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DIAGNOSTIC THEORY OF INFORMATION AS A TESTING TECHNIQUE TO ASCERTAIN THE DIFFERENT LEVELS OF SPANISH VOCABULARY SKILLS

THESIS

Submitted to the Graduate Committee of the Department of Curriculum and Instruction Faculty of Education State University College at Brockport in Partial Fulfillment of the Requirements for the Degree of Masters of Science in Bilingual Education

> by Eliza Bennette-Kinkead

State University College at Brockport Brockport, New York

May, 1990

SUBMITTED BY:

Eliza M. Kinkead

APPROVED BY:

2/25/91

Project/Thesis Advisor

Date

Second Faculty Reader

Date

nn

Chair, Graduate Policies Committee

Date

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Abstract

The purpose of this study was to investigate the use of information theory as a testing technique to diagnose the different levels of Spanish vocabulary skills. This study is not an attempt to analyze mistakes or to debate which language proficiency test is the best in testing language abilities or expertness. This test was constructed to determine the readability and the validity of information theory as a testing tool. A secondary purpose was to determine whether this technique could help increase a person's ability to comprehend reading material at their level of second language learning.

Vocabulary skills were tested at the beginner, intermediate, advanced and native stages of language proficiency. This study consisted of three experimental groups. The first was composed of fifty students from the Allendale Columbia School who are learning Spanish as a second language. Their ages ranged from twelve to nineteen years old. This group was further categorized as non-native language learners at the beginner, intermediate and advanced levels of language development. The second group consisted of non-educated native Spanish speakers and language trained non-native Spanish speakers and finally, the third group was composed of non-language trained educated Spanish speakers and language trained native Spanish speakers. The first group was tested with a variety of reading materials in the target language. This was done to verify their language level. The materials presented consisted of two to three paragraphs with part of the information deleted. The objective of the test was for the subjects to encode the missing letters within a five minute time frame.

All three groups were presented with a similar testing procedure at different levels of difficulty. The reading passages consisted of approximately 200 to 250 bits of information each. Shannon's citation for calculating redundancy was used to compute the predictability of the passages, as well as, to determine the level of each subject tested. The subjects in group one made significant improvement on test scores at their instructional level. The second and third group made positive, yet not significant improvements at their level of language proficiency.

Within the limitations of this study the following conclusions can be drawn:

 The findings of this project suggest that the results of this study must be interpreted with caution and can only be generalized to a similar population.

2. The findings failed to show any significant difference between a language trained non-native Spanish speaker and a non-language trained native Spanish speaker. 3. The findings suggested that for classroom applications and implications further research is warranted.

Chapter I

Statement of the Problem

Purpose

The purpose of this study was to investigate the use of information theory as a testing technique to validate the different levels of Spanish vocabulary skills. A secondary purpose was to determine whether this technique could help increase a persons ability to comprehend reading material at their level of second language learning.

Need For Study

Educators have always recognized the importance of vocabulary in the development of language; the level of vocabulary not only provides the means of oral and written communication, but also serves to extend and enrich a persons' experiences through reading. (Gary and Holmes, 1939). For second language learning this is also true, thus, the acquisition

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process varies from that of the first language, in that, the development of reading and writing skills are emphasized from the very beginning.

Since, the skill emphasis is a technique used in most second language learning all four skills are usually taught simultaneously. The development of these four skills were considered very important in this project for two reasons; first the subjects were already exposed to many grammatical structures in the target language, and secondly, it is believed that there is a high degree of positive transfer from one skill to another.

In using the theory of information, the subjects must rely on both their language skills in order to recognize cues in a written passage and, the redundancy of language to predict letters and words on the basis on what is already present in the passage. The moment that an uncertainty is resolved, it becomes information. Information which conveys meaning, conforms to rules of spelling, structures and sense. All these rules are skills learned in advance as information shared between the writer and the reader (Campbell: 1982).

(2)

A need exists for a standardized proficiency test which foreign language teachers can easily use in the classroom to assess their students' generalized language competences against a common metric (Clark: 1972). The theory of information may prove to be the basis for such a measure, since it can be used as a method in diagnosing vocabulary levels as well as a teaching technique for improving reading comprehension. Further investigation into the use of the theory of information as an instructional technique in second language learning appears to be warranted. This study investigates the use of information theory to diagnose and validate the different levels of Spanish vocabulary skills.

Questions

Is the theory of information a valid measure of second language vocabulary skills?

Is the theory of information a valid measure of second language reading comprehension?

Is the theory of information a valid measure of second language proficiency?

(3)

Definition of Terms

In terms of language, <u>The Theory of Information</u> is used to investigate any system in which a message is sent from one source to another. As with a sentence conveying information from the sender to the receiver (writer-reader); more data might be sent than is strictly necessary to convey the meaning intended by the sender. Consequently, the message becomes partly predictable. Due to the natural redundancy in language communication, part of the information of a sentence could be deleted and the receiver would still be able to reconstruct the message by using his language skills to recognize cues in the sentence.

Information as a word has never been easily defined. Currently, in its most familiar sense, information is news, intelligence, fact and ideas that are acquired and passed on as knowledge. Information is the non-random element in the entropy principle to generate new structures to inform the world in novel ways (Campbell: 1980). In information theory, a precise measure of the information content of a message, measured in bits and ranging from zero when the entire message

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is known in advance to some maximum when nothing is known of its content.

<u>Entropy</u> in information theory, a measure of the information of a message evaluated as to its uncertainty.

Language any means of communicating, as with human speech or vocal sounds so used or the written symbols for them; letters, numerals, rules, signs, gestures, animal sounds etc. used for the transmission of information.

<u>Communication</u> the act of giving or exchanging information, signals or messages by speech, gestures, writings, etc. from one source to another.

Message communication passed or sent between persons by speech, in writing or by signals.

<u>Predictability</u> the act of stating what one believes will happen. The ability to foretell what will follow.

<u>Redundancy</u> in terms of language, using more bits of information than are actually needed to communicate meaning.

