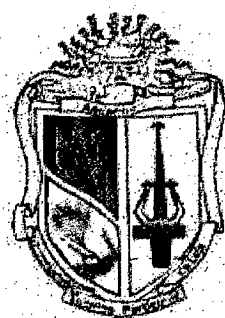


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DEPARTAMENTO DE INGLÉS

SCHEDULE AND PERFORMANCE: A contrastive-scheduled Evaluation on the Skills of Reading and Writing with two homologous student groups at the Unidad Educativa Tecnológica Experimental *Israel* in Quito, during the academic year 1998 – 1999.

A RESEARCH WORK FOR LICENTIATE'S DEGREE IN ENGLISH

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ADVISOR

Quito – Ecuador
1999.



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SCHEDULE AND PERFORMANCE: A contrastive-scheduled Evaluation on the Skills of Reading and Writing with two homologous student groups at the Unidad Educativa Tecnológica Experimental *Israel*, in Quito, during the academic year 1998 – 1999.

Lic.
María Arias C.
DIRECTOR OF THESIS



CERTIFIES:

That I have fully proceeded to review the thesis:

SCHEDULE AND PERFORMANCE: *A contrastive-scheduled Evaluation on the Skills of Reading and Writing with two identical student groups at the Unidad Educativa Experimental "Israel" in Quito, during de academic year 1998-1999, developed by the aspirant Edgar Martínez Eskola, as a previous requirement for getting the title of "Licenciado" in sciences of Education, English Major, and after whole observations and suggestions I have been done I authorize its presentation for law regulations.*

Loja , October the 26th 1999.

Lic. María Arias Córdova
DIRECTOR OF THESIS

AUTHORY

The thoughts and contents given in this research are exclusive responsibility of the author.

A handwritten signature in black ink, appearing to read 'Edgar F. Martínez E.', with a double underline beneath the name.

Edgar F. Martínez E.



DEDICATION

To my beloved wife, Lic. Martha Cevallos, who gave the necessary financial support to this survey. Besides, she has been a permanent inspiration to fulfill this labour.

THANKS NOTE



There are both persons and institutions that deserve especial thankfulness.

First, my best acknowledgements for Lic. María Arias, who has been a sort of guiding light all the survey over, and of course my gratefulness for my unforgettable Universidad Técnica Particular de Loja, in its open modality.

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EXECUTIVE SUMMARY

SCHEDULE AND PERFORMANCE: A contrastive-scheduled evaluation on the Skills of Reading and Writing of two homologous student groups at the Unidad Educativa Tecnológica Experimental de Informática *Israel*, in Quito, during the academic year 1998-1999.

ABSTRACT

School performance may vary due to a constellation of factors from both social and psychological sources establishing thin borders among the several student groups, which tend to behave differently; especially, when working under contrastively opposite schedules.

At studying English, we have assumed that the Language Competence Level of a student group is not only made up of some general aptitude to handle the so called four skills to a certain degree, but also composed of some attitude towards acquiring the target language. Mostly, these two main characteristics have made us think of student groups as possessing their own *personalities* altogether.

There were two principal reasons that guided the present survey. On the one hand, we desired to find to which extent the students' performance varies as the school hours go by. On the other, after analysing results gathered at pursuing the former point, we have believed it may bring practical solutions at suggesting how to design a not only flexible but optimum schedule for language learning, as a kind of base-line to be used by similar, other high schools.

The language skills of Reading and Writing have been considered more appropriate for *superior* grades because they make the students develop culminating abilities to apply side by side others involved with handling computers; e.g., students could read written messages in English as well as supply answers by writing short but meaningful compositions.



Sample groups, being evaluated at Reading and Writing for the second term, were undergoing Listening and Speaking to a certain extent during the first term. This has made them capable of being representative as a sample of a population given at the High School.

We have chosen the 5-A and 6-A grades, with 22 and 24 students respectively, as *homologous* groups, because they were supposed to fulfil similar activities. Indeed, they have been made follow the same objectives, contents and methodology for the term, as indicated in the Language Syllabus at the appendix.

3

The present survey obeys a one-way ANOVA, Factorial 2, Experimental Design, which uses three factors at two levels each that make eight treatments altogether. The first factor, *Language Competence*, has two routes, 5-A and 6-A. The second factor, *Schedule*, has two routes, initial (7:30 –9:00) and final (12:30-14:00.) The third factor, *Ability*, has two routes, the Skills of Reading and Writing.

Before collecting data for our results, the students had to pass through three didactical units undergoing the so called process of knowledge, application, comprehension, analysis, synthesis, and evaluation from the Cognoscitive Field by Bloom. Students have applied their knowledge especially at solving homework by using their PCs either at home or at the High School.

Several tests and worksheets were designed to awaken expectation, manage ambiguities, and raise personal interest, in text-reading passages. To develop the skill of Writing, on the other hand, the students were supposed to put a piece of information in order, and to use it for creating short compositions. Both skills were planned for the students to apply their own strategies, feedback, and self correction.

The results showed, among other things, that both groups were somewhat heterogeneous. The first coefficient of variation surpassed 50%. We think this is due to human behaviour has been under testing, and not simple proportional quantities, such as those of natural sciences. At most high schools, alike the one of the present survey, groups studying a foreign

language are not usually selected by levels with more accuracy, and this fact carries as well a certain amount of heterogeneity among the students of a given group.

Another evaluation was carried out using a square-root scale change. There was another coefficient of variation, which came down to 22.9 %. We have thought that this new coefficient of variation may be acceptable, under the circumstances of the present research.

Analysis of the results showed that the interaction between the two first factors, *Language Competence-Schedule (L-S)*, was **significant**. Groups reacted differently to the treatments. This means that the schedule is an important factor that may at times cause significant variation on the students' performance *if combined with unique group characteristics*.

This difference in behaviour led us to discover what could be an optimum departure point in time, 10:17 AM approximately. According to the needs of high schools, it may serve to suggest how to elaborate an idealised schedule where the English lessons enable the students to cope with time and labour problems.

Finally, we recommend other researchers to analyse more deeply the other factors immersed in student groups, so that we can have a finer socio-psycholinguistical theory referring the learning-teaching process, according to certain environmental conditions.

INTRODUCTION

*The experiment is the only method that can determine whether one factor causes another. Although other methods can reveal relationships, they cannot provide any information on the cause of the relationship. In a psychological experiment, conditions are **controlled** so that causes can be discovered. The psychologist begins with a hypothesis, or educated guess about a relationship. The hypothesis may be formed after checking the results of a survey or a correlation study (*1.)*

For a long time, teachers have asked themselves why some student groups attending lessons at earlier schedules reacted differently as compared to those attending lessons at later schedules. They might have as well been wondering whether or not there would be schedule intermeddling, or performance variation, depending upon other factors such as the ones immersed in student groups.

Other teachers might have found either empirically or intuitively that the less extreme the schedule appears, the better for the students. Others may have been a little more dogmatic at saying all at once that the schedules do not affect the students' performance at all. Others might have been a little more prudent at not uttering such early guesses. Others could have said that all depends on the teacher, as being the only responsible professional, who is capable to moderate the students' behaviour either individually or in social groups, so that they can cope with stressing time during the school labours. Others ...

Criteria diversity must have been subject of hot arguments, mostly because any technical, pedagogical studies on this fields do not seem to exist. Therefore, the central idea of this research has been to find a more accurate approximation to establish an optimum schedule for English lessons, and so avoid as much as possible such baseless criteria; and, at the same time, palliate somehow any possible adversity that can diminish the students' performance because of the factor schedule.

*1. Queen, V., 1990 *Applying Psychology*, Second Edition, McGraw-Hill Publishing Company, New York, USA., page 22.

We have believed that the only means to access into a more reliable information was through an adequate experiment. Indeed, according to Queen, we have thought of a factorial experiment in order to cover a larger stretch of possibilities, though not all of them. Our desire is to gather as much information as possible not only from the factors solely, but also from their combinations.

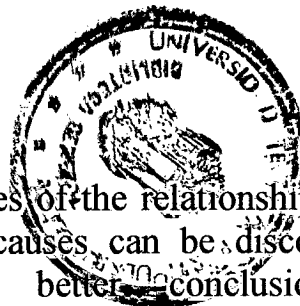
We have to depart from a set of chosen factors, and, with the results obtained, we may access another, finer set in another complementary survey that could be carried out in the future by other researchers.

