	91.11	83.0	II
*caso	I	1a	50.65	51.72	85.71	80.00	66.0	II
casual	IV	6						
*casualidad	III	13	19.48	34.48	65.31	66.67	43.5	III
*catálogo	V	5b	93.51	100.00	87.76	97.78	96.0	I
*catástrofe	IV	8	20.78	44.83	69.39	64.44	47.5	III
*catedral	III	4b	50.65	68.97	65.31	86.67	67.0	II
*categoría	III	13	6.49	17.24	22.45	57.78	25.5	III
*católico	II	4b	23.38	24.14	40.82	37.78	33.0	III
*causa	I	1a	83.12	89.66	85.71	95.56	89.5	II
causar	I	1a						
*ceder	II	10	0	3.45	7.96	4.44	3.0	IV
*celebrar	I	2b	84.42	86.21	85.71	73.33	84.5	II
célebre	II	n.l.						
celebridad	V	11						
*celeste	III	4b	7.79	20.69	40.82	35.56	24.0	III
(celestial)	IV	4b						
*cementario	V	4b	48.05	58.62	87.76	55.56	61.0	II
*censura	IV	5b	27.27	44.83	65.31	68.89	48.5	III
*centímetro	IV	9	23.38	41.38	32.65	35.56	31.0	III
(central)	III	2b						
*centro	I	1b	37.66	51.72	67.33	73.33	55.0	II
*ceremonia	IV	4a	61.04	79.31	85.71	88.89	76.0	II
*científico	III	7	14.29	27.59	34.69	53.33	30.0	III

TABLE I (continued)

Spanish Word	Buchanan	Thorn-dike	Freshmen	Sophomores	Juniors	Seniors	Total	C.G.
*cigarro	IV	5	84.42	86.21	95.92	95.56	90.0	II
*circulación (circular)	V III	7 4a	83.12	93.10	93.88	97.78	90.0	II
*circulo	II	1b	62.34	86.21	77.55	75.56	72.5	II
*circunstancia	I	3a	79.22	86.21	93.88	86.67	85.5	II
*citar (civil)	II II	6 3a	0	0	10.20	15.56	6.0	IV
*civilización civilizar	III V	7 6	96.10	82.76	97.96	97.78	95.0	I
*clamar (clamor)	III V	4b 4b	33.77	51.72	63.27	64.44	50.5	II
*claro	I	1a	11.69	20.69	28.57	40.00	23.5	III
*clase	I	1b	58.44	62.07	55.10	68.89	60.5	II
*clásico	III	4b	33.77	65.52	51.02	62.22	49.0	III
*clemencia	V	12	6.49	12.24	30.61	37.78	21.0	III
*cliente	V	7	41.56	65.52	83.67	91.11	66.5	II
*clima	II	3a	40.26	44.83	59.18	48.89	47.5	III
*coche	II	2b	25.97	41.38	32.65	46.67	34.5	III
*coincidir	IV	11	31.17	55.17	55.10	62.22	47.5	III
*colección	IV	3b	72.73	68.97	79.59	71.11	73.5	II
*colérico	IV	n.l.	2.60	6.90	10.20	8.89	6.5	IV
*colonia	III	2b	66.23	89.66	85.71	84.44	78.5	II
*coloquio (color)	IV I	14 1a	5.19	17.24	20.41	15.56	13.0	III



TABLE I (continued)

Spanish Word	Buchanan	Thorn-dike	Freshmen	Sophomores	Juniors	Seniors	Total	O.C.
*colosal	III	7	44.16	82.76	79.59	82.22	67.0	II
*columna	II	3a	75.32	89.66	89.80	91.11	84.5	II
*comandante	V	13	50.65	68.97	81.63	80.00	67.5	II
combate	III	4a						
*combatir	II	4a	53.25	65.52	75.51	71.11	64.5	II
(combinación)	IV	3b						
*combinar	IV	3a	55.84	79.31	79.59	75.56	69.5	II
*comedia	II	5a	66.23	89.66	91.84	93.33	82.0	II
comentar	IV	6						
*comentario	IV	9	31.17	44.83	71.43	60.00	49.5	III
*comenzar	I	3b	19.48	41.38	42.86	33.33	31.5	III
comercial	IV	3b						
*comercio	II	2b	32.47	65.52	77.55	80.00	59.0	II
*cometa	IV	7	44.16	68.97	61.22	73.33	58.5	II
*cómicoo	III	12	42.86	65.52	71.43	75.56	60.5	II
*comisión	III	3b	64.94	75.86	89.80	93.33	79.0	II
*compañero	I	2a	58.44	68.97	81.63	86.67	72.0	II
compañía	I	1a						
comparable	V	12						
comparación	III	4a						
*comparar	II	2a	72.73	86.21	87.76	88.89	82.0	II
*compasión	II	5b	50.65	72.41	77.55	91.11	69.5	II
*compatriota	V	13	5.19	10.34	30.61	42.22	20.5	III
competencia	V	14						
*competir	IV	8	49.35	75.86	69.39	64.44	61.5	II
*complemento	IV	7	62.34	89.66	73.47	75.56	72.0	II
completar	III	1b						
*completo	I	1b	92.21	93.10	93.88	95.56	93.5	I

TABLE I (continued)

Spanish Word	Buchanan	Thorn-dike	Freshmen	Sophomores	Juniors	Seniors	Total	C.C.
*comedidad	II	7	3.90	24.14	28.57	35.56	20.0	III
(composición)	III	4b						
*compromiso	IV	7	67.53	86.21	83.67	93.33	80.0	II
*comida	I	1b	25.97	31.03	24.49	40.00	29.5	III
comunicación	II	4b						
*comunicar	I	6	29.87	55.17	67.35	68.89	51.5	II
*conceder	I	9	25.97	41.38	65.31	57.78	45.0	III
*concentrar	IV	7	31.17	44.83	67.35	68.89	50.5	II
concepción	V	7						
*concepto	II	15	68.83	82.76	85.72	84.44	78.5	II
*concertar	II	4a	42.86	48.28	59.18	64.44	52.5	II
*conciencia	I	3a	48.05	58.62	63.27	57.78	55.5	II
(conclusión)	III	5a						
*concreto	V	6	74.03	72.41	73.47	82.22	75.5	II
*concurrir	III	13	29.87	31.03	67.35	53.33	44.5	III
concurrencia	IV	13						
*condensar	III	6	67.53	96.55	93.88	91.11	83.5	II
(condición)	I	1b						
*conducir	I	11	41.56	51.72	73.47	73.33	58.0	II
*conducta	II	2b	88.31	79.31	85.72	91.11	87.0	II
(conductor)	IV	5a						
*conferencia	III	4b	71.43	82.76	85.72	82.22	79.0	II
*confesar	I	3a	80.52	82.76	79.59	91.11	83.0	II
confesor	IV	9						
confesión	IV	5b						

TABLE I (continued)

Spanish Word	Buchanan	Thorn-dike	Freshmen	Sophomores	Juniors	Seniors	Total	G.C.
*confianza	I	3b	7.79	10.34	32.65	24.44	18.0	III
*confirmar	II	4a	63.64	89.66	85.71	91.11	79.0	II
*conflicto	II	4b	70.13	89.66	97.96	95.56	85.5	II
conformar	IV	8						
*conforme	II	8	62.34	86.21	89.80	86.67	78.0	II
*confundir	I	4b	6.49	20.69	28.57	31.11	19.5	III
(confusión)	II	3b						
*confuso	II	5a	84.42	93.10	91.84	93.33	89.5	II
*congreso	II	2b	73.32	86.21	89.80	93.33	84.5	II
*conjunción	V	8	83.71	89.66	95.92	95.56	91.0	II
*conquista	II	3b	50.65	55.17	67.35	77.78	61.5	II
*consecuencia	II	3b	24.68	51.72	40.82	42.22	36.5	III
*consentir	II	2a	48.05	68.97	79.59	68.89	63.5	II
conservación	IV	7						
*conservador	IV	n.l.	28.57	62.07	73.47	77.78	55.5	II
(considerable)	III	4a						
(consideración)	II	4a						
*considerar	I	2a	81.82	93.10	93.88	88.89	88.0	II
*consistir	I	2b	63.64	79.31	85.71	77.78	74.5	II
*consolar	II	8	29.87	58.62	75.51	62.22	52.5	II
*consolidar	V	9	18.18	44.83	51.02	66.67	41.0	III
*consonante	IV	8	37.66	44.83	71.43	82.22	57.0	II
constancia	III	8						
*constante	II	2a	85.71	82.76	95.92	86.67	88.0	II
(constitución)	IV	3b						

TABLE I (continued)

Spanish Word	Buchanan	Thorn-dike	Fresh-men	Sopho-mores	Jun-iors	Sen-iors	Total	C.C.
*constitucional	V	8	62.34	75.86	97.96	95.56	80.5	II
*constituir (construcción)	I II	5a 4a	40.26	62.07	71.43	68.89	57.5	II
*construir	II	3b	27.27	37.93	55.10	60.00	43.00	III
*consultar	III	3b	58.44	79.31	63.27	84.44	68.5	II
*consumir	II	4a	55.84	79.31	89.80	88.89	75.0	II
*contacto	III	7	68.83	79.31	67.35	75.56	71.5	II
*contar	I	1b	1.30	13.79	2.04	4.44	4.0	IV
contemplación	IV	6						
*contemplar	I	6	11.69	24.14	48.98	55.56	32.5	III
*contemporáneo	V	18	3.90	10.34	36.73	37.78	20.5	III
*contener	I	1b	11.69	6.90	26.53	26.67	18.0	III
contentar	II	2a						
*contento	I	2a	72.73	86.21	79.59	88.89	80.0	II
*continente	II	3a	31.17	44.83	61.22	57.78	46.5	III
*contingents	V	14	10.39	24.14	44.90	53.33	30.5	III
continuación	III	8						
*continuar	I	1b	58.44	72.41	81.63	75.56	70.0	II
continuo	I	3b						
*contradicción	IV	8	41.56	65.52	71.43	75.56	60.0	II
contradictorio	V	16						
*contrario	I	3a	27.27	58.62	69.39	68.89	51.5	II
*contraste	IV	4b	72.73	86.21	91.84	93.33	54.0	II

TABLE I (continued)

Spanish Word	Buchanan	Thorn-dike	Freshmen	Sophomores	Juniors	Seniors	Total C.O.
contratar	V	3a					
*contrato	IV	3a	33.37	34.48	30.61	37.78	34.0 III
contribución	IV	7					
*contribuir	II	5b	49.35	82.76	85.71	84.44	71.0 II
conveniencia	III	5a					
*conveniente	II	3b	76.62	79.31	93.88	93.33	85.0 II
*convento	III	5a	64.94	68.97	71.43	86.67	72.0 II
(conversación)	I	3a					
*conversar	IV	5a	67.53	79.31	83.67	88.89	78.0 II
*convertir	I	4b	45.45	58.62	73.47	73.33	60.5 II
*convicción	IV	9	51.95	72.41	85.71	84.44	70.5 II
*convocar	V	18	9.09	13.79	32.65	35.56	21.0 III
*copiar	III	2a	41.56	51.72	67.35	62.22	54.0 II
*copioso	V	7	3.90	13.79	16.33	8.89	9.5 III
(coral)	V	5a					
(cordial)	III	3b					
*cortesano	IV	18	6.49	6.90	14.29	11.11	9.5 III
*cortesía	III	5a	10.39	13.79	40.82	26.67	22.0 III
corrección	IV	6					
correcto	III	2a					
*corregir	III	2a	2.60	6.90	18.37	13.33	9.5 III
correspondencia	III	4b					
*corresponder	I	4b	87.01	93.10	100.00	97.78	93.5 I
correspondiente	III	8					
*costar	I	1b	51.95	65.52	73.47	64.44	62.0 II
costoso	V	3a					
(creación)	III	4b					

TABLE I (continued)

Spanish Word	Bush-anan	Thorn-dike	Fresh-men	Sopho-mores	Jun-iors	Sen-iors	Total	C.C.
*creador	III	6	25.97	58.62	53.06	40.00	40.5	III
*crédito	II	3a	84.42	86.21	95.92	93.33	89.5	II
*crimen (criminal)	II II	3a 5b	36.36	58.62	59.18	62.22	51.0	II
*crisis	IV	8	55.84	68.97	97.96	93.56	77.0	II
*cristal cristalino	II IV	4a 12	74.03	86.21	91.84	84.44	82.5	II
*cristiano	I	2b	50.65	72.41	87.76	77.78	69.0	II
*criterio	IV	15	10.39	3.45	10.20	8.89	9.0	III
crítica	III	8						
*crítico	II	5a	51.95	51.72	73.47	77.78	63.0	II
*crónica	V	10	20.78	24.14	20.41	44.44	26.5	III
*crudo (cruel)	II I	6 2a	74.03	75.86	95.92	95.56	84.5	II
*crueldad	III	4b	40.26	58.62	73.47	75.56	59.0	II
*cuestión	I	1b	25.97	55.17	53.06	66.67	46.0	III
*culpable	IV	15	3.90	17.24	16.33	17.78	12.0	III
*cultivar cultivo	II III	3a 7	54.55	75.86	75.51	84.44	69.5	II
*culto	II	7	22.08	37.93	42.86	48.89	35.5	III
*cultura	III	6	72.73	82.76	87.76	84.44	80.5	II
*curar	II	2b	42.86	58.62	67.35	71.11	57.5	II
*curiosidad curioso	II II	5a 3a	33.77	65.52	69.39	64.44	54.0	II
*curso	II	1a	2.60	3.45	0	4.44	2.5	IV

TABLE I (continued)

Spanish Word	Buchanan	Thorn-dike	Freshmen	Sophomores	Juniors	Seniors	Total	O.C.
*curva	V	2b	79.22	79.31	91.84	95.56	86.0	II
*chino (chocolate)	IV II	5a 4a	77.92	72.41	81.63	71.11	76.5	II
*danza	IV	1b	64.94	82.76	77.55	77.78	73.5	II
*debilidad	IV	16	3.90	6.90	20.41	28.89	14.0	III
*decadencia	V	16	2.60	17.24	26.53	22.22	15.0	III
*decente	III	6	83.12	79.31	83.67	86.67	83.5	II
*decidir decisivo (decisión)	I V III	1b 8 4a	45.45	65.52	75.51	73.33	62.0	II
declaración *declarar (decoración)	II I III	7 2a 5a	81.82	82.76	95.92	97.78	89.0	II
*decoro	III	11	2.60	3.45	10.20	6.67	5.5	IV
*decreto	III	4a	5.19	0	6.12	8.89	5.5	IV
*dedicar	I	5a	24.68	44.83	55.10	66.67	44.5	III
*deducir	V	11	36.36	37.93	65.31	71.11	51.5	II
*defecto	II	5a	87.01	86.21	91.84	95.56	90.0	II
*defender defensa defensor	I II IV	2b 3a 11	85.71	96.55	95.92	100.00	93.0	I
*definitivo	II	13	70.13	68.97	61.22	66.67	67.0	II
*delegado	IV	5b	40.26	62.07	81.63	71.11	60.5	II
*deliberar	V	6	44.16	62.07	83.67	75.56	63.5	II

TABLE I (continued)

Spanish Word	Buchanan	Thorn-dike	Fresh-men	Sopho-mores	Jun-iors	Sen-iors	Total	O.C.
*delicado	I	3a	45.45	51.72	68.31	71.11	57.0	II
*de licioso	II	4a	54.55	68.97	79.59	77.78	68.0	II
*delincuente	IV	15	15.58	20.69	51.02	62.22	35.5	III
*delirio	III	12	23.38	37.93	67.35	62.22	45.0	III
*demanda demandar	III III	1b 1b	90.91	93.10	95.92	95.56	93.5	I
*democrático	V	8	79.22	96.55	97.96	86.67	88.0	II
demostración *demostrar	III I	7 6	71.43	72.41	97.96	84.44	81.0	II
*denso	IV	4a	66.23	96.55	91.84	91.11	82.5	II
*departamento	IV	3a	79.22	93.10	97.96	100.00	94.0	I
dependencia *depender	III II	10 2b	70.13	79.31	81.63	82.22	77.0	II
*depositar depósito	III IV	3b 3b	64.94	89.66	87.76	88.89	79.5	II
*derivar	IV	4a	35.06	68.97	75.51	80.00	60.0	II
*desagradable	III	6	41.56	72.41	69.39	88.89	63.5	II
*desarmar	V	7	28.57	72.41	75.51	86.67	59.5	II
*desastre desastrosos	IV V	5b 7	46.75	55.17	69.39	75.56	60.0	II
*descender descendiente	II IV	2b 7	68.83	82.76	97.96	84.44	81.5	II
*descolorido	V	12	23.38	31.03	48.98	51.11	37.0	III
*desconcertar	V	14	18.18	27.59	46.94	44.44	32.5	III
*describir	II	2a	71.43	82.76	89.80	97.78	83.5	II



TABLE I (continued)