Fluency the ability to speak and/or write effortlessly.

<u>Competence</u> referring to knowledge of the system of the language, including rules of grammar, vocabulary and how linguistics elements can be combined to form acceptable sentences,

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based on the individuals performance or actual production and comprehension of specifics linguistics events.

<u>Proficiency</u> this term implies the degree of competence through training or performing with expert correctness and facility.

<u>Proficiency Test</u> the method used to measure an individual's general competence in a second language, independent of any particular curriculum or course of study.

<u>Vocabulary Skills</u> all the words used with great ability by a particular person, class or profession in full active speech and/or written form of a language communication.

Language Acquisition and Learning. Acquisition is a subconscious process in which a person acquires their first language, on the other hand, learning implies a conscious knowledge of rules of grammar of a second language and their application in production.

Bit the smallest piece of information conveyed by a letter, space or punctuation.

<u>Readability</u> in the broadest sense, readability is the sum total of all elements within a given piece of printed material that affects the level of success which a group of

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readers attains or the extent to which they understand, read at optimum speed, or find it interesting.

Validity of a test the validity of a test is the extent to which a test actually measures what it claims to measure.

Limitations of the Study

This study included fifty students from Allendale Columbia School which is located in Rochester, New York. Results may vary with a larger testing population.

Summary

Information theory as a teaching and testing technique for diagnosing vocabulary levels can produce significant gains in reading comprehension. This technique actively in volves the student in the reading process. I noted that the comprehension level of poor language learners was improved since they had to more effectively use cues in the context of the written passage.

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Chapter II

Review of Literature

Purpose

The primary purpose of this study was to investigate the use of information theory as a testing technique to validate the different levels of Spanish vocabulary skills. A secondary purpose was to determine whether this technique could help increase a persons ability to comprehend material at their level of second language learning.

Theory of Information

Information became a concept with the dawn of the age of electronic communication. Moreover, information became a theory presented to the world by Claude Shannon of the Bell Telephone Laboratories. (Claude Shannon: 1980). He published

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two papers in the Bell System Technical Journal in July and October of 1948. His papers consisted of a set of theorems dealing with the problem of sending messages from one place to another quickly, economically and efficiently. Although, Shannon's works were related to the field of engineering, he encompassed not only a few types of information, but all kinds everywhere (Campbell: 1980).

Language and Communication

Communication is not only confined to radios, telephones and television channels. It occurs in nature, wherever life exits. The human being is the most complex communication network on earth, and language is a code which preserves the orderly structure of oral communication.

The messages of speech are conveyed so clearly that they are still not fully understood by man who has not yet begun to comprehend how such messages are separated from noise , (Shannon: 1948). When speech is delivered it is immersed in noise. Noise is disorder, it tends to randomize and distort

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messages, making them unreliable. However, nature has succeeded in finding a way to resist or at least reduce the frequency of noise in speech; so that the sequences of symbols sent by the message source reach their destination more or less in its original form (Campbell: 1978)

Predictability

In nearly all forms of communication, more messages are sent than are strictly necessary to convey the information intended by the sender. Such additional messages diminish the unexpectedness, the surprise effect, of the information itself making it more predictable. A predictability caused by redundancy (Shannon: 1948).

A person reading a passage may be able to predict the next letter or words in the sentences on the basis of what he has already read. Given half a word, he can often predict the other half or he may be able to make a reasonable guess at it. The reason for this is that written language is never completely unpredictable (Campbell: 1978). If the language

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that we use to express our thoughts, feelings and ideas were unpredictable, our message would be nonsense. For a written message to be understandable, to convey meaning, it most conform to rules of spelling, structure and sense. These rules, known in advance as information shared between the writer and the reader, reduce uncertainty by making the message partly predictable (Campbell: 1978).

Redundancy

Redundancy increases predictability by reducing errors and making certain letters and groups of letters more probable. In English, as in other languages, redundancy can be of more than one kind. One type of redundancy consists of rules of spelling and from the sequence of letters in a word.

The first type of redundancy consists of the appearance of a letter more often than other letters over a fairly long stretch of text. For example, the letter "e" appears very often in English and in Spanish texts. The second type of redundancy arises from the fact that the probability of a

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certain letter occurring in a word depends, to a greater or lessor degree, on the letter or letters which precede it. An example of this will be "i before e except after c."

Shannon tried several ways of estimating the amount of redundancy in English texts. He used his knowledge of secret codes to compress a passage of prose. He composed sentences of pure gibberish by randomly typing sequences of letters and then programming in rules of redundancy, so that its sequence resembled English prose more closely. In addition, he also played games in which the players of a team would have to guess the next letters until reaching the end of the sentence. If the player made an incorrect guess, he would be given the correct letter as a cue. For example; there were 100 letters in a full sentence, but the player only needed to be told 25. Given these cues the player was able to predict the rest of the sentence in its entirety. 75% of the letters were predictable given the knowledge of the rules of spelling, structure and sense.

According to Shannon the figures are even higher in the case of whole pages or chapters, where the readers are able to get an idea of the long range context of a text, including its theme and literary style. This means that, much of what we write is dictated by the structures of the language and is more or less forced upon us (Campbell: 1980).

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Information Theory As a Measure of Readability

Information theory was first introduced to the world by Claude Shannon (1948) as a tool for estimating the amount of redundancy in an English text. By using this technique a passage could be taken from a text book, typed with deletions, and then completed by the students. The number of correct guesses or predictions will measure the readability of the passage and would indicate whether the student could read the text independently or whether assistance would be necessary or whether the material was too difficult for the student.