The *Israel* High School, our experimental, educational institution, is located in Quito, Ecuador, at an approximate elevation of 9210 ft. Its temperature varies from 8° C in the morning to 23° C at noon, approximately. It follows the *Sierra* regime, used by most high schools in the valleys of the Ecuadorian Andes Mountain Range.

Since the students at the *Israel* High School will graduate in Computer Science Technology, English is important for most of information in such matters come from more developed countries, where the English language is spoken, and so spread to the rest of the world. However, learners at the institution clearly need more lesson periods a week in order to reach a more acceptable level that can compete with other high schools of similar characteristics either locally, nationally, regionally or all over the world.

This is true because, now-a-days, new educational systems are being implemented. Mass media that comes from abroad is being cast by fast-developing technology in branches of the computer sciences. Latin American students are now able to communicate easily with others from the same region of more distant countries. Hence, Chinese students will have to use English for communicating with those of England, Ecuadorian students will have to send their messages in an acceptable English when answering requests from the United States advisors, and so on.

Being this so, the present survey carries an amount of interest not only because a novel approach through the experimental design has been



applied, and so bringing more accurate causes of the relationships among the factors given, but also because those causes can be discovered or inferred more appropriately, and so better conclusions and recommendations may be supplied. But most of all, we believe that it is important to bring better judgement elements which may be able to palliate a negative effect, if any, carried by the schedule difference on the students' performance, and, at the same time, to suggest some technical-pedagogical lineaments for the elaboration of better schedules to be used at the School, or by other high schools as well, with practical and flexible ways.

In this work, the term *Language Competence Level*, considered one of the most important factors along the research, side by side the factor *Schedule*, refers not only to individual personalities that can reflect a general aptitude inside a certain student group, but also a certain social attitude that, together, can give the group the appearance of possessing its own global personality, and which gives the different grades a characteristic of being virtual social units, complete with all their incredible thin features and subtleties, at the High School.

Social attitude has been found interesting and crucial but, unfortunately, difficult of disentangle. Its finer elements are still awaiting for discovery. Yet, we have put them together as being contained in one single factor, which we have called language competence for effects of giving fluency to this experiment.

The methods used through this labour have been both the deductive and inductive -and a combination of them. We have formulated hypotheses both intuitively and deductively. Deductive methodology has helped us prove one of the hypotheses. Inductive methodology has helped us prove the other. So, scientific theory has been inferred from the combination of the former methods, specially, and guided by the central experimental method.

The first chapter speaks of generalities concerning both the referential and theoretical frames, whereas the second chapter informs about the results. The third chapter will give us conclusions and recommendations, apart from some discussion.

The appendixes will show all pertinent information about the instruments used along the experiment. Here, some polls and tests as well as homework samples are placed.

In Chapter II, specific methods to handle the experiment were exposed. First of all, to diminish the effect of the *teacher's presence*, activities were planned to be a student-centred for both Reading and Writing. Second, to diminish the effect *student cheating*, four samples of tests were prepared. Third, to diminish the effect of *students' absence*, the method that uses the *Yates* formula to estimate the lost plots was applied. Fourth, to prevent any violation of ANOVA (*1.) assumptions, the method of the *Coefficient of Variation* was used. When it was too high, the method of the *Square-root Scale Change* was effected. Finally, to verify the hypotheses proposed, the method of *Minimum Significant Difference*, as well as the *Typificate Punctuation Z*, was used.

The population sample, used in this research, surpasses 30% of the total population given at the School, which is acceptable for the survey. 46 students from the grades selected for the experiment were taken from the 150 students. 22 belong to 5-A, and 24 belong to 6-A.

To put it in a nutshell, the experiment consisted in verifying the students' performance during the morning and at noon for both groups. The didactical units were mostly oriented for Reading and Writing at a rather high level instruction, because our syllabus establishes the fact of having students with a poor academic level education, and so needing lessons to be mostly remedial.

The experiment served two additional purposes. The first referred to hypotheses proof, as well as objective fulfillment. The second referred to the students' advantage for the second five-month programme. Indeed, the students of the experiment acquired a positive surplus in their academic achievement, although this was not really expected. The techniques for both Reading and Writing used here will serve as well for convenient lessons for other teachers who wanted to apply them in the classroom.

*1. ANOVA refers to any Experimental Design using statistics criteria based on **Analysis of Variance**.

CHAPTER I



GENERALITIES

1. Referential Frame.

1.1. The High School. The Educational Institution, where the present research has been done, is the **Unidad Educativa Tecnológica Experimental Israel**, which from now on will be called **Israel High School**, for purposes of abbreviation.

The Israel High School is, by no means, related to any political or religious proselytism from the Republic of Israel. It admits, however, any kind of religion among its educational community.

The High School is of a Private type. It functions mostly in the morning, from 7:30 to 14:00. Its education is laic and devoted to develop technicians in Computer Sciences. At the moment, there are about 150 students, but this number may vary. The Israel High School's doors are open for male and female teenagers.

The High School is located in Quito, Ecuador, at an approximate elevation of 9210 ft. Its temperature in degrees Celsius varies from eight degrees in the morning to twenty three at noon, approximately. It follows the **Sierra** Regime used by most high schools in the valleys of the Ecuadorian Andes Mountain Range.

The High School, unfortunately, has no proper installations, at the moment. That is to say, it has neither appropriate playground yards and gyms, nor courts to practice sports. Fortunately, its classrooms are comfortable enough to give place a number of students that varies from ten to thirty in each classroom. Also, there is an adequate number of toilets for boys, girls, and teachers.

In order to develop the necessary Physical Education, the students are taken to some nearby parks in company of the inspectors and teachers, who have a lot of fun every Friday.

The Israel High School is now trying to follow a world-wide programme for environmental concerns. At present, an agreement has been held with the *OIKOS* Corporation to effect the *Globe* Programme. But it will have to be postponed until the High School has its own building very soon.

1.2. The Teachers. At the High School, the teachers are chosen very selectively. There are, at least, twenty teachers distributed among four areas for both the Basic and Diversified stages. Of these twenty teachers, the only one who does not work as a teacher himself is the Principal. Four teachers are involved in the Scientific Area, which covers Physics, Natural Sciences, Chemistry, and Mathematics.

Another group of three teachers works for the Technical Area, which is made up of Technical Drawing, Utilitaries, and Accounting. The Humanistic Area, where eight teachers are involved, covers English, Spanish, Social Sciences, Scientific Research, and Physic Culture.

Other four teachers work for the Technological Area, which includes Projects, and Computer Sciences.

1.3. The Family. With no doubt, the family is the social organism that has unavoidable compromises of children education. It is the most directly interested at forming its kids. Particularly, families that belong to the Educational Community of the *Israel* High School have demonstrated their firm support for the normal functioning of the Institution. Parents, mostly of a middle-social class, have organised themselves to work side by side the High School, not only in cultural concerns, but also at planning and suggesting what they may consider good for their children and teenagers, in educational affairs.

Special Committee Meetings have come to an agreement. There, both parents and teachers have also come to the conclusion that one of the best features for a better didactical atmosphere in the classroom is reducing the number of pupils; that is to say, each classroom may have a maximum number of thirty students.

Among other details, families at the *Israel* High School have agreed to enter special pedagogical courses for parents. Those, being held on Saturdays.

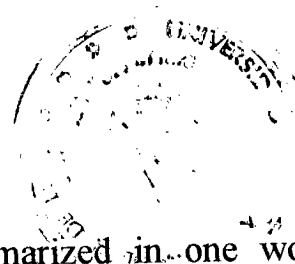
1.4. The Social Environment. It has been said, wisely, that the school is, by no means, the only place where education works. Human beings learn in their community, and the school is just a part of it. It is not an exaggeration to sustain that society could not have any continuity without education. But this is not an obligation under exclusive responsibility of the school solely, but the other community institutions as well.

The *Israel* High School has been working not only to improve relations with the family, as it has been said before, but also with other components of society, such as the church and other institutions of the Country.

Most of religious activities have been made under the catholic religion; however, families at the school are free to choose the worship that they consider convenient.

Concerning other institutions, the school has taking care of promoting education for democracy, looking for better ways to maintain positive feelings and cordial affection among the rest of actors in the Country.

Under a general appraisal, the internal social environment at the High School is good. Apart from some isolated indiscipline crumbs –put out conveniently- students show respect for teachers, and viseversa. So far, no fights have been registered inside or outside the School. However, it is wishable for the students not to acquire either indigenous or foreign harmful habits that may break the High School social equilibrium.



