IMPROVING READING SPEED AND READING COMPREHENSION AT HIGH SCHOOL LEVEL

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ESCUELA DE POSTGRADO
PROGRAMA DIDACTICA DEL INGLES
SAN JUAN DE PASTO, 1992

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Submitted as a partial requirement for the degree of Specialist in English Didactics

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1. GENERAL INTRODUCTION

The present study entitled "Improving Reading Speed and Reading Comprehension at the High School Level", is aimed at giving an account of the statistical differences between the population and the experimental group mean scores of a reading speed and reading comprehension post-test. In addition, this research work will validate specific reading speed and reading comprehension techniques.

This research study has as a motive the necessity to try out the effectiveness of certain teaching and learning techniques, which seek to improve the reading speed and reading comprehension skills. Specifically, this investigation will address questions about whether the experimental group subjects taught by means of special reading techniques would show a better performance on a relevant post-test than the general population made up of official and private, male and female high school students of Pasto.

The research hypothesis to be statistically tested here is whether the experimental group members taught through

special techniques would show a better performance on a post-test about English reading speed and reading comprehension than the general population made up of official and private, male and female, high school students of Pasto.

Furthermore, it is worth mentioning that the practical development of this research proposal has been undertaken from an interdisciplinary perspective. In fact, there exist sociolinguistic, psycholinguistic and linguistic theoretical foundations which support the conception and the fulfillment of this study.

The data analysis will be studied with T-test comparison Case I Study. It compares the sample mean with the eighteen groups as the representative population mean.

We will apply correlation analysis to test the correlation between reading speed and reading comprehension.

Finally, the specific topic of the present study "Improving reading speed and reading comprehension at the high school level" does not rely on a previous background, at least under the particular conditions that this study will be conducted.

Also we are concerned with diverse strategies that will assure successful reading abilities among our students.

1.1 INTRODUCTION TO THE PROBLEM

Reading in English is very important within our educative background, its negligence interferes with the development of all study areas because the person who does not read efficiently is not able to get involved in the learning process.

Effective reading is a step toward the appropriate reinforcement of abilities in the foreign language. Furthermore, reading comprehension in English, as an instrument of knowledge also serves the student for developing further knowledge in other areas and, sometimes for extending them. Reading in a foreign language is considered a continuation of the activity that the student has begun to develop in his native language. In addition, learning to read English in the secondary school level serves the student to extend his cultural horizons, because with the development of adequate reading skills the student becomes familiar with the language in which the scientific and technical publications are written. Nowadays, by means of this pre-experimental or pilot study, we want to research the

reading speed and reading comprehension levels of high school students in Pasto.

1.2 PROBLEM STATEMENT

Do the experimental group subject taught through specific techniques, specified below, show a better performance on a post-test about English reading speed and reading comprehension than the population made up of official and private, male and female high school students of Pasto?

1.3 PURPOSE OF THE STUDY

Our main purpose is to detect the reading speed and reading comprehension levels in English as a foreign language in eighteen groups at the ninth level of nine high school institutions in Pasto. In addition, we will encourage our experimental group students to be able to read with specific reading comprehension techniques based on: reading with purpose, predicting, linking sentences and ideas with reference to linking words, inference through the context and word formation. And reading speed techniques such as: scanning, skimming, reading words, phrases, and paragraphs in order to promote an effective reading speed as well as comprehension. Moreover we will compare differences between the

population and experimental group mean scores of a reading speed and reading comprehension post-test.

1.4 SIGNIFICANCE OF THE STUDY

The most important reasons which justify the development of the present study are:

- It seems that the topic of reading speed and reading comprehension has not been investigated within the educational context of Pasto.

- It is evident that high school students need to acquire reading speed and reading comprehension strategies in order to decode meaning lexical-structural, and cultural from graphic symbols. This is consistent with the general teaching guidelines of the "MEN" concerning the suitability of qualifying the student to deal with written English materials at the University level.

- The low performance of students' reading speed and reading comprehension levels and the lack of appropriate methodological knowledge of teachers regarding reading speed and reading comprehension have motivated the search for some reading techniques, which respond to the specific needs, and expectations of our students.

- The study of this topic is also relevant, because comprehensive reading makes the students interact with the language. By reading the students can improve lexical meaning, structural and cultural aspects, these being a subject of study with psychological, linguistic, social, and sociological implications in the area of reading speed and reading comprehension.

1.5 ASSUMPTIONS AND LIMITATIONS

1.5.1 Assumptions

This specific topic of the present study "Improving Reading Speed and Reading Comprehension at the High School Level" relies on basic concepts related to speed and comprehension techniques of many authors. Also we are concerned with the diverse strategies for assuring the conditions of successful readers in our students.

The concepts emitted by Jackey Richard, (1970) show how "the ability to read English rapidly and accurately depends upon careful instruction and purposeful practice", he points out that the students will have the peripheral vision for reading that consists in "the ability to see words on either side of the point at which your eyes focus".

In addition, Christine Nuttall (1982) says that "the good readers do not read word by word, they make fewer eye movements than poor readers. The foreign language student's problem is that he does not know the language well enough to read by chunks effectively. He tends to read word by word, specially if the text is difficult. So, to encourage good reading habits, it is necessary to give a lot of practice with easy texts".

On the other hand, Fernando Silva (1981) sustains that "Reading comprehension is regarded as one of the most important steps in the learning of language, since it serves as an instrument of knowledge and strengthening of the linguistic system structures. There exist some appropriate reading comprehension techniques or strategies which enable the students to acquire this skill"

Finally, Francoise Grellet (1981) also maintains that "Understanding a written text means extracting the required information from it as efficiently as possible". For example, we apply different reading techniques when looking at a notice board to see if there is an advertisement for a particular type of flat, and when carefully reading an article of special interest in a scientific journal.

We believe that the research design and the statistical design of this study turn out to be appropriate since they facilitate the achievement of our purpose (Hatch and Farhady, 1982).

1.5.2 Limitations

We consider the following limitations in the development of our study:

- Subjects were not picked at random in the experimental group because of the interference of internal regulations within academic institutions. For this reason, our study will be a pre-experimental or a pilot study rather than a true-experiment.

- There was not continuity in the experimental treatment. This is because of the fact that the instruction period is to be developed within the regular schedule of the institution.

- The possible lack of attendance of the students in the sample.

- The specific topic of the present study "Improving reading speed and comprehension at the High School Level" does not rely on a previous background, at least under the particular conditions that this study was conducted.

In fact, the present study allows for the motivation, above all, in the techniques of reading with purpose.

2. LITERATURE REVIEW

2.1 LEARNING TO READ IN A FOREIGN LANGUAGE

In general terms, Nuttall (1982) defines READING "as a meaningful activity which is concerned with making SENSE of written language rather than decoding print to sound". Reading is also seen as having four distinctive and fundamental characteristics - that it is purposeful, selective, anticipatory, and based on comprehension.

Reading is a psycholinguistic process closely related with the concepts "learning to read" and "reading to learn". Reading is a language skill susceptible to be acquired and improved. Frank Smith (1982), from a psycholinguistic perspective, holds that an understanding of how people learn to read should be approached from two points of view: the nature of fluent reading and the way in which all people learn. The general aim of learning to read in a foreign language should be to develop "fluent reading". That is, an act not only of deciphering but also of searching for meaning, in an appropriate and fast way.An understanding of "fluent reading" appears to require also the consideration of aspects such as the way in which language works, and the capacities and limitations of the human brain.

As to the concepts "reading to learn", it is necessary to keep in mind that "in many parts of the world a reading knowledge of foreing language is often important to academic studies, professional success and personal development" (Alderson 1984). An it is also to be noticed that foreign language learners should read the target language for the same sort of authentic reasons which motivate the reading even within their native language.

We consider that readers, in both the first and foreign language, do not read just because. They have to read necessarily, with a purpose..

In the same sense, Cristine Nuttall (1982) holds that "We read because we want to get something from writing: facts, ideas, enjoyment [...], whatever it is, we want to get the message that the writer has expressed. We are interested in what the writing means".

It seems clear that the concept referred to as "reading to learn" does not mean exclusively "reading to learn just the language". Teachers should keep away from, as Goodman (1970) points out, "... teaching reading as one of the means of teaching the language [...] including activities such as reading aloud, literal comprehension questions...". Teachers should teach reading for "meaning".

Taking into account what Smith (1982) says about "learning to read", in the sense that one learns (just) by reading, teachers should FACILITATE both learning to read and (or by) reading to learn. For this effect, they should consider all the possible psycholinguistic implications of the reading process, and the factors which impinge negatively on the desired effectiveness in the foreign language reading. So it turns out to be suitable that teachers be in touch with the investigations done by the experts.

The foreign language teacher should also make systematic observations of those factors which influence on the reading act. Sheila Been (1975) relates some of the most common. Students sometimes can not understand the text because they suffer from lack of sufficient vocabulary. The students are not used to reading independently. And they do not have the appropriate mental set which enables them to cope with the different reading demands.
Other negative factors (habits) found in the Foreign Language Reading are as follows: students read word by word, they read without integrating, they do not know the function and importance of connectors, they do not have

an appropriate mental set, and certain amount of previous knowledge, and amount of vocabulary.

The student's point of view

The purpose of any reading training or class is that reading turns out to be comprehensible. An here the student's point of view plays an important role. The student should have the opportunity to judge whether materials or activities are too difficult or too dull.

Based on this, teacher should, as Smith argues, understand those factors that make reading difficult, whether induced by the student, the teacher or the task. It would be reasonable that the teacher adapts the degree of difficulty or complexity of the reading material to the cognitive and affective possibilities of the students. The reading training should be in function of the students, taking into account their potentialities, limitations, needs, etc...

Other factors that, according to Frank Smith, may affect reading comprehension are: concentration on visual detail that will cause tunnel vision; the overloading of short-term memory by attention to fragments of text that make little sense; logyams in long-term memory as the student strives to be ready to answer questions or to write reports; attempts to sound

out words at the expense of meaning; slow reading; anxiety no to make mistake; lack of assistance when a child needs it for sense or even word identification; too insistent correction that may be irrelevant to the child and that may in the long run inhibit the self correction that is an essential part of the learning.

Teachers have a crucial role in helping students learn to read and give different techniques that increase the speed in reading.

On this point, Smith sustains that the teacher's main role is to understand the nature of fluent reading and of the general way in which students learn.

Also Smith says that the teacher must have a sympathetic awarness and a sensitivity in front of the student and their individual feelings, interest and abilities.

If the teachers wish to have satisfactory results, they should select the reading texts with responsability. According to Nuttall, the teacher should choose carefully the books that contain comprehension passages, accompained by well conceived questions or other exercises, books giving practice in particular reading skills.

She suggests to look at material from three points of view: readability, suitability of content,exploitability.

Readability has to do with the level of linguistic difficulty that a given text may present to the student; that is, the level of structural and lexical complexity. There are many ways of measuring readability, one of them being "the cloze technique"

Suitability of content the choice of reading texts should also take into account those subjects known to appeal to the students.

Of course, there are many factors which influence the students'tastes and preference, e.g., age and nationality. Therefore, the teacher should choose passages from diverse sources. He should make use of a wide VARIETY of reading material in order to satisfy the different interests and expectations of the students.

Exploitability Exploitation means facilitation of learning". A reading text is to offer the possibility of making use of it to develop the students' competence as readers.

The reflective observation of those factors can enable the teachers to reorient their work by adapting the "training process" to the student's needs, interests and expectations.

The teachers could begin such process by assigning texts on familiar topics and a specific purpose. There should be also a complexity progression, taking into consideration the cognitive and affective possibilities of the students.

Here we also enhance the importance of furthering the "training process" in a very systematic way. The teachers should be aware of the possible transference of negative reading habits from the native language to the foreign language. It is necesary that the teachers prevent the students from reading word by word, going back, finger pointing, vocalization progressively.

This should not be interpreted as a behaviouristic or audiolinguistic attitude. We want to mean that there should be a control of these "negative or bad" habits, from a humanistic perspective.

2.2 READING SPEED AND READING COMPREHENSION

2.2.1 READING SPEED FROM A PSYCHOLINGUISTIC PERSPECTIVE

From a psycholinguistic standpoint, reading speed should be understood in close association with the reader's mental performance. Smith (1982) holds that " it is the

brain that determines what we see and how we see it". He sustains that the brain's perceptual decisions are based only partly on information from the eyes, greatly augmented by information that the brain already possesses. That is, reading speed has to do with the possibility of integrating visual and nonvisual information, for the sake of getting "meaning" from a written context in a fast way.

The effectiveness at the reading event would be asured as long as three basic cognitive conditions are met. As a matter of fact, reading must be FAST; it must be selective; and it is to depend on nonvisual information (Smith 1982). Here is a brief explanation of these necessary and interrelated implications:

Reading must be fast. For this, the brain must always move ahead quickly, to avoid becoming bogged down in the visual detail of the text to the extent that tunnel vision might result (Smith 1982).

The intention of "comprehension" would be achieved when reading as much text as possible with every fixation to maintain meaningfulness.

Reading must be selective. Smith (1982) upholds that the brain does not have the time to attend to all the

information in the print and can be easily inundated by visual information. The reader should not read indiscriminately but "sample" the text. There exists selectivity when the brain makes maximun use of what it knows already and analyzes the minimun of visual information required to verify or modify what it can already predict about the text.

Reading depends upon nonvisual information. Nonvisual information is that we already have in our brain, is such background information relevant to the language and to the subject matter. The reader should attend to just those parts of the text that contain the most important information. And he should necessarily appeal to what he already knows about the topic.

These three aspects are closely interwined in the effective attempts of reading comprehension.

Finally, it is worth mentioning that the cognitive structure which makes "comprehension" possible should be described with the terms "nonvisual information, long-term memory, and prior knowledge".

Nonvisual information is understood as the knowledge we have stored behind the eyes that enables the brain to make sense of the visual information that comes through

the eyes while reading. Long-term memory is our permanent source of information about language and the world.

2.2.2 READING SPEED

The exercises of speed are intendeded to help increasing the peripheral vision, practicing rapid recognition of letters, words and phrases without regression. Richard C. Jackey (1970) gives us several exercises in order to improve speed reading: Reading words, reading phrases and reading paragraphs.

"Reading Words" has to do with the ability to see words at a single glance. This can increase the student's peripheral vision by eye exercises such as focusing in the center line, reading capital and small letters and so forth.

"Reading Phrases" is another exercise which deals with focusing at the center of a phrase and seeing two or three words, then moving rapidly to the next phrase.

"Reading Paragraphs" is a subsequent phase which requires focusing the eyes at the center of each phrase and then reading the paragraphs to focus the eyes at the center of the paragraphs and to make only one eye fixation in each time.

Moreover, Christine Nuttall (1982) proposes two complementary techniques aimed at improving reading speed: skimming and scanning. "Skimming" means glancing rapidly through a text to determine its gist. It is used, for example, to decide whether a research paper is relevant to our own (not just to determine its field, which we can find out by scanning) or in order to keep ourselves supperficially informed about matters that are not of great importance to us.

We can notice that, students are accustomed to plodding word by word, and the idea that some words in a text may be ignored or skipped certainly seem strage to students; but the techniques of skimming and scanning require this, therefore, it is very important to give them a special trainning period in order to promote students' reading skill.

As for "scanning", it demands glancing rapidly through a text either to search for a specific piece of information (e.g. a name, a date) or to get an initial impression of whether the text is suitable for a given purpose (e.g. whether a book on gardening deals with the cultivation of a particular vegetable).

Cristine Nuttall (1982) also maintains that in speed exercises of all kinds, students should be motivated to

beat their own records, not to compete with one another: there is much sense in trying to improve their own performance, and almost every one is capable of this.

In the present study, we gave the students a regular prog ramme of speed-reading exercises or techniques that helped them to understand how fast they can read if they try. All the techniques suggested by Richard Jackey and Christine Nuttall were developed in some high schools of Pasto, in the ninth level, with interesting results found in the "Data Analysis" section.

Most of the mentioned techniques should be familiar to the students in their native language in order for them to be used in the FL learning. It is well known that there is a considerable influence of the reading habits in L1 on the reading efforts in L2.

The application of reading speed techniques kindless clearly the students' motivation since the variety of new material keeps the students'interest and desire of active and creative participation in the classroom environment.

These techniques also create and satisfy the student's expectations as for the process of the technique development.