Often an assessment of the reading difficulty of a text is made by the publisher or by a teacher using one of several standard readability prediction formulas. These formulas are based on factors such as sentence length and number of difficult words or a syllable count. These formulas ignore other factors which affect the readability of a selection (Taylor: 1953). Some of the factors are concept load, format of the material, organization of ideas, and writing patterns of the author (Hittleman:1978). Standard formulas do not take into account linguistics constraints, including syntactic and semantic cues, which operate between and among sentences (Ramanauskas: 1972). Professional judgment most be used in selecting an

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appropriate passage. It must be a passage that the pupils to be tested would want to read, and it must be a passage that they could reasonable be expected to read. Teachers must remember that deletions will add to the difficulty of the passage. If the passage is too difficult the test will fail to discriminate well between weaker and stronger pupils. If it is too easy it will fail to discriminate between able pupils (Petronivich: 1970; Harrison: 1980). Since information theory applied to language testing seems to include these factors, it also may provide an accurate measure of vocabulary difficulty.

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Information Theory As a Measure of Comprehension

The process of comprehension cannot be examined. However, the product or reader's behavior after reading a passage can be seen. A reader's comprehension can be measured by his or her behavior exhibited after he/she has read a passage (LaSasso: 1980). Semantics plays an important role in reading. Most communication situations require the reader to construct semantic representation of objects, relationships between objects, events, state of affairs, and the like (Barclay: 1973; Stauffers: 1979). In contrast, Stauffer and Barclay, Robbins and Hatcher (1981) state that word recognition and word comprehension training do not affect the subject's comprehension of sentences. They recommended that knowledge of syntax is the most important role in reading comprehension. While discussion concerning semantics and syntax cause disagreement among researchers, other aspects of comprehension produced agreement.

Taylor (1956) stated that: "If a passage is readable and that means understandable, then the factors that measure readability should measure comprehension too." He concluded that learning depends on comprehension and retention of new information.

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Summary

It can be said that redundancy increases predictability. Words usually contain more letters than are strictly necessary for understanding. Language is redundant, as well as, predictable and this predictability allows us to be able to use contextual cues more efficiently and effectively during active or silent reading.

In this study, the theory of information, applied to language testing appears to be useful in determining the levels of Spanish vocabulary skills of each subject. Students with poor vocabulary skills in the target language were able to focus their attention on the passage during reading. Moreover, they were able to attain an understanding of the relationship between oral and written context. In addition, it became apparent that the subjects were constantly being reinforced and motivated with the content of the passage.

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Chapter III

Design of The Study

Purpose

The purpose of this study was to investigate the use of information theory as a testing technique to categorize the different levels of Spanish vocabulary skills. A secondary purpose was to determine whether this technique could help increase a persons ability to comprehend reading materials at their level of second language learning.

Methodology

This study was based on the work done by Claude Shannon (1948) on secret codes during the Second World War and, moreover, the development of a new theory of information. The subjects consisted of three experimental groups. The first

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group was composed of fifty students from one upper middleclass suburban independent school. These students were all studying Spanish as a second language. Students ranged from twelve to nineteen years of age. They were all at different levels of second language development, as well as, different grade levels. There were eleven students at the novice level; sixteen at the first level; eleven pupils were at the second level; five at the third and seven at the fourth level of second language training.

Students also differed in socioeconomic background and intelligence. In addition, age, grade level and linguistic ability varied among the different stages of language development. All subjects were exposed to Spanish grammatical, syntactical and semantic structures as well as a knowledge of the functions and uses of the language. Moreover, they were able to communicate at their level of language development.

The subjects in group one were pre-tested with three passages of approximately 200 to 250 bits of information each. These passages were chosen based on their context, style, length and readability. One passage at the first level was taken from a cultural note found in the text <u>Spanish For Mastery</u> <u>One</u> and a second passage from <u>Spanish For Mastery Two</u>.

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The second passage was a small sampling of a famous Spanish literary text. The third passage was taken from a Spanish short story textbook for levels three and higher. It was necessary to cover all language levels. Moreover, passage difficulty was calculated by progressively deleting letters to make the passage less predictable. In place of the deleted letters a typed two spaced line was inserted.

The first testing took place on October 10, 1989 and the second on April 23, 1990. The test materials were completely new to the students. The students had no previous contact with the content of the tests. Both tests were divided into six levels of difficulty. Level six being the most difficult and zero (novice level) the easiest. The subjects had no knowledge of this; moreover, they had to try and complete all six levels of the tests in a given time frame. Beginning with level six, the time frames ranged from five minutes to complete level six and five minutes to complete level five. Level four had a time frame of four minutes and decreasing to thirty seconds for the lowest level.

The second group consisted of four non-college educated native Spanish speakers and three language trained non-native speakers.

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Group three was composed of three language trained-native Spanish speakers and three non-language trained educated native Spanish speakers. Groups two and three were tested in the same manner in which group one was tested, ranging from the most difficult with the maximum time frame of five minutes to the least difficult being performed within thirty seconds. The level of frustration for all three groups ranged from high to low. However, the frustration length varied among the groups during testing and this was evident through the subjects' body language, gestures and socially inappropriate verbal expressions.

Procedure

At the beginning of the testing period, the instructor read the directions to the subjects as they followed along on their test copy. The duration of the testing period was twenty-five minutes with a thirty second break within each level tested.

The subjects worked independently with no assistance from the tester. They read the passage silently and filled

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in as many of the deleted letters as they could. The subjects had to draw from their own backgrounds and experiences as well as their knowledge of the target language structures to think of possible letters and to select the best one to fill in the deletion. All subjects were able to complete all deleted words at their stage of language development.

Summary

Three Spanish textbook passages were selected to test the Spanish vocabulary skills of fifty high school students who are studying Spanish as a second language. These students were grouped as language learners and labeled group one. Groups two and three were composed of subjects who had had ten or more years of experience in speaking Spanish. The subjects differed in socioeconomic background, age and intelligence. In addition members in group one differed in grade levels and stages of language development.

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Chapter IV

Analysis of Data

Purpose

The purpose of this study was to investigate the use of information theory as a testing technique to diagnose the different levels of Spanish vocabulary skills. A secondary purpose was to determine whether this technique could help increase a persons ability to comprehend reading material at their level of second language learning.