The teachers' social environment may be summarized in one word: *joyfulness*. This is true partly because there are a few discipline problems, and partly because there is a deep sense of friendship. Most of the teachers have said they want to stay working for the institution, although the payment is not one of the best. They prefer working comfortably within a nice environment with a moderate payment more than working at a luxurious school with a good payment, but with a sense of being inside a sort of prison.

2. Theoretical Frame.

2.1. Doctrinal Basis. The very core of the research lays on what mathematicians call *Experimental Design*. Proper demonstrations of all theorems involved in this field would be quite complex, and far beyond the reachness of the present labour. Also, the *language* used in such matters may turn into jargon for persons interested more in Linguistics than in Statistical Mathematics.

For this reason, the present labour will try to avoid, as much as possible, such insights. Instead, we will stop and concentrate on specific points that may be considered more important and relevant for the experiment used in this survey.

In order to illustrate the importance of using an appropriate experimental design, and, of course, to show its reachness, let us describe the example used by Freund in his *Mathematical Statistics* (Freund, 1971, page 393.)

He says that in the performance of statistical tests we may well decide that one kind of tire is better than another, the students in one school get better instruction than those in another, or one rocket is more accurate than another, completely overlooking the fact that the second kind of tire may have been tested over much rougher roads, that the students in the second school did poorly in the test (on which the judgement was based) because they happened to be thinking about a big football game scheduled for that evening, and the person who fired the second kind of rocket was a much poorer marksman than the one who fired the first. All this serves to point



out that experiments purported to test one thing often test another, or they cannot serve any useful purpose at all.

We may avoid situations like those described by two ways. One is to follow a *rigorously controlled* experiment in which all variables are held fixed except for the one with which we are concerned. For example, at wanting to compare the performance of two student groups, all test runs could be made with the same instructor, with the same methodology, and over identical routes.

In that case, if there is significant difference in the average, we know that it is *not* due to differences in instructors, methodology, and routes. We know that one of the student groups performs better than the other, provided it is tested by a certain instructor, by a given methodology, and over a certain kind of route.

The other way of handling problems of this kind is to design the experiment in such a way that we can not only compare the merits of the two student groups under more general conditions, but we can also test whether the other variables really affect their performances. Another example could illustrate how this might be done. Suppose that the test runs are performed in two cars, a low-priced car **L** and a high-priced car **H**; by two drivers, a good driver **Mr. G** and a poor driver **Mr. P**; and over two routes, a city route **C** and a freeway route **F**. Suppose, furthermore, that each test run is performed with a gallon of one kind of gasoline respectively, and that the experiment consists of the following 16 test runs:

Test run	Gasoline	Car	Driver	Route
1	B	L	Mr. G	C
2	B	H	Mr. P	C
3	A	H	Mr. P	C
4	B	L	Mr. P	F
5	A	H	Mr. G	C
6	B	H	Mr. G	C
7	B	L	Mr. G	F
8	A	L	Mr. P	F
9	A	L	Mr. G	F
10	A	H	Mr. P	F
11	B	L	Mr. P	C
12	A	H	Mr. G	F
13	A	L	Mr. G	C
14	B	H	Mr. G	F
15	A	L	Mr. P	C
16	B	H	Mr. P	F

This means that the first test run is performed with gasoline B in the low-priced car, by the good driver, over the city route.

The second test run is performed with gasoline B in the high-priced car, by the poor driver, over the city route.

The third test run is performed with gasoline A, in the high-priced car, by the poor driver, over the city route; ...

... And the sixteenth test run is performed with gasoline B, in the high-priced car, by the poor driver and over the freeway route.

It is customary to refer to this kind of scheme as a *completely balanced design*—each gasoline is used once with each possible combination of cars, drivers, and routes.

Another factor which is important for designing an experiment is that of *replication* or *repetition*. In order to observe if differences between sample means are significant, we must have an estimate of *chance variation*, or, as it is usually called, the *experimental error*. Such an estimate is usually obtained by repeating all or part of the experimental scheme, and in our example we must perform 32 test runs, 2 of each of the 16 possible combinations listed above. Whatever differences there are between the corresponding pairs would then be attributed to chance.

As the reader may notice, the purpose of the last example has been to introduce some of the basic ideas about the experimental design, and it is important to realise that the 16 test runs would not only enable us to decide whether there really is a difference between the two kinds of gasoline, but also whether their performance is affected by differences in cars, differences in drivers, and differences in driving conditions.

The actual analysis of a four- factor experiment like the one just described is fairly complicated and it will not be discussed in this work; however, it will serve as straightforward generalisation for a rather less complicated experiment, such as the one which is going to be used in this research. Nevertheless, factorial experiments may conveniently be analysed by *ANOVA* (Analysis of Variance.)

The kind of analysis to be used in this section is called a *one-way analysis of variance* because we are studying the effect of only *one source of variation* (other than chance) and is frequently presented in the following kind of *analysis of variance table*:

ANALYSIS OF VARIANCE TABLE

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Square	F
Treatments	$k-1$	SS(Tr)	$MS(Tr)=SS(Tr)/k-1$	$MS(Tr)/MSE$
Error	$k(n-1)$	SSE	$MSE=SSE/k(n-1)$	
Total	$kn - 1$	SST		

This table is important for it is going to be used along with the development of the experiment. The reader must refer to this table if he/she wants to check mathematical operations when analysing proper results and values taken from the survey.

Of course, there is a variation at using the table to insert values. Here we have not included a slot where the probability ratios appear. We think it is not really necessary to show it here, but when real values have been collected and calculated.

Probability ratios are easily getting from special statistical tables, such as that of *Fisher's*. Those previously calculated values will inform us if our calculations are significant or not.

Another difference the reader will find is that referring to the additional factors, which will be present after the treatments. Like them, each of the rest of factors will be equivalent to one.

Another feature to be taken is that referring to the randomisation. If we have a glance at the table where the test for gasoline, drivers, and cars are shown, one may notice that the different routes have been taken at random.

This is important in the sense that we may avoid as many variables as possible to *purify* the experiment, except the variable of chance.

In fact, the test run 1 could have been as well matched to gasoline A, to the car L, to Mr. P., and to the route F. Also, there are some other possibilities, which are at the order of the randomical numbers, frequently used to select which route to go.

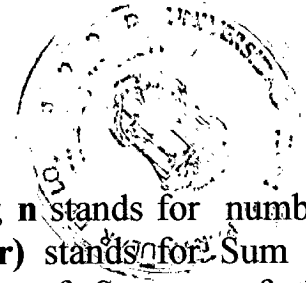
In our particular case, things turn a little more complex when deciding to use randomical numbers for purposes of experimentation. The problem here is the short amount of students at the High School. Indeed, we need a 30% of the total population to say that the sample is representative.

Ideally, we would have chosen a randomical sample from all the fifths and sixths courses at the school, but another problem refers to the students at the other *parallels* –5-B, and 6-B- which are under the direction of another teacher, with different methods, and another language syllabus.

Anyway, we may as well say that there is a certain amount of randomisation in our sample, because no proper selection of the pupils studying English has been done. That is to say, there may be individual variations concerning the aptitude for acquiring the language.

Also, we think the experiment is adequate in the sense that most schools have the same problems, and if the survey is successful, it will as well serve to be used by other educational institutions of similar characteristics.

Concerning again to the Analysis of Variance Table, there are some symbols that the reader may need to be accountant, such as MSE, MS(tr), F, SST, SSE, SS(Tr), n, and k. All of them represent something important for the development of any experimental design, and the values are obtained by arithmetical handling among them; e.g., $k-1$, $MS(Tr) = SS(Tr)/k-1$, $k(n-1)$, etc.



Where **k** stands for number of treatments or groups; **n** stands for number of replications or observations –group size; **SS(Tr)** stands for Sum of Squares of the treatments; **SSE** stands for Sum of Squares of the Experimental Error; **SST** stands for Sum of Squares Total; **MS(Tr)** stands for Mean Square; **MSE** stands for Mean Square of the Experimental Error. The probability value **F** (Fisher) results from dividing the Mean Square of the Treatments **MS(Tr)** by the Mean Square of the Experimental Error **MSE**.

Other authors prefer to use **t** instead of **k**, and **r** instead of **n**.