2.2.3 READING COMPREHENSION

In the present study, it is supported that the "raison d'etre" of reading is "reading comprehension carried out with appropriate " speed " . So we welcome the ideas of Françoise Grellet (1981) on the subject, in the sense that understanding a written text means extracting the required information from it as efficiently as possible. It is to be also noticed that there does not exist one type of reading but several according to one' s personal reasons for reading. Grellet (1981) points out that students will never read efficiently unless they can adapt their reading speed and techniques to their aim when reading. Thus, it seems clear that readers apply different strategies depending on their purpose. For example, if one is looking for a phone number, one quickly rejects irrelevant information and tries to find the desired point as soon as possible. Grellet (1981) also holds that reading involves a variety of skills.
The main ones are:

- recognizing the script of the language.
- understanding explicit stated information.
- identifying the main point of important information.
- understanding information when not explicitly stated.

- understanding relations between the parts of a text through lexical cohesion devices.

Françoise Grellet (1981) proposes the following reading comprehension techniques: predicting, linking sentences and ideas, logical inference of ideas.

Predicting : is a special technique aimed at improving the faculty of predicting or guessing what is to come next, making use of grammatical, logical and cultural clues. This technique is at the core of techniques such as anticipation or skimming, and we must devote some time to more systematic training by giving the students unfinished passages to complete or by going through a text little by little, stopping after each sentence in order to predict what is likely to come next.

Linking Sentences and Ideas: is another reading comprehension technique related to recognizing the various devices used to create textual cohesion and more particularly the use of references and link-words. Given the significance of knowing " the linking words " (prepositions and conjunctions) appropriately, it is necessary to encourage students, from the very beginning, to look out for such markers. Therefore, the simple recognition of those link-words help them to understand the development of the argument in the passage. And such

recognition is also useful to make an appropriate use of some reading speed techniques such as " skimming " and " scanning ". Grellet suggests some specific exercises which deal with " linking sentences and ideas ": recognizing the function of the connectors and finding equivalents, completing text with the missing link-words, transforming a series of statements and propositions into a coherent text by joining sentences and adding connectors ". In order to prevent students from being uncapable of recognizing the communicative value of the passages and the function of the markers, it is important to train the students, as early as possible to practice and handle this technique.This presents other advantages such as : making sense of a text in a coherent way, integrating the ability of reading comprehensively and quickly.

Logical inference of ideas: constitutes another technique related with making use of syntactic, logical and cultural clues to discover the meaning of unknown elements. Word formation and derivation also play an important part in the logical guessing of ideas in the text. The necessity of knowing and applying this technique is supported by the fact that some students become discouraged when they have inability to infer the

meaning of unknown elements, and to get an immediate grasp of sentence structures. This is specially true when the students are faced with a new text. According to Grellet (1981), there exists some specific aims: to train the students to infer as quickly as possible the meaning of previously learned incomplete words; to work out a strategy of inference for dealing with unfamiliar words; to practice inference through word-information; to practice inference through the content; and to guess meaning of unfamiliar words. We consider that the great advantage of applying the technique " logical inference of ideas ", is that the students learn to act at the discourse level of the language. It is necessary to deduce the implicit information (e.g. the intentions of the author) underlying what is stated explicitly.

Moreover, we include another reading comprehension technique suggested by Christine Nuttall (1982) :Reading with purpose. Nuttall suggests that reading in a Foreign language be motivated by purposes different from learning that target language. That is, reading should go beyond the academic and linguistic intentions. Reading should check with things done outside the classrooms, such as enjoyment, reading for information, pleasure, finding a pertinent information about movie films, finding a global

idea of the contents of scientific, cultural, technical texts, etc.

Teachers should prevent the students from reading FL text with the purpose of improving their language knowledge. Nuttall sustains that "language is merely the means of achieving a non-linguistic purpose".

In general terms, the previously mentioned techniques of reading comprehension are related to some psychological foundations. In fact, Harrison and Dolan (1976) sustain that " our intention is to set aside considerations of eye movement, visual information, processing, motivation, memory and alternatives and concentrate instead on what takes place beyond the word recognition stage as the reader attempts to understand the meanings conveyed by the text ". They also say that " the task in developing reading comprehension is to encourage a vital response rather than a mechanical or unchallenged one ". These informed concepts could be a useful contribution to the teacher' s way of facilitating the reading process in and outside the classroom. How?. By selecting special reading comprehension techniques in order to improve little by little that process as a valuable learning experience, and according to the student' s needs, interests and expectations. As suggested previously, the teacher has

the " moral " responsibility of doing his work on the basis of the scientific advances in many related disciplines specially in psycholinguistics. Well, there is no psycholinguistic method of teaching reading. But, according to Clarke and Silberstein (1977), the value of psycholinguistics lies in the insights it provides into the reading process.

2.3 READING SPEED IS ESSENTIAL TO READING COMPREHENSION

From a psycholinguistic perspective, Goodman (1970) holds that " reading is a selective process " . It is clear that such process includes partial use of available minimal language clues selected from perceptual input on the basis of the reader' s expectations. As this partial information is processed, tentative decisions are made to be confirmed, expected or refined as reading progresses. Also reading must be viewed as a twofold phenomenon involving process comprehension and product comprehension. Reading as Goodman (1970) states " an interaction between thought and language, and skill in reading depends on the efficient interaction between linguistic knowledge and knowledge of the world".

It is worth mentioning that according to the psycholinguistic theory, our goal as reading teachers

are: to train our students to determine beforehand their goals and expectations, for a given reading activity; to use reading speed appropriate to the task at hand; to encourage our students to take risks, to guess, to ignore their impulses to always be correct; to foster independence in our students.

One of the essential beliefs of this study is that " fast reading contributes to apprehension of meaning ". This supports the suggestion that the teacher should replace the tasks of reading aloud by meaningful activities of silent reading. Reading speed is essential to reading comprehension . And reading speed is susceptible to be developed and improved. Francoise Grellet (1981) mentions a few exercises on reading speed: predicting, previewing, anticipation, skimming and scanning.

Another important strategy could be to time the student's performance and to keep control of his advances.There are many forceful arguments behind the suggestion " improve your reading ". One of them is that reading comprehension in English serves as an instrument of knowledge. Also, reading comprehension activities could help the students extend their cultural horizons. In addition, reading improvement in a foreign language can be supported by the

same sort of motives that encourage reading improvement in the native language. Smith points out that " reading in a foreign language is considered a continuation of the activity that the student has begun to develop in his native language ".

Smith says that the " visual system " would lead to three important implications for reading and for learning to read, those points are: reading must be fast, selective and reading depends on nonvisual information.
The present study allows for these considerations. Since it deals with the general intention of studying how to assure " effectiveness " in foreign language reading. Reading should be necessarily fast, comprehensive, selective and inferential. This is supported by Françoise Grellet (1981) in his book " Developing reading skills " who says that one of the most important points to keep in mind when teaching reading comprehension is that, there is not one type of reading but several according to one's reasons for reading. Students will never read efficiently unless they can adapt their reading speed and technique to their aim when reading. By reading all the text in the same way, students would waste time and fail to remember points of importance to them, because they would absorb too much non-essential information.

In addition, Christine Nuttall (1982) points out that " there is no doubt that reading speed and comprehension are closely linked ". In this study we are in total agreement with this comment, because a very slow reader is likely to read with poor understanding . In our research experience, we realized that there is a mutual influence between reading comprehension and reading speed. And we see that it is possible to develop these two abilities through a " training process ", taking into account their functionality not only within but also beyond the classroom environment.

2.4 READING FROM A PEDAGOGICAL POINT OF VIEW

For the sake of constituting an event of satisfactory communication, reading should be interpreted as " making sense of the text ". In fact, Nuttall (1982), at viewing this point, sustains that "Reader has to make sense of the text through the time at his disposal....". It is only through making sense of the writer' s words and intentions that the reader could assure an effective communication or interaction with that " absent " interlocutor. Moreover, teachers, should allow for some factors which influence on the student' s efforts to make sense of the text. The previous familiarity with the

topic, the amount of vocabulary, the life experience enable the student to think along with the writer. The section on analysis of procedures in teaching reading is briefly concerned with observing the teacher' s basic role at " teaching " reading. It would be reasonable to discuss or consider whether " reading " can be taught at all, Smith (1982) holds that " reading is rather learned than taught and that one learns reading by reading in a native language as well as in a foreign language.

So one of the teacher' s roles should be to facilitate the student' s acquisition of the reading skill. And this is only possible if the teacher abides by the informed discussions or comments of those researchers, who have investigated the reading process in a very systematic way. Sheila been (1975) points out that " in the light of analysis of the reading process by psycholinguists, procedures such as mechanics of reading (ortography), called learning to read stage, vehicle for vocabulary enrichment, called reading to learn stage, seem to undermine the development of fluent reading (reading for meaning...)". She says that the problem can be explained in terms of a conflict interest between the strategies required in reading per se, and skills involved in learning to read.

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The teachers should take into account all those psycholinguistic principles involved in a normal reading even if, when organizing and developing pedagogic strategies to facilitate both " learning to read " and " reading to learn ". In short, the learner with the teacher' s assistance should:

- acquire habits in silent reading. Reading aloud might inhibit the promotion of fluent reading in that language. Reading aloud is necessary in a reading to learn stage.
- develop the skill of intelligent guessing and practice the task of making predictions. Twaddell (1973) says that " it is near an impossibility to teach the learner what he will need (in terms of vocabulary resources)".
- Utilize whatever resources he has to make up for information, that he is lacking. Twaddell (1973) says that this builds the student' s confidence.
- exploit their redundancies in the language. Twaddell (1973) holds that this helps the learner to understand that in the reading process it is important to see the trees than the forest.

The present study allows for all those considerations mentioned here and taken from diverse sources. It deals with the general intention of studying how to assure "

effectiveness " in the foreign language reading. Therefore, we have drawn the sound conclusion that " reading should be necessarily fast, comprehensive, selective and inferential". And this is possible to be achieved through a " training process ", integrating both comprehension and speed in different reading activities motivated with a specific purpose.

3. METHODOLOGY

3.1 RESEARCH DESIGN

The basis of the research question (problem statement), and according to the chosen institutions "Itsin, Javeriano, Ciudad de Pasto, Franciscanas, Betlemitas, La Presentacion, Mercedario, Los Andes, and Inem" from Pasto, this study adopts the so called "Pre-experimental design or pilot study (Match and Farhady 1982). Therefore, the study fulfills the following terms:

- There were eighteen groups of subjects at the ninth level of nine high school institutions from Pasto, one experimental group which received the experimental treatment (specific reading speed and reading comprehension techniques instruction), (see appendix 4) , and control groups which did not. As a matter of fact, the control group of students who represented the population were selected on the same basis as the experimental group, this experimental group belongs to

the general population except that the control group subjects were not taught using experimental methodology.

- The decision as to which group would be the experimental group was made randomly. These decisions establish that there is the control and the other group the experimental one. The experimental group was taught the specific reading speed and reading comprehension techniques.

- One pretest (written form) was given to the population groups and one post-test was given to the experimental group. The tests had the same format, including a text, which readability level according to Flesh's index is for a seventh grader and as a simplified text according to Gunning's Fog index, also the students checked the elapsed time from the beginning to the end of the reading of the text. They checked the time in hours, minutes and seconds. The reading was rapid and the students did not stop when they found any words that they did not know. Finally the students read twenty questions of reading comprehension according to the same text; fifteen of multiple choice and five of true or false, and the students had to answer them without having to reread the text again. (see appendix 1)

- The grading was made according to reading speed formula: number of a text's words by seconds, divided by seconds that the students spent.

$$\frac{\text{Number of text's words} \times \text{second intervals in a minute}}{\text{Number of second intervals required to read the text}} = \text{words/min.}$$

Example: $\frac{182 \times 60}{240} = \frac{10920}{240} = 45.5$ w/m

And reading comprehension exercises of 100 percent. Number of answers by 0.5.

Example: $10 \times 0.5 = 50\ \%$

The population group and the experimental group had the same teachers (the researchers). The experimental group was taught during two weeks two hours per day in the academic period 1990-91.

The experimental group subjects received specific guides (see chapters 3.8 and 3.9) on reading speed and reading comprehension techniques, and the experimental treatment period was developed according to the syllabi.(appendix 4)

3.2 HYPOTHESES

3.2.1 General Hypotheses

The experimental group subjects taught through specific reading speed and reading comprehension techniques show a better performance on a posttest than the population made up of official and private, male and female high school students in Pasto.

REMARK: The population was not given any instructional treatment. With the application of a pretest, it was identified its low level of reading speed and reading comprehension. Therefore, a sample experimental group was integrated and given a special treatment, just to validate certain reading speed and reading comprehension techniques.

3.2.2 Statistical Hypotheses

H_1 The mean score of the Experimental sample group and the reading speed and reading comprehension post-test will be significantly higher than the mean score of population to the 0.05 level of significance.

H_2 A significant and close correlation will be found between speed and comprehension in the results of the sample after the reading techniques are applied.

3.3 POPULATION AND SAMPLE

Eighteen groups of students were taken from different high schools at the ninth grade from Pasto, as the representative group from the overall population they were evaluated with a pretest. The sample size was thirty students, a stratified random sampling has been employed and they were evaluated with a post-test.

Population groups (Control)

Private Male-Female Institutions	
Javeriano High School	2 groups
La Presentación High School	2 groups
Los Andes High School	2 groups

Private Female Institutions	
Betlemitas High School	2 groups
Franciscanas High School	2 groups

Official Male-Female Institution	
Inem High School	2 groups
Ciudad de Pasto High School	2 groups
Mercedario High School	2 groups
Itsin High School	2 groups

Experimental Group (30 students)

Inem High School 1 Group

For the treatment we took one group with thirty students who were selected from the High School Institutions from Pasto, as overall population.

In statistical terms, the magnitudes of the population and the sample are to be thought as the same set of values, the students' scores on the tests.

3.4 VARIABLES

3.4.1 Independent Variable

3.4.1.1 Reading Speed Techniques

- Reading numbers
- Reading Small and Capital letters
- Reading Short words
- Recognizing words
- Reading Phrases
- Reading Paragraphs
- Skimming
- Scanning

3.4.1.2 Reading Comprehension Techniques

- Prediction
- Linking sentences and Ideas

- Logical Inference of Ideas
- Reading with purpose

3.4.2 Dependent Variable

Level of reading speed and reading comprehension.

3.4.3 Moderator or Intervening Variables

3.4.3.1 Sex

3.4.3.2 Institutions

Researchers have found two moderating or intervening variables which can modify or affect the relationship between the dependent and independent variable.

3.5 INSTRUMENTS

As to data collection, one pretest and one post-test were used, both in written form. The pretest and post-test focused on the reading speed and reading comprehension exercises (See appendices 1-2).

With regard to validity of the pretest (which main purpose has to do with "reading speed and reading comprehension level" and not "proficiency"), this study accounts for its content validity, which has been determined as written form.

In fact, the tests only seek to determine whether the students read with speed and comprehension or not.

In order to gather and compute the scores on the pretest and post-test, researchers took Christine Nuttall's speed formula and comprehension one, and designed two special charts for reading speed and reading comprehension (see appendix 10)

3.6 PROCEDURES

3.6.1 Steps Before Data Collection

- Obtaining permission for researches to develop the study in nine institutions of High School in Pasto.
- Constructing the written tests.
- Obtaining and developing materials.
- Reviewing relevant literature.
- Random determination of the experimental and control groups.

3.6.2 Steps During Data Collection

- Baseline measurement: Students were given a written pretest. Its purpose was to detect the initial

differences between the 18 groups of the population as to the reading speed and reading comprehension levels.

- Experimental treatment period: The experimental treatment was concerned with teaching the experimental group subjects the specific reading speed and reading comprehension techniques, the experimental treatment period lasted two weeks.

Final measurement: The experimental group subjects were given a post-test (written) on the special reading speed and reading comprehension techniques studied during the treatment period.

3.6.3 Steps After Data Collection

- The pretest and post-test results underwent a statistical treatment or evaluation.
- Discussion.
- Displaying results and conclusions of the study.

3.7 EXPERIMENTAL TREATMENT

- The experimental group subjects were imparted an instruction on the special reading speed techniques (Jackey, Richard 1970) and reading comprehension techniques (Grellet Francoise 1981).

- Here is a list of the most important reading speed and reading comprehension techniques which were used. They are based on different materials coming from "Improving your Reading Speed", "Developing Reading Skills" and texts from "Reading and Understanding", and "MEN's English Program".

3.8 READING SPEED TECHNIQUES

The exercises of speed intent to help increasing the peripheral vision, practicing rapid recognition of letters and words an phrases without regression. Richard Jackey (1970) proposes some reading speed techniques as follows:

3.8.1. Reading numbers

Specific Aim: To develop exercises of fixing.

Skill Involved: Focusing in the center line.

Why?: These speed reading exercises will help students to increase peripheral vision.