Spanish Word	Buchanan	Thorn-dike	Freshmen	Sophomores	Juniors	Seniors	Total	C.G.
(descripción)	III	3b						
*desembarcar	IV	13	11.69	20.69	28.57	35.56	22.5	III
*desesperación	III	10	27.27	27.59	57.14	60.00	41.0	III
*designar	II	8	2.60	3.45	12.24	4.44	5.5	IV
*desistir	IV	10	24.68	48.28	65.31	44.44	42.5	III
*desolar	V	4b	18.18	20.69	36.73	42.22	28.5	III
*despotismo	V	10	24.68	51.72	65.31	66.67	48.0	III
destinar	II	4b						
*destino	I	5a	46.75	72.41	73.47	84.44	65.5	II
(destrucción)	V	3a	76.62	86.21	93.88	95.56	86.5	II
determinación	IV	7						
*determinar	I	2b	77.92	89.66	95.92	93.33	87.5	II
*detestable	IV	11	48.03	68.97	91.84	93.33	72.0	II
(devoción)	III	5a						
*devorar	III	4a	27.27	31.03	36.73	46.67	34.5	III
*devoto	III	6	0	0	0	0	0	IV
*diadema	V	8	12.98	37.93	36.73	48.89	30.5	III
*diálogo	III	7	72.73	86.21	91.84	91.11	83.5	II
*diamante	IV	2a	12.98	34.48	33.61	37.78	26.0	III
*diciembre	IV	2a	16.88	37.93	28.57	31.11	26.0	III
*dictar	II	5a	32.47	65.52	65.31	60.00	51.5	II
*diferencia	I	1b	70.13	82.76	91.84	91.11	82.0	II
diferenciar	IV	14						
diferente	I	1b						

TABLE I (continued)

Spanish Word	Buchanan	Thorn-dike	Fresh-men	Sopho-mores	Jun-iors	Sen-iors	Total	G.C.
*diferir	V	8	46.75	58.62	79.59	77.78	63.5	II
*difícil dificultad	I II	2a 3b	23.38	34.48	53.06	44.44	37.0	III
*difunto	II	16	6.49	13.79	18.37	13.33	12.0	III
*difusión	V	11	58.44	65.52	73.47	82.22	68.5	II
*dignidad	III	4a	24.68	51.72	57.14	75.56	48.0	III
*dilatár	II	6	16.88	27.59	40.82	48.89	31.5	III
*diligencia diligente	II V	7 5a	24.68	58.62	81.63	71.11	54.0	II
*dimensión	IV	7	67.53	86.21	95.92	88.89	82.0	II
*diplomático (dirección)	IV I	13 2a	45.45	65.52	87.76	86.67	68.0	II
*directo (director)	II II	1b 4b	87.01	89.66	95.92	97.78	92.0	II
*disciplina	IV	5a	57.14	72.41	83.67	88.89	73.0	II
*discípulo	V	8	22.08	34.48	55.10	48.89	38.0	III
*disco	IV	9	37.66	62.07	61.22	60.00	52.0	II
discreción *discreto	IV II	7 6	48.05	62.07	91.84	80.00	68.0	II
*discusión	III	5b	83.12	86.21	93.88	95.56	89.0	II
*discurso	II	5a	15.58	20.69	51.02	60.00	35.0	III
*disimular disímulo	II V	n.l. 14	3.90	0	10.20	4.44	5.0	IV
*disipar	III	2	6.49	17.24	14.29	20.00	13.0	III

TABLE I (continued)

Spanish Word	Buchanan	Thorn-dike	Fresh-men	Sopho-mores	Jun-iors	Sen-iors	Total	G.O.
*disolver	IV	3b	72.73	86.21	95.92	84.44	83.0	II
*disolución	V	8	31.17	62.07	71.43	73.33	55.0	II
*dispensar	III	5a	44.16	86.21	83.67	82.22	68.5	II
(disposición)	II	5a						
disputa	IV	3a						
*disputar	II	3a	70.13	82.76	95.92	86.67	82.0	II
*distancia	I	1b	62.34	79.31	87.76	91.11	77.5	II
distante	II	2a						
*distinguir	I	3b	41.56	48.28	75.51	77.78	59.0	II
distinción	II	5b						
*distinto	I	3a	28.57	55.17	57.14	48.89	44.0	III
*distracción	IV	10	71.43	75.86	97.96	95.56	84.0	II
(distribución)	IV	5a						
*distribuir	III	5a	51.95	75.86	87.76	88.89	72.5	II
*distrito	III	2b	35.06	37.93	59.18	64.44	48.0	III
diversión	IV	9						
*divertir	II	7	33.77	51.72	69.39	77.78	55.0	II
*diverso	I	8	40.26	55.17	73.47	62.22	55.5	II
*dividir	I	1b	88.31	86.21	87.76	88.89	88.0	II
divinidad	V	6						
*divino	I	2b	70.13	79.31	91.84	88.89	81.0	II
(división)	III	3a						
*divulgar	V	13	9.09	17.24	34.69	48.89	25.5	III
*dócil	III	12	20.78	31.03	63.27	64.44	42.5	III
(doctor)	I	1b						
*doctrina	III	4b	44.16	58.62	87.76	84.44	61.0	II

TABLE I (continued)

Spanish Word	Buchanan	Thorn-dike	Fresh-men	Sopho-mores	Jun-iors	Sen-iors	Total	O.C.
*documento	III	6	79.22	96.55	95.92	95.56	89.5	II
*doméstico	III	3a	75.32	89.66	97.96	91.11	86.5	II
*domicilio	IV	17	14.29	24.14	57.14	62.22	37.0	III
*dominar	I	10	15.58	24.14	46.94	46.67	31.5	III
(drama)	II	5b						
*dramático	III	8	70.13	89.66	97.96	97.78	86.0	II
*duque	III	3b	7.79	17.24	32.68	26.67	19.5	III
*eclesiástico	V	12	9.09	31.03	53.06	53.33	33.0	III
*eco	II	2b	63.64	68.97	63.27	55.56	62.5	II
economía	IV	7						
*económico	III	9	87.01	86.21	97.96	97.78	92.0	II
*edición	IV	6	41.56	68.52	63.27	84.44	60.0	II
*edificar	IV	8	3.90	13.79	6.12	20.00	9.5	III
*edificio	II	5b	3.90	13.79	24.49	33.33	17.0	III
(educación)	II	3a						
*educar	II	6	32.47	34.48	57.15	57.78	44.5	III
efectivo	III	7						
*efecto	I	2a	77.92	89.66	100.00	93.33	88.5	II
*eficaz	III	15	0	0	6.12	0	1.5	IV
*efímero	V	16	0	0	2.04	0	.5	IV
*efusión	V	13	25.97	31.03	68.31	66.67	48.5	III
*egotismo	III	14	27.27	41.38	69.39	66.67	48.5	III
egocista	V	n.l.						
ejecución	III	5b						
*ejecutar	II	4a	1.50	0	0	6.67	2.0	IV
ejecutivo	V	5b						

TABLE I (continued)

Spanish Word	Buchanan	Thorn-dike	Fresh-men	Sopho-mores	Jun-iors	Sen-iors	Total	O.C.
(elección)	II	3a						
electricidad	IV	7						
*eléctrico	III	3a	79.22	89.66	83.67	91.11	87.0	II
elegancia	IV	12						
*elegante	II	4b	66.23	79.31	91.84	93.33	80.5	II
elementar	IV	10						
*elemento	I	3b	79.22	96.55	97.96	95.56	90.0	II
elevación	V	6						
*elevar	I	4b	27.27	44.83	51.02	57.78	42.5	III
elocuencia	IV	5a						
*elocuente	III	7	7.79	24.14	44.90	60.00	31.0	III
emanación	V	13						
*emanar	V	15	0	6.90	6.12	26.67	8.5	III
*embarcar	III	7	11.69	10.34	26.53	37.78	21.0	III
*emigración	III	10	59.74	68.97	83.67	91.11	74.0	II
emigrante	IV	9						
eminencia	V	8						
*eminente	III	6	15.88	27.59	69.39	77.78	44.5	III
(emoción)	II	5b						
*emperador	II	3a	27.27	27.59	51.02	51.11	38.5	III
*enamorar	I	9	7.79	17.24	38.78	26.67	21.0	III
*enemigo	I	1b	25.97	31.03	40.82	37.78	33.0	III
*energía	II	4b	40.51	68.52	73.47	82.22	66.0	II
enérgico	II	8						
*énfasis	V	7	7.79	10.34	32.65	37.78	21.0	III
*engendrar	II	9	3.90	20.69	12.24	17.78	11.5	III
*enorme	I	3a	16.88	37.93	46.94	40.00	32.5	III
*entero	I	1b	1.30	0	2.04	0	1.0	IV
*entonar	III	17	7.79	17.24	42.86	35.56	24.0	III

TABLE I (continued)

Spanish Word	Buchanan	Thorn-dike	Freshmen	Sophomores	Juniors	Seniors	Total	C.C.
*entrar	I	1b	16.88	31.03	40.82	33.33	28.5	III
*entusiasmo entusiasta	II IV	5b 6	48.05	62.07	77.55	77.78	64.0	II
*enumerar	IV	8	15.58	34.48	42.86	62.22	35.5	III
*época	I	9	16.88	20.69	38.78	42.22	28.5	III
*episodio	V	9	37.66	58.62	67.35	75.56	56.5	II
*equilibrio	III	13	12.98	20.69	34.69	60.00	30.0	III
*equipaje	V	11	16.88	20.69	38.78	51.11	30.5	III
equivocación *equivocar	III II	15 16	5.19	17.24	10.20	24.44	12.5	III
errante *errar	IV IV	13 3b	64.94	72.41	87.76	91.11	77.5	II
*erudito	IV	19	5.19	10.34	16.33	15.56	11.0	III
*escapar	I	1b	57.14	79.31	98.92	88.89	77.0	II
*escena	I	2b	2.60	6.90	12.24	24.44	10.5	III
*esclavo	II	2a	2.60	6.90	12.24	15.56	8.5	III
escrúpulo *escrupuloso	IV III	6 7	3.90	10.34	24.49	37.78	67.5	II
*esencia esencial	II III	6 5b	2.60	10.34	12.24	20.00	10.0	III
*espacio (especial)	I I	1b 2a	12.98	13.79	24.49	37.78	21.5	III
*especie	I	20	11.69	17.24	30.61	42.22	24.0	III
*especificar	V	12	11.69	20.69	22.45	42.22	22.5	III

TABLE I (continued)

Spanish Word	Buchanan	Thorn-dike	Fresh-men	Sopho-mores	Jun-iors	Sen-iors	Total	C.C.
*espectáculo	II	4a						
*espíritu espiritual	I III	1b 4b	14.29	37.93	30.61	48.89	29.5	III
*esplendor	III	4a	29.87	55.17	46.94	64.44	45.5	III
*espontáneo	III	8	11.69	24.14	20.41	48.89	24.0	III
*esqueleto	V	7	0	0	0	0	0	IV
*establecer establecimiento	I III	2a 5b	41.56	65.52	75.51	77.78	61.5	II
*estación	II	1b	5.19	24.14	12.24	35.56	16.5	III
*estampa estampar	III V	2a 2a	35.06	51.72	30.61	46.67	39.0	III
*estatua	II	3a	24.68	31.03	16.38	46.67	28.5	III
*estatura	IV	5a	11.69	20.69	14.29	40.00	20.0	III
*estéril	III	10	10.39	17.24	18.37	40.00	20.0	III
*estilo	II	2a	2.60	0	2.04	0	1.5	IV
estimación	III	8						
*estimar	I	4a	25.97	44.83	46.94	55.56	40.5	III
*estómago	II	4a	6.49	0	8.16	24.44	10.0	III
*estricto	V	4a	27.27	44.83	36.73	57.78	39.0	III
*estructura	V	7	29.57	37.93	44.90	57.78	40.5	III
estudiante	III	2b						
*estudiar	I	1b	24.68	37.93	28.57	48.89	33.0	III
*estupendo	IV	8	7.79	24.14	26.53	44.44	23.0	III
*estúpido	V	4b	27.27	48.28	34.69	60.00	39.5	III

TABLE I (continued)

Spanish Word	Buchanan	Thorn-dike	Freshmen	Sophomores	Juniors	Seniors	Total	C.O.
(ateótera)	III	4b						
*eterno	I	3a	15.58	41.38	58.78	42.22	31.0	III
*etiqueta	IV	11	32.47	55.17	77.55	91.11	60.0	II
*europeo	II	4a	74.03	89.66	87.76	88.89	83.0	II
*evangelio	IV	13	14.29	37.93	42.86	53.33	33.5	III
evidencia	IV	4a						
*evidente	IV	3b	75.32	89.66	91.84	91.11	85.5	II
*evocar	III	16	8.19	10.34	16.33	28.89	14.0	III
*evolución	IV	9	44.16	62.07	81.63	84.44	65.0	II
exactitud	IV	17						
*exacto	II	2a	83.12	82.76	97.96	88.89	88.0	II
*exagerar	III	7	23.38	41.38	73.47	77.78	50.5	II
exaltación	III	12						
*exaltar	III	4b	33.77	58.62	71.43	71.11	55.0	II
*examinar	II	2b	79.22	89.66	97.96	95.56	89.0	II
*exceder	IV	3a	50.65	86.21	91.84	84.44	73.5	II
excelencia	IV	10						
*excelente	I	2a	59.74	82.76	93.88	88.89	78.0	II
(excepción)	II	4a						
*excepto	III	1b	92.21	93.10	93.88	95.56	93.5	I
exceptuar	III	1b						
excesivo	III	5b						
*exceso	III	4a	68.83	82.76	87.76	77.78	77.5	II
*excitar	II	3a	63.64	75.86	91.84	86.67	77.5	II
exclamación	V	7						
*exclamar	I	3a	61.04	79.31	89.80	82.22	75.5	II



TABLE I (continued)

Spanish Word	Buchanan	Thorn-dike	Fresh-men	Sopho-mores	Jun-iors	Sen-iors	Total	C.O.
*exclusivo	II	4b	87.01	89.66	97.96	93.33	91.5	II
*excursión	III	6	57.14	82.76	85.71	84.44	74.0	II
excusa	III	2b						
*excusar	II	2b	57.14	75.86	89.80	86.67	74.5	II
*exhalar	III	8	63.64	79.31	87.76	84.44	76.5	II
*exhibir	V	4b	59.74	86.21	83.67	93.33	77.0	II
*exigencia	V	14	3.90	6.90	18.37	31.11	14.0	III
existencia	I	4b						
existente	V	18						
*existir	I	4a	61.04	72.41	87.76	84.44	74.5	II
*exótico	V	14	14.29	24.14	42.86	53.33	31.5	III
*expansión	IV	7	88.31	89.66	100.00	95.56	93.0	I
(expedición)	IV	4a						
*experiencia	II	2a	70.13	82.76	83.67	91.11	80.0	II
*experimentar	II	5a	83.12	79.31	91.84	95.56	87.5	II
experimento	IV	5a						
*experto	V	4b	88.31	93.10	100.00	97.78	94.0	I
*expirar	III	4b	54.55	75.86	83.67	84.44	71.5	II
explicación	II	5b						
*explicar	I	2a	1.30	13.79	18.37	24.44	12.5	III
*explorar	IV	4b	88.31	82.76	97.96	93.33	91.0	II
*explosión	IV	8	90.91	93.10	97.96	100.00	85.0	II
*explotar	III	5b	10.39	10.34	20.41	33.33	18.0	III
*exposición	III	8	38.96	65.52	73.47	71.11	58.5	II
*expresar	I	1b	75.32	82.76	79.59	88.89	80.5	II
expresión	I	5a						
expresivo	IV	9						

TABLE I (continued)

Spanish Word	Buchanan	Thorn-dike	Fresh-men	Sopho-mores	Jun-iors	Sen-iors	Total	C.C.
*expreso	III	1b	70.13	75.86	83.67	97.78	80.5	II
*exquisito	II	5b	81.82	79.31	95.92	93.33	87.5	II
*extender extenso	I III	1b 5a	77.92	96.55	93.88	93.33	88.0	II
(extensión)	II	5a						
*exterior	II	7	68.83	93.10	95.92	97.78	85.5	II
*externo	IV	8	48.05	75.86	85.71	80.00	68.5	II
*extinguir	III	6	41.56	51.72	73.47	80.00	59.5	II
*extraordinario	II	4b	59.74	79.31	85.71	93.33	76.5	II
*extravagancia	V	11	55.84	75.86	85.71	91.11	74.0	II
extremidad	V	6						
*extremo	I	2b	87.01	93.10	95.92	88.89	90.5	II
*fábrica	II	6	70.13	82.76	93.88	93.33	83.0	II
fabricación	V	16						
*fabricar	III	14	9.09	6.90	14.29	24.44	13.5	III
*fábula fabuloso	III V	4a 8	33.77	24.14	57.14	68.89	46.0	III
*fácil	I	10	10.39	24.14	30.61	42.22	24.5	III
facilidad	II	7						
facilitar	II	10						
*factor	V	7	80.52	86.21	93.88	95.56	88.0	II
*facultad	II	5a	15.58	44.83	53.06	62.22	39.5	III
falsedad	IV	18						
*falso	I	2b	96.10	93.10	100.00	97.78	97.0	I
*falto	V	2a	70.13	79.31	87.76	91.11	80.5	II
*fama	I	2b	63.64	58.62	87.76	82.22	73.0	II

TABLE I (continued)

Spanish Word	Buchanan	Thorn-dike	Freshmen	Sophomores	Juniors	Seniors	Total	C.O.
*familia (familiar)	I III	1a 2b	68.83	79.31	87.76	75.76	76.5	II
*familiaridad	IV	10	41.56	48.28	71.43	73.33	57.0	II
*famoso	I	1b	74.03	72.41	85.71	91.11	80.3	II
*fantasía fantástico	II III	9 6	31.17	41.38	63.24	73.33	50.0	II
*farsa	IV	7	16.88	20.69	48.98	51.11	33.0	III
*fascinar	V	7	20.78	20.69	57.14	62.22	39.0	III
*fastidioso (fatal)	V II	13 3b	15.58	31.03	48.98	66.67	37.5	III
*fatalidad	V	15	29.87	51.72	61.22	66.67	49.0	III
fatiga *fatigar	III II	6 6	40.26	58.62	75.51	75.56	59.3	II
(favor)	I	1b						
(favorable)	IV	3b						
*favorecer favorito	II IV	1b 2b	62.23	75.86	91.84	84.44	78.0	II
*febrero (federal)	IV V	2b 5b	24.68	24.14	26.53	20.00	24.0	III
*felicidad	I	12	10.39	10.34	36.73	33.33	22.0	III
*femenino	III	6	66.23	79.31	85.71	68.89	73.5	II
*fenómeno	II	7	5.19	10.34	12.24	28.89	13.0	III
*feroz	III	11	0	0	8.16	15.56	5.5	IV
*Fértil	IV	4a	63.64	86.21	87.76	86.67	78.0	II