Findings and Interpretations

This study was designed to diagnose and validate the different stages of Spanish vocabulary skills attained by Native Spanish Speakers and non-native speakers of the language. The three passages that were used to assess the different levels of vocabulary skills among each subjects were of general reading comprehension. The predictability of language as

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well as the reduction of such predictability was used as a tool in making the passages less redundant. In addition, this became the basis for the creation of different levels of difficulty to assess each subjects' stage of development in the target language.

Questions 1 and 2

Is the theory of information a valid measure of vocabulary skills and reading comprehension?

The frequency of different parts of speech was taken into account when measuring vocabulary skills. Also the relationship between the numbers of nouns, verbs and adjectives used in the first passage with that of nouns, verbs and adjectives used in the second passage. There was no significant difference between the scores achieved in passage one and two; however, the number of class words predicted were significantly higher in the second passage than in the first. There was a difference of about .28 between the vocabulary scores of test one and test two. Table I through III establishes a correlation between the two sets of scores obtained on the tests.

(23)

	A	В	С
	Groups	Number of Subjects	Language Development
			Classification
(IV)	Advanced	7	L4
(III)	High Intermed	liate 4	L3
(II)	Low Intermedi	ate ll	L2
(I)	Beginner	17	Ll
(0)	Novice	11	LO
2 (NENS	SS)*	4	L4
(NNL)	[S)*	3	L4
3 (ENN)	LTS)*	3	L5
(LTNS	SS)*	3	L5

Table I: Distribution of Subjects by Experiential Based LanguageDevelopment Classification

* note: (NENSS) Non-Educated Native Spanish Speakers

(NNLTS) Non-Native Language Trained Speakers

(ENNLTS) Educated Native Non-Language Trained Speakers

(LTNSS) Language Trained Native Spanish Speakers

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	D	E	F	G
Groups	Number of	Number of	Number of	Number of
	Deleted Bits	Correct Bits	Deleted Bits	Correct Bits
	Passage One	Passage One	Passage Two	Passage Two
1 (IV)	75	52	72	56
(III)	60	44	57	45
(II)	50	37	43	38
(I)	39	33	37	34
(0)	24	21	37	34
2 (NENSS)	75	60	72	62
(NNLTS)	75	61	72	64
3 (ENNLTS)	85	57	80	65
(LTNSS)	85	63	80	67

Table IIa: Redundancy Comparison Between Passage One and Two

Table IIb: Group Average

Groups	Number	of Language	Gro	oup Scores
	Subject	s Development	Tes	st Passage
		Classificat	cion One	& Two
l (O thru	IV) 50	Ll- L4	74	85
2 (NENSS)	7	L4	81	88
(NNLTS)				
3 (ENNLT)	6	L5	71	83
(LTNSS)				
Table IIc	: Combined Voc	abulary Scores		
Table IIc Groups	: Combined Voc Number of	abulary Scores Combined		Validity
		-	oup Scores	Validity Scores
	Number of	Combined	oup Scores 54	-
Groups	Number of Subjects	Combined Tests Scores - Gro		Scores
Groups 1 (IV)	Number of Subjects 7	Combined Tests Scores - Gro 74	54	Scores
Groups 1 (IV) (III)	Number of Subjects 7 4	Combined Tests Scores - Gro 74 59	54 45	Scores .73 .76

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Groups Number of		Combin	Validity		
Subjects		Test Scores - G	Scores		
2 (NENSS)	4	.74	.61	.82	
(NNLTS)	3		.63	.85	
3 (ENNLT) (LTNSS)		.83 .83	.61 .65	.74	

It can be seen that both Group Scores on test one and Group Scores on test two are reasonably high, and that they are in line with the Validity Scores obtained from the correlation of the combined tests scores and the combined group scores.

It appears that greater familiarity with reoccurring words made the task of predicting and selecting letters much easier. Apart from the relative predictive difficulty of each level per se, the subjects had to make a clear distinction among structure words; nouns and pronouns, main verbs, adjectives

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and adverbs. The deletions of some of these grammatical structures made predictions much more difficult on the first and second passage.

Question 3

Is the Theory of Information a valid measure of second language proficiency?

The combined scores of the first and second tests were used to measure the concurrent validity of the language levels of each group tested. Validity scores of the first passage were correlated with scores obtained on the second passage. Eventhough, the first test was taken six months before the second test there was an increase in performances on the second passage.

Table III: Percentages of the Deleted Bits Answered Correctly By Language Development Classification

Groups	Number of	Validity Scores		
	Subjects	Test One	Test Two	
l (IV)	7	.64	.78	
(III)	4	.74	.77	
(II)	11	.75	.87	

(28)

Groups	Number of	Validity Scores				
	Subjects	Test One	Test Two			
(I)	17	.88	.88			
(0)	11	.89	.92			
2 (NENSS)	4	.80	.86			
(NNLTS)	3	.82	.87			
3 (ENNLT)	3	.69	.82			
(LTNSS)	3	.74	.84			
total		7.00	7.61			

What emerged from test one and test two was a distribution of the scores and the fact that the validity score was lower for the first test than it was for the second. Conclusions drawn from this could suggest that the second test was slightly too easy for the very able subjects. As it stands these tests

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could be used for all levels of ability. However, revision of the second test and the addition of sentences containing several more difficult items are needed to help spread out the scores at some of the language levels. Such revision would be relatively easy to execute, and the extra items would add to the overall validity of the test.

Summary

The purpose of this study was to examine the theory of information as a measure of vocabulary skills, as well as, the subjects comprehension of reading materials at their level of language development. The results indicate that the theory of information applied to language proficiency and vocabulary skills can be adapted with subjects of all ages and ability levels. Moreover, the theory of information may prove to be a valid method for diagnosing language proficiency.

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Chapter V

Conclusions and Implications

Purpose

The purpose of this study was to investigate the use of information theory as a testing technique to diagnose the different levels of Spanish vocabulary skills. A secondary purpose was to determine whether this technique could help increase a person's ability to comprehend reading material at their level of second language learning.