Procedure: There are five lists of numbers.
Center the eyes at O over the column.
Fix the eyes on these points.
Cover the list of numbers with the card.
Move the card downwards to reveal each number.

Read the numbers as fast as possible.

Activity:

0	0	0	0	0
105	93054	23081	2840716	9270182
308	74082	35086	9320428	6380542
904	49033	93052	3890123	3820937
602	52049	89043	6540398	7380921
707	17028	27056	2308876	7380765
809	88021	54089	2340349	9400474
908	37017	56029	8160387	2910789
403	61065	73018	6920748	3890567
504	25076	29055	2710982	2970172
107	87053	30058	1230456	6450340
201	39027	17040	3060746	1740605
600	80003	75061	8690899	9270283

3.8.2 **Reading small and capital letters**

Specific Aim: To improve the Reading Speed by reading across the line with Capital Letters and small letters.

Skill Involved: Reading Capital and small letters across the line.

Why?: To help to identify more quickly the same letters.

Procedure: At the left of the vertical line, there is a letter. When your teacher says to start, read across the line as fast as you can.

Circle all the letters that are the same as the letter at the left.

Stop when you are told to stop.

Activity:

A|	A	M	V	Y	A	K	L	W	F	S	A	U	O	P	A
L|	K	T	L	J	P	T	L	F	Y	L	I	T	L	N	I
S|	N	Z	S	M	S	C	C	V	S	R	U	L	X	Q	G
R|	V	R	P	P	D	B	R	K	H	G	B	W	R	S	P
Q|	C	O	U	G	Q	G	C	C	O	D	Q	C	G	O	C
M|	N	W	M	N	N	W	H	U	G	M	N	W	X	H	N
V|	Y	U	W	O	H	D	U	W	Y	Z	U	V	W	Y	U

b|	d	p	b	k	d	p	p	d	b	d	p	c	d	p	b
h|	h	d	h	h	p	d	d	h	k	t	l	k	b	h	p
t|	f	l	t	h	t	k	b	d	f	f	f	t	h	f	t
v|	r	n	w	u	v	n	m	u	v	w	r	u	n	v	n
r|	v	n	n	r	u	i	n	v	v	v	u	i	r	v	n
s|	z	n	c	m	c	z	z	n	x	e	s	z	n	u	o
l|	j	t	f	l	t	t	i	f	t	l	i	l	l	t	l
a|	e	a	c	u	o	e	s	x	c	a	e	u	n	c	e

3.8.3. **Reading short words**

Specific Aim: To help students to read short words quickly.

Skill Involved: Reading lists of words in columns.

Why?: It is possible to guess short words quickly because of the other letters before and after the e.

Procedure: There are five columns of words.

Center your eyes at e over the column.

Fix the eyes on this letter.

Cover the words in each column.

Move the card downward to reveal each word.

Try not to look at the beginning of the word.

Concentrate on the center of the column and read straight down, moving the card downward as rapidly as possible.

Activity:

e	e	e	e	e
pet	press	science	repeats	marketing
her	opera	reserve	forever	projected
men	piece	appears	streets	mannerism
sex	clerk	mineral	friends	suspended
get	great	selects	silence	depressed
sea	ocean	lineman	spreads	different
bed	shell	general	essence	sickening
set	guest	streaks	funeral	retreated
red	agent	detects	immense	uncleanly
tea	steam	liberty	experts	mastering
let	trend	priests	powered	
ten	check	quieter	queenly	

3.8.4. Recognizing words

Specific Aim: To develop word- recognition.

Skill Involved: Reading words with the same meaning.

Why?: It can help the students to overcome some of their difficulties in recognizing words and their meaning.

Procedure: At the left of vertical line, there is a word. When your teacher says to start. read across the line as fast as you can.
Circle the one word which has about the same meaning as the word at the left.

Activity:

happy	sad	false	fresh	glad	modern
mistake	poison	blame	puzzle	rescue	error
rich	wrong	sacred	wealthy	scared	healthy
silent	quiet	noisy	loud	funny	quick
to begin	fall	start	try	speak	stop
attempt	singer	pupil	lesson	teacher	pencil
to cry	laugh	sing	weep	shout	run
present	get	give	gift	return	forget
a test	eraser	lab	glass	snow	exam
pretty	lazy	rapid	ugly	beautiful	lonely

3.8.5. Reading Phrases

Specific Aim: To help to increase the reading speed by phrases.

Skill Involved: Reading phrases.

Why?: to help students in the recognition of phrases rapidly.

Procedure: Fix your eyes on the arrow at the top of the column.
Read down as rapidly as possible.

Activity:

1. Being able
to read
by phrases
instead of
by single words
results
from practice.

2. Successful improvement
of your reading
depends upon

3. Until about
four hundred years ago
nothing like
a modern microscope
existed.
Then
spectacle makers
in Holland
noticed that
When certain lenses
are used in pairs

your eagerness
to improve
and your willingness
to practice.
Your teacher
can guide you
but only you
can do
your own reading.
No one else
can do it
for you.

at the right distance
apart
they magnify things.
The first man
to make
a powerful microscope
was a Dutchman
named Leeuwenhoek,
who was born
in 1632.
His instruments
could magnify things
to three hundred times
their actual size.

3.8.6. Reading Paragraphs

Specific Aim: To improve the speed reading in paragraphs.

Skill Involved: Reading aloud.

Why?: To help to practice reading paragraphs aloud.

Procedure: Read the paragraph aloud or listen to your teacher read it.

Try to focus your eyes at the center of each phrase and read all in a single glance.

Activity:

1. Many foreign students find that their studies in English take so much time they have little time for the other pleasures of college live. This is unfortunate because many of the most useful and permanent lessons you will learn at college do not come from books at all. They come from your association with teachers and students outside of class.

2. Your reading rate is determined by the speed with which your eyes can focus on a group of words, then move swiftly and smoothly to the next group of words. The more stops that your eyes make, or the more times your eyes regress, the slower you will read. Vocalizing the words also slows down your reading. Fortunately, increasing your peripheral vision and developing a uniform movement of your eyes can be accomplished by special exercises and regular practice.

Note: the same techniques exposed above were used in developing the reading speed study.

a. Skimming

Specific Aim: To prepare the students to locate facts which are expressed in sentences rather than in

single words, or they can be asked to say briefly what a text is about.

Skill involved: Skimming.

Why?: The students can be encouraged to do the exercise as quickly as possible to see how quickly they can understand the gist of each article.

Procedure: Which of the following sentences reflects the main idea of the paragraph.

Circle the corresponding letter.

Activity: Paragraph:

Yet, there are some T.V. stations that never have advertising. These are called noncommercial stations. When the government sponsors a station the government pays all the station's expenses. In England for example, the British Broadcasting Corporation (B.B.C.) is sponsored by the British government. This has no advertising. An educational station is usually supported by some kind of educational institution such as a college or university.

b. Advertisements help T.V. stations to pay their expenses.

a. The noncommercial stations, like the B.B.C., never have advertising.

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b. Scanning

Specific Aim: To train the students to run their eyes over a text quickly in order to locate specific information.

Skill Involved: Scanning.

Why?: When we are trying to locate specifically required information, usually we need not read the whole text carefully. What we do is try to find in which paragraph the information we are looking for is likely to be, then read this paragraph with more attention.

Procedure: Read the questions before reading the paragraph and answer.

Activity: Where was born Harold Pinter?

When was wrutten "The Birthday Party"?

What is Hackney?

Who is Stanley?

HAROLD PINTER

Harold Pinter is a famous dramatist. He was born in Hackney, which is in the East End of London, in 1930. He became an actor in 1951 and later began to write plays. His plays are popular in England and many other countries too. He usually writes about ordinary people who have problems. His plays are unusual because there is a lot of silence in them. The characters have conversations

which stop, start and stop again; communication is very difficult for them.

One of Pinter's most interesting plays is "The Birthday Party", which was written in 1957. It is about a man (Stanley) who is hiding from something. He lives with a middle-aged couple (Meg and Petey) who like him very much. Life is pleasant in their house. Stanley, who is lazy, always stays in bed late. Meg makes his breakfast every day and Petey goes to work. Sometimes Stanley is unkind to Meg but she never objects because she loves him.

3.9 SELECTED READING COMPREHENSION TECHNIQUES

Most of the techniques are already familiar to the students in their native language. But it is necessary to re-train them as some students have difficulty in applying them, therefore, in the experimental treatment was developed some Françoise Grellet's reading comprehension techniques such as:

a) Predicting

SPECIFIC AIM: To train the students to use the title, and their prior knowledge to anticipate the contents of the text.

SKILLS INVOLVED: Prediction.

WHY? By simply looking at the title, one can often guess what the text is about, this will allow us to ask ourselves preliminary questions and expect to find some answers in the text. Which will greatly help the process of reading.

PROCEDURE: In the first column you will find some titles of books.

In the second column you will find some titles of chapters.

Match the themes of the second column with the titles of first column.

COLUMN I	COLUMN II
The Olympic games	The oldest space colonies
Natural Resources	Father's and Mother's love
Passage to Jupiter	Food from the sea
The Family	Men in the Olympics

SPECIFC AIM: To train the students to predict or to anticipate or guess the group of contents related directly to the title of the text

SKILLS INVOLVED: Prediction.

WHY: By simply looking the title of the book, one can often guess what the text is about. This will allow us to ask ourselves preliminary questions and expect to find some answers in the text which will greatly help the process of reading, this technique is essential when skimming (e.g. through a newspaper).

PROCEDURE: the text that you are going to read is entitled: "What's cooking"

Can you guess what the text might be about?

Choose the group of chapters related to the title of the book.

GROUP A	GROUP B	GROUP C
breakfast	breakfast	Festive eating
lunch	lunch	drinking
dog	dinner	Our school

- Imagine and write the content of the reading: THE HOUSE

_____

_____

_____

_____

_____.

- Now discuss your answers with a partner. Explain why you think some of these ideas are possible and some

impossible. Wherever you think an idea is possible, try to imagine some of the points the article might mention. Can you think about further ideas of the content of the article ?.

b)Linking sentences and Ideas

SPECIFIC AIM: To train the students to understand the value of link-words.

SKILLS INVOLVED: Use of logical connectors.

WHY? It is extremely important to be able to recognize connective words. Not only are they essential to understanding of the ideas and facts mentioned in the passage, but they also indicate the rhetorical value (e.g. reinforcing, explaining what follows).

PROCEDURE: Underline the connectors in the following text.

Logical relationship between two ideas.

Join sentences.

(with, but, finally, first, such as, thus, etc.).

LIFE IN BIG AND SMALL CITIES

The life of people who live in a big city is very different from the life of people in small cities. A big city has some characteristics such as: noise and pollution, a small one is quiet and clean. People in the big city must go to work with rush by bus, subway or taxi, some drive their own car. There is a lot of traffic there. But, in small towns people walk to work and have time to stop and say hello to their friends, finally life is slow and very enjoyable in a small city.

- Replace the underlined connectors by other link-words, and rewrite the sentences, making the meaning remains the same.

c)Logical inference of ideas

SPECIFIC AIM: To train the students to recognize and relate explicit information (given information) and implicit information (suggested information) in order to make logic conclusions.

SKILLS INVOLVED: Inference explicit and implicit information.

WHY? When the students are faced with a new text, they are unable to get an inmediate grasp of sentence structures. This will be a definite handicap in the case of texts with relative embedded clauses and complex structures. It is therefore important to train the students, as early as possible to look first for the core of the sentence. In order to do that, there are information questions, true or false questions and multiple-choice.

PROCEDURE: Explicit information (given information).
Implicit information (suggested information).
Exercises of : Wh questions, true or false, multiple-choice.

GABRIEL GARCIA MARQUEZ

Gabriel Garcia Marquez is a Colombian writer who was born in Aracataca in 1.928. He began to work as a journalist, later he wrote short stories and finally novels. His most popular novel is One Hundred Years of Solitude, the plot is about the Buendia Family and their life in Macondo. The novel is a kind of saga that relates the folklore and the history of the Atlantic region in Colombia.

- Write true or false:

a. Gabriel Garcia Marquez is an Ecuatorian reader. ___

___.

b. He was born in 1928. ___ ___

c. Later he wrote novels and finally short stories. ___

___

d. The plot is about the Perez Family. ___ ____

e. The text above talked about the life of Gabriel Garcia Marquez. ____ ___

- Information questions:

a. What is the topic of the text above?

b. Why is Garcia a great writer?

SPECIFIC AIM: To train the students to recognize suffixes and prefixes.

SKILLS INVOLVED: To guess meaning of unfamiliar words.

WHY? Many texts use prefixes and suffixes to convey their message more clearly. It is important for the students to be aware of these lexical relations as they often help to infer the meaning of unfamiliar words.

PROCEDURE: Circle the prefixes and underline the suffixes:

SUFFIXES: after root word.

He works He worked Teacher's book

entertainment business talking standing costs

player wins

PREFIXES: before root word.

Premeditated Postnatal unhappy disagree

incorrect irresponsible imperfect.

SAN ANDRES AND PROVIDENCIA

San Andres and Providencia are two Colombian Islands in the Caribbean Sea. These islands have undergone an eventful history. The Spaniards discovered them, San Andres is a place of entertainment. Its incomparable climate, its multicolored sea, it is a popular shopping center. The Islander loves his Island.

- Can you write other prefixes and suffixes?

According to Christine Nuttall (1982) "...in a foreign language reading is often used for purposes which are different from those found in mother tongue learning. She proposes a reading with purpose technique ".

SPECIFIC AIM: To train the students to locate specific explicit information in the text.

To train the students to locate general explicit information in the text.

SKILLS INVOLVED: a. skimming (gist) b. scanning (specific).

WHY? When we are trying to locate specifically required information usually we need not read the whole text carefully. What we do is to try to find in which paragraph the information we are looking for is likely to be, or to consult the meaning of unknown words in the dictionary, to look for an address in the telephone directory, a score in the newspaper, the winner number of the raffle in the newspaper, the name of the theater where is the movie that we want to see. In the second case, we want to look for the global idea of the text. We use this strategy when we want to know the content of the text to know if it is interesting or not.

PROCEDURE: It is necessary to guide the students through the questions, there are different ways in order to obtain better results in these reading comprehension technique.

a. Specific explicit information.

We can use different types of questions such as: wh questions, diagrams, pictures, tables.

- Read the following text and answer the questions :

HAROLD PINTER

Harold Pinter is a famous dramatist. He was born in Hackney which is in the East of London, in 1930. He became an actor in 1951 and later he began to write plays. His plays are popular in England and many other countries too.

QUESTIONS: Who is Harold Pinter? _____

Where was he born? _____

Where is Hackney? _____

In what year was he born? _____

When did he become an actor? _____

b. General explicit information.

There are different types of questions: wh questions, multiple-choice, true or false.

- Read the text and choose the general idea.

A CAREER IN PLANT SCIENCE

A great percentage of deaths in the world are associated with poor nutrition. One of today's challenges is feeding all the world's people. Education, research and knowledge of plant science can help to meet this challenge, because plants are source of food. Education in plants science

can help you find an exciting career in the agricultural industry or in scientific research.

QUESTIONS: The general idea of the previous text is:

- Education, research and knowledge of plant science can help to meet the challenge.
- Plants are source of food.

_ Challenge is feeding all the world.

_ Education in plant science can help you.

The experimental treatment was developed during the regular hours of the institution (two hours per day), during two weeks..

3.10 STATISTICAL DESIGN AND DATA ANALYSIS

The statistical design used in this study is the t-test.

$$t_{observed} = \frac{\bar{X} - \mu}{s_{\bar{x}} / \sqrt{N}}$$

This statistical has a **t** distribution given the small size of the sample group.

The steps which have been followed are:

- To estimate the means (X) corresponding to the experimental group and control one.

- To calculate the differences between those means.
- To work out the standard error of differences between the means.
- To find the t-value by means of the above formula
- To decide the significance level. This study adopts an acceptance level at 0.05 with which researchers will try to reject the null hypothesis.
- To turn to the **t** distribution table.
- To find the critical value for "**t**".
- To analyze the differences between the values.
- To see whether the claim underlying the research hypothesis can be supported.
- To discuss and display the results and to make conclusions of this study.

4. DATA ANALYSIS

In this, in addition to sorting and displaying the obtained data, two sorts of analyses are made. Each one setting for the research findings and presenting an informed discussion. Also certain theoretical and practical implications are drawn.