TABLE I (continued)

Spanish Word	Buchanan	Thorn-dike	Freshmen	Sophomores	Juniors	Seniors	Total	C.O.
*fibra	V	5a	41.56	44.83	48.98	66.67	49.5	III
*ficción	IV	6	38.96	41.38	71.43	60.00	52.0	II
*fidelidad	III	7	11.69	20.69	55.10	51.11	32.5	III
*figura	I	1b	84.42	89.66	97.96	91.11	90.0	II
filosofía	II	4a						
filosófico	IV	9						
*filósofo	II	4b	14.29	37.93	40.82	51.11	32.3	III
*filtrar	IV	7	55.84	58.62	77.55	77.78	66.5	II
(final)	II	2a						
*finesa	V	9	35.06	41.38	51.02	60.00	45.5	III
*firmamento	IV	5b	20.78	20.69	69.39	51.11	39.5	III
*firme	I	1b	83.12	86.21	93.88	91.11	88.0	II
firmeza	V	8						
*físico	II	5b	5.19	13.79	6.12	28.89	12.0	III
*flexible	IV	7	84.42	96.55	95.92	97.78	92.0	II
*fomentar	IV	14	14.29	27.59	30.61	28.89	23.5	III
fomento	V	n.l.						
forma	I	1a						
formación	IV	6						
*formar	I	1a	20.78	31.03	40.82	20.00	27.0	III
*formal	III	6	93.51	96.55	93.88	100.00	95.5	I
*formidable	II	7	54.55	51.72	79.59	77.78	65.5	II
*fórmula	II	8	76.62	89.66	93.88	91.11	86.0	II
formular	III	9						
*fortuna	I	2a	85.71	89.66	97.96	93.33	91.0	II
*fotografía	V	16	38.96	65.52	66.31	80.00	58.5	II

TABLE I (continued)

Spanish Word	Buchanan	Thorn-dike	Freshmen	Sophomores	Juniors	Seniors	Total	C.O.
*fragancia	V	5b	28.57	24.14	46.94	53.33	37.5	III
*frágil	III	8	61.04	79.31	91.84	86.67	77.0	II
*fragmento	IV	5b	67.53	86.21	81.63	91.11	79.0	II
*franco	II	2b	11.69	17.24	24.49	15.56	16.5	III
franquesa	IV	9						
*fraternal	V	7	29.87	55.17	85.71	80.00	58.5	II
frecuencia	II	12						
frecuentar	III	2a						
*frecuente	II	2a	19.48	44.83	59.18	51.11	40.0	III
*frívolo	IV	8	5.19	27.59	36.73	44.44	25.0	III
*frontera	III	6	15.58	51.72	42.86	57.78	37.0	III
fruta	II	1b						
*fruto	I	1b	68.84	82.76	77.55	86.67	77.0	II
*fugitivo	IV	5a	74.03	79.31	93.88	88.89	83.0	II
*función	II	5a	45.45	65.52	83.67	84.44	66.5	II
funcionar	IV	5a						
funcionario	V	n.l.						
*fundación	V	3a	22.08	31.03	48.98	55.56	37.5	III
*fundamental	IV	7	81.82	93.10	100.00	95.56	91.0	II
furia	III	3b						
furioso	III	3b						
*furor	II	n.l.	16.88	31.03	53.06	48.89	35.0	III
*furtivo	V	10	20.78	37.93	63.27	60.00	42.5	III
*future	II	2a	75.32	75.86	89.80	95.56	83.5	II
*gala	II	16	16.88	34.48	61.22	62.22	40.5	III
*galante	V	4a	66.23	79.31	89.80	86.67	78.5	II
galantería	V	9						

TABLE I (continued)

Spanish Word	Buchanan	Thorn-dike	Fresh-men	Sopho-mores	Jun-iors	Sen-iors	Total	C.O.
*galería	IV	4a	12.98	27.59	42.86	55.33	31.5	III
*ganar	I	1b	7.79	20.69	14.29	55.33	21.5	III
*garantía	V	5b	23.38	31.03	44.90	60.00	38.0	III
(gas)	IV	3a						
(generación)	III	3b						
(general)	I	1a						
generosidad	III	7						
*generoso	I	3a	54.55	68.97	81.63	86.67	70.5	II
(genial)	V	4b						
*gentil	II	8	6.49	20.69	18.37	28.89	16.5	III
gentileza	IV	12						
*geográfico	V	4b	61.04	79.31	77.55	86.67	73.5	II
*gigante	II	7	50.65	72.41	73.47	88.89	68.0	II
gigantesco	III	7						
*globo	III	3a	94.81	93.10	85.71	82.22	89.5	II
*gloria	I	2a	58.44	72.41	77.55	75.56	69.0	II
glorioso	II	2b						
gobernador	III	2a						
gobernar	II	3a						
*gobierno	I	1b	1.30	0	16.33	6.67	6.0	IV
*golfo	IV	2b	1.30	0	0	0	.5	IV
*gracioso	II	3a	55.84	68.97	81.63	88.89	71.5	II
*graduar	III	4a	32.47	37.93	63.27	71.11	49.5	III
*gramática	III	13	36.36	58.62	75.51	77.78	58.5	II
*gramo	IV	12	46.75	27.59	42.86	64.44	47.0	III

TABLE I (continued)

Spanish Word	Bueh- anan	Thorn- dike	Fresh- men	Sopho- mores	Jun- iors	Sen- iors	Total	C.O.
*grandioso	IV	14	19.48	27.59	55.10	46.67	35.5	III
*grano	II	1b	28.57	31.03	30.61	51.11	34.5	III
*gratis	V	9	10.39	10.34	16.33	40.00	18.5	III
*gratitud (grave)	III I	4a 2a	70.13	86.21	89.80	93.33	82.5	II
*gravedad	II	7	35.06	51.72	63.27	64.44	51.0	II
*grotesco	IV	8	9.09	27.59	53.06	53.33	32.5	III
*grupo	I	2b	77.92	72.41	85.71	80.00	79.5	II
guarda	III	1b						
*guardar	I	1b	48.05	68.97	81.63	73.33	65.0	II
guardia	III	1b						
*guiar	II	1b	6.49	3.45	18.37	15.56	11.0	III
*guiso	V	8	9.09	24.14	36.73	46.67	26.5	III
*guitarra	IV	10	29.87	48.28	63.27	68.89	49.5	III
*gusto	I	n.l.	2.60	17.24	14.29	22.22	12.0	III
*habilidad	II	4b	0	0	4.08	8.89	3.0	IV
*habitación	I	6	42.86	62.07	77.55	84.44	63.5	II
habitante	II	5a						
*habitar	II	4b	3.90	10.34	18.37	33.33	15.0	III
*hábito	II	3a	80.52	82.76	87.76	91.11	85.0	II
habitual	III	8						
habituár	V	15						
*héroe	II	2b	88.31	96.55	95.92	93.33	92.5	II
heroico	II	4b						
heroísmo	III	9						
*higiene	V	8	70.13	82.76	93.88	91.11	82.5	II

TABLE I (continued)

Spanish Word	Buchanan	Thorn-dike	Fresh-men	Sopho-mores	Jun-iors	Sen-iors	Total	G.C.
*himno	IV	4a	32.47	41.38	36.73	46.67	38.0	III
hipocresía	V	7						
*hipócrita	IV	6	51.95	72.41	87.76	84.44	71.0	II
*hispanoamericano	IV	n.l.	32.47	44.83	63.27	53.33	46.5	III
*historia	I	2a	79.22	82.76	100.00	95.56	88.5	II
historiador	IV	7						
histórico	III	5b						
*holandés	IV	18	48.05	58.62	73.47	77.78	62.5	II
*honesto	III	2a	93.51	96.55	97.96	97.78	96.0	I
(honor)	I	1b						
honra	II	1b						
*honrar	I	1b	72.73	89.66	89.80	86.67	82.5	II
*horizontal	V	7	81.82	86.21	91.84	88.89	86.5	II
*horizonte	II	4b	51.95	75.86	83.67	80.00	69.5	II
(horrible)	II	3b						
(horror)	II	4a						
(hospital)	III	3a						
(hotel)	III	3a						
humanidad	II	5b						
*humano	I	2a	97.40	89.66	97.96	95.56	96.0	I
*húmedo	III	14	16.88	31.03	42.86	57.78	34.5	III
humildad	IV	5b						
*humillar	III	9	18.18	20.69	51.02	51.11	34.0	III
(humor)	II	3a						
*huracán	IV	8	62.34	75.86	87.76	93.33	77.5	II



TABLE I (continued)

Spanish Word	Buchanan	Thorn-dike	Freshmen	Sophomores	Juniors	Seniors	Total	C.C.
(idea)	I	2a						
(ideal)	II	4a						
*idéntico	III	7	37.66	55.17	57.14	55.56	49.0	III
*idiota	IV	5a	57.14	79.31	87.76	88.89	75.0	II
*idolo	III	4b	59.74	75.86	77.55	88.89	73.0	II
*ignorancia ignorante	II III	4a 3b	72.73	82.76	91.84	91.11	83.0	II
*iluminar	II	7	18.18	41.38	71.43	71.11	46.5	III
*ilusión	I	7	64.94	89.66	91.84	93.33	81.5	II
*imagen	I	3a	31.17	20.69	32.65	42.22	32.5	III
(imaginación)	I	3b						
*imaginar imaginativo	I V	2a 9	64.94	72.41	89.80	86.67	77.0	II
*imbécil	IV	13	28.57	27.59	81.63	75.56	52.0	II
imitación	III	8						
*imitar	II	4b	35.06	68.97	69.39	77.78	58.0	II
impaciencia	III	8						
*impaciente	III	5a	33.77	48.28	59.18	55.56	47.0	III
*imposible	V	15	58.44	62.07	83.67	84.44	71.0	II
*impedir	I	9	14.29	17.24	42.86	42.22	28.0	III
*imperativo	V	7	55.84	37.93	93.88	84.44	73.5	II
(imperial)	III	4a						
*imperfecto	III	5a	81.82	89.66	93.92	95.56	89.5	II
*imperioso	III	8	18.18	24.14	28.57	31.11	24.5	III

TABLE I (continued)

Spanish Word	Buchanan	Thorn-dike	Fresh-men	Sopho-mores	Jun-iors	Sen-iors	Total	O.C.
*impertinente	III	10	24.68	37.93	67.35	73.33	48.0	III
*impetu impetuoso	III V	11 8	6.49	6.90	24.49	20.00	14.0	III
*impío	III	6	2.60	0	14.29	13.33	7.5	III
*implacable	IV	10	36.36	62.07	77.55	62.22	56.0	II
*implicar	IV	15	11.69	13.79	34.69	53.33	27.0	III
*implorar	IV	5b	41.56	65.52	85.71	80.00	64.5	II
importancia	I	3a						
*importante	I	1b	88.31	89.66	97.96	91.11	91.5	II
*importar	I	3b	77.92	75.86	91.84	82.22	82.0	II
*importuno	IV	14	16.88	24.14	42.86	42.22	30.0	III
*imposible	I	2b	93.51	96.55	100.00	91.11	95.0	I
*impregnar	IV	13	3.90	10.34	14.29	26.67	12.5	III
*impresión impresionar	I V	4a 5a	88.31	93.10	95.92	95.56	92.5	II
*improvisar	IV	13	27.27	37.93	65.31	64.44	46.5	III
imprudencia	IV	15						
*imprudente	IV	16	50.88	62.07	91.84	73.33	67.5	II
*impulso	II	7	80.52	89.66	100.00	93.33	89.5	II
*impuro	V	11	67.53	72.41	87.76	93.33	79.0	II
*inaugurar	IV	9	19.48	44.83	57.14	71.11	34.5	III
*incesante	III	7	25.97	58.62	69.39	57.78	48.5	III
*incidente	IV	5b	85.71	86.21	87.76	95.56	88.5	II
*inciense	V	4a	11.69	24.14	46.94	44.44	29.5	III

TABLE I (continued)

Spanish Word	Buchanan	Thorn-dike	Freshmen	Sophomores	Juniors	Seniors	Total	O.C.
*inclemencia	V	16	9.09	17.24	28.57	40.00	22.0	III
inclinación	II	7						
*inclinarse	I	3a	45.45	51.72	81.63	71.11	61.0	II
*incluir	III	2a	9.09	10.34	32.65	37.78	21.5	III
*incomparable	IV	10	77.92	82.76	93.88	93.33	86.0	II
*incompatible	V	15	25.97	34.48	67.35	64.44	46.0	III
*incompreensible	IV	12	53.25	75.86	85.71	84.44	71.5	II
*inconsciente	IV	4b	5.19	3.45	6.12	13.33	7.0	III
*inconveniente	II	6	71.43	65.52	83.67	86.67	77.0	II
*increíble	V	7	41.56	65.52	73.47	84.44	62.5	II
*incurrir	IV	5b	23.38	24.14	51.02	44.44	35.0	III
*indefinido	V	8	57.14	72.41	91.84	80.00	73.0	II
independencia	II	4a						
*independiente	II	3a	75.32	89.66	97.96	91.11	86.5	II
indicación	III	9						
*indicar	I	2b	29.87	37.93	51.02	62.22	43.5	III
indiferencia	III	7						
*indiferente	II	7	61.04	93.10	93.88	91.11	80.5	II
*indígena	IV	14	0	0	0	0	0	IV
*indignación	II	9	46.75	62.07	77.55	75.56	63.0	II
*indirecto	IV	7	89.61	89.66	100.00	93.33	93.0	II
*indispensable	III	8	48.05	79.31	93.88	91.11	73.5	II
(individual)	V	3a						
*individuo	II	3a	50.65	65.52	79.59	82.22	67.0	II

TABLE I (continued)

Spanish Word	Euchanan	Thorn-dike	Freshmen	Sophomores	Juniors	Seniors	Total	C.O.
*inducir	IV	4b	22.08	62.07	69.39	60.00	48.0	III
*industria industrial	II IV	2b 9	68.83	89.66	91.84	93.33	83.0	II
*inefable	IV	13	10.39	17.24	42.86	35.56	25.0	III
*inerte	V	8	20.78	31.03	57.14	64.44	41.0	III
*inestimable (inevitable)	V IV	10 5b	29.87	55.17	71.43	71.11	53.0	II
*infalible	V	9	16.88	31.03	40.82	55.56	33.5	III
*infame infamia	III IV	7 9	2.60	24.14	36.73	31.11	20.5	III
*infancia infante infantil (inferior)	III III III II	6 3b 19 4a	28.57	37.93	73.47	71.11	50.5	II
*infernial	III	7	51.95	65.52	91.84	84.44	71.0	II
infinidad *infinito	IV I	14 4a	61.04	55.17	77.55	73.33	67.0	II
*inflamar	IV	5a	36.36	68.52	79.59	77.78	60.5	II
*influenza (información)	II V	2b 3a	62.34	79.31	95.92	88.89	79.0	II
*informar	II	2b	64.94	62.07	89.80	82.22	74.5	II
*inglés	I	1b	2.60	0	8.16	4.44	4.0	IV
ingratitude *ingrato	IV II	8 18	41.56	41.38	61.22	80.00	55.0	II
*inhumano	V	11	80.52	79.31	95.92	97.78	88.0	II

TABLE I (continued)

Spanish Word	Buchanan	Thorn-dike	Freshmen	Sophomores	Juniors	Seniors	Total C.G.	
*injuria	IV	4a	83.12	93.10	93.88	95.56	90.0	II
injusticia	III	6						
*injusto	II	3b	83.12	86.21	93.88	91.11	88.0	II
*inmediato	I	2a	70.13	79.31	93.88	84.44	80.5	II
imensidad	III	12						
*inmenso	I	3b	67.53	65.52	87.76	82.22	75.5	II
*inmortal	III	3a	70.13	86.21	95.92	93.33	84.0	II
*inmóvil	III	9	33.77	62.07	63.27	66.67	52.5	II
*inmutable	V	12	15.58	27.59	46.94	48.89	32.5	III
*innumerable	III	6	70.13	72.41	93.88	95.56	82.0	II
inocencia	II	4b						
*inocente	II	3a	80.52	86.21	95.92	91.11	87.5	II
*inquieta	II	n.l.	14.29	24.14	46.94	44.44	30.5	III
*inquirir	IV	3a	64.94	75.86	81.63	86.67	75.5	II
*insano	V	8	90.91	96.55	100.00	100.00	96.0	I
*insecto	IV	3a	90.91	89.66	97.96	97.78	94.0	II
*insensible	V	7	70.13	79.31	89.80	93.33	81.5	II
*insignificante	III	6	64.94	82.76	93.88	95.56	81.5	II
*insinuar	IV	9	15.58	34.48	40.82	51.11	32.5	III
insistencia	IV	11						
*insistir	II	3b	57.14	72.41	83.67	84.44	72.0	II
insolencia	IV	9						
*insolente	IV	8	35.06	62.07	79.59	80.00	60.0	II
(inspiración)	III	5b						

TABLE I (continued)