Conclusions

Within the limitations of this study the following conclusions can be drawn:

The findings of this study supports the conclusion that the theory of information can be a valid measure of language ability and vocabulary skills. As demonstrated with table one B, the mean scores for group one (levels 0-4), the subjects

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found the second passage to be the easiest and; passage one the most difficult. This was also certain for groups two and three. Since all levels of subjects were calculated together, it can be speculated that different scores would be obtained if only the high scores were analyzed.

Study Limitations

There are several limitations which must be considered when interpreting the results of this study. These limitations are:

 Non-random selections of subjects. The school's location and the socioeconomic status of the subjects.

2. Small sample size. The results of this study must be interpreted with caution. Considering this limitation, the results can only be generalized to a similar population.

3. Inferences in the reading process by uncontrolled variables (e.g. emotions, attitudes etc...).

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4. Further limitations were imposed by the twenty-five minute time limit for the completion of the reading comprehension test.

5. A large testing population would bring about different results.

Implications for Further Research

The findings of this study suggest that further investigation into the use of the theory of information as a testing tool to validate vocabulary levels is warranted. There are limited number of studies available in which this kind of technique has been used as a diagnostic tool. Additional research with a larger groups would add valuable information regarding the use of this technique. Further research should use a variety of reading materials and a larger testing population.

The results of the comparison between the first and second passages had a very high degree of relationship. However, more research is needed to determine if one of the passages discriminates development classification better than the other.

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Summary

It was concluded that the use of the theory of information for language testing enable subjects in group one (language learners) to more effectively utilize the syntactic and semantic cues which were available in the context of the passage as they were filling in deletions. However, the use of this technique did not appear to improve general reading ability. In addition, it is suggested that given over a period of time this analysis may change.

Suggestions for research included continued investigation of the use of the theory of information as a method for testing vocabulary skills, as well as, an investigation into various method of scoring and analysis. The results also implied that the information theory may be a valuable tool in assessing a person's ability to comprehend reading material at their level of second language learning.

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(36)

APPENDIX

(37)

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DIAGNOSTIC DATA

TABLE IB:

Sum of all scores obtained

____ Vocabulary Scores

Number of subjects (per-level)

TABLE II: Group Average

Sum of test deleted bits

_____Group Test Scores

Sum of vocabulary test scores obtained

TABLE III: Validity Scores

Combined test scores

_____ _ Combined Validity Scores

Combined group scores

(38)

TABLE IV: Validity Scores

Number of test deleted bits

_____ Validity Scores

Vocabulary test scores obtained

Test Directions

The following Passages have certain letters deleted. Each gap in the passages stands for just one letter that is missing. Read the passages carefully and write in the missing letters. You may find clues in the passage to help you. If you can think on more than one letter that will fit into the gap, choose the one letter that you think the author would have used.

On the next page is a sample of one of these tests. Fill in each gap with the letter you think was taken out. You will have five minutes to fill in the gaps on the first page, four minutes for the second, three for the third and decreasing to thirty seconds for the last page. ***You may begin when the tester say the word: GO

Please stop writing when the tester say the word: STOP

(40)

TEST ONE - LEVEL 6

FORM A

DON RAMON

(41)

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o R_mó_ v_v_a c_rc_ d_ _a_e_ci_,

e_ __a c_s_ d_ _a_p_, __ s_l_ _e_í ___ad_i __u_nd_ a_gd __a_un_o _r_en_e l_ __x_g_a. A_es_r __e __u __ s_ _i_o __ení_ __a __i __a __da_ q_e __o, d_n __amo __o p_s_b _____o___i_cu_n_a __no_, l_ __u_l __ac_a pre_u_i __u ____ _a_í __a_ad_ __a_t_nt_ j_ve_.

(6)

TEST ONE - LEVEL 5

FORM A

DON RAMON

(42)

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D____R_mo___v_v_a c_rc__d___ale_cia, e____n__c_s__d___amp_, y s_1____eni___a _ad_id___u_nd___a_gu___a_un_o___r_ent__ 1___ ex_g_a. A_es_r __e __ue _____ijo __eni__ 1__ m__s_a __da___q_e __o, __o____am__n __o p_s_b___d___1_s c_nc___nt___a_os, 1____c_a__ _ac____ pre_um_r __ue __e __ab_a __asad__ _ast_nt___J__en.

(5)

TEST ONE - LEVEL 4

FORM A

DON RAMON

(43)

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Don R_mó_ v_v_a c_rc_ d_ _ale_cia, e_ u_a c_s_ d_ _amp_, y s_l_ _ení_ a _ad_id _u_nd_ a_gú_ a_unt_ _r_ent_ l_ ex_gía. A_esar _e q_e s_ hi_o _ení_ l_ mis_a _da_ _u_ _o, d_n _amo_ _o pas_b_ d_ __s ci_cu_n_a _ño_, l_ cu_l _ac_a pre_umi_ _ue _e _abí_ _asad_ _ast_nte j_ven.

(4)

TEST ONE - LEVEL 3

FORM A

DON RAMON

(44)



Don R_mo_____vv_a __er_a __e __alen_ia, __n ___ c_s_ d_ ca_p_, y _ol____vn_a ____adr_d c___nd__ a_g_n as_nto u_gent_ l_ ex_g_a. A_es_r d_ q_e s_ hi_o __eni___a __ism___ed_d q_e __o, __on R_mo___ _o __asab___e __o __cin__uen_a a_os, __o c__al __aci__ pres_mi___ue s_ __abi___c_s_d_ __astan_e j_ve_.

TEST ONE - LEVEL 2

FORM B

EL MATE

(45)

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EL MATE



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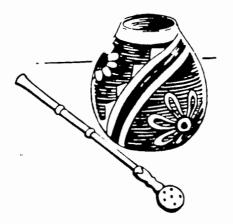
TEST ONE - LEVEL 1

FORM B

EL MATE

(46)

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a yerb mate _s _na pl_nt_ _e l_ cua_ s_ h_c_ _n_ bebid_, _n te llamad_ "mate." _s m_y p_pula_ e_ _l Paraguay _ l_ Argentin_. S_ beb_ _n un_ calabaz_, p_r m_dio d_ u_ tub_ ll_mado "bombill_."