4.1 TESTING THE RESEARCH HYPOTHESIS

4.1.1 Results

One Sample t-Test X1:speed

DF:	Sample Mean:	Pop. Mean:	t Value:	Prob. (1-tail):
29	61.568	52.922	17.136	1.0000E-4

REFERENCE

DF:	T.Critical	Prob.(1-tail)
29	1.699	0.05

Table 1: Analysis of t.test in the post-test of the experimental group of Reading Speed.

In reference to the findings shown in table 1, it is worth noticing that the mean scores of the two groups are

different, superficially regarded. The experimental group mean with 61.568 and the control group with 52.922 related to reading speed results. (see appendix 5 - 6)

In order to be certain about how significant such difference is and about how far these results should be assumed to the same probability for "t-test" is applied. (see appendix 9)

Thus, table 1 shows mainly that the mean score on the post-test based on reading speed of the experimental group subjects is significantly greater than the mean score on the pretest on reading speed of the control group as population. (see appendix 5 - 6)

In fact, the statistical significance of the difference between the means (61.568 and 52.922) is supported by the comparison of the t-value (17.136) with the t-critical for the t distribution, with the appropriate degrees of freedom.
As already known there were 30 Ss in the group; so the degrees of freedom are 29. The t critical for 29 d.f. is 1.699 to the 0.05 level of significance (see appendix Table 9). Although the research hypothesis of this study is to be tested only in reference to the post-test results, further observations are made in order to gain a better understanding of this research work value.

By means of statistical inference, it is then evident that these results allow rejection of the null hypothesis. We are left with the research hypothesis, the preferred alternative hypothesis, that there is a significant difference between the experimental and control groups as for the reading speed, and that this difference is in the direction of better performance of the experimental group.

One Sample t-Test X1:Compreh

DF:	Sample Mean:	Pop. Mean:	t Value:	Prob. (1-tail):
29	83.167	60.903	27.421	1.0000E-4

REFERENCE

DF:	T.Critical	Prob.(1-tail)
29	1.699	0.05

Table 2: Analysis of t.test in the post-test of the control group in Reading Comprehension.

In reference to the findings shown in table 2, it is first worth noticing that the mean scores of the two groups are different, superficially regarded. The experimental group mean with 83.167 and the control group with 60.903 related to reading comprehension results. (see Appendix 5 - 6)

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In order to be certain about how significant such difference is and about how far these results should be assumed to reflect the same probability for a larger set of potential values, the inferential statistical procedure t-test is applied. (see appendix 5 - 6)

Thus, table 2 shows mainly that the mean score on the post-test based on reading comprehension of the experimental group subjects is significantly greater than the mean score on the pretest based on reading comprehension of the control group as population.

In fact, the statistical significance of the difference between the means (83.167 and 60.903) is supported by the comparison of the t.value (27.421) with the t critical for the t distribution, with the appropriate degrees of freedom. As already known there were 30 Ss in the group; so the degrees of freedom are 29. The t critical for 29 d.f. is 1.699 to the 0.05 level of significance (see appendix table 9). Although the research hypothesis of this study is to be tested only with reference to the post-test results, further observations are made in order to gain a better understanding of this research work's value.

By means statistical inference, it is then evident that these results allow rejection of the null hypothesis. We are left with the research hypothesis, the preferred alternative hypothesis, that there is a significant difference between the experimental and control groups as for the reading comprehension, and that this difference is in the direction of better performance of the experimental group.

Corr.Coeff. X_1:Compreh Y_1:speed

Count:	Covariance:	Correlation:	R-squared
30	-2.709	-217	047

Table 3: Correlation Analysis in the post-test of the experimental group with Reading Speed and Reading Comprehension.

In reference to the findings shown in table 3, it is first worth noticing that in correlation studies, researchers are interested in determining the degree of relationship between pairs of two or more variables.

In this case researchers are interested in the degree of relationship between reading speed and reading

comprehension scores in the post-test of the experimental group subjects, because, the statistical hypothesis says: "H_2 A significant and close correlation will be found between speed and comprehension in the results of the sample after the reading techniques are applied".

Thus, table 3 shows mainly that there is a negative or inverse relationship (-.217) That is, the scores of reading speed on a test increased, so the scores of reading comprehension on a test decrease. And when the scores of reading speed on a test decrease, so the scores of reading comprehension on a test increase. In simple words, in correlation studies there is no cause-effect relationship between the variable, since it cannot be affirmed that the students who read rapidly have an inadequate understanding and others who read slowly have an adequate one. It cannot be affirmed that, because the correlation analysis use the correlation coefficient to show the degree of relationship between the variables (-.217).

In order to be certain about that there is a negative relationship it is important to analyze the following scores of the S in reading speed and reading comprehension post-test.

SCORES	R.Speed	R.Compreh.
S1	58	85%
S2	59	80%
S3	60	80%

These scores show mainly that the correlation is inverse between the variables: more speed less comprehension and between less speed more comprehension. Although the students have a carefully reading speed in order to comprehend more. Therefore, the relationship is inverse and the given treatment to the experimental group influenced in the negative results of the variables.

Covariance is concerned with how two variables covary. It is defined as the cross product of the deviation scores from X_1 comprehension and Y_1 speed, in other words, the table 3 shows that there is a minimum covariance (-2.709) between the two sets of scores.

Corr.Coeff. X_1:pop-speed Y_1:pop-compreh.

Count:	Covariance:	Correlation:	R-squared:
18	.111	1.293E-3	1.6709E-6

Note: 12 cases deleted with missing values

Table 4: Correlation Analysis in the pretest of the population group as control one with Reading Speed and Reading Comprehension.

In reference to the findings shown in the table 4, it is first worth noticing that the degree of relationship between reading speed and reading comprehension scores in the pretest of the control group is 1.293E-3 that is, there is not relationship between the variables, because the correlation is 1.293E-3.

In addition, the R squared value (1.6709E-6 validate the techniques applied to the experimental group since the correlation is lower (0.001293) than 1 and the variables did not have a positive covariance (.111) and the population is reading with more slowness and in terms of correlation, there is more difference between speed and comprehension and the treatment given to the experimental group correlated a little because the correlation is low. The validity is to the techniques applied.

Unpaired t-Test X_1:male-female-speed Y_1:M-F-Speed

DF:	Unpaired t Value	Prob.(2-tail)
30	1.093	283

Group:	Count:	Mean:	Std.Dev.:	Std. Error:
Group 1	14 H	55.5	19.001	5.078
Group 2	18 M	48.722	16.062	3.786

REFERENCE

DF:	T.Critical	Prob.(2-tail)
30	2.042	0.05

Table 5: Analysis of t.test in the pretest of the control group (male and female) in Reading Speed.

In reference to the findings shown in the table 5, it is first worth noticing that the mean scores of the two groups are different superficially regarded. The male group with 55.5 and the female group with 48.722.

In order to be certain about how significant such difference is and about how far these results should be assumed to reflect the same probability for a larger set of potential values, the inferential statistical procedure t-test is applied. (see appendix 5 - 6)

Thus, table 5 shows mainly that the means scores on the pretest based on reading speed of the control group

subjects (Male-Female) are not significantly different between them.

In fact, the statistical homogeneity between the means (55.5) and (48.722) is supported by the comparison of the unpaired t-value (1.093) with the t-critical for the t distribution with the appropriate degrees of freedom. As already known, there were 32 Ss in the population so the degrees of freedom are 30. The t critical for 30 d.f. is 2.042 to the 0.05 level of significance.

Table 5 also displays the homogeneity of the groups (Male-Female) as for the average variability of all the scores around the mean. As a matter of fact, the male group presents a standard deviation of 19.001 and female groups present a standard deviation of 16.062 this mean more homogeneity of its scores from the central point in the distribution 48.722 and 55.5.

The information of standard errors of means is instrumental for the calculation of the t value. Hence these data are overlooked for the sake of enhancing the important issues of this study.

By means of statistical inference, it is then evident that the results allow showing the homogeneity in the groups.

Unpaired t-Test X1:male-female Y1:comprehension				
DF:	Unpaired t Value:		Prob.(2-Tail):	
30	-23		8193	
Group:	Count:	Means:	Std.Dev.:	Std.Error:
Group 1	14	59.786	4.406	1.178
Group 2	18	60.222	5.917	1.395

REFERENCE:

DF:	T.Critical	Prob.(2-tail)
30	2.042	0.05

Table 6: Analysis of t.test in the pretest of the control group (Male and Female) in Reading Comprehension.

Table 6 also displays that the means scores on the pretest based on reading comprehension of the control group subjects (Male and Female) are not significantly different between them.

In fact, the statistical homogeneity between the means 59.786 and 60.222 is supported by the comparison of the unpaired t-value (-23) with the t-critical for the t distribution with the appropriate degree of freedom. As already known, there were 32Ss in the control group so the degrees of freedom are 30. The t critical for 30 d.f. is 2.042 to the 0.05 level of significance.

Table 6 shows the homogeneity of the two groups (Male and Female) as for the average variability of all the scores around the mean. As a matter of fact, the male group presents a standard deviation of 4.406 and female group presents a standard deviation of 5.917 this means more homogeneity of its scores from the central point in the distribution 60.222 and 59.786.

By means of statistical inference, it is then evident that these results allow showing the homegeneity in the groups.

Unpaired t-Test Xi:Private-Official Y1:Speed Priv-Off				
DF:	Unpaired t Value:		Prob.(2-tail):	
16	306		7637	
Group:	Count:	Mean:	Std.Dev.:	Std.Error:
Group 1	10	53.5	19.415	6.14
Group 2	8	51	13.939	4.928

REFERENCE

DF:	T.Critical	Prob.(2-tail)
16	2.120	0.05

Table 7: Analysis of t-test in the pretest of the control group (private-official) in Reading Speed.

In reference to the findings shown in Table 7, it is first worth noticing that the mean scores of the two groups are different, superficially regarded. The control groups as official with 51.0 and control groups as private with 53.5.

In order to be certain about how significant such difference is and about how far these results should be assumed to reflect the same probability for a larger set of potential values, the inferential statistical procedure t test is applied.

Thus, table 7 shows mainly that the mean score on the pretest based on reading speed level of the control groups from private instructions is not significantly greater than the mean score of the control groups from official instructions, to the level of significance.

In fact, the statistical no significance of the differences between the means (53.5 and 51.0) is supported by the comparison of the unpaired t value (.306) with the t critical for the t distribution, with the appropriate degrees of freedom. As already known, there were 18 Ss; so the degrees of freedom are 16. The t critical for 16 d.f. is 2.120 to the 0.05 level of significance.

By means of statistical inference, it is evident that these results allow saying that there is no difference between the variables. It is better to say that the private groups are better than official groups but there is not a significative difference and the population is homogeneous.

Unpaired t-Test X1:Private-Official Y1:Priv-Offic-Compreh.

DF:	Unpaired t Value:	Prob.(2-tail):
16	1.041	3136

Group:	Count:	Mean:	Std.Dev.:	Std.Error:
Group 1	10	61.5	5.339	1.688
Group 2	8	59	4.69	1.658

REFERENCE:

DF:	T.Critical	Prob.(2-tail)
16	2.120	0.05

Table 8: Analysis of t-test in the pretest of the control group (Private-Official) in Reading Comprehension.

In reference to the findings in table 8, is first worth noticing that the mean scores of the two groups are different, superfiacially regarded. The control groups from private institutions with 61.5 and the control groups from official institutions with 59.0.

In order to be certain about how significant such difference is and about how far these results should be assumed to reflect the same probability for a larger set of potential values, the inferential statistical procedure t test is applied.

Thus, table 8 shows mainly that the mean score on the pretest based on reading comprehension level of the control groups from private institutions is not significantly greater than the mean score of the control groups from official institutions, to the level of significance.

In fact, the no statistical significance of the differences between the means (61.5 and 59.0) is supported by the comparison of the unpaired t value (1.041) with the t critical for the t distribution, with the appropriate degrees of freedom. As already known, there were 18 Ss; so the degrees of freedom are 16. The t critical for 16 d.f. is 2.120 to the 0.05 level of significance.

By means of statistical inference, it is evident that these results allow saying that there is not difference between the variables. It is better to say that the private groups are better than official groups but there

is not a significative difference, and the population is homogeneous.

4.2 DISCUSSION

The results obtained in this study demonstrate a number of things about the special reading speed and reading comprehension techniques.

To begin with, it seems quite clear the difference in the reading speed and reading comprehension techniques for learning of the two groups (experimental and control). They can be attributable to the dissimilarity of instructional activities.

Actually, subjects studying with reading speed and reading comprehension techniques performed significantly better in the posttest based on reading speed and reading comprehension techniques.

Why do special reading speed and reading comprehension techniques help improving reading speed and reading comprehension when the students read English texts as a foreign language?

Given the nature of the reading speed and reading comprehension techniques it is reasonable to assum that "they" should be better fostered through an adecuate

practical training period of reading in the students' teaching learning process. This is consistent with Silva's (1981) statement "that there are reading techniques or strategies that help the students to achieve this ability. The speed and effectiveness depend on the effects of the native language reading ability in the foreign language".

Some linguists have suggested that it is better to apply these strategies first in the native language then in the foreign language, in order to facilitate the reading process.

Been's (1975) statement "if we want our students to be able to read, we must encourage them to do so. Ultimately, we believe with Smith (1928) that reading is rather learned than taught, and that one learns reading by reading, in the mother tongue as well as in a foreign language.

Furthermore, Nuttall's (1982) states that "students from some educational traditions may not read efficiently even in their L1. When this happens it is a hindrance to the development of efficient reading in a foreign language, research shows that there is strong transfer of reading habits from one language to another. We can notice that

Nuttall's statement is according to our purpose, because the students carry on habits in L1 on habits in FL.

Grellet's (1981) states that "understanding a written text means extracting the required information from it as efficiently as possible". For example, we apply different reading strategies when looking at a notice board to see if there is an advertisement for a particular type of flat and when carefully reading an article of special interest in a scientific journal. It is necessary to apply reading strategis because they help to improve reading skills.

Things being so, it is worth stressing some positive or constructive features of the reading speed and reading comprehension techniques.

The exercises of speed intent to help to increase the peripheral vision, practicing rapid recognition of letters, words and phrases without regression. Richard C. Jackey (1970) gives us several exercises of all kinds, students should be motivated to beat their own records, not to compite with one another, because there is much sense in trying to improve your own performance and everyone is capable of this.

Some specific reading speed techniques such us the ones Nuttall sustains are: a) Scanning, b) Reading words, c) Reading phrases, d) Reading paragraphs, e) Skimming. (see "Improving reading speed").

Most of the techniques are already familiar to the students in their native language. But it is necessary to re-train them as some students have difficulty in applying them to a second language. These reading speed techniques had been explained in the chapter named "Improving Reading Speed"

Some specific reading comprehension techniques were considered in the treatment period such as: a) Predicting, b) Reading with purpose, c) Linking sentences and ideas, d) Logical inference of ideas. These reading comprehension techniques had been explained in the chapter named: "Selected reading comprehension techniques".

There exist some specific aims:

- To train the students to infer as quickly as possible the meaning previously learned of incomplete words.

- To work out a strategy of inference for reading with unfamiliar words.

- To practice inference through word formation.

- To practice inference through the context.

- To guess meaning of unfamiliar words.

On the whole, the findings shown in tables 1 and 2 account for the practical effectiveness of the reading speed and reading comprehension techniques. Students taught by these specific techniques read quickly and comprehended more effectively than those who were not given an adecuate practical treatment period.

As estimated earlier, the results of the pretest (Table 1 and 2) reveal that there was a pre-existing difference between the experimental and control groups as for the reading speed and reading comprehension. The experimental group students had a better performance in the posttest.

It is important to understand now that such initial difference became greater in the posttest as a result of the experimental treatment, based on adequate practical period of specific reading speed and reading comprehension techniques in order to improve student's reading with English texts as a foreign language, than those who had not a treatment.

In looking, at the internal gain scores of the two groups (Tables 1 and two), it is evident that the experimental group achieved a greater gain speed score (61.568) than the control one (52.922), and comprehension score of experimental group (83.167) than the control group (60.903) as a consequence of the instructional influence of reading speed and reading comprehension techniques applied.

The marked increase in the experimental group is also in keeping the prediction underlying the research hypothesis. The experimental group showed a greater improvement in the learning of the specific techniques of speed and comprehension, on account of the practical exercises oriented increasing exercises of reading and creating good habits of reading.

It is very important to notice that in the correlational analysis of reading speed and reading comprehension of experimental and control groups (Tables 3 and 4) also produced positive results, even though on smaller scales, therefore there was a negative relationship between speed and comprehension in the experimental group, that is, the correlation is inverse between the variables, more speed less comprehension and less speed more comprehension but,

this does not invalidate the research hypothesis, because the claim is focused on the (H2) statistical hypothesis.