Spanish Word	Buch- aran	Thorn- dike	Fresh- men	Sopho- mores	Jun- iors	Sen- iors	Total	G.C.
*inspirar	I	4b	57.14	79.31	87.76	95.56	76.5	II
*instalar	III	5b	51.95	68.97	81.63	88.89	70.0	II
instantáneo	IV	14						
*instante	I	2b	81.82	82.76	93.88	91.11	87.0	II
instintivo	V	7						
*instinto	II	5a	45.45	65.52	65.31	68.89	58.5	II
( institución)	IV	4b						
*instituto	IV	4a	74.03	79.31	93.88	91.11	83.5	II
( instrucción)	II	3a						
*instrumento	II	3a	88.31	89.66	93.88	95.56	91.5	II
*insultar	II	4a	58.44	89.66	75.51	75.56	71.0	II
insulto	IV	4a						
*insuperable	V	15	27.27	51.72	71.43	68.89	51.0	II
*íntegro	IV	14	3.90	6.90	20.41	33.33	15.0	III
intelectual	II	7						
*inteligencia	II	4a	64.94	86.21	89.80	91.11	80.0	II
inteligente	II	5b						
( intención)	I	4a						
intensidad	III	7						
*intenso	II	6	68.83	82.76	97.96	88.89	82.5	II
*intentar	II	2a	6.49	17.24	22.45	17.78	14.5	III
intento	II	3b						
*interés	I	1b	12.98	31.03	36.73	44.44	28.5	III
interesante	II	5b						
interesar	II	1b						
( interior)	I	4a						

TABLE I (continued)

Spanish Word	Buchanan	Thorn-dike	Freshmen	Sophomores	Juniors	Seniors	Total C.C.	
*interlocutor	V	n.l.	9.09	0	38.78	37.78	21.5	III
*intermedio	V	9	31.17	48.28	65.31	68.89	50.5	II
*intemible	IV	10	29.87	37.93	73.47	60.00	45.5	III
*internacional	V	8	48.05	72.41	89.80	82.22	69.5	II
*interno	III	5b	51.95	72.41	81.63	84.44	69.5	II
interpretar	IV	5b						
*intérprete	IV	7	57.14	72.41	85.71	86.67	73.0	II
*interrogar	III	16	29.87	44.83	57.14	66.67	47.0	III
*interrumpir	I	3b	22.08	37.93	46.94	48.89	36.5	III
interrupción	V	9						
(intervención)	V	3b						
*intervenir	IV	8	12.98	44.83	75.51	73.33	46.5	III
*intimar	IV	5b	11.69	27.59	34.69	55.56	29.5	III
*íntimo	II	5b	1.30	17.24	10.20	17.78	9.5	III
*intolerable	V	8	53.25	72.41	89.80	91.11	73.5	II
*intrépido	V	14	7.79	10.34	30.61	28.89	18.5	III
introducción	IV	6						
*introducir	II	3a	71.43	82.76	93.88	91.11	83.0	II
*inundar	III	15	3.90	6.90	12.24	20.00	10.0	III
*invadir	III	4a	59.74	68.97	85.71	75.56	71.0	II
invasión	V	7						
*invariable	V	7	57.14	79.31	93.88	91.11	77.0	II
*invencible	IV	9	29.87	48.28	67.35	71.11	51.0	II
(invención)	III	3b						

TABLE I (continued)

Spanish Word	Such- anan	Thorn- dike	Fresh- men	Sopho- mores	Jun- iors	Sen- iors	Total C.C.	
*inventar	II	3b	83.12	82.76	91.84	86.67	81.0	II
*investigación	V	6	77.92	82.76	97.96	97.78	88.0	II
(invisible)	III	4b						
*invitar	II	2a	61.04	72.41	89.80	88.89	76.0	II
*invocar	III	9	14.29	17.24	30.61	46.67	31.0	III
*ira	II	11	11.69	10.34	22.45	42.22	21.0	III
*ironía irónico	III V	12 12	2.60	10.34	16.33	37.78	15.0	III
(irregular)	V	4b						
*irresistible	III	8	63.64	79.31	91.84	88.89	78.5	II
*irritar	III	7	33.77	51.72	71.43	75.56	55.0	II
*isla	I	1b	66.23	62.07	81.63	95.56	76.0	II
*italiano	II	3a	72.73	86.21	89.80	95.56	84.0	II
*jarro	V	3a	66.23	89.66	79.59	82.22	76.5	II
*jazmín	IV	15	12.98	34.48	34.69	40.00	27.5	III
*júbilo	V	6	46.75	62.07	79.59	75.56	63.5	II
*jurisdicción	V	9	54.55	75.86	97.96	93.33	77.0	II
justicia	I	2a						
justificar	II	4a						
*justo	I	1a	90.91	96.55	93.88	95.56	93.5	I
*juvenil	IV	13	37.66	65.52	93.88	88.89	67.0	II
*kilómetro	III	7	76.62	75.86	91.84	91.11	83.5	II
(labor)	II	1b						
*laboratorio	V	8	72.73	79.31	89.80	97.78	83.5	II



TABLE I (continued)

Spanish Word	Buchanan	Thorn-dike	Freshmen	Sophomores	Juniors	Seniors	Total C.O.	
*laborioso	IV	10	46.75	51.72	75.51	84.44	63.0	II
lamentable	III	8						
*lamentar	II	4b	36.36	51.72	77.55	77.78	58.0	II
lamento	IV	4b						
*lancha	IV	5a	25.97	44.83	38.78	42.22	35.5	III
*lateral	IV	8	57.14	79.31	91.84	88.89	76.0	II
(latín)	III	3a						
*latino	II	3a	83.12	86.21	95.92	88.89	88.0	II
*latitud	V	7	74.03	89.66	95.92	95.56	86.5	II
(laurel)	III	4b						
(legal)	IV	5b						
(legión)	V	4b						
*legislador	V	9	68.83	79.31	93.88	97.78	83.0	II
*legítimo	III	8	10.39	31.03	53.06	62.22	35.5	III
*león	II	1b	2.60	24.14	24.49	6.67	12.0	III
*letra	I	1a	31.17	41.38	63.27	57.78	46.5	III
(liberal)	II	4a						
*libertad	I	2a	45.45	65.52	89.80	88.89	69.0	II
librar	I	8						
libertador	IV	16						
libertar	V	8						
*licencia	II	4b	67.53	68.97	83.67	82.22	75.0	II
*licor	III	4b	61.04	89.66	91.84	80.00	77.0	II
limitar	II	2a						
*límite	II	2a	84.42	82.76	95.92	88.89	88.0	II
*limón	V	4a	76.62	82.76	89.80	86.67	83.0	II

TABLE I (continued)

Spanish Word	Bush- anan	Thorn- dike	Fresh- men	Sopho- mores	Jun- iors	Sen- iors	Total	C.C.
*línea	I	1a	61.04	55.17	73.47	82.22	68.0	II
*líquido	II	3b	88.31	93.10	93.88	97.78	92.5	II
*lira	V	6	14.29	17.24	42.86	55.56	31.0	III
*lirico	IV	9	24.68	31.03	55.10	48.89	38.5	III
*lista	II	1b	92.21	72.41	89.80	93.33	89.0	II
*literario literatura	II II	5b 4b	41.56	51.72	75.51	66.67	57.0	II
*lívido (local)	V III	14 3a	42.86	20.69	48.98	57.78	44.5	III
lógica	IV	7						
*lógico	IV	12	50.65	62.07	83.67	86.67	68.5	II
*longitud	IV	7	77.92	82.76	100.00	91.11	87.0	II
*lúcido	IV	10	19.48	31.03	65.31	68.89	43.5	III
*lúgubre	IV	19	1.30	10.34	10.20	13.33	7.5	III
*luminoso	II	7	22.08	31.03	67.35	57.78	42.5	III
*maestro	I	1b	25.97	51.72	67.35	68.89	49.5	III
*mágico	II	3a	87.01	93.10	93.88	95.56	91.5	II
*magnífico	II	3a	45.45	79.31	81.63	73.33	65.5	II
*majestad majestuoso	I III	3b 4b	45.45	72.41	85.71	82.22	67.5	II
*maldición	III	17	11.69	24.14	28.57	44.44	25.0	III
*malicia malicioso	III V	5a 7	11.69	31.03	51.02	48.89	32.5	III
*maltratar	IV	17	1.30	3.45	4.08	6.67	3.5	IV

TABLE I (continued)

Spanish Word	Bugh- anan	Thorn- dike	Fresh- men	Sopho- mores	Jun- iors	Sen- iors	Total	C.O.
*mamá	III	10	77.92	79.31	91.84	84.44	83.0	II
*manera	I	1b	55.84	58.62	42.86	64.44	55.0	II
*mania	III	16	2.60	17.24	26.53	46.67	20.5	III
manifestación	III	10						
*manifestar	I	4a	53.25	72.41	85.71	80.00	70.0	II
manifiesto	IV	16						
(mansión)	IV	4a						
*mantener	I	2b	3.90	20.69	34.69	42.22	22.5	III
*manual	V	8	77.92	79.31	93.88	91.11	85.0	II
*mapa	V	2a	77.92	93.10	85.71	86.67	84.0	II
*maravilla	II	4a	18.18	20.69	46.94	48.89	33.0	III
maravillar	V	4a						
maravilloso	II	3b						
marca	IV	1a						
*marcar	II	1a	18.18	34.48	40.82	42.22	31.5	III
marcha	II	1b						
*marchar	I	1b	38.96	62.07	63.27	60.00	53.0	II
*margen	III	5a	70.13	89.66	89.80	91.11	82.5	II
marina	IV	6						
*marinero	II	5a	33.77	44.83	71.43	66.67	52.0	II
marítimo	V	8						
*mártir	IV	5a	16.88	31.03	44.90	37.78	30.5	III
*masa	II	2a	38.96	58.62	55.10	64.44	51.5	II
*matemáticas	V	6	83.12	89.66	91.84	86.67	87.0	II
matemático	V	11						
*materia	I	2a	57.14	62.07	63.27	66.67	61.5	II
(material)	II	2a						

TABLE I (continued)

Spanish Word	Buchanan	Thorn-dike	Fresh-men	Sopho-mores	Jun-iors	Sen-iors	Total	O.C.
*maternal	IV	8	38.96	48.28	81.63	77.78	59.5	II
*matrimonio	II	11	35.06	62.07	75.51	77.78	58.5	II
*máxima	V	7	18.18	20.69	20.41	22.22	20.0	III
*máximo	V	9	9.09	44.83	22.45	24.44	21.0	III
*mayo	II	1a	81.82	68.97	63.27	73.33	73.5	II
*mecánico	IV	4a	29.87	37.93	67.35	60.00	47.0	III
*medalla	IV	5b	35.06	31.03	44.90	57.78	42.0	III
*medio	I	4b	7.79	20.69	30.61	33.33	21.0	III
*medicina	III	2b	70.13	75.86	87.76	88.89	79.5	II
meditación	IV	6						
*meditar	III	5b	18.18	20.69	42.86	42.22	30.0	III
*mejicano	IV	6	14.29	13.79	26.53	31.11	21.0	III
melancolía	III	5b						
*melancólico	III	n.l.	45.45	72.41	83.67	84.44	67.5	II
*melodía	V	4b	62.34	82.76	79.59	84.44	74.5	II
*melón	IV	6	81.82	89.66	91.84	97.78	89.0	II
memorable	V	8						
*memoria	I	2a	70.13	86.21	91.84	86.67	81.5	II
(mención)	IV	2a						
*mencionar	IV	2a	11.69	41.38	36.73	55.56	32.0	III
*mental	III	7	46.75	72.41	91.84	91.11	71.5	II
*meridional	IV	6	14.29	24.14	42.86	46.67	30.0	III
*mérito	II	3a	46.75	44.83	63.27	75.56	57.0	II
(metal)	II	2b						
*metálico	IV	8	32.47	41.38	73.47	82.22	55.0	II

TABLE I (continued)

Spanish Word	Buchanan	Thorn-dike	Freshmen	Sophomores	Juniors	Seniors	Total	O.O.
*método	III	3a	20.78	24.14	32.65	44.44	29.5	III
*metro	III	4a	36.36	31.03	38.78	48.89	39.0	III
*miembro	II	1b	14.29	24.14	16.33	37.78	21.5	III
*militar	II	3a	44.16	58.62	73.47	80.00	61.5	II
*millonario	V	6	72.73	86.21	91.84	93.33	84.0	II
*mina	III	1a	57.14	65.52	69.39	68.89	64.0	II
(mineral)	IV	4b						
*mínimo	IV	8	15.58	27.59	51.02	53.33	34.5	III
ministerio	IV	13						
*ministro	I	2b	66.23	55.17	83.67	86.67	73.5	II
*minuto	II	1b	84.42	86.21	93.88	95.56	89.5	II
(miserable)	I	4a						
*miseria	I	3b	38.96	44.83	79.59	73.33	57.5	II
*misión	III	5a	76.62	93.10	95.92	93.33	87.5	II
misterio	II	3a						
*misterioso	II	4b	37.66	48.28	73.47	68.89	55.0	II
*místico	IV	8	31.17	34.48	53.06	62.22	44.0	III
*mixto	V	2a	75.32	86.21	71.43	86.67	78.5	II
moda	III	3b						
*modo	I	3b	48.05	37.93	63.27	57.78	52.5	II
*modelo	II	2b	81.82	89.66	87.76	93.33	87.0	II
moderación	V	7						
*moderar	III	3a	28.57	34.48	65.31	75.56	49.0	III
*moderno	I	2b	70.13	75.86	95.92	93.33	82.5	II

TABLE I (continued)

Spanish Word	Buchanan	Thorn-dike	Freshmen	Sophomores	Juniors	Seniors	Total	O.O.
modestia	III	6						
*modesto	II	3a	81.82	86.21	95.92	93.33	88.5	II
modificación	IV	12						
*modificar	III	9	58.44	58.62	79.59	82.22	69.0	II
*molestar	II	7	44.16	51.72	75.51	82.22	61.5	II
molestia	III	14						
molesto	IV	7						
*momento	I	1b	92.21	89.66	95.92	88.89	92.0	II
*monarca	III	3b	57.14	48.28	75.51	77.78	65.0	II
*monasterio	IV	9	22.08	27.59	73.47	62.22	44.5	III
*monosílabo	V	16	12.98	20.69	51.02	62.22	34.5	III
*monótono	IV	8	45.45	62.07	75.51	77.78	62.5	II
*monstruo	II	4b	27.27	24.14	57.14	55.56	40.5	III
monstruoso	IV	4a						
montaña	I	1a						
*monte	I	1b	15.58	27.59	34.69	22.22	23.5	III
*montar	II	1b	3.90	3.45	4.08	11.11	5.5	IV
*monumento	II	3a	62.34	75.86	87.76	80.00	74.5	II
(moral)	I	3a						
moralidad	V	8						
*moralista	V	12	32.47	48.28	73.47	75.56	54.5	II
(mortal)	II	2b						
*mortificar	V	8	32.47	41.38	65.31	77.78	52.0	II
*mosquito	IV	8	89.61	89.66	85.71	75.56	85.5	II
motivar	V	n.l.						
*motivo	I	3b	81.82	86.21	93.88	93.33	88.0	II

TABLE I (continued)

Spanish Word	Buchanan	Thorn-dike	Freshmen	Sophomores	Juniors	Seniors	Total C.C.	
movible	V	6						
móvil	IV	15						
*movimiento	I	3a	36.36	44.83	59.18	73.33	51.5	II
*mucho	I	1a	89.61	89.66	95.92	93.33	92.0	II
*mula	IV	4a	61.04	72.41	73.47	71.11	68.0	II
múltiple	IV	10						
*multiplicar	III	3a	70.13	82.76	77.55	82.22	76.5	II
*multitud	II	3b	66.23	72.41	87.76	84.44	76.5	II
*municipal	IV	10	64.94	79.31	91.84	93.33	80.0	II
*murmurar	II	2a	64.94	65.52	81.63	84.44	73.5	II
*musa	IV	3b	28.57	48.28	48.98	48.89	41.0	III
*museo	IV	4a	1.30	13.79	8.16	11.11	7.0	III
*música	I	1b	80.52	82.76	91.84	93.33	86.5	II
músico	IV	3a						
(nación)	I	1b						
*narración	IV	20	28.57	44.83	87.76	86.67	58.5	II
*natal	IV	11	16.88	6.90	38.78	44.44	27.0	III
*naturaleza	I	1b	64.94	62.07	91.84	95.56	78.0	II
naturalidad	IV	n.l.						
*navegación	IV	7	63.64	73.86	93.88	88.89	78.5	II
*necesario	I	1b	63.64	79.31	93.88	95.56	80.5	II
necesidad	I	3a						
necesitar	I	8						
*negativo	III	6	90.91	89.66	97.96	93.33	83.0	II
nervio	III	4a						
*nervioso	II	4b	74.03	79.31	87.76	84.44	80.5	II

TABLE I (continued)