TEST ONE - LEVEL 0

FORM B

EL MATE

(47)

1



La yerb_ mate _s un_ plant_ de l_ cua_ se h_ce un_ bebida, u_ te llam_do "mate." _s m_y popul_r e_ _l Paraguay y la Argentin_. Se b_be _n una calabaz_, p_r medio d_ u_ tubo ll_mado "bombill_."

TEST TWO - LEVEL 6

FORM A

LOS GITANOS

(48)

A DESIGNATION OF

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NOMBRE:

FECHA:



Ls g_t_n s d_Ep_n s_n <u>éers</u> <u>o</u> s<u>hbldd</u> <u>n</u> <u>a</u> <u><u>u</u>ia <u>n</u> <u>l</u> <u>al</u>. <u>L</u> <u>myr</u> <u>at</u> <u>d</u> <u>ls</u> <u>iao</u> <u>sn</u> <u>e</u> <u>nauí</u>, <u>sbn</u> <u>itrrtr</u> <u>o</u> <u>bie</u> <u>d</u> <u>aula</u> <u>ein</u>, <u>ae</u> <u>cm</u> <u>e</u> <u>lmno</u>, <u>a</u> <u>eud</u> <u>la</u>, <u>e</u> <u>fnag</u>.</u>

TEST TWO - LEVEL 5

FORM A

LOS GITANOS

(49)

ġ

NOMBRE:

FECHA:



_____g_tano_____E_p_n _____c_lebr_s _o__ s__h_b_li_ad __n l____úsi____ e______ail_. L___ay_r _art___e l____g_ta____ __n d___nd_l_ci__ y s_b____i_terp_et_r _o___b_il_s d__ aq___lla r_gió_, tal_____omo ____f_amenco, _____seg_idil_a, _____fanda_go.

(5)

TEST TWO - LEVEL 4

FORM A

LOS GITANOS

(50)

····: 010001 0.

4

NOMBRE:

FECHA:



_____g_tan___d___pañ___n__él_bre___o___u h_b_lid_d __n ____m_si_a y e___l __aile. L___ayo__ p_rt_____o__g_ta_o_ s______nd_lucí_____ab_n __nterp_et_r l___ b__les d___quella __egión, tale__ c_mo ____ flam_nco, ____ seg_idilla, _____ fandango.

(4)

TEST TWO - LEVEL 3

FORM A

LOS GITANOS

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NOMBRE:

FECHA:



_____gitan____e _spañ__ s___ céleb_e__po__ s__h_bilid_d __n l___m_sic__ y __n __l __ai_e. L___m_yor p_rt___e _o___itan___ _o__ d__ Andalucía, ____sbe___i_terp_etar l_____ail_s d___aquel_a r_gión, tale__ c_mo e___fandang_, l___seg_idilla, y _l_flamenc_.

TEST TWO - LEVEL 2

FORM A

LOS GITANOS

(52)

NOMBRE:

FECHA:



_os gitano___e __sp_ñ__s ___ célebre__po____u h__bilid__d __n l___músic__ y __n e___aile. L__mayo__ p_rte d__ l__s gitan**o**___on d__ Andalucía, y s__ben __nterp_eta__ lo__ b__iles d__ aq__ella regi__n, tales co__o __l flamenc__, l__ seg__idilla, ___l fandango.

TEST TWO - LEVEL 1

FORM A

LOS GITANOS

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- ADDRESS AND F. F. SAMEAN

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(53)

NOMBRE:

FECHA:



Los g_tano_ de Es_aña s_n cél_bres _or su _abil_dad e_ la m_sica _ en el _aile. L_ mayo_ part_ de lo_ gita_os so_ de An_aluc_a, y s_ben i_terp_etar _os ba_les d_ aque_la r_gión, _ales _omo e_ flam_nco, l_ segu_dill_, y el f_ndan_o.

(1)

TEST TWO - LEVEL 0

FORM A

LOS GITANOS

. _ ..

FECHA:



L_s gitano_ d_ Esp_ña s_n célebre_ po_ s_ habilidad __n l__músic_ y en e__bai_e. L__mayo__p_rte__e lo__gitano__s_ben __nterpr_tar __os b__iles d__aquella regió__, tale__ como __l flamenc__, l__seguidilla, y __l f__ndango.



Don Ramón vivía cerca de Valencia, en una casa de campo, y sólo venía a Madrid cuando algún asunto urgente lo exigía. Apesar de que su hijo tenía la misma edad que yo, don Ramón no pasaba de los cincuenta años, lo cual hacía presumir que se había casado bastante joven.

(55)

<u>El Mate</u>



La yerba mate es una planta de la cual se hace una bebida, un té llamado "mate." Es muy popular en el Paraguay y la Argentina. Se bebe en una calabaza por medio de un tubo llamado "bombillo."



Los gitanos de España son célebres por su habilidad en la música y en el baile. La mayor parte de los gitanos son de Andalucía, y saben interpretar los bailes de aquella región, tales como el fandango, la seguidilla, y el flamenco.

READING COMPREHENSION TEST



Don Ramón vivía cerca de,
en una casa de campo, y sólo venía a
cuando algún asunto lo exigía.
Apesar de que su hijo tenía la misma edad que yo,
don no pasaba de los
años, lo cual hacía presumir que se había
bastante j•





La yerba	es una planta de la cual
se hace una	_, un llamado
"" Es muy popu	lar en el
y la Se	bebe en una
por medio de un tubo llamad	o "•"

NOMBRE:

FECHA:



Los gitanos _	Espana		celebres por	habilidad
en música _	en	baile.	La mayor parte	l
gitanos de	Andalucía,	S	interpretar	bailes
de aquella región,	tales c		flamenco,	seguidilla,
el fandango.				

SUBJECTS TESTS RESULTS

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COMMENTS SPANISH BEGINNER

The students at this level are able to operate in only a very limited capacity. However, they can satisfy immediate needs with learned utterances.