On the other hand, in the correlational analysis of reading speed and reading comprehension of control group (Table 4) produced negative results, therefore there was not relationship between speed and comprehension, and the correlation was lower (0.001293) than 1 and the variables did not have covariance (.111).

According to the moderating or intervening variables (Sex and Institutions) the means scores of the pretest based on reading speed and reading comprehension of the control groups subjects (Male-Female - Institutions) were not significantly different between them. In fact, the statistical homogeneity between the means (55.5) and (48.722) in speed and (61.5) (59.0) in comprehension is supported by the comparison of the Unpaired t-value (1093) in speed and (-23) in comprehension.

By means of statistical inference, it is evident that the results allow showing the homogeneity in the groups, therefore, these variables could not modify or affect the relationship between the dependent variable and the independent variable.

4.2.1 Implications

The theoretical, pedagogical and methodological contributions of the study could be summarized as follows:

- Teachers of English as a FL should maximize the student's ability in reading speed and reading comprehension techniques first with Spanish texts and then, with English texts.

- The teachers'role is to understand the nature of fluent reading and the general way in which children learn.

- The teachers must have a sympathetic awareness of the particular children for whom they are responsible and sensitivity for their individual feelings, interest and abilities at any particular time.

- Where children see little relevance, in reading the teacher must provide a model.

- Where children find little interest in reading, then teachers must create more interesting situations.

- Where children have difficulty in reading, the teacher must see that they are helped to read what they would like to read.

- The assistance can be given by developing the confidence of children to read for themselves, in their own way, taking the risk of making mistakes and being willing to encourage them in correct way.

- The present study has demonstrated the relative methodological value of an adequate practical treatment period with reading speed and reading comprehension techniques, in order to improve reading English texts and Spanish texts, too.

- Teachers should strive to ensure that reading is comprehension, permiting children themselves to judge whether materials or activities are too difficult or too dull.

- Teachers must identify a particular child's needs, interests, difficulties at the particular time.

- Teachers' decisions require knowledge, experience, and understanding in order to decide how and when to use particular materials and techniques with particular children or particular times.

- Teachers and children can together produce the materials for themselves: stories, books, poems, songs, letters, newspapers, guides, charts, small library and so

forth, in order to practice reading and create good habits of it.

- Students' texts should be at the right level of difficulty, taking into account the readability of the text.

- Texts must be interesting for the greatest number of students and for the teacher.

- Texts must have things that the students do not already know, they must introduce them new and relevant ideas, make them think about things they have not thought about before, help them to understand the way other people feel or think, make them want to read for themselves, (to continue a story, find out more about a subject and so on).

- Texts must have exploitability, this means, facilitation of learning. When teachers exploit it, he makes use of it to develop your students' competence as readers.

- Because of a psychological, pedagogical and methodological suitability, EFL teachers should stop using traditional ways of teaching reading. That is, to use the process of reading to learn stage, for example:

mechanic procedures (reading for teaching vocabulary, ortography, pronunciation, structures etc.).

- Reading motivation is of great importance when reading. Partly, because most of what we usually read is what we want to read (books, magazines, advertisements).

- The teacher should always put primary emphasis in reading instruction on comprehension strategies.

- The various process strategies interact among themselves. The EFL student should take advantage of his strengths in order to overcome his weaknesses.

- There is not any one way to teach reading. Readers are going to have differing strengths in the various process strategies and, moreover utilize them in varying combinations.

- Some initial emphasis on increasing reading speed of students is usually necessary to change the strategy of translation so commonly found in young students.

A degree of speed to be used should vary according to the complexity of the material read; the purpose for reading the material, and the reader's background.

- The teachers' task in reading comprehension is to encourage a vital response rather than a mechanical or unchallenged one.

- Students should become as conscious as we are of the purpose for reading.

- The teacher should be a participant, a facilitator in an environment in which reading can take place.

- Teachers should have a crucial role in helping children learn to read by modifying circumstances, stimulating children's interest, and making reading meaningful to a degree that formal instructional programs, with their necessary limited objectives, cannot be expected to achieve.

- Students will need to read more willingly if they have visible signs of their own progress.

What students should be to do is to find out whether the text aims at convincing, giving lead him information, asking him for something, etc.

The material that they are trying to read should be familiar, clear without difficulty in order to avoid the tunnel vision.

Slow reading interfers with comprehension.
Letter identification involves the discrimination and categorization of visual information.

The whole-word identification is based on the premise that readers do not stop to identify individual letters or group or letters in the identification of a word.

The use of meaning is important meaningfulness facilitates the identification of every word, because reading would be impossible if we labored along, blindly striving to identify one word after another with no prior insights into what those words might be.

Slow reading is not efficient reading because it tends to create tunnel vision, overload short-term memory, and leave the reader floundering in the ambiguity of language.

The time required to read a text carefully depends on its linguistic difficulty and on the density of the information it carries.

Flexibility is the main characteristic of a good reader, it will vary the speed according to the text and according to the purpose in reading.

Reading aloud is much slower than silent reading (our eyes move faster than our tongue).

4.2.2 Suggestions for Further Studies

This same study should be conducted with a true experimental research design in an attempt to draw more reliable conclusions. Remember that true experimental designs have three basic characteristics: 1) acontrol group (or groups) is present, 2) the Ss are randomly selected and assigned to the groups, and 3) a pretest is administrated to capture the initial differences between the groups. The two most common experimental designs are: "Posttest only control group" and Pretest Posttest control group design.

It seems that the issue of gathering sufficient relevant information on reading ability in the L1 ideally where the sample of subjects contained both good and poor first-language readers; information of the reading ability in the FL, and information about the level and, importantly, the nature, of the FL proficienly of the same individual, is relatively unexplored area which deserves more active consideration.

It is necessary to know in considerable detail the nature of the subjects' proficiencies in both languages, their

attitudes to the FL, the role of that FL in their society and a host of other social, cultural econimic, educational and political variables that may have a bearing on learning and processing language.

It should be advisable to make systematic classroom observations about the practical effectiveness of reading speed and reading comprehension techniques for the improving reading with English texts as a FL.

Much research focused upon the product of reading - the comprehension of text - rather than the process of reading, the comprehending.

The important point to note is that we need to experimental with a range of different techniques that will give insight into reading behaviour, into the reading process, in both language.

All studies have been quantitative in nature, rather than qualitative.

Another variable that needs to be investigated is the state of learner's knowledge.

The teacher as researcher should meet the following requirements:

- To be able to define the term "research" the different types of research which exist and the reasons for conducting research.

- To be able to formulate appropriate questions to which a research project can give answers. By "appropriate" questions we mean those which relate directly to your own teaching or learning situations.

- To get to know the different ways in which research projects can be set up by a practising classroom teacher and the ways in which data from these projects can help to improve teaching techniques, materials, and methodology.

To be able to plan or outline a research project, the results of which can be usefully communicated to your colleagues in order to help them find answers to problems relating to their own teaching and learning situation.

In short, it is becoming increasingly clear that future research will have to focus upon individuals, and be specially designed to allow a detailed examination of the nature of their abilities, strategies, knowledges, attitudes and motivations, and any other variables that appear to be of relevance. Such research will also need to make account of the dynamic nature of learning, the

interactive of reading and the importance of trying to characterize the process of reading.

The students should use specific reading techniques like skimming and scanning necessary for quick and efficient reading speed.

The skimming and scanning exercises should contribute to building up the students' confidence by showing them how much they can learn simply by looking at some prominent parts of an article, by catching a few words anly, by reading a few paragraphs.

It is not necessary to understand thousands upon thousands of words to begin to learn to read, basically all that is required is a general familiarity with the words and construction in the written material from which one is expected to learn.

The speed exercises of all kind should be motivated to beat their own records, not to compete with one another.

The students who subvocalize tend to read word by word instead of in sense groups and it will be difficul to improve speed.

The finger-point also can slow down the reading process if the finger-points word by word.

5. CONCLUSIONS

- Poor reading in a foreign language is due to poor reading ability in the first language. Poor first-language readers will read poorly in the foreign language and good first-language readers will read well in the foreign language.

- Poor reading in a foreign language is due to inadequate knowledge of the target language.

- If poor first-language reading is the cause, we must improve first-language reading.

- If poor foreign language knowledge is the cause, we need to improve FL competence.

- If processing is different for different languages, then we need to teach reading of the foreign language, regardless of the first-language ability.

- A better and fuller understanding of what a second language readers does when he reads is needed.

- The subject of reading materials should be of high interest and relate well to the background of the reader.

- The teacher's main function in reading instruction is to get the student moving in the right direction and provide timely and appropriate feedback.

- There is the obvious need to learn the target language and avoid the pitfalls of the native language.

- There is the fact that a great deal of the ability to read transfers automatically. We must teach reading skills which should have been learned in first language instruction,and the children should do comprehension exercises in order to enhance their reading skills.

- The students must have strategies in the interpretation of text. The role of the teacher is to motivate the learner's capacity to develop his own learning strategies for efficient reading, rather than merely to provide a set of techniques for coping with the texts.

-Skills in reading, therefore, depend on precise coordination of a number of special skills. Providing students with practice in these skills and helping them to develop consistent "attack strategies" should be the focus of any reading program.

- Reading must be viewed as a twofold phenomenon involving process comprehension and product comprehension, and our responsibility as reading teachers, therefore, goes beyond presenting our students with passages followed by comprehension questions. We must construct reading tasks which reward students as much for trying as for getting the correct answer.

- If we want students to practice determining the main idea of a passage, we must find readings which are well-organized with topic sentences and supporting details.

- If a selection contains many facts and figures, it would probably work well in a scanning exercise.

- If we want to work on skimming, for example, it is our responsibility to search until we find an appropriate reading.

- The development of reading skill exercises and the development of language skill exercises, both of which enable students to read more efficiently by using a minimum number of linguistic clues to obtain maximum information, are needed.

- If we cannot read with immediate comprehension, we soon feel tired and bored.

- The level of difficulty should be carefully controlled.

- The content should be tailored to the particular students' needs, ideally to the particular student's needs.

- The reader must have at least a minimun access to the writer's underlying assumptions about his subjects and, perhaps, the larger world of which that subject forms a part.

- The teaching of vocabulary is an essential element of foreign language study, and one which can be best taught through contextualized material.

- The teacher should try to avoid materials or activities that are nonsense to the child, there should be active encouragement for the child to predict, understand, to enjoy.

- Children do not learn to read if they have wrong idea of the nature of reading, if they have learned or been taught that reading does not make sense.

- We take advantage of available texts, which we may adapt slightly to include the particular structures we are interested in; nevertheless, sometimes we have found it best to write our own original materials.

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6.REFERENCES

1. ALDERSON, Charles J. Reading in a Foreign Language. London, Longman, 1984.

2. BEEN, Sheila. Reading in the Foreign Language-Teaching program. Tel Aviv, Israel, 1975.

3. BRATT, Christina. Teaching English as a Second Language: Techniques and procedures by winthrop publishers, Inc. Cambridge, Massachusetts, 1976.

4. CLARKE, Mark A. and SILBERSTEIN, Sandra. Toward a Realization of Psycholinguistic Principles. English Language Institute. University of Michigan, 1977.

5. FRANSSON, Anders. Cramming or Understanding. University of Goteborg, 1976.

6. GRELLET, Francoise. Developing Reading Skills. Cambridge. University Press. New York, New Rochelle, 1981.

7. HARRISON, Colin and DOLAN, Terry. Reading Comprehension a Psychological. Viewpoint. School of Education University of Nottingham, 1976.

8. HATCH, Evelin & Hussein Farhady 91982). Research Design and Statistics for Applied Linguistics. New Bury House. Rowley Mass.

9. IBARRA, Beatriz, INSUASTY, Edgar Alirio, LOPEZ, Leonor."Learning the Basic Cases of English Ellipsis Through Communicative Tasks". Universidad de Narino. Escuela de Postgrado. Pasto. 1991.

10. NUTTALL, Christine. Teaching Reading Skills in a Foreign Language. London. Heinemann Educational Books, 1982

11. SILVA, Fernando. Programe de Inglés de 1981. Editor, 1981.

12. SMITH, Frank. Understanding Reading, CBS. College Publishing, Holt Rinehart and Winston.

13. JACKEY, Richard C. Improving your Reading. New York, Mc Graw Hill, 1970.

APPENDIX

APPENDIX 1

PRETEST DE LECTURA

INSTITUCION : ---------- ASIGNATURA :------- JORNADA ----

NOMBRE : --------------- SEXO:----EDAD: ---- FECHA :-----

El presente pretest tiene como objetivo identificar el tiempo de lectura y el nivel de comprensión de lectura.

A continuación encontrarás una serie de actividades encaminadas a detectar dicha información.

NOTA: Al iniciar la lectura del siguiente texto en inglés, favor escribir la hora, minutos y segundos:------

VIDEO GAMES

Entertainment in the United States is big business.One entertainment industry made five billion dollars in 1981, that sum is almost twice as much as the movie industry made, and three times more than all the major professional sports made. I am talking about the video games industry. All over the U.S. people are standing in front of electrocic machines and playing games. Each

games usually lasts about two minutes and costs twenty five cents. But players sometimes play for hours and spend tens of dollars on the games.

A fifteen year old, who lives in Illinois, has the record for "Defender", which is a space attack game. The record is 16 hours 34 minutes, and 15.963.100 points, all for the same 25 cents.

An incredible record, but the machine always wins in the end.

Many adults are worried about the games. Young people sometimes miss school to play them and they often spend a lot of money on them. The games are fun, but they often become an expensive habit. Think about this. How many 25 cents make 5 billion dollars.?

Tan pronto termines de leer el texto, escribe la hora, minutos y segundos:

I. Mark the correct answer (a,b,c or d) with a circle:

- Which entertainment industry is the text about?

  a) The movie industry

  b) The electronic games industry

c) The industry

d) The electronic

- What is the usual time limit for a game?

a) 16 hours 34 minutes

b) 2 minutes

c) 25 minutes

d) 10 minutes

- What is the cost of the game?

a) 25 cents

b) Tens of dollars

c) 2 cents

d) 15 cents

- Who has the record for defender:

a) an adolescent

b) an adult

c) young people

d) players

- Who is worried about the games?

a) adults

b) young people

c) an adolescemt

d) players

II. Write TRUE OR FALSE:

- Entertainment in the United States is not big business _____

- One entertainment industry make two billions_____

- People are standing in front of electronic machines _____

- Each game usually lasts five minutes_____

- The games are not fun _____

III. Choose the correct answer (a,b, or c) and put a circle around it.

- Entertainment is big:

a) in London

b) in England

c) in The United States

- The games are:

a) beautiful

b) nice

c) fun

- The games often become:

a) a cheap habit

b) a good habit

c) an expensive habit

- All over the U.S.people are standing:

- Entertainment is:

a) a work

b) a business

c) a sport

- Players sometimes play

a) for seconds

b) for minutes

c) for hours

- Entertainment in the U.S. is:

a) small business

b) expensive business

c) big business

- Players spend:

a) behind electronic machines

b) beside electronic machines.

c) in front of electronic machines

- The record is:

a) 14.963.100 points

b) 13.963.100 points

c) 15.963.100 points

a) Three cents

b) six cents

c) tens of dollars

- Young people sometimes:

a) miss school

b) miss church

c) miss office

THANK YOU!

APPENDIX 2

POSTTEST DE LECTURA

INSTITUCION:_____ ASIGNATURA:_____ JORNADA_____

NOMBRE:_____ SEXO _____ EDAD _____FECHA ____

El presente posttest tiene como objetivo identificar el tiempo de lectura y el nivel de comprensión de lectura.

A continuación encontrarás una serie de actividades encaminadas a detectar dicha información.

NOTA: Al iniciar la lectura del siguiente texto en Ingles, favor escribir la hora, minutos y segundos

_____

VIDEO GAMES

Entertainment in the United States is big business. One entertainment industry made five billion dollars in 1981, that sum is almost twice as much as the movie industry made, and three times more than all the major professional sports made. I am talking about the video games industry. All over the U.S. people are standing in front of electronic machines and playing games. Each game

usually lasts about two minutes and costs twenty five cents. But players sometimes play for hours and spend tens of dollars on the games.

A fifteen year old, who lives in Illinois, has the record for "Defender", which is a space attack game. The record is 16 hours 34 minutes, and 15.963.100 points, all for the same 25 cents. An incredible record, but the machine always wins in the end.

Many adults are worried about the games. Young people sometimes miss school to play them, and they often spend a lot of money on them. The games are fun, but they often become an expensive habit. Think about this. How many 25 cents make 5 billion dollars?