Spanish Word	Buchanan	Thomdike	Freshmen	Sophomores	Juniors	Seniors	Total C.O.	
*noblesza	II	5b	64.94	82.76	75.51	68.89	71.0	II
(noción)	IV	3b						
*nocturno	III	12	22.08	31.03	63.27	66.67	43.5	III
nota	I	1b						
*notar	I	1b	42.86	51.72	48.98	66.67	51.0	II
*noticia	I	1b	64.94	65.52	85.71	86.67	75.0	II
*notorio	IV	7	11.69	20.69	55.10	53.33	33.0	III
*novela	II	5a	83.12	75.86	91.84	95.56	87.0	II
novelista	V	10						
*noviembre	IV	2a	40.26	48.28	61.22	64.44	52.0	II
*núcleo	V	7	2.60	0	40.82	44.44	21.0	III
*número	I	1a	63.64	79.31	83.67	82.22	75.0	II
numeroso	II	3a						
*obedecer	I	2a	22.08	34.48	42.86	53.33	36.0	III
obediencia	IV	4a						
obediente	V	5a						
objetivo	IV	14						
*objeto	I	1b	85.71	82.76	93.88	93.33	89.0	II
(obligación)	II	5b						
*obligar	I	16	54.55	68.97	79.59	84.44	69.5	II
obscuridad	II	7						
*oscuro	I	5a	59.74	72.41	89.80	88.89	75.5	II
obscurecer	III	5a						
*obsequio	IV	10	1.30	3.45	4.08	6.67	3.5	IV
(observación)	II	4a						
observador	IV	8						
*observar	I	2a	77.92	89.66	87.76	97.78	86.5	II
*obstáculo	III	5b	38.96	58.62	71.43	80.00	59.0	II
*obtener	II	2a	32.47	58.62	44.90	48.89	43.0	III



TABLE I (continued)

Spanish Word	Buchanan	Thorn-dike	Freshmen	Sophomores	Juniors	Seniors	Total C.C.	
*ocasión	I	2a	89.61	82.76	100.00	95.56	92.5	II
ocasionar	II	2a						
*occidente	IV	20	16.88	17.24	38.78	40.00	27.5	III
occidental	V	13						
*océano	III	1b	88.31	82.76	95.92	93.33	90.5	II
*octubre	V	2a	55.84	72.41	65.31	60.00	61.5	II
ocupación	II	3b						
*ocupar	I	2a	27.27	41.38	53.06	60.00	43.0	III
ocurrencia	IV	7						
*ocurrir	I	2b	53.25	62.07	75.51	77.78	65.5	II
*ofender	I	3a	85.71	86.21	97.96	93.33	90.5	II
ofensa	IV	3a						
*oficina	IV	1b	18.18	24.14	34.69	37.78	27.5	III
oficial	II	3a						
*oficio	I	1b	45.45	65.52	75.51	75.56	62.5	II
*olivo	V	3a	90.91	86.21	97.96	88.89	91.5	II
*omitir	V	4b	58.44	65.52	83.67	82.22	71.0	II
*ondular	V	10	0	6.90	6.12	11.11	5.0	IV
(operación)	II	2b						
*operar	V	5b	25.97	20.69	28.57	33.33	27.5	III
*opinar	III	16	25.97	44.83	48.98	64.44	43.0	III
(opinión)	I	2a						
oportunidad	III	2b						
*oportuno	II	9	57.14	75.86	93.88	91.11	76.5	II

TABLE I (continued)

Spanish Word	Buchanan	Thorn-dike	Freshmen	Sophomores	Juniors	Seniors	Total C.O.	
*oposición	III	5a	50.65	68.97	83.67	82.22	68.5	II
*opresión	V	5a	70.13	72.41	97.96	82.22	80.0	II
*orden	I	1a	37.66	62.07	53.06	60.00	50.0	II
*ordenanza	V	4b	12.98	37.93	30.61	46.67	28.5	III
*ordinario	II	3a	40.26	62.07	69.39	73.33	58.0	II
orgánico	IV	7						
organismo	V	7						
*órgano	III	2b	79.22	75.86	95.92	95.56	86.5	II
(organización)	IV	5b						
*organizar	III	4b	74.03	82.76	93.88	91.11	84.0	II
*orgia	V	9	3.90	10.34	18.37	24.44	13.0	III
oriental	III	6						
*oriente	III	5a	71.43	79.31	95.92	91.11	83.0	II
*origen	I	5a	61.04	65.52	83.67	71.11	69.5	II
originar	III	8						
(original)	II	3a						
*paciencia	II	3a	28.57	34.48	46.94	53.33	39.5	III
paciente	IV	2b						
*pacífico	II	3b	80.52	86.21	83.67	91.11	84.5	II
*pacto	IV	n.1.	53.25	62.07	85.71	82.22	69.0	II
*palacio	I	2a	61.04	55.17	85.71	84.44	71.5	II
*palma	II	3a	25.97	75.86	100.00	95.56	92.0	II
palmera	V	3a						
palmo	IV	3a						

TABLE I (continued)

Spanish Word	Euchanan	Thorn-dike	Freshmen	Sophomores	Juniors	Seniors	Total	O.O.
palpitante	IV	17						
*palpitar	IV	18	5.19	3.45	22.45	33.33	15.5	III
*panorama	IV	12	20.78	31.03	44.90	51.11	35.0	III
*paralelo	IV	4b	63.64	55.17	67.35	71.11	65.0	II
*paralizar	V	8	64.94	75.86	81.63	91.11	76.5	II
*parcial	V	5b	32.47	41.38	61.22	66.67	48.5	III
*parlamento	V	4a	76.62	86.21	95.92	95.56	87.0	II
*parque	V	2a	23.38	37.93	46.94	57.78	39.0	III
*parte	I	1a	85.71	100.00	95.92	91.11	91.5	II
*participar	III	7	42.86	58.62	71.43	71.11	58.5	II
(particular)	I	2a						
*pasar	I	1a	41.56	48.28	46.94	55.56	47.0	III
*pasión	I	3a	80.52	86.21	100.00	97.78	90.0	II
*pasivo	V	8	71.43	82.76	95.92	95.56	84.5	II
*pasta	V	5b	15.58	20.69	12.24	15.56	15.5	III
*patata	IV	2a	46.75	55.17	61.22	68.89	56.5	II
*patente	IV	5a	81.82	79.31	87.76	91.11	85.0	II
*paternal	IV	7	36.36	63.52	83.67	66.67	59.0	II
paterno	V	7						
*patriarcal	V	15	11.69	24.14	53.06	46.67	31.5	III
*patrimonio	IV	12	15.58	31.03	51.02	51.11	34.5	III
patriota	IV	5b						
patriótico	IV	6						
*patriotismo	III	7	46.75	55.17	85.71	86.67	66.5	II

TABLE I (continued)

Spanish Word	Buch- aran	Thorn- dike	Fresh- men	Sopho- mores	Jun- iors	Sen- iors	Total C.C.	
(patrón)	III	4a						
*pausa	III	3b	92.21	100.00	91.84	95.56	94.0	I
(peculiar)	III	3a						
*pedestal	V	8	35.06	65.52	95.92	88.89	66.5	II
*pendiente	III	7	12.98	27.59	42.86	57.78	32.5	III
penetración	V	13						
*penetrar	I	13	36.36	48.28	65.31	71.11	53.0	II
(península)	V	5a						
*penitencia	V	12	6.49	17.24	22.45	33.33	18.0	III
*pensión	V	6	81.82	86.21	95.92	97.78	89.5	II
*percibir	II	3a	7.79	10.34	18.37	17.78	13.0	III
perdón	II	2b						
*perdonar	I	2b	31.17	41.38	55.10	57.78	44.5	III
*peregrinación	V	17	9.09	6.90	28.57	40.00	20.5	III
perfección	II	4b						
perfeccionar	V	1b						
*perfecto	I	1b	89.61	82.76	100.00	100.00	93.5	I
*pérfido	V	12	0	0	4.08	4.44	2.0	IV
*perfumar	III	4a	84.42	93.10	95.92	93.33	90.5	II
(perfume)	II	4a						
*periódico	III	6	10.39	31.03	71.43	71.11	42.0	III
*periodo	III	2b	71.43	75.86	87.76	88.89	80.0	II
*perla	II	2b	62.34	48.28	59.18	68.89	61.0	II

TABLE I (continued)

Spanish Word	Buch- anan	Thorn- dike	Fresh- men	Sopho- mores	Jun- iors	Sen- iors	Total	C.O.
*permanecer	I	4a	15.58	24.14	59.18	48.89	35.0	III
permanencia	V	12						
permanente	III	4a						
*permiso	III	4b	33.77	37.93	63.27	60.00	47.5	III
*permitir	I	2a	74.03	62.07	93.88	97.78	82.5	II
*perpetuo	III	4a	22.08	44.83	51.02	64.44	42.0	III
*persecución	IV	6	48.05	65.52	81.63	84.44	67.0	II
*persona	I	1a	90.91	82.76	95.92	95.56	92.0	II
personalidad	IV	7						
(personal)	II	3b						
*perspectiva	IV	9	57.14	62.07	85.71	93.33	73.0	II
*persuadir	III	3b	59.74	75.86	91.84	88.89	76.5	II
perturbación	V	14						
*perturbar	IV	11	19.48	17.24	42.86	40.00	29.5	III
*perverso	IV	7	35.06	51.72	61.22	60.00	49.5	III
*peste	IV	9	88.31	86.21	95.92	95.56	91.5	II
(petición)	IV	5a						
(piano)	V	4a						
*pino	IV	2b	25.97	31.03	46.94	62.22	40.0	III
*pintoresco	III	5b	3.90	3.45	12.24	11.11	7.5	III
*pique	V	8	42.86	41.38	73.47	66.67	55.5	II
*pirámide	IV	7	37.66	58.62	67.35	64.44	54.0	II
*pirata	V	6	80.52	79.31	95.92	93.33	87.0	II
*plácido	IV	7	22.08	20.69	51.02	66.67	39.0	III

TABLE I (continued)

Spanish Word	Buchanan	Thorn-dike	Freshmen	Sophomores	Juniors	Seniors	Total G.C.	
(plan)	II	1b						
*planeta	III	4b	67.53	72.41	85.71	80.00	75.5	II
*plano	IV	4b	20.78	34.48	38.78	48.89	33.5	III
*planta	I	1a	89.61	79.31	97.96	93.33	91.0	II
plantar	III	1a						
*plato	II	2a	81.82	75.86	73.47	86.67	80.0	II
poema	III	3a						
poesía	II	13						
*poeta	I	2a	92.21	89.66	100.00	97.78	95.0	I
poético	III	6						
policia	IV	3b						
política	II	9						
*político	I	4a	68.83	79.31	93.88	91.11	81.5	II
*pompa	IV	4a	33.77	55.17	69.39	62.22	52.0	II
pomposo	V							
(popular)	III	3b						
*populoso	V	8	27.27	41.38	59.18	66.67	46.0	III
*porcelana	IV	7	42.86	58.62	85.71	77.78	63.5	II
(porción)	III	2b						
*portal	III	6	63.64	68.97	79.89	82.22	72.5	II
*portento	IV	11	40.26	44.83	63.27	53.33	49.5	III
*portugués	III	6	59.74	82.76	95.92	91.11	79.0	II
*posesión	II	2b	70.13	79.31	85.71	91.11	80.0	II
posibilidad	III	5a						
*posible	I	1b	92.21	89.66	100.00	95.56	94.5	I
(posición)	II	3a						

TABLE I (Continued)

Spanish Word	Such- anan	Thorn- dike	Fresh- men	Sopho- mores	Jun- iors	Sen- iors	Total C.C.	
*positive	III	5a	90.91	82.76	100.00	95.56	93.0	I
(postal)	V	5b						
*posterior	IV	10	10.39	13.79	53.06	51.11	30.5	III
*práctica	III	1b	76.62	75.86	91.84	82.22	81.5	II
practicar	III	1b						
práctico	III	3a						
(practical)	III	3a						
*preámbulo	V	14	42.86	58.62	67.35	62.22	55.5	II
*precaución	IV	8	64.94	68.97	95.92	93.33	79.5	II
precedente	IV	7						
*preceder	II	6	64.94	72.41	87.76	91.11	77.5	II
*precepto	III	6	63.64	62.07	85.71	80.00	72.5	II
*precioso	II	2b	49.35	34.48	53.06	51.11	48.5	III
precipitación	V	11						
*precipitar	III	7	14.29	31.03	55.10	53.33	35.5	III
*precisión	III	8	37.66	62.07	81.63	80.00	61.5	II
*precursor	V	17	41.29	17.24	22.45	17.78	17.5	III
*predilecto	IV	15	5.19	10.34	14.29	24.44	12.5	III
*predominar	IV	11	15.58	44.83	77.55	68.89	47.0	III
preferencia	III	7						
preferente	V	n.l.						
preferible	V	10						
*preferir	II	2a	66.23	51.72	89.80	84.44	74.0	II
preocupación	III	n.l.						
*preocupar	II	12	28.57	44.83	77.55	66.67	51.5	II
(preparación)	IV	3b						

TABLE I (continued)

Spanish Word	Buchanan	Thorn-dike	Freshmen	Sophomores	Juniors	Seniors	Total C.C.
*preparar preparativo	I V	1b 3b	85.71	82.76	95.92	93.33	89.5 II
*preposición	V	10	61.04	72.41	85.71	86.67	74.5 II
presencia presentación	I III	2a 8					
*presentar presente	I I	1a 1a	84.42	93.10	97.96	93.33	91.0 II
*preservar	V	2a	80.52	96.55	95.92	100.00	91.0 II
presidencia *presidente presidir	V I IV	9 2a 5b	85.71	93.10	93.88	95.56	91.0 II
*prestigio	III	12	16.88	27.59	65.31	80.00	44.5 III
*presumir	II	4a	61.04	82.76	95.92	88.89	79.0 II
pretendiente *pretensión	V III	15 10	67.53	79.31	85.67	88.89	78.0 II
*pretérito	IV	20	5.19	17.24	22.45	22.22	15.0 III
*pretexto	II	10	63.64	82.76	81.63	84.44	75.5 II
*prevención	V	8	57.14	79.31	79.59	88.89	73.0 II
*primitivo (principal)	II I	7 2b	72.73	75.86	97.96	93.33	84.0 II
*prisión prisionero	II III	2b 2a	83.12	86.21	93.88	95.56	89.0 II
*prisma	V	7	55.84	48.28	81.63	75.56	65.5 II
*privación	V	11	28.57	62.07	57.14	62.22	48.0 III
*privilegio	II	3b	85.71	89.66	97.96	93.33	91.0 II



TABLE I (continued)

Spanish Word	Buchanan	Thorn-dike	Fresh-men	Sopho-mores	Jun-iors	Sen-iors	Total C.O.	
*probabilidad (probable)	V III	8 2b	28.57	31.03	63.27	60.00	44.5	III
*problema	III	3a	94.81	100.00	100.00	97.78	97.5	I
*proceder proceso	I IV	2a 3a	81.82	75.86	97.96	95.56	88.0	II
*proclamar	III	3a	54.55	68.97	67.35	82.22	66.0	II
*procurar	I	4a	50.65	55.17	85.71	86.67	68.0	II
*pródigo (producción)	IV III	8 5a	3.90	17.24	18.37	35.56	16.5	III
*producir producto	I II	2a 2b	67.53	79.31	89.80	91.11	80.0	II
profanar *profano	V V	5b 5b	59.74	79.31	89.80	91.11	77.0	II
profesar *profesión profesional	III II V	5a 5a 7	92.21	93.10	100.00	97.78	95.5	I
*profesor	III	3a	94.81	93.10	95.92	91.11	94.0	I
*profeta	III	3a	12.98	24.14	22.45	20.00	18.5	III
profundidad *profundo	IV I	16 5a	28.57	31.03	30.61	64.44	32.5	III
*programa	IV	5b	92.21	86.21	93.81	97.78	93.0	I
progresar *progreso	IV II	3a 3a	88.31	93.10	95.92	95.56	92.5	II
*prohibir	III	5a	63.64	68.97	93.88	91.11	78.0	II
*prolongar	II	4a	79.22	72.41	93.88	93.33	85.0	II

TABLE I (continued)

Spanish Word	Buchanan	Thorn-dike	Freshmen	Sophomores	Juniors	Seniors	Total C.C.	
*prontitud	IV	16	14.29	13.79	36.73	37.78	25.0	III
*pronunciar	I	2b	37.66	55.17	73.47	77.78	58.0	II
*propicio	IV	9	0	0	4.08	6.67	2.5	IV
*propiedad propietario	II III	2b 17	11.69	3.45	18.37	31.11	16.5	III
*proponer (proporción)	I III	3a 3a	0	0	14.29	11.11	6.0	IV
*proporcionar (proposición)	II IV	3a 5b	24.68	27.59	53.06	60.00	40.0	III
*prosa prosaico	III V	6 16	47.75	65.52	89.80	91.11	70.0	II
*proscribir	V	14	44.16	41.38	77.55	80.00	60.0	II
*prosperidad próspero	IV V	4b 3b	24.68	31.03	57.14	64.44	42.5	III
(protección)	III	3b						
*protector	II	6	93.51	93.10	100.00	97.78	96.0	I
protesta	III	4b						
*protestar	II	4b	75.32	79.31	97.96	73.33	81.0	II
*providencia	III	4a	62.34	72.41	87.76	73.33	72.5	II
*provincia (provisión)	I V	2b 3b	46.75	79.31	81.63	82.22	68.0	II
*provocar	II	3b	20.78	34.48	46.94	62.22	38.5	III
*proximidad	IV	11	5.19	6.90	32.65	33.33	18.5	III
*proyecto	II	5a	2.60	3.45	22.45	24.44	12.5	III

TABLE I (continued)