The One-way Analysis of Variance is a basic experimental design from which the rest of designs are formed by adding certain restrictions — sources of variation. It is mainly used in laboratories or greenhouses where agronomical experiments are being performed. Also, it may be quite useful for **sociological** research, and works with animals. This type of design may not be recommendable for investigations in the country side, or when the material that is observed is suspected not to be very homogeneous.

2.1.1. Advantages of a one-way Analysis of Variance

- a.** This design is the easiest of planning, and the simplest.
- b.** Statistical calculations are not so complex, and if some plots (experimental units) are missing, there is no problem with the design and its calculation.
- c.** A greater number of degrees of freedom is generated for the experimental error; that is to say, the expected **F** value is smaller; therefore, the analysis of variance turns more accurate.
- d.** It permits to use many replicates per treatment.

2.1.2. Disadvantages of a one-way Analysis of Variance

- a.** It requires the sample to be as homogeneous as possible.
- b.** It is applicable, as well, when a few treatments are used.
- c.** It is the least efficient of all the designs; that is why it is not recommendable for field essays (Agronomy.)

2.1.3. The mathematical Model

The sources of variation for a one-way analysis of variance are closely related with what the mathematical model expresses; namely:

$$X_{ij} - U = T_i + E_{ij}$$

Where $X_{ij} - U$ stands for the Total Source of Variation; T_i stands for the Treatment Source of Variation, and E_{ij} stands for the Experimental Error Source of Variation.

2.1.4. Assumptions for ANOVA

- **Homogeneity.** It means that regardless the subpopulations (treatments) can have different means, their internal variances are the same.
- **Normality of the Error (The F distribution).** When comparing two or more samples to get to know if they have the same variances, we have to impose the supposition that the variable which is studied has a normal distribution. According to our linear mathematical model, it may be considered that each value of X is made up of three parts, and that the two parts U and T_i are considered fixed values; that is to say, the part of the error E_{ij} is distributed normally with a mean that equals 0 and its variance is symbolized by the square of delta. The reason why normality is supposed in this case is because the F distribution is known, and it is the result of dividing two independent estimates that, according to the null hypothesis H_0 , has the same variance.
- **Independence.** In our case, $MS(Tr)$ and MSE are two estimates that have independence and the same variance according to the null hypothesis. The mathematical test for its independence is complex; nevertheless, this independence has a logical basis, because $MS(Tr)$ comes from the mean values of the treatment, and does not regard to individual variations within each group from which $MS(Tr)$ is estimated.

- **Additivity.** The effect of treatments and the effects of environment (E_{ij}) must be additive. There must not be effects because of the combination of treatments, plots or uncommon replication

2.1.5. Scale Changes

A final consideration must be taken into account. It refers to the use of transformations or scale changes. Frequently, if the measurements are done in a given scale, it is possible that the data are more fittable in some aspects according to another scale. Therefore, selecting a more adequate scale measurement, we can solve some of the problems that can appear due to violation of any of the assumptions stated above.

In general, a good indicator to consider when a scale change is being needed is to refer to the **Coefficient of Variation**, which is:

$$VC = \sqrt{(MSE / \bar{x})} * 100$$

There are some useful systems for scale change; namely, **square root**, **angular**, or **logarithmical** *1.

2.2. Doctrinal Basis on Applied Linguistics. To design the corresponding tests to be applied during the experiment, It was necessary to refer to the objectives given in the Language Syllabus for both grades, the 5th and the 6th.

Of course, the mentioned Syllabus has been placed in the Appendix, just in case the reader wanted to have a glance of it.

What is important to notice is the Language Syllabus has been as well related to a *communicative* methodology, which is gaining momentum. Teachers are, more and more, adopting a learner-based approach.

*1. These data has been taken and adapted from the Experimental Design Pamphlet, 1993, edited by the Catholic University, Quito.

2.2.1. Current Practice: The Four Skills

It has long been conventional to think of language teaching in terms of the so-called four skills: listening, speaking, reading and writing. The method of language teaching known as audiolingualism regarded speech as primary, and a great deal of emphasis was placed on speaking practice, with reading and writing being introduced later largely to reinforce language which had already been practiced through speech.

Investigations into the characteristics of spoken and written language (White, R.1987, page 14) have shown that speaking is not just a debased or simplified form of writing and that writing is not just an attempt to put spoken language on paper. Consequently, we no longer treat one skill as a reflection of another. Each skill tends to be treated in its own right.

The amount of time given to each skill will depend on the needs and wants of the learner as specified in the syllabus. There is little sense, for instance, in spending hours practising the spoken language if all what the students need to learn is to read English.

As variety is also important in the language classroom, all four skills will have their place. Even the student who only needs to read English will benefit from some practice in listening, speaking and writing. Some people, moreover, do seem to be better at learning by listening and speaking while others are better at learning by reading and writing. So using all four skills is important in order to give all students a chance to use their abilities as best they can.

Finally, integration of skills is a feature of current practice. This means that any one lesson may exercise all four skills, for instance with information that is provided in a listening comprehension exercise being used for spoken or written practice later in the same lesson. Similarly, reading comprehension may provide the basis for spoken discussion which will recycle information obtained in the reading phase of the lesson.

2.2.2. The Skill of Reading

Now that some pertinent information on the four skills have been supplied, and how they may be applied in the classroom, let us go directly into the first skill of our concern: *Reading*.

For a long time, the skill of reading has been thought of being a simply passive activity. Currently, it is now thought of a specific mental process, far from being passive. It is still a fact, shamefully, that even new teaching materials do not always make the students fully aware of the *reading process*.

The experiment we propose will take into account the reading process for the students to come across the difficulties to solve by themselves more than with the teacher's assistance. Also, it will put into practice some conclusions and recommendations from the results that other researchers have found.

An article published in the journal *Forum* says something on the reading process: *The results certainly show that making the students aware of the process of reading by focusing on some areas that the students themselves may manage led to greater understanding. This suggests that greater time needs to be spent on teaching the process, in such a way the final product of being able to read would be more successful. Once the students know the strategies and the process, they will be able to read by themselves with little teacher help. The rate of learning, and of using the language, will be greater after an initial period of teaching based on self-access and process.* *1.

*1. Joyce, E., 1984 *Analyzing the Reading Process*, the Journal Forum, distributed by the American Embassy, Volume XXII, Number 2, USA, page 28..

2.2.3. Selected Areas for the Skill of Reading

- a. **Expectation.** Most teachers realise that when we read a passage, there is usually a reason for doing so. It could be to gather some specific information, or it could be to look for meaning in a passage –or the reader may simply wish to pass the time, picking up something to read just to see if he can find any pleasure in it. If there is any reason to read, it follows that the reader has some *expectation* as to what he will find, and this expectation will control the amount of interest he will have in the passage.

So, after reading the title of first lines of a passage, if there is an expectation based on the information so gained that the passage will be boring, the reader will have no general interest in the passage. He will look for another piece of reading material.

If the expectation is something good, the reader will continue reading, testing his expectation of general interest against what he finds as he proceeds. The more the passage fits his original expectation, the more likely he is to read it completely. Thus, learners need to be made aware of the role of expectation, and its relation to the reason for reading and to general interest.

- b. **Ambiguities in Text.** What usually happens when a student meets an unknown word in a reading passage, or knows the words but cannot understand the meaning of the passage?

He usually asks the teacher, who in the belief that it is necessary to know all the words in a passage in order to understand it, tells the student the exact meaning of the word or phrase. This confirms most students' belief that to read understandingly it is necessary to know everything he comes upon.

In fact, the native speaker does not do this when he is reading. He does not require such precision in order to understand. Whenever an *ambiguity* arises, he is tolerant of accuracy in meaning. He probably adopts a strategy of some kind to supply a meaning sufficient to carry on reading and understanding *without knowing the exact meaning*. He does not disambiguate, but draws on his knowledge of the world, concepts, routines that people live by, and the rules that hold the text together.

The reader asks himself questions and makes hypotheses as he proceeds reading, testing such hypotheses. This way of handling ambiguity is related to expectation in that the questions he asks himself create new expectations, which he looks for as he reads. It also creates a further reason to read, as there is a wish to confirm the hypotheses, and, of course, the new expectations increase his interest in the passage.

Therefore, students need to be made aware of the strategies to adopt when encountering ambiguities. They must be shown how to use their knowledge of the world, text, and language, etc. They also need to be taught that it is essential to disambiguate. They must be tolerant of imprecise meaning. Adoption of such an approach means that the student will develop strategies of self-access when reading a difficult passage. These are useful, as the teacher is not always going to be available. One aim of the language classroom should be to give the learner the ability to deal with language outside the classroom.