Tan pronto termines de leer el texto escribe la hora minutos y segundos:

_____

1) Mark the correct answer (a,b,c or d) with a circle:

- Which entertainment industry is the text about?

a) The movie industry

b) The electronic games industry

c) The industry

d) The electronic.

- What is the usual time limit for a game?

a) 16 hours 34 minutes

b) 2 minutes

c) 25 minutes

d) 10 minutes

- What is the cost of the game?

a) 25 cents.

b) tens of dollars

c) 2 cents

d) 15 cents.

- Who has the record for defender?

a) an adolescent

b) an adult

c) young people

d) players.

- Who is worried about the games?

a) adults

b) young people

c) an adolescent

d) players

2) Write TRUE OR FALSE

- Entertainment in the United States is not big business
_____

- One entertainment industry makes two billions _____

- People are standing in front of electronic machines
_____

- Each game usually lasts five minutes _____

- The game are not fun _____

3) Choose the correct answer (a,b, or c) and put a circle around it

- Entertainment is big:
  a) in London
  b) in England
  c) in United States

- The games are
  a) beautiful
  b) nice
  c) fun

- The games often become:
  a) a cheap habit
  b) a good habit
  c) an expensive habit

- All over the U.S.people

Entertainment is:
a) a work
b) a business
c) a sport

Players sometimes play:
a) for seconds
b) for minutes
c) for hours

- Entertainment in the U.S. is:
  a) small business
  b) expensive business
  c) big business

- Players spend:

are standing:

a) behind electronic machines

b) beside electronic machines

- The record is

a) 14.963.100 points

b) 13.963.100 points

c) 15.963.100 points

a) three cents

b) six cents

c) tens of dollars

- Young people sometimes:

a) miss school

b) miss church

c) miss office

THANK YOU!

APPENDIX 3

VIDEO GAMES

Entertainment in the United States is big business. One entertainment industry made five billion dollars in 1981. That sum is almost twice as much as the movie industry made, and three times more than all the major professional sports made. I am talking about the video games industry. All over the U.S. people are standing in front of electronic machines and playing games. Each game usually lasts about two minutes and costs twenty five cents. But players sometimes play for hours and spend tens of dollars on the games.

A fifteen year old, who lives in Illinois, has the record for "Defender", which is a space attack game. The record is 16 hours 34 minutes, and 15.963.100 points, all for the same 25 cents. An incredible record, but the machine always wins in the end.

Many adults are worried about the games. Young people sometimes miss school to play them, and they often spend a lot of money on them. The games are fun, but they often become an expensive habit. Think about this. How many 25 cents make 5 billion dollars?

SELECTION STATISTICS

Number of characters:	951
Number of words:	174
Approximate number of syllables:	240
Numbers of words with at least 3 syllables:	14
Percentage of words with at least 3 syllables:	8
Number of sentences:	16
Average number of words per sentences:	10
Number of paragraphs:	3
Number of Return characters:	3
1. Gunning's Fog Index:	7
2. Flesch's Index:	72 (Grade 7)

OK

PROGRAMME OF ENGLISH

SUBJECT: ENGLISH UNIT #: 1 TITLE: READING SPEED AND COMPREHENSION

GRADE : NINTH PERIOD: FOURTH TIME: 2 HOURS

OBJECTIVES	THEMES - SUBTHEMES	ACTIVITIES	RESOURCES	CRITERION OF EVALUATION
To emphazise the importance of speed in the reading, by means of motivating exercises.	1.-Reading speed 1.1.Importance 1.2.Determination 1.3.Comparison 1.4.Relationship between R.C. and R. S. 1.5.Kinds of skills	Exercises of motivation, fixation, skiping, focusing on the center, reading down, reading across with letters, words and patterns, scanning and skimming exercises.	Billboard Words Letters Guide Posters	To appreciate the importance of speed in the reading by means of practicing the fixation as a technique.
To identify the concept, principles, importance, process of communication, reasons for reading, by means of different activities of motivation.	2.-Reading comprehension 2.1.Importance 2.2.Principles 2.3.Process of Commun 2.4.Reasons.	Exercises of motivation, explanation, practice, techniques, prediction, purpose, inferation of ideas, and so forth.	Billboard Pictures Guide Dictionary	To identify the process, principles, reasons, by means of different activities of motivation.

PROGRAMME OF ENGLISH

SUBJECT: ENGLISH *UNIT #: 1* *TITLE: READING SPEED AND COMPREHENSION*

GRADE : NINTH *PERIOD: FOURTH* TIME: 2 HOURS

OBJECTIVES	THEMES - SUBTHEMES	ACTIVITIES	RESOURCES	CRITERION OF EVALUATION
To identify the strategies that help students to read with comprehension and to apply these.	3. Strategies 3.1.Prediction of the content starting with the title. 3.2.Reading with Purpose. 3.3.Logical inference 3.4.Guessing words.	Exercises of match with titles, ideas, choosing-chapters, diagrams, multiple choice, true or false, guessing words, prefix and suffix.	Texts Dictionary Billboard Stories Magazines News	To apply 5 activities according to the reading comprehension by means of writing exercises.
To create the habit of reading by means of building of newspaper library.	4. The Newspaper Library 4.1.Magazines 4.2.Pamphlets	To obtain the material.	Magazines Pamphlets News	To motivate with the habit of reading.

#39849

PROGRAMME OF ENGLISH

SUBJECT: *ENGLISH* *UNIT #:* *II* *TITLE:* *EXERCISES OF READING SPEED*

GRADE : *NINTH* *PERIOD:* *FOURTH* TIME: 2 HOURS

OBJECTIVES	THEMES - SUBTHEMES	ACTIVITIES	RESOURCES	CRITERION OF EVALUATION
Improve the Reading Speed by means of practice speed exercises such as: focusing in the column, reading across the line, with small and capital letters, words with the same meaning and different meaning.	1.- Improvement of Reading Speed. 1.1. Focusing in the center line. 1.2. List of words. 1.3. Reading across. 1.4. Capital and small letters. 1.5. Reading across the line. 1.6. Words. 1.7. Same meaning. 1.8. Reading across the line. 1.9. Column words. 1.10. Doesn't belong.	Exercises of explanation vision exercises, repetition of compoundwords. Exercises of explanation fixing exercises, identification exercises with capital and small letters. Exercises of explanation fixing exercises, identification the same word (left) and meaning. Exercises of explanation reading without line, identification exercises of word, doesnot belong.	Billboard Sheet Photocopies Posters Billboard Sheet Guide Watch Billboard Dictionary Car-words Billboard Posters Magazines.	To focus 10 pairs of words by means of vision exercises. To identify capital and small letters by means of read across the line. To fix 5 words with same word and meaning. To identify 5 words do not belong the group.

PROGRAMME OF ENGLISH

SUBJECT: *ENGLISH* *UNIT #:* *III* TITLE: EXERCISES OF READING SPEED

GRADE : *NINTH* PERIOD: FOURTH TIME: 2 HOURS

OBJECTIVES	THEMES - SUBTHEMES	ACTIVITIES	RESOURCES	CRITERION OF EVALUATION
To identify words by means of scanning and skimming strategies.	1. Scanning 1.1. Identification of words. 1.2. Choosing titles. 1.3. Repetition dates and names. 2. Skimming 2.1. Identification 2.2. Choosing 2.3. Repetition 2.4. Numbers 3. Reading words 3.1. Pairs of words 3.2. Eyes movement 3.3. Read down 4. Reading phrases and paragraphs 4.1. Phrases separated by spaces. 4.2. Phrases a single glance. 4.3. Phrase with smooth and rhythm.	Exercises of identification, occuring exercises, of titles, reading aloud writing exercises, underline exercises, and circle exercises. Identification exercises occuring exercises of titles, topics, pictures and diagram. Reading exercises, fixing exercises, words. Reading and memorization exercises, practice of reading silently, focus at the center, reading the words in a single glance.	Billboard Sheet Guide. Billboard Guide Pictures. Billboard Guide Billboard	To underline and circle the correct words and numbers by means of the strategy. To give the appropriate title topic, subtitle, in a context. To real 10 pairs of words rapidly. To read 10 phrase all the words, paragraphs aloud pausings lightly.

PROGRAMME OF ENGLISH

SUBJECT: *ENGLISH* **UNIT #:** **IV** **TITLE:** **STRATEGIES OF READING COMPREHENSION**

GRADE : *NINTH* **PERIOD:** **FOURTH** **TIME:** 2 HOURS

OBJECTIVES	THEMES - SUBTHEMES	ACTIVITIES	RESOURCES	CRITERION OF EVALUATION
To improve the reading comprehension, by means of practicing comprehension exercises, such as: prediction, reading with purpose, identification, connectors.	1. Improvement of Reading comprehension 1.1. Prediction of content starting with title. 1.1.1. Chapters 1.1.2. Themes 1.1.3. Ideas	Exercises of explanation finding titles, chapters ideas, themes, express reasons of choosing, memorization, identification, repetition.	Titles Ideas Billboard Guide	To identify 5 titles related with themes, ideas by means of prediction of content.
	1.2. Reading with purpose. 1.2.1. Specific 1.2.2. General	Exercises of explanation with questions, diagrams, complementation, identification with drawing, reading, passages, multiple choice, true or false exercises.	Billboard Pictures Posters Magazines	To organize a story according to the reading, by means of reading with purpose.
	1.3. Identification of connectors 1.3.1. Function 1.3.2. Kinds 1.3.3. Meaning 1.3.4. Place 1.3.5. Relation.	Exercises of explanation deductive reasoning, identification of connectors, meaning, memorization relationship, function and place.		To identify 5 connectors by means of the reading The Life in a Small and a Big City.

PROGRAMME OF ENGLISH

SUBJECT: *ENGLISH* *UNIT #:* V *TITLE:* *STRATEGIES OF READING COMPREHENSION*

GRADE : *NINTH* PERIOD: FOURTH TIME: 2 HOURS

OBJECTIVES	THEMES - SUBTHEMES	ACTIVITIES	RESOURCES	CRITERION OF EVALUATION
To improve the level of reading comprehension by means of practicing the strategies of local inferation of ideas with explicit and implicit form, and guessing words with suffix and prefix.	1. Logical inferation of ideas. 1.1. Explicit form 1.2. Implicit form 1.3. Function 2. Guessing words 2.1. Suffixes 2.2. Prefixes 2.3. Kinds 2.4. Definition 2.5. Examples 2.6. Investigation.	Explanation exercises, multiple choice, true or false exercises, with questions, answers and questions. Explanation exercises, identification, investigation, organization, memorization, complementation.	Reading Billboard Guide Text Magazines Reading Billboard Guide Texts Dictionary	To identify the level of comprehension by means of some exercises. To identify 5 prefixes and 5 suffixes by means of application of the guessing words strategy.

APPENDIX 5

1. Descriptive statistical data Experimental Group

Descriptive statistics experimental group - speed

Mean.:	Std.Dev.:	Std.Error:	Variance:	Coef.Var.:	Count:
61.568	2.809	.513	7.89	4.562	30
Minimun:	**Maximun:**	**Range.:**	**Sum:**	**Sum Squared:**	**Missing**
57.47	68.25	10.78	1847.04	113947.365	30

Descriptive statistics experimental group - Comprehension

Mean:	Std.Dev:	Std.Error:	Variance:	Coef.Var.:	Count:
83.167	4.45	.812	19.799	5.35	30
Minimun:	**Maximun:**	**Range.:**	**Sum:**	**Sum Squared:**	**Missing:**
80	95	15	2495	208075	30

Appendix 6

Descriptive statistical data population
Descriptive statistics population - speed

Mean:	Std.Dev.:	Std.Error:	Variance:	Coef.Var:	Count:
52.922	21.794	.982	474.976	41.181	493
Minimun:	**Maximun:**	**Range.:**	**Sum:**	**Sum Squared:**	**Missing:**
17.06	182	164.94	26090.48	1614445.078	0

Descriptive statistics population - comprehension

Mean:	Std.Dev.:	Std.Error:	Variance:	Coef.Var:	Count:
60.903	14.147	.637	200.149	23.23	493
Minimun:	**Maximun:**	**Range.:**	**Sum:**	**Sum Squared:**	**Missing:**
20	100	80	30025	1927075	0

Appendix 7

CONTROL GROUP

INST.	GROUP	WORDS/MINUTE SUM:	WORDS/MINUTE SUM SQUARED:	LEVEL OF COMPREHENSION SUM:	LEVEL OF COMPREHENSION SUM SQUARED:
1	A	1.763.23	112.332	1.700	104.500
1	B	1.810.86	154.738	1.830	117.050
2	A	1.627.90	96.069	1.705	103.025
2	B	2.048.41	247.718	1.225	80.625
3	A	1.228.81	62.194	2.040	123.800
3	B	675.92	22.041	1.320	86.550
4	A	998.21	46.195	1.315	78.783
4	B	902.06	35.207	1.340	75.050
5	A	2.039.61	146.592	1.600	89.650
5	B	2.051.20	147.105	1.780	113.200
6	A	2.010.42	153.354	1.940	136.650
6	B	1.382.77	70.196	1.830	114.100
7	A	884.40	55.642	1.195	73.375
7	B	639.59	32.710	1.130	76.500
8	A	1.498.52	81.051	2.065	145.525
8	B	1.478.53	74.761	1.995	137.227
9	A	1.241.61	63.552	1.650	98.300
9	B	1.789.43	106.285	2.365	178.475
TOTALES		26.090.48	1.707.742	30.025	1.927.075

$$S = \sqrt{\frac{X^2 - (X)^2 / N}{N - 1}} = \sqrt{\frac{1614445,07 - (26.090.48)^2 / 493}{492}}$$

$$S = \sqrt{23369.39} = \sqrt{47.49876} = 21.794$$

CONTROL GROUP

$$S = \sqrt{\frac{x^2 - (x)^2 / n}{N - 1}} = \sqrt{\frac{1.828.60 - 1.927.07}{492}} = 20.014$$

14.147

SYMBOLS:
1 Javeriano
2 Los Andes
3 La Presentación
4 Inem
5 Ciudad de Pasto
6 Itsin
7 Mercedario
8 Franciscanas
9 Betlemitas

Appendix 8

(POSTTEST)

WORDS/MINUTE

X	X^2
60.66	3679.63
60.66	3679.63
62.04	3848.96
62.04	3848.96
62.40	3893.76
58.08	3373.28
61.34	3762.59
66.18	4379.79
64.23	4125.49
59.02	3483.36
57.47	3302.80
60.66	3679.63
59.02	3483.36
60.66	3679.63
60.00	3600.00
60.66	3679.63
60.66	3679.63
60.66	3679.63
68.25	4658.06
58.39	3409.39
57.47	3302.80
59.02	3483.36
66.18	4379.79
62.40	3893.76
64.23	4125.49
59.02	3483.36
66.18	4379.79
65.00	4225.00
61.34	3762.59
63.12	3984.13
1.847.04	113.947.28

LEVEL OF COMPREHENSION

X	X^2
80	6.400
80	6.400
80	6.400
85	7.225
90	8.100
85	7.225
90	8.100
80	6.400
80	6.400
80	6.400
95	9.025
85	7.225
80	6.400
80	6.400
85	7.225
80	6.400
80	6.400
90	8.100
85	7.225
80	6.400
80	6.400
90	8.100
80	6.400
80	6.400
80	6.400
80	6.400
80	6.400
80	6.400
90	8.100
85	7.225
2.495	208.075

$$S = \sqrt{\frac{X^2 - (X)^2 / N}{N - 1}} = \sqrt{\frac{119.947.28 - 113.718.55}{29}} = \sqrt{\frac{228.73}{29}}$$

$$\sqrt{7.887} = 2.808 \quad \text{Speed.}$$

$$S = \sqrt{\frac{X^2 - (X^2 / N}{N - 1}} = \sqrt{\frac{208.075 - 207.500}{29}}$$

$$\sqrt{19.82} = 4.45 \quad \text{Comprehension}$$

Appendix 9

Distribution of t

	Nivel de significacion para la prueba de una sola cola					
	.10	.05	.025	.01	.005	. 0005
	Nivel de significacion para la prueba de dos colas					
	.20	.10	.05	.02	.01	.001
1	3.078	6.314	12.706	31.821	63.657	636.619
2	1.886	2.920	4.303	6.965	9.925	31.598
3	1.638	2.353	3.182	4.541	5.841	12.941
4	1.533	2.132	2.776	3.747	4.604	8.610
5	1.476	2.015	2.571	3.365	4.032	6.859
6	1.440	1.943	2.447	3.143	3.707	5.959
7	1.415	1.895	2.365	2.998	3.499	5.405
8	1.397	1.860	2.306	2.896	3.355	5.041
9	1.383	1.833	2.262	2.821	3.250	4.781
10	1.372	1.812	2.228	2.754	3.169	4.587
11	1.363	1.796	2.201	2.718	3.106	4.437
12	1.356	1.782	2.179	2.681	3.055	4.318
13	1.350	1.771	2.160	2.650	3.012	4.140
14	1.345	1.761	2.145	2.624	2.977	4.140
15	1.341	1.753	2.131	2.602	2.947	4.073
16	1.337	1.746	2.120	2.583	2.921	4.015
17	1.333	1.740	2.110	2.567	2.898	3.265
18	1.330	1.734	2.101	3.552	2.878	3.922
19	1.328	1.729	2.093	2.539	2.861	3.883
20	1.325	1.725	2.086	2.528	2.845	3.850
21	1.323	1.721	2.080	2.518	2.831	3.819
22	1.321	1.717	2.074	2.508	2.819	3.792
23	1.319	1.714	2.069	2.500	2.807	3.767
24	1.318	1.711	2.064	2.492	2.797	3.745
25	1.316	1.708	2.060	2.485	2.787	3.725
26	1.315	1.706	2.056	2.479	2.779	3.707
27	1.314	1.703	2.052	2.473	2.771	3.690
28	1.313	1.701	2.048	2.467	2.763	3.674
29	1.311	1.699	2.045	2.462	2.756	3.659
30	1.310	1.697	2.042	2.457	2.750	3.646
40	1.303	1.684	2.021	2.423	2.704	3.551
60	1.296	1.671	2.000	2.390	2.660	3.460
	1.282	1.645	1.960	2.326	2.576	3.291