Spanish Word	Buchanan	Thorn-dike	Freshmen	Sophomores	Juniors	Seniors	Total	C.C.
prudencia	III	6						
*prudente	II	5a	54.55	72.41	89.80	86.67	73.0	II
*psicología	V	11	20.78	34.48	71.43	73.33	47.0	III
psicológico	V	13						
publicación	V	6						
*publicar	I	3a	20.78	27.59	40.82	57.78	35.0	III
*público	I	1b	84.42	86.21	91.84	93.33	88.5	II
*pueril	IV	16	5.19	17.24	22.45	6.67	12.5	III
*puerto	II	2a	1.30	3.45	10.20	4.44	4.5	IV
*pulso	IV	4a	80.52	89.66	95.92	95.56	89.0	II
*puntual	III	6	24.68	34.48	71.43	80.00	50.0	II
*puro	I	1b	74.03	82.76	85.71	88.89	81.5	II
*púrpura	V	2b	15.58	20.69	16.33	13.33	16.0	III
*querrela	V	2b	22.08	31.03	38.78	40.00	31.5	III
quieto	IV	1b						
*quietud	III	13	59.74	58.62	79.59	82.22	69.5	II
*rabioso	IV	16	0	3.45	14.29	20.00	8.5	III
*racional	IV	9	15.58	31.03	42.86	51.11	32.5	III
*radiante	IV	5a	63.64	82.76	91.84	93.33	80.0	II
*radical	III	7	67.53	89.66	97.96	95.56	84.5	II
rapidez	III	7						
*rápido	I	1b	83.12	96.55	100.00	100.00	93.0	I
*raro	I	2b	80.52	96.55	95.92	93.33	89.5	II
*rayo	I	2b	79.22	89.66	87.76	84.44	84.0	II

TABLE I (continued)

Spanish Word	Euchanan	Thorn-dike	Freshmen	Sophomores	Juniors	Seniors	Total C.C.	
*realidad	I	5b	31.17	37.93	55.10	64.44	45.5	III
realización	IV	9						
*realizar	II	3b	84.42	79.31	95.92	88.89	87.5	II
*rebelión	IV	5b	81.82	93.10	97.96	95.56	90.5	II
*reciente	I	3a	50.65	55.17	77.55	86.67	66.0	II
*recitar	IV	4b	57.14	75.86	81.63	88.89	73.0	II
*reclamar	II	7	46.75	79.31	79.59	88.89	69.0	II
*recobrar	II	2b	0	3.45	4.08	2.22	2.0	IV
recomendación	III	3b						
*recomendar	III	3b	72.73	75.86	89.80	91.11	81.5	II
*recompensa	IV	4b	29.87	55.17	73.47	82.22	56.0	II
recompensar	IV	4b						
*recrear	V	17	15.58	31.03	46.94	48.89	33.0	III
*rectificar	V	10	15.58	17.24	42.86	57.78	32.0	III
*recurso	II	9	7.79	6.90	30.61	31.11	18.5	III
*recurrir	IV	9	18.18	20.69	57.14	57.78	37.0	III
*reducir	I	3a	77.92	82.76	93.88	95.56	86.5	II
referencia	IV	5a						
referente	V	3b						
*referir	I	3b	72.73	75.86	85.71	91.11	80.5	II
refinamiento	V	7						
*refinar	V	3b	74.03	82.76	91.84	80.00	81.0	II
*reflexión	II	5a	75.32	82.76	83.67	91.11	82.0	II
reflexivo	V	17						
*reforma	IV	4b	93.51	100.00	97.96	95.56	96.0	I
*refugio	V	3b	61.04	62.07	85.71	80.00	71.5	II

TABLE I (continued)

Spanish Word	Buchanan	Thorn-dike	Fresh-men	Sopho-mores	Jun-iors	Sen-iors	Total C.C.
(región)	I	2a					
*regresar regreso	II III	20 n.l.	19.48	34.48	71.43	57.78	43.0 III
(relación)	I	3a					
*relativo	II	3a	96.10	93.10	95.92	97.78	96.0 I
(religión)	II	3a					
*religioso	I	3a	59.74	75.86	87.76	86.67	75.0 II
*reliquia	IV	20	6.49	13.79	10.20	22.22	12.0 III
*remedio remediar	I III	3a 3a	58.44	72.41	89.80	91.11	75.5 II
*remitir	III	5b	54.53	62.07	85.71	88.89	71.0 II
*remoto	II	4b	84.42	89.66	93.88	95.56	90.0 II
*renovar	II	13	6.49	13.79	18.37	28.89	13.5 III
*renunciar	II	5a	19.48	34.48	51.02	57.78	38.0 III
repetición	V	7					
*repetir	I	2a	27.27	44.83	73.47	62.22	49.0 III
*reposar repose	II II	3b 3b	50.65	68.97	91.84	86.67	71.5 II
(representación)	III	5b					
*reproche	V	3b	66.23	82.76	91.84	93.33	81.0 II
reproducción	V	7					
*reproducir	III	7	77.92	82.76	93.88	95.56	86.5 II
republicano	V	4b					
*república	II	3b	81.82	86.21	89.80	95.56	87.5 II
repugnancia	V	12					
*repugnante	IV	12	14.29	34.48	61.22	64.44	40.0 III

TABLE I (continued)

Spanish Word	Buch- aran	Thorn- dike	Fresh- men	Sopho- mores	Jun- iors	Sen- iors	Total	O.C.
(reputación)	V	4b						
*resentirse	IV	7	24.68	44.83	61.22	60.00	44.5	III
reserva	V	3a						
*reservar	II	3a	76.62	82.76	91.84	93.33	85.0	II
residencia	IV	3b						
residente	V	5b						
*residir	III	4a	51.95	72.41	81.63	91.11	71.0	II
resignación	III	8						
*resignarse	III	3b	38.96	58.62	71.43	75.56	58.0	II
resistencia	III	7						
*resistir	II	4a	66.23	75.86	89.80	88.89	78.5	II
(resolución)	II	5a						
*resolver	I	3a	87.01	89.66	97.96	97.78	92.5	II
respetable	III	7						
respetar	II	2a						
*respeto	I	2a	90.91	86.21	93.88	93.33	91.5	II
*respectivo	III	5a	84.42	82.76	91.84	97.78	89.0	II
*respirar	II	14	53.25	72.41	81.63	75.56	68.0	II
*resplandeciente	V	7	2.60	6.90	18.37	17.78	10.5	III
*responder	I	5a	83.12	86.21	91.84	95.53	88.5	II
responsable	IV	6						
*responsabilidad	IV	8	58.44	75.86	89.80	91.11	76.0	II
*restablecer	IV	10	20.78	20.69	42.86	57.78	34.5	III
*restituir	IV	11	6.49	10.34	24.49	31.11	17.0	III
*resto	II	1a	90.91	89.66	95.92	95.56	93.0	I

TABLE I (continued)

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Spanish Word	Buchanan	Thorn-dike	Freshmen	Sophomores	Juniors	Seniors	Total C.C.	
resulta	V	2a						
resultado	II	2a						
*resultar	I	2a	65.64	79.31	87.76	91.11	78.0	II
*resucitar	IV	19	2.60	0	8.16	6.67	4.5	IV
*retener	IV	3b	3.90	31.03	24.49	26.67	18.0	III
*retirar	I	2b	63.64	79.31	85.71	86.67	76.5	II
*retórica	IV	8	6.49	24.14	44.90	40.00	26.0	III
reunión	II	13						
*reunir	I	10	23.38	37.93	42.86	35.56	33.0	III
revelación	IV	7						
*revelar	II	3a	19.48	31.03	14.29	31.11	22.5	III
*reverencia	IV	4a	27.27	58.62	73.47	57.78	50.0	II
reverendo	V	4b						
(revolución)	II	4a						
*revolucionario	III	7	45.45	48.28	75.81	84.44	62.5	II
*ridículo	II	6	63.64	82.76	87.76	95.56	79.5	II
rigidez	V	14						
*rígido	V	7	50.65	79.31	83.67	86.67	71.0	II
*rigor	II	6	18.18	48.28	57.14	55.56	40.5	III
(rival)	III	3b						
*robar	I	2b	20.78	24.14	30.61	22.22	24.0	III
*robusto	II	11	51.95	75.86	85.71	95.56	73.3	II
*roca	II	1a	37.66	37.93	46.94	48.89	42.5	III
*romano	III	2a	58.44	55.17	65.27	82.22	64.5	II
romanticismo	IV	19						
*romántico	III	6	72.73	82.76	91.84	95.56	84.0	II

TABLE I (continued)

Spanish Word	Duch- anan	Thorn- dike	Fresh- men	Sopho- mores	Jun- iors	Sen- iors	Total C.C.	
*rosa	I	1b	87.01	93.10	89.80	97.78	91.0	II
*ruina ruinoso	II V	2a 9	76.62	79.31	89.80	93.33	84.0	II
*rústico	III	4b	44.16	41.38	59.18	68.89	53.0	II
*saco	IV	2b	45.45	48.28	57.14	71.11	54.5	II
sacrificar	III	2b						
*sacrificio	II	2b	70.13	68.97	91.84	93.33	80.5	II
*sacristán	V	n.l.	3.90	10.34	16.33	8.89	9.0	III
(salvación)	IV	5b						
*sano	II	8	66.23	75.86	77.55	91.11	76.0	II
*santuario	V	5a	16.88	27.59	57.14	51.11	36.0	III
*sardina	IV	10	84.42	86.21	79.59	88.89	84.5	II
*sátira	V	7	18.18	37.93	55.10	80.00	44.0	III
(satisfacción)	II	3b						
*satisfacer	I	2a	51.95	82.76	71.43	82.22	68.0	II
satisfactorio	V	5b						
(sección)	III	2b						
*secretario	II	3b	59.74	68.97	83.67	86.67	73.0	II
*secreto	I	2a	81.82	89.66	89.80	88.89	86.5	II
*secular	IV	8	16.88	27.59	57.14	44.44	34.5	III
*secundario	V	7	29.87	58.62	69.39	80.00	55.5	II
seducir	IV	6						
*seductor	III	19	11.69	3.45	42.86	42.22	25.0	III
*selecto	IV	2b	93.51	86.21	93.88	97.78	93.5	I



TABLE I (continued)

Spanish Word	Buchanan	Thorn-dike	Fresh-men	Sopho-mores	Jun-iors	Sen-iors	Total	C.O.
*sensación	II	7	51.95	82.76	85.71	93.33	74.0	II
*sensibilidad (sensible)	IV III	9 4b	29.87	48.28	71.43	66.67	51.0	II
*sentencia	III	3a	72.73	79.31	85.71	93.33	81.5	II
sentimental	II	8						
*sentimiento (separación)	I III	5b 1b	49.35	65.52	89.80	91.11	71.0	II
*separar	I	1b	55.84	68.97	83.67	84.44	71.0	II
*septiembre	III	2a	51.95	72.41	89.80	86.67	72.0	II
sepultura	III	19						
*sepulcro	III	7	15.58	17.24	67.35	51.11	36.5	III
serenidad	III	15						
*sereno	II	5a	35.06	51.72	73.47	80.00	57.0	II
*serie	III	4b	24.68	41.38	53.06	53.33	40.5	III
*serio (sermón)	I III	2b 5a	10.39	10.34	18.37	33.33	17.5	III
*serpiente	IV	4a	40.26	58.62	77.55	75.56	60.0	II
*servicio	I	1b	74.03	100.00	87.76	91.11	85.0	II
servidor	II	2a						
servir	I	1a						
*sesión	IV	6	74.03	89.66	81.63	93.33	80.0	II
severidad	III	7						
*severo	II	2b	44.16	55.17	55.10	57.76	51.5	II
*sexo	III	4b	90.91	96.55	93.88	93.33	93.0	I
significación	IV	19						
*significar	II	5b	46.75	65.52	73.47	77.78	63.0	II

TABLE I (continued)

Spanish Word	Buchanan	Thorn-dike	Fresh-men	Sopho-mores	Jun-iors	Sen-iors	Total C.C.	
*signo	III	1b	88.31	86.21	91.84	93.33	90.0	II
*silaba	IV	3a	16.88	41.38	44.90	62.22	37.5	III
*silencio	I	2a	77.92	82.76	89.80	93.33	85.5	II
silencioso	III	2a						
*símbolo	III	4b	74.03	89.66	85.71	86.67	82.0	II
*simpatía	II	3b	23.38	24.14	48.98	57.78	37.5	III
(simple)	I	1b						
sinceridad	III	6						
*sincero	II	3a	40.26	37.93	81.63	88.89	61.0	II
(singular)	II	5b						
*siniestro	III	9	27.27	41.38	61.22	82.22	50.0	II
*sirena	V	8	33.77	37.93	44.90	53.33	41.5	III
*sistema	II	2a	54.55	65.52	71.43	80.00	66.0	II
(situación)	I	4a						
*situar	II	3b	15.58	27.59	38.78	51.11	31.0	III
(social)	I	3b						
*sociedad	I	2b	27.27	55.17	69.39	62.22	49.5	III
(sofá)	V	5b						
*soldado	I	1a	1.30	10.34	6.12	6.67	5.0	IV
*solemne	II	3b	80.52	86.21	93.88	88.89	86.5	II
solemnidad	V	7						
*solicitar	II	5a	32.47	58.62	69.39	71.11	54.0	II
*solicitud	III	10	31.17	65.52	61.22	60.00	50.0	II
solidez	V	15						
*sólido	II	3a	72.73	72.41	87.76	86.67	79.5	II

TABLE I (continued)

Spanish Word	Buch- aran	Thorn- dike	Fresh- men	Sopho- morea	Jun- iors	Sen- iors	Total	C.O.
*solitario	II	4a	55.84	72.41	77.55	84.44	70.0	II
(solución)	IV	5b						
*soneto	V	7	40.26	34.48	87.76	86.67	61.5	II
*sonoro	II	10	3.90	3.45	24.49	17.78	12.0	III
*soportar	III	2a	20.78	31.03	38.75	40.00	31.0	III
*sostener	I	4a	2.60	10.34	10.20	13.33	8.0	III
(sublime)	II	5a						
*subsistir	V	8	27.27	48.28	63.27	68.89	48.5	III
*substancia	II	3b	75.32	72.41	75.51	84.44	77.0	II
*substantivo	IV	11	63.64	65.52	77.55	88.89	73.0	II
*substituir	II	4a	41.56	58.62	77.55	77.78	61.0	II
sucesión	III	5b						
*sucesivo	II	5b	76.62	79.31	93.88	93.33	85.0	II
*sucumbir	IV	14	18.18	27.59	55.10	44.89	35.5	III
*suficiente	II	3a	61.04	68.97	87.76	88.89	75.0	II
*sufrir	I	1b	35.06	48.28	59.18	64.44	49.5	III
sujetar	II	1b						
*sujeto	I	1b	53.25	55.17	67.35	60.00	58.5	II
*sultán	V	8	57.14	62.07	91.84	97.78	75.5	II
*suma	II	2a	62.34	65.52	75.51	68.89	67.5	II
sumar	IV	2a						
*sumergir	IV	7	24.68	27.59	57.14	40.00	36.5	III
*sumisión	IV	7	32.47	68.97	81.63	82.22	61.0	II
*suntuoso	V	6	0	0	0	0	0	IV

TABLE I (continued)

Spanish Word	Buchanan	Thorn-dike	Fresh-men	Sopho-mores	Juni-ors	Sen-iors	Total	C.C.
*superficial (superior)	V I	9 2b	48.05	62.07	83.57	84.44	67.0	II
*superioridad	III	11	22.08	44.83	67.35	66.57	46.5	III
*suplicar	II	10	10.39	6.90	14.29	35.56	16.5	III
*suposición	V	10	37.66	55.17	73.47	82.22	59.0	II
*supremo	II	4a	81.82	89.66	95.92	97.78	90.0	II
*suspender suspensión	II V	5a 9	49.35	58.62	53.06	60.00	54.0	II
*suspenseo	IV	9	72.73	89.66	93.88	93.33	85.0	II
*sutil sutileza	II V	5b 8	12.98	13.79	32.65	46.67	25.5	III
*tabaco	IV	3a	89.61	93.10	91.84	91.11	91.0	II
*talento	II	4a	89.61	89.66	91.84	91.11	90.5	II
*teléfono	V	3a	80.52	89.66	85.71	86.67	84.5	II
telegráfico	V	n.l.						
*telégrafo	V	4a	87.01	96.55	95.92	95.56	92.5	II
telegrama	V	4b						
*temeridad	IV	17	6.49	6.90	24.49	31.11	16.5	III
*temperamento	IV	9	72.73	72.41	89.80	88.89	80.5	II
*temperatura	III	3b	85.71	93.10	93.88	100.00	92.0	II
*tempestad	II	4a	42.86	55.17	57.14	75.56	53.5	II
*templo	II	2b	89.61	93.10	89.80	95.56	91.5	II
*temporal	III	8	22.08	34.48	63.27	35.56	37.0	III
*tendencia	IV	6	50.65	62.07	91.84	80.00	69.0	II

TABLE I (continued)

Spanish Word	Euch-anan	Thorn-dike	Fresh-men	Sopho-mores	Jun-iors	Sen-iors	Total	C.C.
terminación	V	8						
*terminar	I	7	19.48	17.24	34.69	55.56	31.0	III
(terrible)	I	2a						
*territorio	II	3a	67.53	82.76	93.88	95.56	82.5	II
(terror)	II	2b						
*testamento	V	7	71.43	86.21	91.84	91.11	83.0	II
*testimonio	III	4b	54.55	82.76	79.59	91.11	73.0	II
*texto	IV	3b	90.91	89.66	93.88	97.78	93.0	I
*tigre	IV	4b	71.43	82.76	91.84	95.56	83.5	II
timidez	IV	12						
*tímido	III	4a	66.23	79.31	93.88	95.56	81.5	II
tiranía	III	4b						
*tirano	II	4a	18.18	27.59	28.57	48.89	34.0	III
titular	II	4a						
*título	I	2a	15.58	24.14	42.86	55.56	32.5	III
*tolerar	IV	11	32.47	48.28	69.39	75.56	53.5	II
tolerancia	V	13						
*tomate	IV	5a	72.73	79.31	91.84	93.33	83.0	II
*tono	I	2b	54.55	62.07	67.35	86.67	66.0	II
*tormento	II	3b	71.43	86.21	95.92	93.33	89.5	II
*torrente	IV	5a	80.52	75.86	93.88	95.56	86.5	II
(total)	II	2a						
(tradición)	III	4a						
*tradicional	IV	12	31.17	58.62	65.31	75.56	53.5	II
tragedia	IV	4b						
*trágico	II	7	72.73	86.21	89.80	93.33	83.5	II