- c. **Personal Interests.** We have to accept the fact that a person reads a passage for a certain reason, which triggers expectations, and so *general interest*, and leads to his finding ambiguities to solve. Besides asking himself questions about these ambiguities, he will also find his own points of *personal interest* in the passage. These points will focus on information associated with the reader's expectation.

Although our experiment aims to compare reading and writing and to discover if one of them affects the students' performance more than the other under certain environmental conditions, when designing tests, we have found it useful to ask the students to read the passage, and then get

each of them to tell what they find personally interesting in it (some samples of tests are in the appendix of the present labour. The reading questionnaire has been designed to fit the three main areas explained so far.)

We have considered useful to do this not only to generate motivation at using boring texts, such as the one used in the classroom to connect everything to proper objectives in the syllabus, but also to help the students develop their own self-access strategies when reading a passage. Thus, we may jokingly say *to have killed two birds with one stone*.

2.2.4. The Skill of Writing

The time has now come to think over the skill of writing. As a means of communication, writing differs from speaking in several important ways. Firstly, writing is permanent, speaking is not. Secondly, we can correct what we write before it is received by the reader. Corrections when we speak tend to take place after we have already made an error which our audience has received. Thirdly, we usually write for a receiver who is physically absent from us, whereas most speaking that we do is for an audience which is actually present as we speak. Fourthly, the physical distance between writer and reader means that the reader cannot easily ask the writer to explain something unclear or ambiguous.

In face-to-face speech, such feedback from listener to speaker is instantaneous. So the writer has to be careful to ensure that his written message is complete in itself. He should not make any assumptions about shared knowledge between himself and his audience. Nor should the writer leave any room for misunderstandings through unclear expression or faulty organisation of his text.

In order to facilitate the students' learning, we have selected two types of writing exercises –those which consolidate language already presented and practiced orally, and those which develop the skills of communicating in writing.



For purposes of fulfilling our experiment, we have designed tests in such a way that the students can be evaluated according to the two types of writing exercises, already mentioned. But it is not so easy to design such tests aiming to be quite objective. The problem here is not diminishing the students' creativity, and at the same time to have them follow a restricted route for grading facilities.

In fact, to mark scores of writing tests is many times an awful task, especially at specific composition courses where teachers must control many things at the same time, such as (1) The ideas are not in an order that makes sense; the piece is not well-organized. (2) The ideas are not grouped together into paragraphs. (3) The writer does not start the piece with a beginning that starts the reader in the right direction. (4) The writer does not finish the piece with an ending that leaves the reader with a sense of completion. (5) The relation between the ideas is not clear because the writer has not used words like *for example*, *on the other hand*, *because*, and so on. (6) The writer's attitude is not clear. Is the writer, for example, is the writer describing, suggesting, or criticizing something? (7) The piece contains ideas that are not relevant to what the writer wants to express. (8) The sentences do not have clear punctuation; there are commas and periods without any good reason. Besides, the teacher must control syntax, orthography, capitalization, and so on, and so forth, ...

To handle all of those things in the student groups with only two hours a week per group, during a single five-month programme term is a little less than impossible.

That is why we have concentrated on the four first points written above with greater intensity than on the rest; that means *organizing ideas* has been considered the most important, because students seem to vary from beginners to intermediate learners, and do not have a lot of experience when producing pieces of writing.

When marking scores for syntax, spelling, capitalization, etc., we have imposed the arbitrary 0.25 score whenever any fault appears in a given

sentence. More than four faults per sentence means that it will not be taken into account, because the whole sentence is wrong. This process has been followed not only for tests, but also for homework assigned for the students to correct themselves their own mistakes so they get acquainted and follow the so-called route of **Knowledge, Application, Comprehension, Analysis, Synthesis, and Evaluation**, before the experimental tests.

The central idea of writing, for purposes of teaching and experimentation, is to help the students realize that there is a logical order to be followed when producing short pieces of writing. To do this, we have applied one of the techniques described by Jean Withrow in her *Effecting Writing*; namely:

The following sentences form the opening paragraph of a story, but they are in the wrong order. Working with a group, put them in logical order. Discuss how the underlined words and phrases help you.

- a) Finally she reached the bottom.
- b) Burning with curiosity, she jumped up to follow it.
- c) So she did, and found that the liquid had a very pleasant flavour.
- d) Suddenly a white rabbit ran by her, saying to itself, "oh dear! I shall be too late!"
- e) But as she drank, something curious happened – she began to shrink!
- f) It was a long hole, and she fell for such a long time that she thought she might fall through to the other side of the earth.
- g) The rabbit went down a hole, and she jumped in after it.
- h) There she saw a bottle with a label that said, "DRINK ME."
- i) Alice was beginning to get very tired of sitting in the field having nothing to do.*1.

*1. Withrow, J., 1995 *Effective Writing*, Writing Skills for Intermediate Students of American English, Cambridge University Press, USA, page 12.

Another technique, which has been quite useful for a self-correction approach at solving classroom exercises, homework, and the tests used in the experiment, is what appears in the book *The Language Laboratory and Modern Language Teaching*, where Stack states: *Students are supplied with a list of correcting symbols. These symbols suggest the most common errors, and the list provides a brief rule for the correction of each error. Symbols such as the following are used because they readily indicate the grammatical principle involved: pu means punctuation, sp spelling, om omission, wo word order, etc. The list is arranged alphabetically, and each symbol is followed by the rule and a reference to the complete explanation in the textbook.*

*The teacher checks each homework paper, underlining errors in red. A symbol indicating the type of error is placed in the margin for each red mark in the homework. If more than one error appears on a single line, slashes are used to separate the correction symbols. The purpose is to identify each error for the student, tell what kind of mistake it is, give a text reference to aid in correction, and require the student to apply all this information to rewrite the work correctly. (...) *1.*

After any single unit of the language syllabus has been covered, a homework paper has been assigned, and after its correction, the students have been evaluated by two ways. First, they are supposed to work in small groups or individually at solving a **General Performance reading and Writing Worksheet**, which let them get acquainted of the next labour they are expected to do at the examination. Once the exam has been applied, the score that counts for the experiment is the result of the arithmetic mean of both the exams and the worksheet. The exam is individual, and has different versions of it, so the students cannot be tempted to cheat. In the appendix, the reader can find samples of worksheet, homework and exams, as well as a sample of the Language Syllabus to check objectives.

*1. Stack, E., 1971 *The Language Laboratory and Modern Language Teaching*, Third Edition, Oxford University Press, Inc., USA, page 226.

3. The Students

The students chosen as experimental units (plots) belong to two superior grades; namely, the 5-A and 6-A with 22 and 24 students respectively. The first, having the schedule of the two first hours, from 7:30 to 9:00. The second, having the schedule of the last two hours, from 12:30 to 14:00.

It has been estimated that the first group has a Language Competence of a Beginning-upper level; whereas the second, an Intermediate-lower level, concerning their respective language background and aptitude.

This difference in Competence is minimum and does not seem to interfere with the results of our experiment. These students are expected to receive a passage that the teacher knows is too difficult for them to read. A secondary aim is to see if they could read and understand the passage without the direct help of the teacher.

Some of their previous learning will consist in sensitising them to self-access strategies, where the mental process that is adopted while reading is made explicit. They will have to ask themselves why they are reading the passage, or what they are looking for, or what the exercise is aimed at.

CHAPTER II



1. Displaying the Results

1.1. Background. From the beginning of the present academic year, two suspicious situations grasped this research attention. The first refers to a different propensity for achievement motivation on the side of the English pupils due to the subject matter has been imparted in different schedules. We have thought that there may be a *stress* factor that is apparently diminishing the students' performance as the school hours go by. The second refers to an apparently arbitrary way to design the schedules on the side of the High School authorities. We have not found any technical, pedagogical study that could give support to this design at the School.

Casually, there were two student groups located extremely opposite by their schedules-as it was explained briefly in Chapter I. When the same language syllabus has been designed for both of them; e.g., the same objectives, contents, and methodology, we have believed to be in front of outstanding conditions for a *contrastive experiment* development.

Of course, as the two groups has been thought to be *superior*, the skills of Reading and Writing were selected to be emphasized more than Listening and Speaking. Also, the skills chosen has been said to be more useful to apply when using computers, not only to understand written messages, but also to write something more appropriately when answering those messages. We have to remember that the pupils are studying mostly to become technicians in computer sciences.