Fuente: R.A. Fisher y F. Yates (ed 1948)

Appendix 10

INDIVIDUAL STUDENTS RESULTS

STUDENTS	SEX	WORDS/MINUTE		LEVEL OF COMPREHENSION	
1	M	37.01	1369	65 %	4225
2	M	64.23	4125	45	2025
3	M	70.45	4963	65	4225
4	M	64.23	4125	40	5600
5	M	57.47	3302	50	2500
6	F	42.00	1764	55	3025
7	M	39.00	1521	40	1600
8	F	60.66	3673	40	1600
9	M	58.08	3373	25	625
10	F	59.02	3483	45	2025
11	F	54.60	2981	65	4225
12	M	59.02	3483	65	4225
13	F	60.66	3679	35	1225
14	F	42.82	1833	70	4900
15	M	48.53	2355	45	2025
16	F	54.60	2981	55	3025
17	M	44.57	1986	50	2500
18	M	60.66	3679	50	2500
19	F	44.21	1954	45	2025
20	M	64.23	4125	55	3025
21	M	50.79	2579	50	2500
22	M	72.80	5299	100	10000
23	M	48.53	4853	50	2500
24	M	76.90	5913	70	4900
25	M	56.00	3536	75	5625
26	M	99.27	9854	45	2025
27	M	54.60	3136	70	4900
28	M	97.50	9506	85	7225
29	M	58.39	3409	60	3600
30	M	62.40	3893	90	8100
TOTAL		1.763.23	112.332	1.700	104.500
N		30		30	
X		58.77		56.66 %	

LEVEL: NINTH
HIGH SCHOOL: SAN FRANSISCO JAVIER
KIND: MALE AND FEMALE - PRIVATE
GROUP A

	W/M	L. of C
Male (22)	1.34466 = 61.12	1.290 = 58.63 %
Female (8)	418.57 = 52.32	410 = 51.25 %

STUDENTS	SEX	WORDS/MINUTE		LEVEL OF COMPREHENSION	
1	M	28.73	8254	55 %	3025
2	M	59.02	3483	50	2500
3	F	91.00	8281	75	5625
4	M	27.36	7485	55	3025
5	M	29.91	8946	65	4225
6	M	38.31	1467	60	3600
7	F	53.26	2836	80	6400
8	M	40.44	1635	55	3025
9	M	59.02	3483	40	1600
10	F	42.00	1764	75	5627
11	M	42.82	1833	75	5625
12	F	60.66	3679	65	4225
13	M	30.33	9199	75	5625
14	M	44.57	1986	70	4900
15	M	84.00	7056	60	3000
16	F	54.60	2981	60	3600
17	M	60.66	3679	65	4225
18	M	59.02	3483	50	2500
19	F	33.09	1094	40	1600
20	M	7.531	5671	70	4900
21	F	84.00	7056	70	4900
22	M	91.00	8281	50	2500
23	M	50.79	2579	60	3600
24	F	78.00	6084	25	625
25	M	87.36	7631	50	2500
26	M	87.36	7631	85	7225
27	M	109.20	11924	75	5625
28	M	91.00	8281	50	2500
29	M	59.02	3483	75	5625
30	M	59.02	3483	50	2500
TOTAL		1.810.86	154.738	1.830	117.050
N		30		30	
X		60.36		61 %	

LEVEL: NINTH
HIGH SCHOOL: SAN FRANCISCO JAVIER
KIND: MALE AND FEMALE - PRIVATE
GROUP: B

	w/m	L. of C
Male (22)	1.314.25 = 5973	1.340 = 60.90 %
Female (8)	496.61 = 62.07	490 = 61.25 %

STUDENTS	SEX	WORDS/MINUTE		LEVEL OF COMPREHENSION	
1	M	72.80	5299	35 %	1225
2	F	87.36	7631	45	2025
3	M	80.88	6541	55	3025
4	M	62.40	3893	65	4225
5	M	87.36	7631	65	4225
6	M	57.47	3302	70	4900
7	F	72.80	5299	70	4900
8	M	78.00	6084	60	3600
9	F	84.00	7056	65	225
10	F	70.45	4963	60	3600
11	F	72.80	5299	65	4225
12	M	84.00	7056	60	3600
13	M	94.95	9015	60	3600
14	M	84.00	7056	60	3600
15	M	60.66	3679	60	3600
16	M	70.45	4963	45	2025
17	M	75.31	5671	40	1600
18	M	75.31	5671	55	3025
19	F	43.68	1907	45	2025
20	M	64.23	4125	40	1600
21	M	46.46	2158	50	2500
22	M	45.50	2070	75	5625
23	M	75.31	5671	55	3025
24	M	87.36	7631	45	2025
25	M	43.68	1907	45	2025
26	F	44.57	1986	55	3025
27	M	84.00	7056	30	900
28	M	43.68	1907	45	2025
29	M	46.46	2158	25	625
30	M	43.68	1907	55	3025
TOTAL		2.039.61	146.592	1.600	89650
N		30		30	
X		67.98		53.33 %	

LEVEL: NINTH
HIGH SCHOOL: CIUDAD DE PASTO
KIND: MALE AND FEMALE - OFFICIAL
GROUP: A

	w/m	L. of C
Male (23)	1.563.95 = 67.99	1.195 = 51.95 %
Female (7)	475.66 = 67.95	405 = 57.85 %

STUDENTS	SEX	WORDS/MINUTE		LEVEL OF COMPREHENSION	
1	F	91.00	8281	60 %	3600
2	M	39.70	1517	60	3600
3	M	87.36	7631	60	3600
4	M	75.31	5671	60	4225
5	M	68.25	4658	75	5625
6	F	63.48	4029	55	3025
7	F	75.31	5671	80	6400
8	M	68.25	4658	40	3600
9	M	87.36	7631	65	4225
10	M	71.84	5160	45	2025
11	F	64.23	4125	45	2025
12	F	64.23	4125	40	3600
13	M	64.23	4125	70	4900
14	F	75.31	5671	70	4900
15	F	36.40	1324	75	5625
16	F	68.25	4658	75	5625
17	M	64.23	4125	50	2500
18	M	75.31	5671	45	2025
19	M	64.23	4125	65	4225
20	M	76.36	5830	60	3600
21	M	64.23	4125	60	3600
22	M	33.09	1094	45	2025
23	M	32.50	1056	70	4900
24	M	78.00	6084	55	3025
25	F	68.25	4658	55	3025
26	F	91.00	8281	65	4225
27	M	75.31	5671	55	3025
28	F	99.27	9054	55	3025
29	M	60.66	3679	70	4900
30	F	68.25	4658	50	2500
TOTAL		2.051.20	147.105	1.780	113.200
N		30		30	
X		68.37		59.33 %	

LEVEL: NINTH
HIGH SCHOOL: CIUDAD DE PASTO
KIND: MALE AND FEMALE - OFFICIAL
GROUP: B

	w/m	L. of C
Male (18) 1.186.22 =	65.90	10.55 = 58.61 %
Female (12) 864.98 =	72.08	725 = 60.41 %

STUDENTS	SEX	WORDS/MINUTE		LEVEL OF COMPREHENSION	
1	M	94.95	9015	85 %	7225
2	M	87.36	7631	75	5625
3	M	62.40	3893	90	8100
4	M	64.23	4125	90	8100
5	M	91.00	8281	85	7225
6	M	59.02	3483	90	8100
7	M	64.23	4125	90	8100
8	M	62.40	3893	70	4900
9	M	45.50	2070	60	3600
10	M	91.00	8281	75	5625
11	M	62.40	3893	30	900
12	M	58.39	3409	45	2025
13	M	62.40	3893	40	1600
14	M	80.88	6541	70	4900
15	M	94.95	9015	35	1225
16	M	59.02	3483	70	4900
17	M	60.66	3679	30	900
18	M	59.02	3483	60	3600
19	M	59.02	5902	50	2500
20	M	66.18	4379	40	1600
21	M	53.26	2836	50	2500
22	M	64.23	4125	80	6400
23	M	99.27	9854	55	3025
24	M	60.66	3679	55	3025
25	M	52.00	2704	95	9025
26	M	64.23	4125	50	2500
27	M	85.98	7392	80	6400
28	M	64.23	4125	75	5625
29	M	50.79	2579	70	2500
30	F	30.76	9461	70	4900
TOTAL		2.010.42	153.354	1.940	136.650
N		30		30	
X		67.01		64.66 %	

LEVEL: NINTH
HIGH SCHOOL: ITSIN

KIND: MALE AND FEMALE - OFFICIAL
GROUP: A

	w/m	L. of C
Male (29)	1.979.66 = 68.26	1870 = 64.48 %
Female (1)	30.76 = 30.76	70 = 70 %

STUDENTS	SEX	WORDS/MINUTE		LEVEL OF COMPREHENSION	
1	F	35.80	1281	70 %	4900
2	F	37.01	1369	70	4900
3	M	57.47	3302	65	4225
4	M	60.66	3679	65	4225
5	F	64.23	4125	55	3025
6	M	45.12	2035	45	2025
7	F	66.18	4379	60	3600
8	M	47.47	2253	55	3025
9	M	56.00	3136	75	5625
10	F	43.68	1907	65	4225
11	M	35.80	1281	65	4225
12	M	54.60	2981	45	2025
13	M	42.82	1833	60	3680
14	F	37.65	1417	75	5625
15	M	45.50	2070	65	4225
16	F	47.47	2253	45	2025
17	M	37.65	1417	55	3025
18	M	46.46	2158	60	3600
19	F	26.31	3981	65	4225
20	M	37.01	1369	60	3600
21	M	59.02	3483	65	4225
22	F	59.02	3483	60	3600
23	F	56.00	3136	65	4225
24	M	44.93	2018	50	2500
25	F	35.22	1240	75	5625
26	F	56.00	3136	65	4225
27	F	36.64	1342	50	2500
28	F	40.44	1635	45	2025
29	F	33.60	1128	75	5625
30	M	37.01	1369	60	3600
TOTAL		1.382.77	70.196	1.830	114.100
N		30		30	
X		46.09		61 %	

LEVEL: NINTH
HIGH SCHOOL: ITSIN
KIND: MALE AND FEMALE - OFFICIAL
GROUP: B

	w/m	L. of C
Male (15)	707.52 = 47.16	890 = 59.33 %
Female (15)	675.25 = 45.01	940 = 62.66 %

STUDENTS	SEX	WORDS/MINUTE		LEVEL OF COMPREHENSION	
1	F	44.75	2256	75 %	5625
2	F	52.75	7782	75	5625
3	F	49.63	2463	60	3600
4	F	54.05	2921	65	4225
5	F	55.71	3103	60	3600
6	F	45.31	2052	60	3600
7	F	48.53	2355	60	3600
8	F	57.47	3302	45	2025
9	F	47.06	2214	75	5625
10	F	36.40	1324	80	6400
11	F	57.77	3337	80	6400
12	F	44.39	1917	50	2500
13	F	48.53	2355	75	5625
14	F	51.26	2627	60	2600
15	F	51.26	2627	80	6400
16	F	52.00	2704	70	4900
17	F	58.39	3409	70	4900
18	F	43.68	1907	75	5625
19	F	54.60	2981	80	6400
20	F	36.15	1306	75	5625
21	F	54.60	2981	80	6400
22	F	55.71	3103	75	5625
23	F	47.06	2214	50	2500
24	F	52.00	2704	80	6400
25	F	49.63	2473	70	4900
26	F	48.53	2355	50	2500
27	F	56.87	3234	70	4900
28	F	43.68	1907	60	3600
29	F	44.75	2002	80	6400
30	F	56.00	3136	80	6400
TOTAL		1.498.52	81.051	2.065	145.525
N		30		30	
X		49.95 w/m		68.83 %	

LEVEL: NINTH
HIGH SCHOOL: FRANCISCANAS
KIND: FEMALE - PRIVATE
GROUP: A

STUDENTS	SEX	WORDS/MINUTE		LEVEL OF COMPREHENSION	
1	F	60.66	3679	80 %	6400
2	F	57.77	3337	50	2500
3	F	52.75	2782	50	2500
4	F	54.87	3010	60	3600
5	F	55.71	3103	55	3025
6	F	48.10	2313	60	3600
7	F	56.87	3234	75	5625
8	F	44.39	1970	80	6400
9	F	44.21	1954	65	4225
10	F	48.10	2313	65	4225
11	F	36.40	1324	70	4900
12	F	56.87	3234	70	4900
13	F	45.50	2070	50	2500
14	F	34.40	1324	55	3025
15	F	45.50	2070	60	3600
16	F	35.80	1281	40	1600
17	F	36.40	1324	40	1600
18	F	48.53	2355	70	4900
19	F	45.31	2052	80	6400
20	F	36.15	1306	80	6400
21	F	52.75	2782	85	7225
22	F	42.00	1704	80	6400
23	F	56.87	3234	75	5625
24	F	42.00	1704	80	6400
25	F	57.47	3302	65	4225
26	F	57.47	3302	75	5627
27	F	61.00	3721	80	6400
28	F	57.47	3302	70	4900
29	F	6100	3721	60	3600
30	F	44.21	1954	70	4900
TOTAL		1.478.53	74.761	1.995	137.227
N		30		30	
X		49.28 w/m		66.50 %	

LEVEL: NINGH
HIGH SCHOOL: FRANCISCANAS
KIND: FEMALE - PRIVATE
GROUP: B

STUDENTS	SEX	WORDS/MINUTE		LEVEL OF COMPREHENSION	
1	M	36.40	1324	75 %	5625
2	F	32.11	1031	70	4900
3	M	55.15	3041	70	4900
4	M	66.58	4432	70	4900
5	F	57.77	3337	65	4225
6	M	41.05	1685	65	4225
7	F	40.44	1635	65	4225
8	F	36.40	1324	65	4225
9	M	42.82	1833	70	4900
10	M	35.33	1248	60	3600
11	F	41.52	1723	60	3600
12	M	78.00	6048	60	3600
13	F	38.31	1467	60	3600
14	M	21.84	4769	55	3025
15	F	43.68	1907	55	3025
16	M	59.02	3483	55	3025
17	M	36.03	1298	50	2500
18	F	54.60	2981	45	2025
19	F	36.15	1306	45	2025
20	F	31.20	9734	35	1225
TOTAL		884.40	55.642	1.195	73.375
N		20		20	
X		44.22 w/m		59.75 %	

LEVEL: NINTH
HIGH SCHOOL: MERCEDARIO
KIND: MALE AND FEMALE - OFFICIAL
GROUP: A

	w/m	L. of C.
Male (10)	472.22 = 47.22	630 = 63
Female (10)	412.18 = 41.21	565 = 56