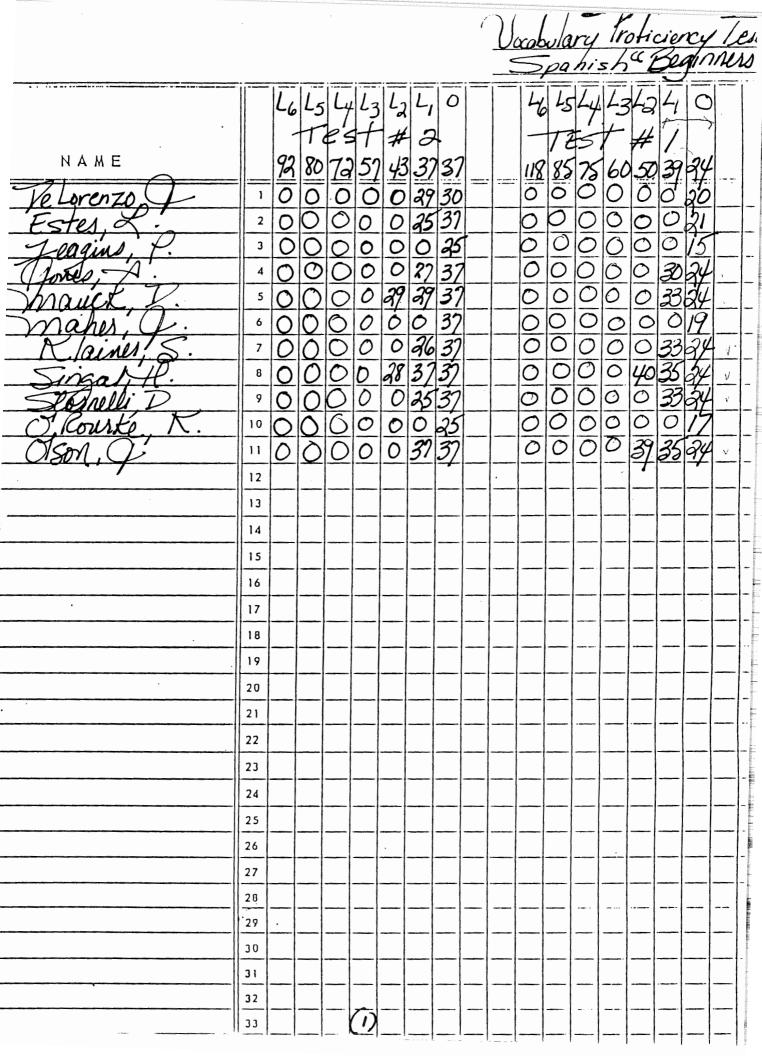
All students were tested at their current level of language development. The test passage used in test one and two consisted of the same number of bits (letters, punctuation marks, blank spaces), length and/or duration. However, the level of redundancy on test two was much higher than that of test one.

On test one, most students at the novice level were able to score at their current level of language development with the exception of six subjects who scored above their current level and two subjects who scored two levels above their present language level. In addition, subject number three scored seven points below the novice level.

Subject number three also failed to complete all deleted bits on test two. Moreover, subject number ten who scored two points above passing score on test one, scored two points below passing score on test two which was the easiest passage of both test passages.

Since the majority of the class were able to accurately complete all deleted bits within the prescribed time, it is safe to assume that these students as a group are placed at their current level of language development.

In conclusion, one of the subjects in this group is functioning at Novice-Low, four of the subjects are at Novice-High and six are at the Novice-High or Intermediate-Low.



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COMMENTS SPANISH ONE

The students at this level are able to satisfy most survival needs and limited social demands in the target language.

The students were tested at their current level of language development. The test passage used in test one and test two consisted of the same number of bits (letters, punctuation marks and blank spaces), length and/or duration.

On the first passage test, all but one subject was able to accurately complete all deleted bits. In addition, five subjects scored above their current level of language development.*

On test passage two, the subjects were able to complete all deleted bits in the prescribed time frame. However, subject number six was unable to complete all the missing letters accurately, moreover, he scored two points below the passing score. Subject number five who had scored at her level one on test passage one, scored above her current level on test passage two.

Most of the students did better on test passage two than on test passage one. This was due in part by an higher number of redundancy in passage two. In addition, there was a difference of 3-4 points between test one and two. Most of the students who did well on test passage one, were able to maintain their scores on test passage two and some were able to score above their current language level.

* Language Level: <u>Function</u>. The students in this group can create with the language, ask and answer questions, participate in short conversation.

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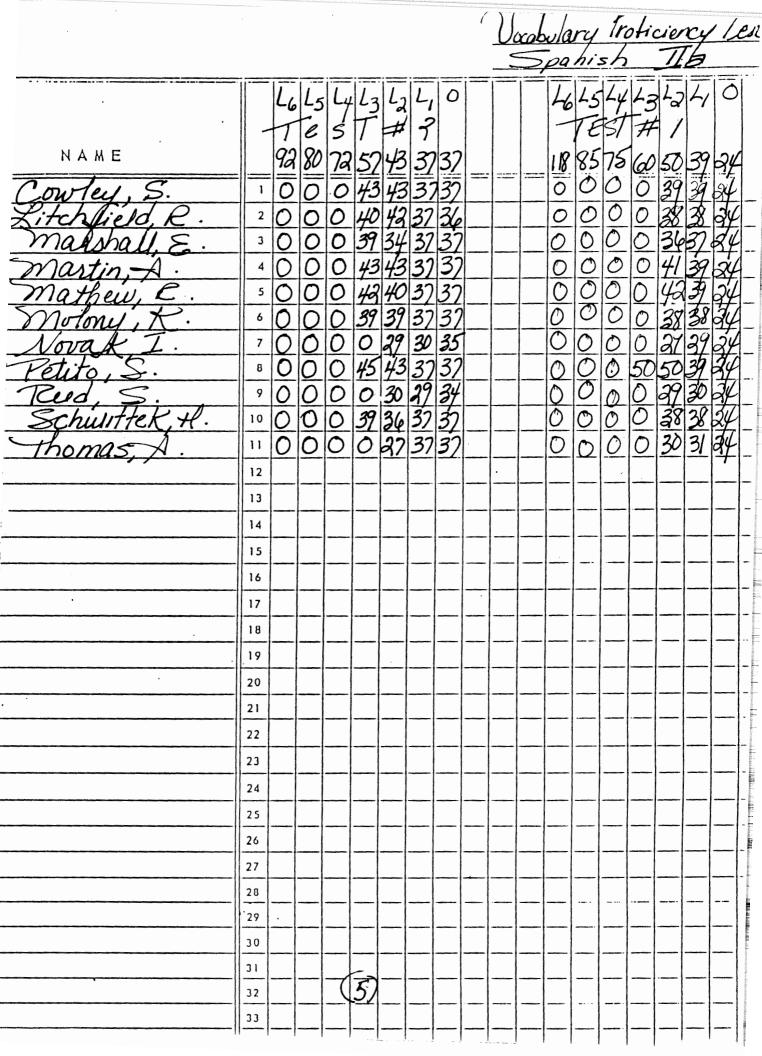
COMMENTS SPANISH TWO