TABLE I (continued)

Spanish Word	Buchanan	Thorn-dike	Fresh-men	Sopho-mores	Jun-iors	Sen-iors	Total	C.O.
*traidor	II	4a	22.08	31.03	42.86	44.44	33.5	III
tranquilidad	III	6						
tranquilizar	III	n.l.						
*tranquilo	I	6	51.95	68.97	83.67	88.89	70.5	II
*transcendencia	V	12	11.69	34.48	57.14	53.33	35.5	III
transformación	V	8						
*transformar	II	5a	89.61	96.55	95.92	97.78	94.0	I
transmisión	V	11						
*transmitir	III	9	89.61	96.55	97.96	95.56	94.0	I
*transparente	IV	7	88.31	93.10	97.96	97.78	93.5	I
*transportar	V	3b	87.01	96.55	97.96	95.56	93.0	I
*tremendo	II	5a	28.57	51.72	51.02	66.67	46.0	III
*trémulo	III	7	9.09	17.24	38.78	48.89	26.5	III
*tren	II	1a	11.69	20.69	20.41	15.56	16.0	III
*tribu	IV	2a	46.75	44.83	51.02	66.67	52.0	II
*tribunal	III	8	41.56	65.52	97.96	95.56	71.0	II
*tributo	IV	4a	76.62	89.66	93.88	86.67	85.0	II
triumfal	V	8						
triumfante	V	6						
triunfar	II	3b						
*triunfo	I	3b	23.38	31.03	34.69	48.89	33.0	III
*trompeta	V	3a	38.96	48.28	61.22	68.89	52.5	II
*tronco	III	2a	7.79	13.79	16.33	8.89	11.0	III
*tropa	II	2b	9.09	13.79	18.37	31.11	17.0	III
*tropical	V	7	80.52	82.76	89.80	95.56	86.5	II
trópico	V	6						

TABLE I (continued)

Spanish Word	Buchanan	Thorn-dike	Fresh-men	Sopho-mores	Jun-iors	Sen-iors	Total	G.C.
*tránsito	IV	8	62.34	75.86	87.76	93.33	77.5	II
*tubo	IV	4a	66.23	68.97	67.35	77.78	69.5	II
*túnica	IV	10	38.92	51.72	53.06	86.67	55.0	II
*ulterior	IV	18	12.98	20.69	57.14	48.89	33.0	III
*último	I	7	11.69	17.24	42.86	53.33	29.5	III
*uniforme	IV	3a	84.42	86.21	95.92	97.78	90.5	II
unidad	III	5b						
*unir	I	1b	2.60	6.90	12.24	17.78	9.0	III
(unión)	II	2a						
(universal)	III	3a						
universidad	III	3a						
*universo	III	6	83.12	93.10	91.84	93.33	89.0	II
*urbanidad	V	18	24.68	17.24	51.02	68.89	40.0	III
*urgente	III	6	68.83	79.31	93.88	88.89	81.0	II
*usar	I	1a	59.74	58.62	69.39	77.78	66.0	II
uso	I	1a						
*usurpar	V	6	23.38	34.48	61.22	66.89	44.5	III
*utilidad	III	7	29.87	34.48	69.39	71.11	49.5	III
utilizar	III	8						
*vacilar	III	13	2.60	3.45	6.12	17.78	7.0	III
*vagabundo	IV	8	66.23	75.86	93.88	88.89	79.5	II
*vago	II	6	40.26	41.38	59.18	71.11	52.0	II
*valeroso	IV	13	14.29	13.79	51.02	44.44	30.0	III

TABLE I (continued)

Spanish Word	Buch-anan	Thorn-dike	Fresh-men	Sopho-mores	Jun-iors	Sen-iors	Total C.O.	
*valiente	I	4b	37.66	51.72	81.63	71.11	58.0	II
*valle	II	1b	44.16	48.28	59.18	48.89	49.5	III
vanidad	II	3b						
*vano	I	2a	5.19	13.79	16.33	15.56	11.5	III
variable	V	8						
variación	V	10						
*variar	II	3a	38.96	55.17	69.39	73.33	56.5	II
variedad	III	3a						
*vasallo	IV	6	15.58	31.03	44.90	48.89	32.5	III
*vasto	III	2b	77.92	89.66	81.63	93.33	84.0	II
vegetación	IV	7						
*vegetal	IV	2b	59.74	75.86	89.80	86.67	75.5	II
*vehemente	IV	7	28.57	31.03	65.31	75.56	48.5	III
*vehículo	V	7	62.34	82.76	87.76	80.00	75.5	II
*velocidad	IV	9	15.58	24.14	65.31	68.89	41.0	III
*venerable	III	7	55.84	68.97	85.71	86.67	72.0	II
veneración	III	14						
*venganza	II	4a	14.29	34.48	51.02	57.78	36.0	III
*ventura	II	3b	70.13	75.86	93.88	95.56	82.5	II
*verbo	I	6	80.52	89.66	93.88	93.33	88.0	II
*verificar	II	8	18.18	31.03	53.06	64.44	39.0	III
*verso	I	3a	90.91	89.66	97.96	97.78	94.0	I
*vertical	V	6	75.32	86.21	95.92	95.56	86.5	II
*vértigo	IV	18	3.90	6.90	10.20	46.67	15.5	III
vibración	IV	9						
*vibrar	III	8	35.06	34.48	42.86	62.22	33.0	III



TABLE I, (continued)

Spanish Word	Bush- anan	Thorn- dike	Fresh- man	Sopho- morea	Jun- iors	Sen- iors	Total C.O.	
*vicio vicioso	II V	3a 3b	27.27	31.03	44.90	60.00	29.5	III
*victima	I	4a	80.52	79.31	93.88	95.56	87.0	II
*victoria victorioso	II IV	2b 4a	48.05	55.17	61.22	57.77	44.5	III
vigilancia *vigilar vigilia	IV IV V	9 7 7	18.18	37.93	51.02	51.11	36.5	III
(vigor)	III	3b						
*vigoroso	III	7	55.84	68.97	79.59	77.78	68.5	II
*vil	II	4a	22.08	34.48	40.82	66.67	38.5	III
*vinagre	III	5a	59.74	75.86	83.67	84.44	73.5	II
*viña	IV	2b	59.74	68.97	75.51	82.22	70.0	II
violencia *violento	II I	3b 3b	84.42	82.76	93.88	93.33	88.5	II
*violeta	V	3a	79.22	89.66	89.80	97.78	87.5	II
(violín)	V	5a						
*virgen	II	3b	62.34	89.66	87.76	95.56	80.0	II
*virtud virtuoso	I III	2b 19	19.48	48.28	42.86	53.33	37.0	III
(visible)	III	4b						
(visión)	II	3b						
visita *visitar	I I	1a 1a	74.03	93.10	91.84	91.11	85.0	II
(vital)	IV	5b						
*vocal	V	6	90.91	93.10	100.00	97.78	95.0	I

TABLE I (concluded)

Spanish Word	Buchanan	Thorn-dike	Freshmen	Sophomores	Juniors	Seniors	Total	O.C.
*volcán	III	7	36.36	51.72	71.43	66.67	54.0	II
*volumen	II	3a	80.52	93.10	89.80	91.11	87.0	II
*voluntario	IV	6	49.35	68.97	91.84	86.67	71.0	II
*voluptuoso	V	12	12.98	13.79	36.73	42.22	20.5	III
votar	IV	2b						
*voto	II	2b	93.51	89.66	93.88	88.89	92.0	II
*yanqui	V	9	9.09	17.24	10.20	22.22	13.5	III
*zona	III	3a	93.51	96.55	95.92	95.56	95.5	I

TABLE II

FREQUENCY RATINGS AND PERCENTAGES OF CORRECT RESPONSE ON  
SEVERAL SPANISH WORDS OF THE TYPE ELIMINATED  
FROM THE DIRECT-RECALL TEST GIVEN  
TO HIGH SCHOOL STUDENTS

Spanish Word	Buchanan	Thorndike	Freshmen	Sophomores	Juniors	Seniors	Total O.C.	
dirección	I	2a	81.82	82.76	97.96	95.56	89.0	II
disposición	II	5a	64.94	66.52	85.71	88.89	75.5	II
elección	II	3a	62.34	82.76	89.80	95.56	79.5	II
generación	III	3b	74.03	86.21	93.88	93.33	85.0	II
instrucción	II	3a	80.52	89.66	95.92	95.56	89.0	II
intención	I	4a	54.55	75.86	77.55	75.56	68.0	II
representación	III	5b	70.13	89.66	95.92	93.33	84.5	II

NOTE: This table should be read as follows: The word dirección is among the thousand most frequent Spanish words listed by Buchanan, and its English equivalent appears in the first half of the second thousand of the words listed in Thorndike. Percentages of correct responses according to high school classification were 81.82% for the freshmen, 82.76% for the sophomores, 97.96% for the juniors, and 95.56% for the seniors. Of the total number of students taking the test, 89.0% responded correctly to this word, giving it a cognate classification of II.

## CHAPTER IV

### FACTORS AFFECTING THE INTERPRETATION OF RESULTS

Subjectivity in checking a test of the direct-recall type has already been mentioned as a factor tending to discredit the findings of this study.<sup>15</sup> If the reader is fully to understand the problem that confronts the conscientious investigator, however, a more detailed discussion is helpful.

The inability of a great many high school students to spell correctly constituted one of the most serious problems in connection with the study. It seemed unwise to demand perfection in spelling before a reply was considered satisfactory. Measurement of the ability of high school students to spell was obviously not the purpose of the experiment, and such a procedure would have introduced an irrelevant factor which would have materially affected the results.

On the other hand, the problem of poor spelling is more complex than it appears at first glance. Some high school pupils have a tendency to guess and evolve systems such as omitting final letters or substituting e's for final o's and a's in an attempt to arrive at the correct English equivalent. Moreover, such devices are often successful, as with such cognates as acto, ácido, cómico, causa, caso, bravo, and bruto. In cases where such systems proved less successful, it was often impossible to distinguish the errors so made from common spelling

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Of. ante, p. 8.

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errors; thus the problem becomes one of determining the intention of the subject and of deciding which type of error was made. Since this would place the experiment on an entirely subjective level, the following plan, though not entirely satisfactory, was adopted in the interest of consistency and objectivity in scoring. Phonetic spelling, that is any spelling which would produce the sound of the correct word, was accepted. The fact that some words lend themselves more readily than others to successful guessing may have tended to raise slightly their percentages as listed in Table I and to change somewhat the ratio between their percentages and those of words not so affected. This should be taken into consideration in interpreting the results of the experiment.

Another problem which presented itself was that of actual comprehension of the words written. It seems entirely possible that, if they were called upon to do so, many students could neither define nor explain a number of their correct responses. Often words read or heard, but not thoroughly understood, will be recalled by a suggestion as strong as that provided by a foreign cognate. In his study of French-English cognates, Dr. Limper<sup>16</sup> attempted to solve this problem of comprehension by putting into a multiple-choice test French cognates of which the English equivalents are of low frequency. However, such a device does not entirely preclude suggestion. A test of this sort was considered beyond the scope of this study.

Another question which has arisen is that of whether the position of a word in a list as long as this would materially affect the number

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<sup>16</sup> Of. ante, p. 2.

of correct responses. A study of the percentages of correct response would indicate that this is not the case, since those near the end of the list seem as high as those at the beginning. It seems possible that mental fatigue might have been offset by the additional practice in recognizing English cognates in the Spanish words. Every effort was made to limit the working periods so that the task would not become excessively monotonous.

English homographs constituted another serious problem, since it is impossible to determine which of two or more possible meanings the student had in mind when he wrote the apparently correct response. A list of such doubtful words, of which the percentages of correct response may be considerably too high, is here given, together with the specific problem each word presented, in order that the reader may draw his own conclusions as to the reliability of the report.

amar (78.5%) - While "arm" was of necessity considered a correct response, it was impossible to determine whether a part of the anatomy or preparation for warfare was meant.

augusto (59.5%) - Any responses beginning with a capital letter were eliminated, but the spelling of the names of other months included in the list indicate that high school students are not always careful about such capitalization and may have meant to indicate the month rather than the adjective. Moreover, it is not always easy to distinguish a small a from a capital A.

busto (72.5%) - Did "bust" connote a piece of statuary, a part of the anatomy, or the illiterate form of the verb? The number of times

"burst" was given as an answer would indicate the latter in at least a part of the cases.

concertar (52.5%) - Was the noun or the verb intended by "concert"?

conducta (87.0%) - Was the noun or the verb intended by "conduct"?

contento (80.0%) - It is doubtful whether the student meant to convey "that which is contained within" or "happiness and satisfaction" when he wrote "content."

question (46.0%) - Was interrogation or controversy indicated by "question"?

diverso (55.5%) - Was "divers" intended as the accepted spelling variation of "diverse" or as the plural of "diver"?

expreso (80.5%) - and expresar (80.5%) - Both are translated to the English "express," but with different meanings.

gravedad (51.0%) - Did "grave" refer to solemnity or to a place of interment? Likewise, does "gravity" indicate seriousness or the pull of the earth's forces?

intimar (29.5%) and intimo (9.5%) - Both resolve into the English "intimate" with entirely different meanings.

jarro (76.5%) - Was the noun or the verb meant by "jar"?

justo (95.5%) - Was "equitable" or "exact" implied by the answer "just"?

letra (46.3%) - "Letter" might refer either to an epistle or to an alphabetical symbol.

marchar (53.0%) - Was the capitalization merely omitted from the name of the month when "march" was written?

masa (51.5%) - Did "mass" refer to the church ritual, to the noun meaning a large quantity, or to the verb?

mayo (73.5%) - Did an uncapitalized "may" indicate the month or the verb?

mina (64.0%) - Was the noun or the possessive pronoun meant by "mine"?

musa (41.0%) - Again, was the verb or the noun intended by "muse"?

paciencia (39.5%) - Since "patient" had to be accepted as being of the same derivation as "patience," the question arose as to whether a state of mind or a person under medical treatment was meant.

pique (55.5%) - Was the fact that so large a percentage of correct responses was given for this word due to a confusion with the name of the fabric "piqué"?

resto (93.0%) - Was "repose" or "remainder" meant?

tronco (11.0%) - Did the student refer to a piece of luggage or to the main body of a tree or animal?

It is quite probable that a number of these doubts would be removed when the words were placed in context.

Another problem which presented itself was that of partial cognates, that is to say words which are cognates in only one of their various meanings. A few examples will serve to illustrate this. "To astonish" may be a slightly more common meaning for admirar than "to admire." Banco can mean either "bench" or "bank," and bomba is commonly used for "pump" as well as for "bomb." The question now arises as to whether such words, and there are many in the list, would have been classified in the five thousand most frequent words as listed by Buchanan had their recurrence depended solely on their cognate meanings.



For obvious reasons the word counts do not take variations of meaning into account in their computations. It is possible that in actual reading correct response on these words from a cognate point of view would be more misleading than helpful.

While all of these considerations tend to decrease the reliability and to change somewhat the interpretation of the results of this study, there are two factors prevailing in the actual classroom situation which offset to some extent the effect of these disturbing elements. In the first place, the presentation of these words in context rather than in lists would tend to increase the student's possibilities for success. In the second place, the students who took the test were selected at random, whereas those who elect to study Spanish often have a greater interest in and aptitude for languages than those who do not choose to do so.

## CHAPTER V

### DECEPTIVE COGNATES

It is rather significant that almost as much work has been done on deceptive cognates in Spanish as on those which are reliable. Such studies have more to recommend them than the attraction of the abnormal, however. By presenting the other side of the picture they are useful in counteracting excess enthusiasm for the cognate approach to language teaching.

One of the first lists of such deceptive cognates was compiled by S. Scatori<sup>17</sup> and is based principally on subtle shades of meaning rather than on broad, general differentiation. This list contains such entries as the following:

Condición, not always condition = estado, circunstancia, but more often temper, disposition, nature.

Cristal, not always crystal, but more often glass, windowpane.

A list somewhat different in character is that compiled by W. K. Jones<sup>18</sup> in which he gives only Spanish words identical to English words in spelling, but entirely different in meaning. A number of these words are verb forms such as era, dice, come, and fugue. He lists about three hundred such words. This list, like that of Professor Scatori, is based on material gathered during several years' teaching

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<sup>17</sup> S. Scatori, "Deceptive Cognates in Spanish," Modern Language Journal, 16:396-401, February, 1932.

<sup>18</sup> W. K. Jones, "Deceptive Doubles: Twin Words--With a Difference," Modern Language Journal, 20:15-18, October, 1935.

experience rather than on any specific experiment.

The experiment herein reported was primarily concerned with reliable cognates, but in checking the results, it was observed that a number of words were, with varying degrees of consistency, being associated with English words other than their real equivalents. The results on these words were tabulated separately, and the percentage of students making the same error on any one word was determined. Those words on which ten per cent or more of the students made the same error are presented in Table III, which shows the percentage of the students making a given error and the percentage making the correct response. Words on which the percentage of wrong responses exceeds the percentage of correct are indicated with an asterisk. In the list of one hundred thirty words, there are fifty-three such cases.