1.2. Choosing the Population Sample. It has been said that a sample, to be representative for a population given, must cover at last a 30% of its population*1. Indeed, this sample is not only representative for the total High School population (around 150 students,) but also the population which is made up by the 5th's and 6th's grades (90 students.) That is to say, the sample from the 5-A and 6-A, covers 46 students. 22 of them belong to 5-A, and 24 to the 6-A.

*1. Universidad Técnica Particular de Loja, 1986 *Proyectos de Plan de Tesis*, Loja, Ecuador, pag. 31.

We wish it would have been chosen by aleatory means, but it would have taken more time, and more problems would have arisen, especially because the other two *parallels* of fifth and sixth grades have been guided by another instructor along with her own particular language syllabus. Whatever it can be, what imports here is the two contrastive schedules (the two first and the two last hours) for the fifth and sixth grades guided by the researcher of this survey.

1.3. The Language Competence Levels. Once the sample has been selected, it is necessary to indicate which level of competence each group belongs to. For doing this, we have chosen the second type of tests used by David P. Harris referring to the classification for Purposes and Methods of Language Testing (Harris, D. 1969, page 3.)

This kind of tests try to distinguish degrees of proficiency so that examinees may be assigned to specific sections of activities on the basis of their current level of competence. Such tests may make no pass-fail distinctions, since some kind of training is offered to every one.

Being this so, the selected test has been one used at the Harvard Language Institute in Quito. It is made up of three important components. The first is a multiple-choice test with fifty items. The second is a homemade answer sheet. And the third is a homemade stencil key for such answer sheets. Samples can be found at the appendix.

The fifty points were divided into six levels. Each level was graded with about 8.3 points; namely, the beginners lower are located between 0 and 8.3; the beginners upper, between 8.3 and 16.7; the intermediate lower are located between 16.7 and 25; the intermediate upper, between 25 and 33.3; advanced lower are placed between 33.3 and 41.6, and the advanced upper, between 41.6 and 50 points, as shown in Figure 1.

After the test has been applied, it resulted that 5-A got an average score of 16.3, equivalent to a beginner upper level, as well shown in Figure 1.

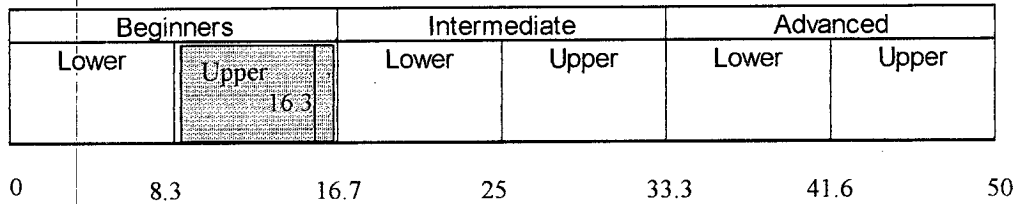


Fig.1. Scoring Scale for the Language Competence Level. 5-A belongs to a *Beginner-upper Competence Level* since it has been placed between 8.3 and 16.7 with an average mean of 16.3.

A similar test was applied for 6-A, and the results showed that this group was located in an intermediate-lower level of competence, as displayed in Figure 2.

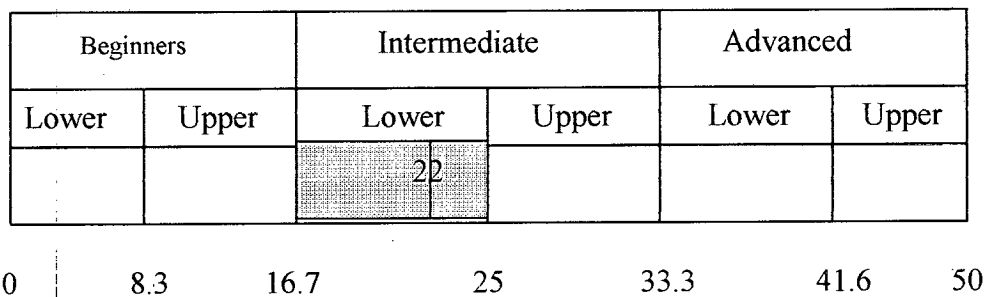


Fig. 2. Scoring Scale for Language Competence Level. The 6-A belongs to an *Intermediate-Lower Level* since it has been placed between 16.7 and 25 with an average of 22.

Substantially, the Language Competence Level for both groups appears rather low as compared to other high schools. This has made us plan a teaching-learning process that is mostly remedial, for the students not

only needed a great extent of listening and speaking, which were put into effect during the first five-month programme, but also a similar extent of reading and writing, put into practice during the second-five month programme. That is why we took the decision of using a somewhat advanced textbook when emphasizing the last two skills, especially.

The textbook, mentioned above, in its introduction says that students preparing for the University of Cambridge First Certificate in English and comparable examinations have reached this level by a variety of paths and methods and so their strengths and weaknesses are also bound to vary; however, it must be remembered that such examinations are primarily tests of students' ability to write in English. Few students entering these classes have much experience in writing composition in English without guidance.

The object of this book is therefore to revise the main structures students have already met at an earlier stage in such a way that at the same time they can develop the skills required for them to use these structures fluently in their own writing. Complex, unusual patterns that the students are unlikely to need at this stage in writing English have been avoided (Fowler, W. 1973, page vii.)

1.4.Objectives. At the end of the research, mainly two aims are expected to be accomplished:

1.4.1. In general, to suggest, after the analysis of results, correctives to palliate the influence of schedule differences on the students' performance, if there is some.

1.4.2. Specifically, to establish, by evaluation, if the schedule difference affects to some extent the students' performance.

1.5. Formulation of Hypothesis. The present labour has been controlled especially by the following hypotheses:

- 1.5.1. The performance in *Reading* and/or in *Writing* of the *5-A students* learning English at the *earliest schedule* is significantly better than that of the *6-A students*, at the *final schedule*.
- 1.5.2. The performance of a student group, in *Reading* and/or *Writing*, with a particular *Language Competence Level* (5-A or 6-A) can vary differently when involved in two *contrastive schedules*.
- 1.6. **Aptitude vs. Attitude.** Before explaining our experiment with more details, it may be good to talk about what we consider two important characteristics when a learning process is being held. On the one hand, *aptitude* refers to one of the many internal factors that makes a student capable to succeed at learning some subject matter, such as English, up to certain extent within a Language Competence. Indeed, for Larsen Freeman and H. Long (1991), there is a constellation of factors that affect the learning of second language students(*1.)

Their learning success may vary due to different circumstances that stretch from psychological to social factors that combine personality, intelligence, learning strategies, etc.

On the second hand, *attitude* reflects both internal and external features that makes a student likely or unlikely for a subject acquisition, such as a second language. It is internal when the general appreciation for a particular subject matter is personal and individual. It is external when the general appreciation for a particular subject matter is promoted by the social group; e.g., customs and habits that may be in *fashion* among teenagers, and specially immersed in a particular social group.

Apart from that, we believe that there are also some physical elements intervening at learning a subject matter. Among others there may be inadequate feeding, use and abuse of drugs, and mismatched schedules. Fortunately, the High School does not have serious problems with the mentioned factors; except, perhaps with the schedule designs.

*1. Pérez, P. 1997 *la Importancia de la Autoestima en el Rendimiento Escolar y en el Aprendizaje de una Lengua Extranjera*, PUCE, Quito. Tesis, page 20.

Therefore, it is necessary to assimilate the student not only as an individual that acts by itself; but, besides it belongs to a social group. Teachers must be aware of these two important characteristics, so they can lead groups more conveniently, since human behaviour is many times unpredictable; that means, when one thinks a group has been controlled, all at once an uprising may show up.

To facilitate the experiment fluency, for us, the *Language Level Competence* will be making up the idealistic sum of not only student's features that refer to the language background and experience to use the target language, whose best representative is *Aptitude*, but also those characteristics that makes a student react either positively or negatively due to personal likes and dislikes and due to especial social fashions immersed in a teenager's group, whose best representative is *Attitude*.

1.7. The Factorial Experiment. This type of experiments relates with a simultaneous study of two or more factors with two or more levels each. However, it is necessary not to confuse the terms levels. Lines above, the term level referred to an English class, whereas in this paragraph, the term refers to a certain route that is selectively chosen during a factorial experiment.