STUDENTS	SEX	WORDS/MINUTE		LEVEL OF COMPREHENSION	
1	F	35.80	1281	80 %	6400
2	M	42.82	1832	80	6400
3	M	36.03	1298	75	5625
4	F	38.31	1467	75	5625
5	M	35.68	1273	75	5625
6	F	38.31	1467	70	4900
7	F	28.00	7840	70	4900
8	F	32.11	1031	70	4900
9	M	42.82	1833	65	4225
10	F	33.60	1128	65	4225
11	M	29.51	8708	65	4225
12	M	40.44	1635	65	4225
13	M	56.00	3136	60	3600
14	F	35.33	1248	60	3600
15	F	33.09	1094	55	3025
16	M	49.63	2464	50	2500
17	F	32.11	1031	50	2500
TOTAL		639.59	32.710	1.130	76.500
N		17		17	
X		37.62		66.47	

LEVEL: NINTH
HIGH SCHOOL: MERCEDARIO
KIND: MALE AND FEMALE - OFFICIAL
GROUP: B

		w/m		L. of C.	
Male (8)	332.93	= 41.61	535	= 66.87	
Female (9)	306.66	= 34.07	595	=	66.11

STUDENTS	SEX	WORDS/MINUTE		LEVEL OF COMPREHENSION	
1	M	52.59	2765	60 %	3600
2	F	24.53	6017	75	5625
3	F	45.12	2035	50	2500
4	F	33.60	1128	65	4225
5	F	35.80	1281	75	5625
6	M	25.39	6440	70	4900
7	F	33.09	1094	75	5625
8	F	17.33	300	65	4225
9	F	26.96	726	65	4225
10	F	29.51	870	50	2500
11	M	25.63	656	65	4225
12	F	21.62	467	65	4225
13	M	42.16	1777	45	2025
14	F	34.12	1164	60	3600
15	F	33.09	1094	55	3025
16	F	33.09	1094	70	4900
17	F	35.80	1281	60	3600
18	F	60.66	3669	35	1225
19	F	40.44	1035	60	3600
20	F	34.12	1164	45	2025
21	F	31.20	9734	60	3600
22	F	31.65	1001	55	3025
23	F	17.33	300	65	4225
24	F	35.22	1240	70	4900
25	F	32.59	1064	60	3600
26	F	37.39	1398	70	4900
27	F	41.20	1697	55	3025
28	M	33.09	1094	60	3600
29	F	52.00	2704	45	2025
30	F	53.26	2836	45	2025
31	F	19.96	398	25	625
32	F	36.40	1324	45	2025
33	F	37.65	1417	40	1600
34	M	62.40	3893	70	4900
35	M	42.82	1833	65	4225
TOTAL		1.228.81	62.194	2.040	123.800
N		35		35	
X		35.10 w/m		58.28 %	

LEVEL: NINTH
HIGH SCHOOL: LA PRESENTACION
KIND: MALE AND FEMALE - PRIVATE
GROUP: A

	w/m	L. of C.
Male (7)	264.08 = 37.72	435 = 62.14
Female (28)	964.73 = 34.45	1.605 = 57.32

STUDENTS	SEX	WORDS/MINUTE		LEVEL OF COMPREHENSION	
1	F	33.09	1094	50 %	2500
2	M	29.71	882	65	4225
3	F	24.81	615	50	2500
4	M	33.09	1094	70	4900
5	F	35.22	1240	70	4900
6	M	35.80	1281	65	4225
7	F	33.60	1128	65	4225
8	F	32.89	1081	70	4900
9	F	33.60	1128	70	4900
10	F	30.33	919	75	5625
11	F	34.12	1164	60	3600
12	F	31.20	973	75	5625
13	F	21.41	458	20	400
14	F	34.12	1164	60	3600
15	F	33.09	1094	65	4225
16	M	34.66	1201	80	6400
17	F	36.40	1324	75	5625
18	M	33.09	1094	50	2500
19	F	35.22	1240	75	5625
20	F	34.66	1201	55	3025
21	M	25.81	666	55	3025
TOTAL		675.92	220.41	1.320	86.550
N		21		21	
X		32.18 w/m		62.85 %	

LEVEL: NINTH
HIGH SCHOOL: LA PRESENTACION
KIND: MALE AND FEMALE - PRIVATE
GROUP: B

	w/m	L. of C.
Male (6)	192.16 = 32.02	385 = 64.16
Female (15)	483.76 = 32.25	935 = 62.33

STUDENTS	SEX	WORDS/MINUTE		LEVEL OF COMPREHENSION	
1	M	45.50	2070	65 %	4225
2	F	54.60	2981	40	1600
3	F	39.00	1521	40	1600
4	F	32.11	1031	45	2025
5	F	53.26	2836	65	4225
6	F	54.60	2981	55	3025
7	F	70.45	4963	65	4225
8	M	61.69	3805	70	4900
9	M	57.47	3302	40	1600
10	M	78.00	6084	60	3600
11	M	52.00	2704	100	10000
12	M	35.80	1281	55	3025
13	M	56.87	3234	55	3025
14	M	50.79	2579	40	1600
15	M	75.31	5671	50	2500
16	M	72.80	5299	40	1600
17	M	22.75	756	75	5625
18	F	53.26	2836	45	2025
19	M	53.00	2909	50	2500
20	F	37.65	1417	50	2500
21	M	91.00	8281	75	5625
22	F	52.00	2704	60	3600
23	M	87.36	7631	40	1600
24	M	56.87	3234	60	3600
25	F	36.40	1324	80	6400
26	M	59.02	3483	50	2500
27	F	57.47	3302	75	5625
28	M	43.68	1907	45	2025
29	M	32.59	1062	55	3025
30	M	54.60	2981	60	3600
TOTAL		1.627.90	960.69	1.705	103.025
N		30		30	
X		54.26 w/m		56.83 %	

LEVEL: NINTH
HIGH SCHOOL: LOS ANDES
KIND: MALE AND FEMALE - PRIVATE
GROUP: A

	w/m	L. of C.
Male (19)	1.087.10 = 57.21	1.085 = 57.10 %
Female (11)	540.80 = 49.16	620 = 56.36 %

STUDENTS	SEX	WORDS/MINUTE		LEVEL OF COMPREHENSION	
1	M	99.27	9854	85 %	7225
2	M	168.00	28224	85	7225
3	M	121.33	14641	80	6400
4	M	121.33	14641	75	5625
5	M	99.27	9854	75	5625
6	F	44.57	1986	75	5625
7	F	145.60	21199	65	4225
8	M	94.95	9015	55	3025
9	M	68.25	4658	55	3025
10	M	94.95	9015	55	3025
11	F	151.66	23000	50	2500
12	F	99.27	9854	45	2025
13	M	182.00	33124	40	1600
14	M	45.50	2070	45	2025
15	M	182.00	33124	40	1600
16	F	84.65	7165	35	1225
17	M	45.31	2052	85	7225
18	M	88.06	7754	50	2500
19	F	65.38	4274	80	6400
20	F	47.06	2214	50	2500
TOTAL		2.048.41	247.718	1.225	80.625
N		20		20	
X		102.42 w/m		61.25 %	

LEVEL: NINTH
HIGH SCHOOL: LOS ANDES
KIND: MALE AND FEMALE - PRIVATE
GROUP: B

		w/m	L. of C.
Male (13)	1410.22 =	108.47	825 = 63.46 %
Female (7)	638.19 =	91.17	400 = 57.14 %

STUDENTS	WORDS/MINUTE		LEVEL OF COMPREHENSION	
1	45.50	2070	6.6 %	4225
2	43.68	1907	7.0	4900
3	42.82	1833	4.0	1600
4	42.00	1764	3.0	900
5	33.09	1094	4.5	2025
6	42.82	1833	6.0	3600
7	56.22	3160	6.5	4225
8	43.68	1907	5.0	2500
9	45.50	2070	4.0	1600
10	51.51	2653	4.5	2025
11	43.68	1907	5.5	3025
12	58.70	3445	5.5	3025
13	31.20	973	6.5	4225
14	31.20	973	4.5	2025
15	30.33	919	5.0	2500
16	34.77	1208	4.5	2025
17	48.53	2355	6.5	4225
18	60.66	3679	6.0	3600
19	43.33	1877	5.0	2500
20	48.53	2355	5.5	3025
21	30.76	9461	6.5	4225
22	37.65	1417	6.5	4225
23	47.47	2253	7.0	4900
24	43.68	1907	9.5	9025
25	43.68	1907	6.0	3600
26	48.53	2355	6.5	4225
27	43.68	1907	6.5	4225
28	37.65	1417	6.0	3600
29	30.76	946	5.0	2500
TOTAL	1.241.61	63552	1.650	98.300
PROMEDIO	42.81		56.89	

MUJERES 29

COLEGIO: SAGRADO CORAZON DE JESUS

	w/m		c/l	
MALE		FEMALE	MALE	FEMALE
-		42.81	-	56.89

STUDENTS	WORDS/MINUTE		LEVEL OF COMPREHENSION	
1	42.00	1764	6.5 %	4225
2	46.46	2558	8.5	7225
3	42.82	1833	5.5	3025
4	42.82	1833	4.5	2025
5	45.50	2070	5.5	3025
6	45.50	2070	7.0	4900
7	44.57	1986	8.5	7225
8	35.22	1240	4.0	1600
9	22.75	517	7.0	4900
10	62.75	3937	5.5	3025
11	40.44	1635	6.5	4225
12	80.88	6541	8.0	6400
13	52.00	1704	7.0	4900
14	45.50	2070	8.0	6400
15	47.47	2253	6.0	3600
16	60.33	3639	8.5	7225
17	47.47	2253	9.5	9025
18	53.26	2836	5.5	3025
19	42.00	1764	9.0	8100
20	53.26	2836	9.5	9025
21	59.02	3483	7.5	5625
22	60.66	3679	8.0	6400
23	80.88	6541	7.5	5625
24	66.18	4379	9.0	8100
25	91.00	8281	8.5	7225
26	79.70	6352	4.5	2025
27	56.00	3136	10.0	10000
28	49.18	7418	9.0	8100
29	52.00	2704	4.5	2025
30	104.00	10816	7.0	4900
31	62.40	3893	6.5	4225
32	29.91	894	9.0	8100
33	45.50	2070	5.5	3025
TOTAL	1.789.43	106.285	2.365	178.475
PROMEDIO	54.22		71.66	

MUJERES 33

COLEGIO: SAGRADO CORAZON DE JESUS

w/m

Female (62) 9703.03 / 2 = 48.51

c/l

Female (62) 128.55 / 2 = 64.27

STUDENTS	SEX	WORDS/MINUTE		LEVEL OF COMPREHENSION	
1	F	34.12	1164	65 %	4552
2	F	41.67	1736	45	2025
3	F	41.20	1697	70	4900
4	F	78.00	6084	75	5025
5	F	32.11	1031	50	2500
6	F	33.09	1094	35	1225
7	M	41.52	1723	75	5625
8	M	27.64	763	60	3600
9	M	50.79	2579	65	4552
10	M	44.57	1986	55	3025
11	F	29.52	870	45	2025
12	F	39.70	1576	60	3600
13	F	36.40	1324	60	3600
14	F	64.23	4125	45	2025
15	F	42.82	1833	65	4552
16	M	52.00	2704	55	3025
17	F	45.50	2070	55	3025
18	F	34.66	1201	55	3025
19	M	48.53	2355	60	3600
20	M	50.55	2555	45	2025
21	F	36.40	1324	60	3600
22	M	41.20	1697	65	4552
23	F	52.00	2704	50	2500
TOTAL		998.21	46195	1.315	78.783
N		23		23	
X		43.40 w/m		57.17 %	

LEVEL: NINTH
HIGH SCHOOL: INEM
KIND: MALE AND FEMALE OFFICIAL
GROUP: A

	w/m	L. of C.
Male (8)	456.80 = 44.60	480 = 60
Female (15)	641.41 = 42.76	835 = 55.66

APPENDIX 11

RESULTS OF THE PRE-TEST APPIED TO THE CONTROL GROUPS

BY GROUPS

INSTITUTION	GROUP	WORDS/MINUTE	LEVEL OF COMREHENSION
FRANCISCANAS	A	49.95	68.83
	B	49.28	66.50
ITSIN	A	67.01	64.66
	B	46.09	61.00
CIUDAD DE PASTO	A	67.98	53.33
	B	68.37	59.33
JAVERIANO	A	58.77	56.66
	B	60.36	61.00
LOS ANDES	A	54.26	56.83
	B	102.42	61.25
LA PRESENTACION	A	35.10	58.28
	B	32.18	62.85
BETLEMITAS	A	42.81	56.89
	B	54.22	71.66
INEM	A	43.40	57.17
	B	36.08	53.60
MERCEDARIO	A	44.22	59.75
	B	37.62	66.47
TOTAL		950.12	1096.06
N		18	18
X		52.78 w/m	60.89 %

APPENDIX 12

RESULTS OF THE POSTTEST APPLIED TO THE EXPERIMENTAL GROUP.

STUDENTS	SEX	WORDS/MINUTE	LEVEL OF COMPREHENSION
			80 %
1	F	60.66	80
2	M	60.66	80
3	M	62.04	85
4	M	62.04	90
5	M	62.40	85
6	M	58.08	90
7	M	61.34	80
8	M	66.18	80
9	M	64.23	80
10	M	59.02	95
11	M	57.47	85
12	F	60.66	80
13	M	59.02	80
14	F	60.66	85
15	M	60.00	80
16	M	60.66	80
17	M	60.66	80
18	F	60.66	85
19	M	68.25	80
20	M	58.39	80
21	F	57.47	90
22	M	59.02	80
23	M	62.40	80
24	M	66.18	80
25	F	64.23	80
26	M	59.02	80
27	M	66.18	80
28	M	65.00	90
29	M	61.34	85
30	M	63.12	
TOTAL		1.847.04	2.495
N		30	30
X		61.56 w/m	83.16 %

LEVEL: NINTH
HIGH SCHOOL: inem

KIND: MALE AND FEMALE - OFFICIAL

		w/m
Male (24)	1.482.70	= 61.77
Female (6)	364.34	= 60.72

Total X 61.24 w/m

L. of C.	
2.000	= 83.33
495	= 82.50

82.91 %

APPENDIX 13

RESULTS OF THE PRETEST APPLIED TO THE CONTROL GROUP

BY SEX.

INSTITUTIONS		WORD/MINUTE MALE	WORD/MINUTE FEMALE	LEVEL OF COMPREHENSION MALE	LEVEL OF COMPREHENSION FEMALE
ITSIN	A	68.26	30.76	64.48	70.00
	B	47.16	45.01	59.33	62.66
CIUDAD DE PASTO	A	67.99	67.95	51.95	57.85
	B	65.90	72.08	58.61	60.41
JAVERIANO	A	61.12	52.32	58.63	51.25
	B	59.73	62.07	60.90	61.25
LOS ANDES	A	57.21	49.16	57.10	56.36
	B	108.47	91.17	63.46	57.14
LA PRESENTACION	A	37.72	34.45	62.14	57.32
	B	32.02	32.25	64.16	62.33
INEM	A	44.60	42.76	60.00	55.66
	B	44.71	32.69	52.85	53.88
MERCEDARIO	A	47.22	41.21	63.00	56.00
	B	41.07	34.07	66.87	66.11
BETLEMITAS	A		42.81		56.89
	B		54.22		71.66
FRANCISCANAS	A		49.95		68.83
	B		49.28		66.50
TOTAL		783.72	884.21	843.48	1.092.10
N		14	18	14	18
X		55.98 w/m	49.12 w/m	60.24 %	60.67 %

APPENDIX 14

RESULTS OF THE PRETEST APPLIED TO THE CONTROL GROUPS BY PRIVATE INSTITUTIONS.

	WORDS/MINUTE	LEVEL OF COMPREHENSION
FRANCISCANAS	49.95	68.83
	49.28	66.50
JAVERIANO	58.77	56.66
	60.36	61.00
LOS ANDES	54.26	56.83
	102.42	61.25
LA PRESENTACION	35.10	58.28
	38.18	62.85
BETLEMITAS	42.81	56.89
	54.22	71.66
TOTAL	539.35	620.75
N	10	10
X	53.93 w/m	62.07 %

APPENDIX 15

RESULT OF THE PRETEST APPLIED TO THE CONTROL GROUPS BY OFFICIAL INSTITUTIONS.

	WORDS/MINUTE	LEVEL OF COMPREHENSION
ITSIN	67.01	64.66
	46.09	61.00
CIUDAD DE PASTO	67.98	53.33
	68.37	57.17
INEM	43.40	57.17
	36.08	53.60
MERCEDARIO	44.22	59.75
	37.62	66.47
TOTAL	410.77	475.31
N	8	8
X	51.34 w/m	59.41 %

RESULTS OF THE POST-TEST APPLIED TO THE EXPERIMENTAL GROUP

	WORDS/MINUTE	LEVEL OF COMPREHENSION
INEM	61.568	83.167

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