On the basis of observation of the type of reliable cognate most easily recognized and of the sort of errors most commonly made on these deceptive cognates, a supplementary list<sup>19</sup> has been assembled which is composed of one hundred twenty words which would almost certainly have been missed by a large percent had they been presented to high school students in the same manner as that employed to introduce the reliable list. These words were selected at random from the first five thousand words in the Buchanan word book and are by no means the product of an exhaustive search. They are offered merely as a glimpse into the negative side of the picture of reading by inference.

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<sup>19</sup> Cf. post, pp. 109-110.

TABLE III

ENGLISH WORDS FOR WHICH CERTAIN SPANISH COGNATES ARE MISTAKEN,  
AND PERCENTAGES OF WRONG AND CORRECT RESPONSE

Spanish cognate	English word for which mistaken	Per cent of wrong response	Per cent of correct response
abril	able	13.5	21.5
adversario	advertise	22.0	43.5
*afable	fable	30.5	26.5
*alianza	alien	32.5	13.0
ángulo	angel	14.0	40.0
*animar	animal	51.0	7.0
*anterior	interior	45.0	19.5
*aparato	apart	20.5	17.5
agosto	August	38.0	39.5
*autor	auto	30.0	29.5
ávido	avoid	11.0	28.0
*bala	bale	28.5	17.5
balcón	bacon	16.5	48.0
bárbaro	barber	23.5	31.0
*batería	bacteria	57.5	8.0
*bestia	best	59.0	5.5
bordo	board	23.5	46.5

(Table Continued)

NOTE: This table should be read as follows: The Spanish word abril was thought to mean "able" by 13.5% of the students, while 21.5% made the correct response.

TABLE III (continued)

Spanish cognate	English word for which mistaken	Per cent of wrong response	Per cent of correct response
*bronce	bronco	27.5	22.5
burro	burr	16.5	56.5
*columnia	column	28.0	1.0
*ceder	cedar	62.5	3.0
cementerio	cement	13.0	61.0
centro	cent	14.0	55.0
*citar	city	30.0	6.0
clamar	clam	10.5	50.5
clase	clause	14.0	60.5
olima	climb	27.0	47.5
complemento	compliment	15.5	72.0
común	commune	11.5	29.5
consular	consular	13.0	52.5
contemplar	contempt	19.5	32.5
*criterio	critter	10.0	9.0
*culpable	capable	23.5	12.0
*curso	curse	72.5	2.5
decadencia	decade	13.5	15.0
*de coro	decoration	30.5	5.5
definitivo	definition	14.0	67.0
*devoto	devote	88.5	0
diamante	diameter	22.0	26.0
diplomático	diploma	14.0	68.0

TABLE III (continued)

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Spanish cognate	English word for which mistaken	Per cent of wrong response	Per cent of correct response
*disimilar	dissimilar	26.0	5.0
*disipar	despair	61.5	13.0
distinto	distant	23.0	44.0
doctrina	doctor	16.5	61.0
*edificar	edifice	17.5	9.5
*ejecutor	eject	24.0	2.0
elevant	eleven	11.5	42.5
embarrasar	embrace embarrass	17.0 14.5	21.0
*entero	enter	69.5	1.0
equivocar	equivalent	13.0	12.5
especie	especial	11.0	24.0
estatua	estate	24.5	28.5
*estilo	still	12.5	1.5
*fabricar	fabric	21.0	13.5
*fácil	facial	28.5	24.5
farsa	far	26.5	33.0
*feroz	froze	12.5	5.5
firmamento	ferment	20.5	39.5
frontera	front	20.5	37.0
gala	gale gal	27.5 11.0	40.5

TABLE III (continued)

Spanish cognate	English word for which mistaken	Per cent of wrong response	Per cent of correct response
*gentil	gentle	68.0	16.5
*golfe	golf	97.0	.5
grano	grammar	16.5	47.0
grano	grand	24.0	34.5
gratis	grate	15.0	18.5
*gusto	gust	60.0	12.0
himno	him	28.5	38.0
idéntico	identity	10.0	49.0
*imagen	imagine	43.0	32.5
*impío	imp	15.5	7.5
*indígena	indignant	21.0	0
infomar	informal	10.0	74.5
*inglés	angles	12.0	4.0
insuperable	inseparable	10.5	51.0
ira	era	11.0	21.0
*ironía	iron	57.5	15.0
jazmín	jazz	13.5	27.5
letra	let	12.5	46.5
lira	liar	10.5	31.0
lívido	lived	22.5	44.5
*manía	man	39.5	20.5
mártir	martin	13.5	30.5

TABLE III (continued)

Spanish cognate	English word for which mistaken	Per cent of wrong response	Per cent of correct response
mequínico	Mexican	11.5	47.0
miseria	miser	10.5	57.5
místico	mist	10.5	44.0
*musso	sausage	31.0	7.0
*occidente	accident	39.5	27.5
*operar	opera	47.0	27.5
opinar	open	16.5	43.0
parcial	parcel	19.5	48.5
*pasta	past	52.0	15.5
paternal	pattern	14.0	59.0
perverso	preserve	11.5	49.5
pino	pin	35.0	40.0
	piano	10.5	
plácido	place	23.0	39.0
*plano	plan	57.5	33.5
pompa	pump	11.5	52.0
populoso	popular	19.5	46.0
posterior	poster	21.0	30.5
precioso	precise	16.0	48.5
*pródigo	prodigy	21.5	16.5
*profeta	profit	41.5	18.5
publicar	public	21.5	35.0
*pueril	peril	29.5	12.5
púrpura	purpose	27.0	16.0



TABLE III (continued)

Spanish cognate	English word for which mistaken	Per cent of wrong response	Per cent of correct response
*rabioso	rabbit	16.5	8.5
reflexión	reflex	10.0	82.0
reliquia	relinquish	10.5	12.0
renovar	remove	14.5	15.5
*revelar	revel	41.0	22.5
robar	robe	20.5	24.0
romano	romance	22.0	64.5
rústico	rust	28.5	53.0
sensibilidad	sensible	26.5	51.0
*serio	series	36.5	17.5
severo	sever	16.5	51.5
sirena	serene	25.0	41.5
sistema	sister	10.5	66.0
*soldado	sold	35.5	5.0
sumergir	summer	15.0	36.5
terminar	term	12.0	31.0
tono	ton	20.5	66.0
*traidor	trader	34.0	33.5
*tren	trend	21.0	16.0
tribu	tribute	16.0	52.0
*tropa	tropic	21.5	17.0
tubo	tub	13.5	69.5

TABLE III (concluded)

Spanish cognate	English word for which mistaken	Per cent of wrong response	Per cent of correct response
*unir	unit	18.0	9.0
valiente	valentine	11.5	58.0
*vano	van vano	19.0 44.0	11.5

## FIGURE I

## SUPPLEMENTARY LIST OF DECEPTIVE SPANISH COGNATES

acostar	costumbre	hollar	peño
afecto	cura	horno	pariente
asistir	chocar	humo	pasto
astro	dato	indigno	pata
balde	delito	intimidad	pavo
bando	dependiente	joya	personaje
barba	desgracia	lance	pico
beato	desposar	lente	plata
bigote	devolver	limpio	playa
borrar	divisar	listo	plazo
cabal	docto	literato	porte
café	dote	lobo	postre
capa	falto	lodo	presa
carbón	faro	loro	presidio
cara	figurar	luto	probar
casta	firma	marco	rama
celo	floreata	máscara	rato
codo	fraile	mata	raya
colar	gaita	mira	real
colegio	gana	mirar	refrán
colono	germen	miserio	registrar
consumar	gota	mudo	resonar
coro	grito	nevar	revolver
costa	haz	palo	riaco

(List continued)

## FIGURE I

## SUPPLEMENTARY LIST OF DECEPTIVE SPANISH COGNATES (concluded)

ropa	senda	tallo	torno
rota	son	terco	trapo
ruse	sopa	tino	tripa
salto	suceno	tipo	venta
salvo	tacto	tiro	vino
sello	talle	tormenta	vulgo

## CHAPTER VI

### RELATIONSHIP BETWEEN THE BUCHANAN WORD BOOK AND THE RECOGNIZABILITY OF COGNATES

Since the Buchanan word book is so widely used for the evaluation of vocabulary difficulty of text books, a study of the relationship between the recognizability of cognates and their Buchanan frequencies should be significant. In order that this relationship may be more readily seen, Table IV has been prepared showing what percentage of the words from each thousand in Buchanan falls into each cognate classification. Only the cognates tested are considered in this tabulation. To facilitate comparison of these percentages for each cognate classification taken through each of the five frequency groupings according to Buchanan, a graph has been prepared.

It will be noted that cognate classification I, including those cognates of almost certain recognizability, shows no definite tendency to predominate more in one Buchanan group than in another. The same is true of cognate classification IV, which includes those words least likely to be recognized. The small number of the words in each of these classifications probably accounts for the relatively uniform proportions.

The words in cognate classification II, those of a high degree of recognizability, show a definite tendency to predominate among the cognates in the first thousand words in the Buchanan word book, are slightly more preponderant in the second thousand, and form a decreasing proportion of the cognates in each successive thousand thereafter.

Poor cognates from the standpoint of recognizability--those in cognate classification III--made up a lower percentage of the frequently used Spanish cognates than of those appearing less often. This shows a tendency precisely the opposite of that demonstrated by the recognizable cognates. The lines representing these two classifications on the graph tend to converge in the fifth thousand of Buchanan. The cognates appearing in this thousand are made up of 48.32% and 47.36% of good and poor cognates respectively.

It would seem, then, that while a much greater percentage of the frequently used cognates is composed of recognizable words than of those which have little suggestive value, the proportion of poor cognates increases with each successive thousand until by the fifth thousand the two classifications are about equally predominant.

TABLE IV

PERCENTAGE, ACCORDING TO THE SUCCESSIVE COGNATE CLASSIFICATIONS,  
OF THE COGNATES IN EACH THOUSAND WORDS OF THE  
BUCHANAN WORD BOOK

		Frequencies by Thousands in Buchanan Word Book				
		I	II	III	IV	V
	I	5.17	2.19	5.88	3.80	2.59
Cognate	II	64.54	65.51	55.29	49.13	48.32
Classifi-	III	27.88	28.21	36.46	44.29	47.36
cation	IV	2.59	4.07	2.35	2.76	1.91

NOTE: This table should be read as follows: Words in Cognate Classification I compose 5.17% of the cognates in the first thousand words listed by Buchanan, 2.19% of those in the second thousand, 5.88% of those in the third thousand, 3.80% of those in the fourth thousand, and 2.39% of those in the fifth thousand.

Frequency by Thousands in Buchanan Word Book

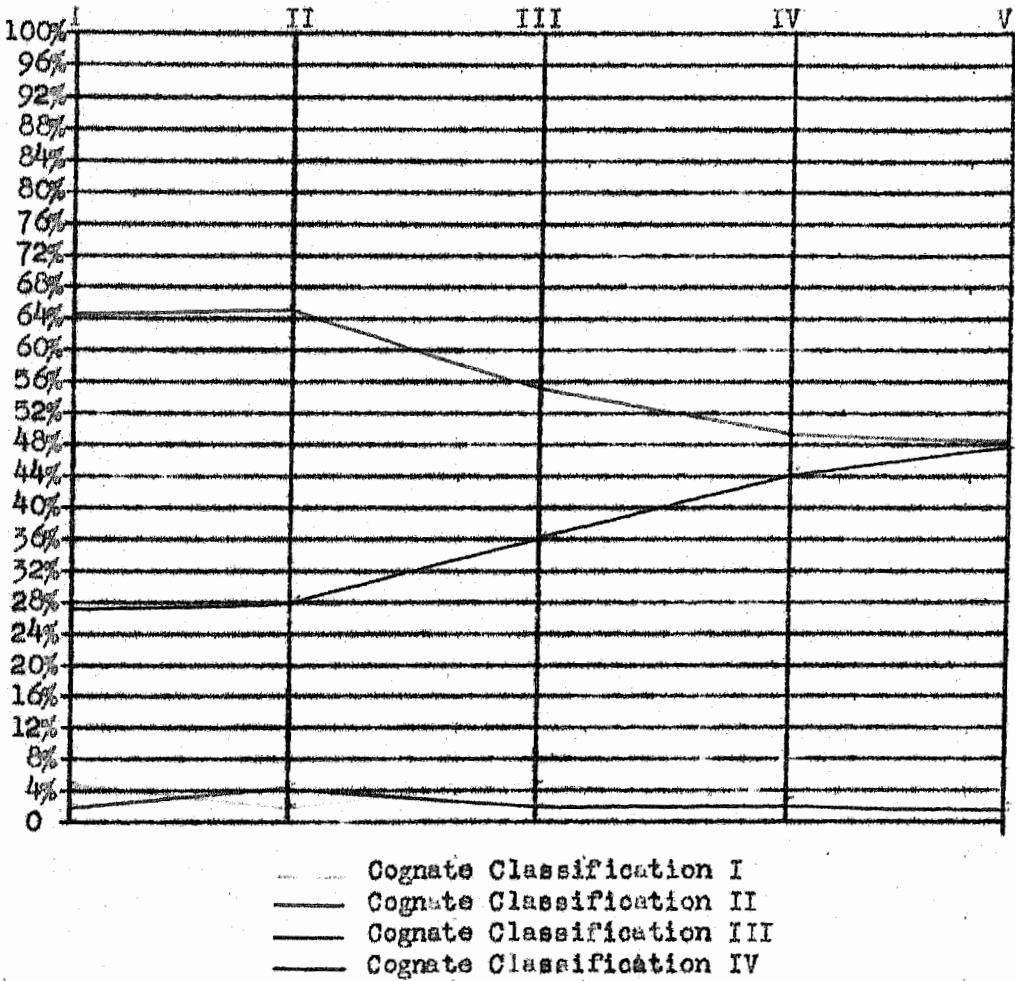


FIGURE 2

PERCENTAGE, ACCORDING TO COGNATE CLASSIFICATIONS, OF THE COGNATES IN EACH SUCCESSIVE THOUSAND WORDS OF THE BUCHANAN WORD BOOK



## CHAPTER VII

### CONCLUSIONS

From the data gathered in this experiment it will be seen that students on the high school level are able to recognize a great many Spanish words before they start their study of that language. Individual scores on the test ranged from 93 to 1,232 correct responses out of 1,323 possibilities. The average individual score was 751.5. The average high school student, then, has a reading vocabulary of approximately seven hundred fifty Spanish words before he ever begins his study of that language.

This is encouraging, to say the least, but there is another side of the picture. While there is a large number of readily recognizable Spanish words, there is also a large number of Spanish words that are not what they seem. Since even the approximate number of such words has not yet been determined, it is impossible to say with accuracy how these two groups compare in size. From the several lists of deceptive cognates that have been compiled, however, it seems probable that the reliable words outnumber considerably those which are unreliable. Of those deceptive cognates actually tested, it was found that on only 53 out of 130, or 40.7%, did the number of wrong responses exceed that of the correct responses.

It has been shown in this study that not all words which the student or teacher of Spanish would designate as cognates have suggestive value for the high school student with his more limited experience with foreign languages and his smaller English vocabulary. The words

which appeared in the test given in the high schools were included with no intention to deceive or "catch" the student. No attempt was made, on the other hand, to limit the list by eliminating subjectively those words which were suspected to be too difficult. It will be observed that the percentage of correct response on various words ranged from zero as on indigena to 98.5% on agricultura. There seems, however, to be a slightly greater proportion of easy than of difficult cognates in the list. On 60.91% of the words, 50% or more of the students made the correct response, a fact which indicates high recognizability for this per cent of the words.

A study of the percentages of correct responses at the various high school levels reveals a tendency toward a directly proportional relationship between high school advancement and the ability to recognize cognates. This is particularly noticeable when the freshmen percentages are compared with those made by the seniors. The general upward tendency may be attributable to improvement in English vocabulary and to increased experience with foreign languages. There are many exceptions to such a general trend when successive classes are considered, however. This seems particularly true of a comparison of junior and senior class percentages, the former often being the higher. This discrepancy may be due to the small number of subjects taken from each of these classes, or it may indicate that little improvement in ability to recognize such words is made at this level. Although consideration of language carry-over was not within the province of this study, it was observed that, in general, students having studied Latin were more successful in recognizing Spanish-English cognates than were those who had not.

A study of the relationship existing between the Buchanan word book and the recognizability of cognates selected from the five thousand words of highest frequency rank given therein reveals the rather interesting fact that the proportion of easily recognizable cognates diminishes with each successive thousand, while that of those cognates not generally recognized increases until parity between the two is reached. This indicates that the Buchanan count is a fairly reliable guide to cognate recognizability. That is to say that if a book were being written for beginners in Spanish and based on the first thousand words in Buchanan, the cognates contained therein would, on the whole, be more easily recognizable than those contained in thousands of lower frequency. This is easily explained if we assume that words frequently used in Spanish are those which occur most often in English. While the Spanish cognate of high frequency may not resemble the English word any more closely than those cognates of lower frequency, its equivalent is usually within the range of the English vocabulary of the high school student; therefore the proportion of correct responses for the more frequently recurring cognates is higher than for those encountered less often.

Although cognates were selected without regard to the thousand in which they are listed by Buchanan, other than that they should be within the first five thousand words, it was found that the number was fairly evenly distributed, 251 being in the first thousand, 319 in the second, 235 in the third, 289 in the fourth, and 209 in the fifth.

It should be borne in mind that this study deals only with the

relationship of the Spanish-English cognate to vocabulary recognition and silent reading ability. Its usefulness and limitations as an approach to this important phase of the study of Spanish have been discussed on preceding pages, but every teacher of Spanish is aware that the appearance of cognates may prove a real detriment to oral reading ability and correct pronunciation.

It is hoped that this study furnishes a fairly reliable and helpful guide to student recognition of some of the more common Spanish-English cognates.

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