Factorial Dispositions are not experimental designs *per se*, but treatment ordaining to be analyzed by a basic design; e.g., *One-way ANOVA*, *Two-way ANOVA*, etc.

We have chosen a factorial experiment because in some cases one single factor may not be acting isolately, but closely related to other factors; that is to say, the answer of one of them, in reality may be connected to the answer of one or more of the others.

In experiments like this, besides obtaining information about each one of the factors, independently, probable interactions among them are as well registered.

Factorial arrangements consider both principal effects and interactions. The first, principal effects, relate to the answer of individual factors. The second, to the answer of linkage among them. Also, we have thought of factorial arrangements as being interestingly useful in *sociological* research because they present some such advantages as (1) factorial dispositions let us use available resources more efficiently, (2) factors of the study are evaluated under more real conditions, and, (3) they may be analyzed under any experimental design.

Since our experiment studies all possible combinations among the levels of factors involved, with high efficiency, it has been considered *complete*. Also, because our intention has been obtaining as much information as possible.

Our experiment will be expressed in an *exponential* way; that means, when the levels of factors are the same, a mathematical formula may be used; namely, the numerical base relates to the quantity of levels (m), and the exponent, to the number of factors (n); so, we can have:

$$m^n$$

As *three* factors at *two* levels each are considered, then the formula will be:

$$2^3$$

That equals 8. Therefore, eight treatments are going to be used, as indicated in Figure 3.

The first factor, *Language Competence Level (L)*, has two levels, *5-A (Lo)* and *6-A (L1)*, considered *initial* and *final* levels. The second factor, the *Schedule (S)*, has two levels, from *7:30 to 9:00, initial schedule (So)*, and from *12:30 to 14:00, final schedule (S1)*. The third factor, *the Ability (A)*, has two levels, the *initial Skill, Reading (R)*, and the *final Skill, Writing (W)*.

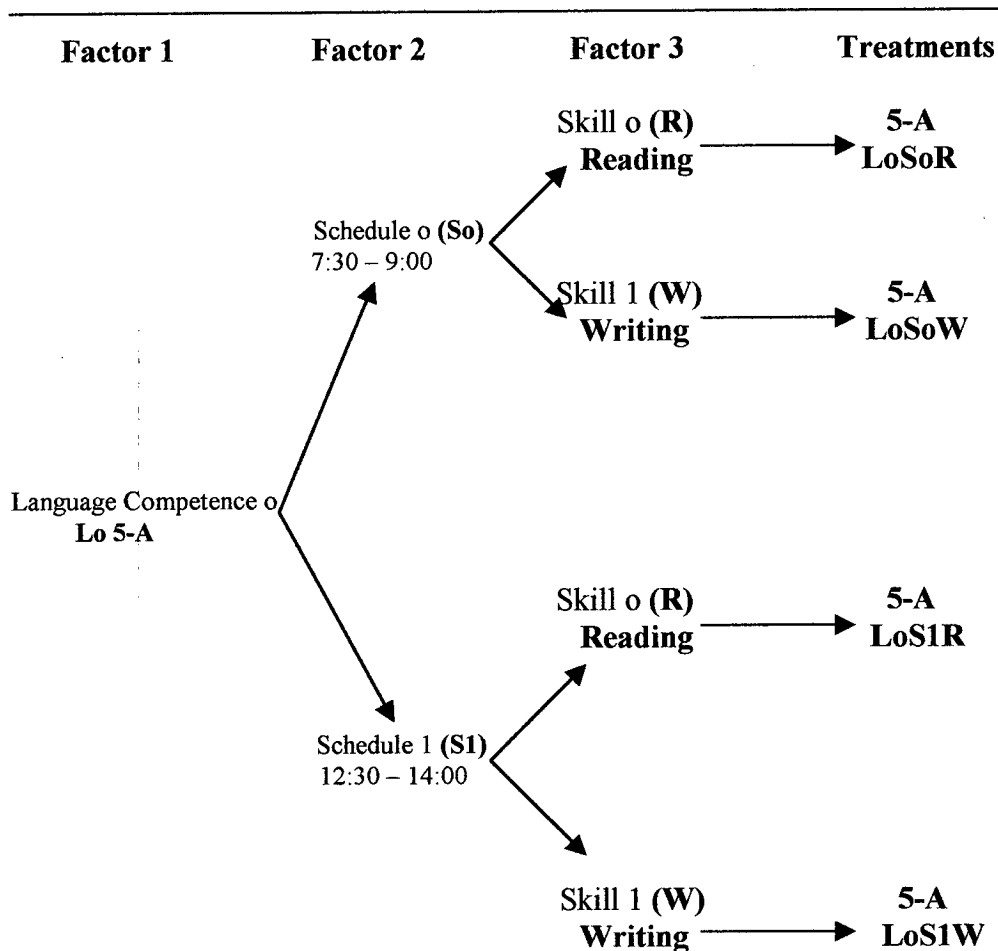


Fig. 3 (Part I.) A Dichotomous System of Routes. Out of eight, the first four treatments are displayed in a factorial experiment of:

3
2

Treatment notations on the right will be used to abbreviate combinations.

1.8. Experimental Timetable. The students passed through three didactic units when the experiment was applied. The first was related to revise what has been learned so far, and the last two were used for the experiment itself.

It started on June, Wednesday the 9th 1999. The first experimental group was the 6-A, with the schedule from 12:30 to 14:00.

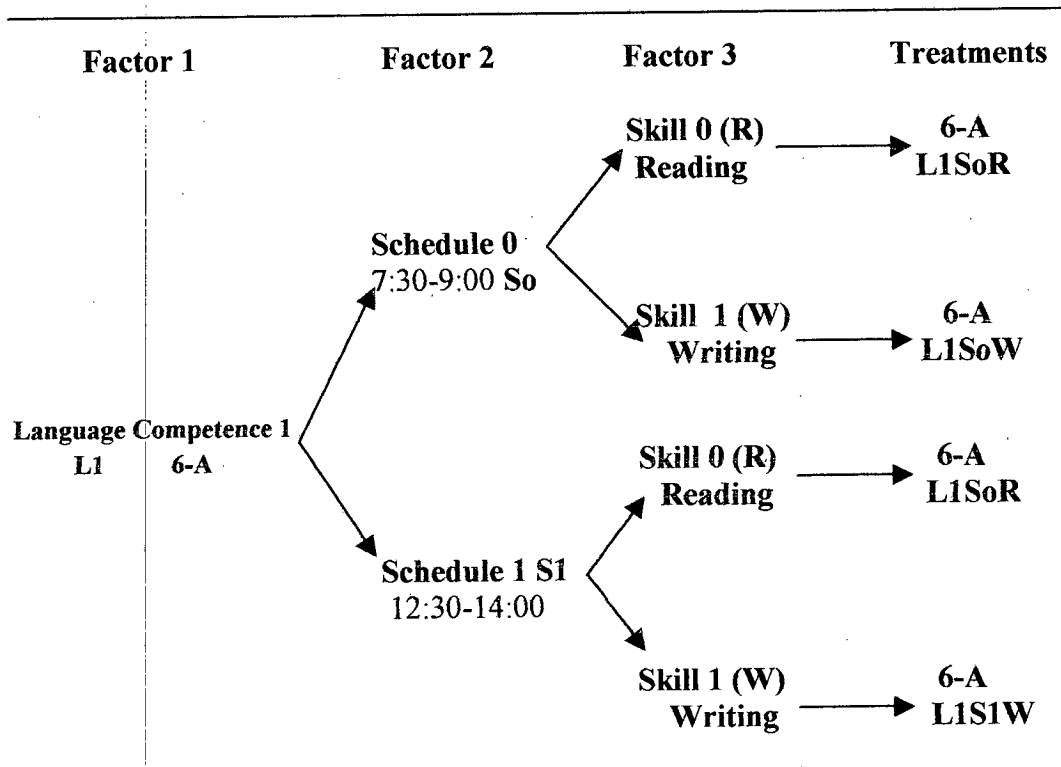


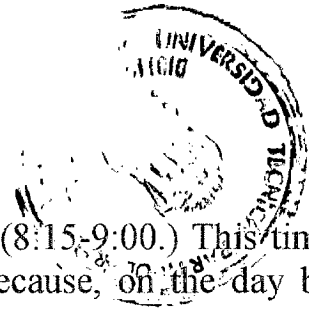
Fig.3 (Part II.) A dichotomous way to show, out of eight, the last four treatments, which are displayed in an exponential, factorial experiment of:

3
2

The notation on the right will be used to abbreviate the combinations.