The students at this level are able to fully participate in casual conversations, can express facts, give instructions, describe, report, and provide narration about current, past and future activities.

All students were tested at their current level of language development. The test passages used in test one and test two consisted of the same number of information bits. However, the frequency of redundancy was higher on test passage two.

On test one all but three students failed to score at their current level of second language development. These students have had an history of having difficulties in learning a second language as well as testing anxiety. Contrary to these three pupils, subject # 8 scored above her current level of second language development by thirteen points above the passing score at level three.

On test two subjects # 1, 2, 4, 5, 8 scored at level three. Subject # 8 scored at level three on both test passages one and two. Therefore, it is safe to assume that this student current level of second language development is higher than level two. Contrary to subject 8, subjects # 7 and 11 were unable to pass both test passage one and two. Due to previous data on these students it would not be safe to state that they are not functioning at their current level of Spanish language development. However, it might be safe to say that these subjects are still at the beginning stage of level two. All other subjects at level two scored at their level of second language development.



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<u>COMMENTS</u> SPANISH THREE

The students at this level can converse in formal and informal situations, they can resolve problems, provide complex explanations, describe in detail with a great deal of precision.

All students were tested at their current level of second language development. The test passages used in test one and two consisted of the same number of information bits. However, the passage predictability on test passage two was higher than that of test passage one.

On test passage one three out of four students scored at their prescribed level. Subject # 4 failed to pass test by three points.

On test passage two, all subjects were able to complete all deleted information bits in the prescribed time. Subjects one and three were able to accurately complete more than half of the deleted bits at level four, moreover, they failed to pass level four by two points.

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<u>COMMENTS</u> SPANISH FOUR

The students at this level are at the advance level of language training. Each individual has his/her own strength and or weaknesses in the target language.

The students at this level are able to tailored language to fit an audience. They can persuade, persuade and negotiate a point of view. They have, at the very minimum, a "professional" level of proficiency.

On the post test, group four (Spanish Four) were predicted to be at level four language learners. On test passage one, two out of seven subjects scored below their current level. In contrast, subject number two attained the highest score and completed more than half of the information on test passage one level 5. Moreover, subject two scored above her current level on test passage two level 5 by one point above the passing score.

Subject number three was able to complete all deleted bits on test passage one level 4. However, on test passage two she scored below her current level. Subject three low performance on test two was due to illness at the time of testing. The same can be said for subject # 4 who failed test one (due to an headache) but was able to complete and pass test passage two at his current level.

Subject # 7 failed to complete all deleted bits in both test passage one and two at her current level of second language learning. Moreover, on test two, subject seven scored one level below predicted group level.

All other subjects were able to complete and pass both test passage one and test passage two at their prescribed level of language development.

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<u>COMMENTS</u> <u>NON-EDUCATED NATIVE SPEAKERS</u> <u>VS.</u> NON-NATIVE LANGUAGE TRAINED SPEAKERS

All subjects were pretested to ascertain their current level of language development. The test passages used on both groups contained the same number of information bits. Test passage one was less predictable than test passage two for both groups. There was no significant difference between the level of language ability of the Non-educated Native Speakers and the Non-native Language Trained Speakers. Moreover, this sub-divided group was prescribed at level 4+ Spanish language speakers.

The proficiency level of the speech of these subject can be characterized as nearly equivalent to a native language speaker. Their speech is extensive, precise and appropriate to every occasion, with only occasional errors.

All subjects tested scored at their prescribed level of language ability. Although, scores for the Non-native Educated Speakers were higher than the scores received on both test passages by the Non-educated Native Speaker it was not significantly higher to make a difference. Most of the subjects did better on test two than test one.

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<u>COMMENTS</u> NON-LANGUAGE TRAINED EDUCATED NATIVE SPEAKERS <u>VS.</u> LANGUAGE TRAINED NATIVE SPEAKERS

All subjects were pretested to determine their level of language development. The test passages used for both groups contained the same number of information bits on test passage one and test passage two. The frequency of redundancy was higher on test passage two. Consequently, the level of predictability on test one was lower than that of test two.

The Non-language Trained Educated Native Speakers (N.T.E.N.S.) were diagnosed at level four. All subjects were able to complete all deleted bits at level four, however, most subjects had difficulties completing deleted spaces at level five, except for subject # 2 who scored eleven points above the passing score.

On test passage two, all subjects did significantly well and were able to complete all deleted bits at their prescribed level. This group was also able to complete more than 75% of the deleted bits at level five, moreover, they scored one level above their prescribed level of language development.

The Language Trained Native Speakers (L.T.N.S.) were diagnosed at level five. All subjects were able to complete all deleted bits above their prescribed level of language ability. However, on test passage one all but one out of three subjects were able to complete and score at his/her current level.

On test passage two all subjects were able to complete all deleted bits at their current level of language development and within the prescribed time frame. In conclusion, none of the subjects tested were able to complete all deleted bits at level six.

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