During the first period (12:30-13:15) the skill of reading was tested. During the second period (13:15-14:00,) the skill of writing was applied. As it was indicated in the first chapter, a *General performance for Reading and Writing Worksheet (GPRW)* was used. It served two purposes, to collect the first scores and to warm up the students for a more controlled, difficult test expected soon.

On Thursday the 10th, the 6-A worked again, but at the opposite schedule (7:30-9:00.) During the first period, (7:30-8:15,) another *GPRW* was effected for solving the Reading questionnaire. The writing



section was expected for the second period (8:15-9:00.) This time, the objectives of the third unit were focused because, on the day before, those of the second unit were used.

On Friday the 11th, the 5-A group was under testing, with a similar procedure. The first worksheet referring to the objectives of the second unit was applied during the schedule from 7:30 to 9:00.

On Monday the 14th, during the schedule from 12:30 to 14:00, the second *GPRW*, referring to objectives of the third unit, was effected with the 5-A group.

Tuesday the 15th came, and during the schedule from 7:30 to 9:00 the 6-A students were under testing. For the first period, the corrected worksheets referred to the second and third units were analyzed. Working in pairs or small groups, the students had the chance to revise and discuss their weaknesses and strengths. For the second period, six sets of four different types of tests were distributed among the students. Two of them referred to the second unit and the other two, to the third, so each four-student group could not have any cheating temptation. Both Reading and Writing were put into proof.

But something unexpected happened this day. Due to the fact most of the students had been sent out of the School, because of their tuitions had not been paid, the tests were applied only with those who were present. The student group was organized according to the circumstances.

On Friday the 18th, in the morning schedule, the same problem appeared with the students of the 5-A group; however, the tests were applied anyway only with those who were present. Again, the students were organized according to the circumstances.

On Wednesday the 23rd, during the afternoon schedule, the 6-A students were taking another test. This time, students who took the former exam were shifted to take the other, and viceversa, so that all of

them could apply the two-unit knowledge. Again, four tests were organized in such a way that the students were not tempted to cheat.

On thursday the 24th, the two schedules were used to test both student groups. During the morning schedule, there was a repetition test for the 6-A students, who were not present last time. During the afternoon schedule, the 5-A students were taking the other test, following the procedadures stated before.

The experimental design, Factorial with a One-way ANOVA, requires that all the experimental units (plots) to be present; so, to complete the lost plots, a special method was used.

Figure 4 shows the *Experimental Timetable Summary*.

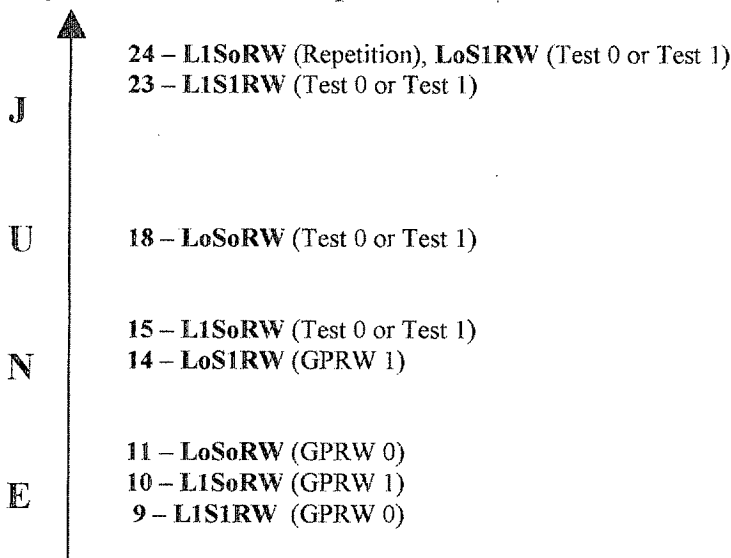


Fig 4. Experimental Timetable. It began on June the 9th, and, upwards, ended on June the 24th. Literals stand for the following designation:

Lo: Initial Language Competence Level (5-A.)

LI: Final Language Level Competence (6-A.)

So: Initial Schedule (7:30-9:00.)

SI: Final Schedule (12:30-14:00.)

R: Initial Skill (Reading.)

W: Final Skill (Writing.)

GPRW₀: Initial General Performance for Reading and Writing Worksheet (Unit 2.)

GPRW₁: Final General Performance for Reading and Writing Worksheet (Unit 3.)

Test 0: Two versions of a test containing objectives for Unit 2.

Test 1: Two versions of a test containing objectives for Unit 3.

Remarks: Test 0 or Test 1 means that there were groups of four students each. They received four different versions of the tests on a date and shifted diagonally on another.

1.9. Specific Methods to Handle the Experiment. After some teaching techniques have been exposed lines above side by side the experimental timetable, we think it is necessary to talk about certain especial methods to handle the experiment.

As pointed out before, factorial experiments require to have the complete sample; that is to say, no lost plots must show up, on the one hand. On the other, whenever zeroes appear among the results, the sample turns less homogenous. Therefore, we took the decision of attacking both problems, one at a time, with specific, statistical methods to be explained afterwards. Problems of this type are expected in any experiment. Table 1 shows them so the reader may get acquainted.

Table 1: First scores for the 5-A, along with the lost plots which are represented by the small literals. Asterisks stand for zeroes. Grades are out of five.

t r	5-A LoSoR	5-A LoSoW	5-A LoS1R	5-A LoS1W	Replication Sum.
1	2.3	2.2	0.7	3.7	8.9
2	1.7	1.2	g	o	2.9
3	2.9	2.3	1.7	2.0	8.9
4	3.1	3.1	3.3	3.0	12.5
5	2.5	1.9	*	0.4	4.8
6	1.9	2.7	1.4	2.7	8.7
7	3.2	2.3	h	p	5.5
8	a	d	i	q	0.0
9	3.6	3.9	1.5	0.9	9.9
10	1.5	1.5	1.0	*	4.0
11	1.9	3.1	1.4	2.3	8.7
12	2.9	1.6	1.5	0.4	6.4
13	3.3	2.3	3.6	2.0	11.2
14	1.6	0.3	j	r	1.9
15	2.3	4.6	3.5	4.4	14.8
16	2.9	2.6	2.5	2.0	10.0
17	3.8	2.8	2.2	1.3	10.1
18	1.4	*	k	s	1.4
19	3.8	3.4	1.7	0.7	9.7
20	2.4	3.7	1.7	3.0	10.8
21	1.8	2.7	l	t	4.5
22	2.9	3.5	2.8	3.2	12.4
23	b	e	m	u	0.0
24	c	f	n	v	0.0
Treatment Sum.	53.7	51.7	30.5	32.0	167.9

First of all, in order to find the lost plots, we must refer again the Experimental Design Pamphlet (PUCE, 1993, page 40), where we have translated the text something like this: *In researches made in the country side, greenhouses, etc., (...), information of one or more experimental units may be lost. It leads to problems with the calculations, whereas the analysis efficiency comes to be poor.*

There are some methods to estimate statistically such information –the correspondent values for the lost experimental units.

The method which has been more usually applied is the one that uses the YATES formula. (...)

Two cases of lost experimental units are considered: (1) when only one unit has been lost, (2) when more than one unit has been lost.

In both cases the Yates formula is used; namely,

$$Y_{ij} = \frac{t Y_i + r Y_j - Y}{(t-1)(r-1)} = a$$

Where,

Y_{ij} = Lost unit estimated value

t = Number of treatments

r = Number of replicates

Y_i = Total treatment where the unit was lost

Y_j = Total replicate where the unit was lost

*Y = Total sum of the experiment (without the lost Unit information.)*1.*

*1. Experimental Design Pamphlet, 1993, edited by the Catholic University, Quito, Ecuador, page 40.

Table 2. First scores for the 6-A along with lost plots and zeroes. Small literals stand for lost plots and asterisks, for zeroes. Scores are out of five. In order to find the general mean, \bar{Y} , the sum of 5-A replicates has been added.

$t \blacktriangleright$ $r \blacktriangledown$	6-A L1SoR	6-A L1SoW	6-A L1S1R	6-A L1S1W	Replicates sum
1	0.8	1.0	2.0	3.9	7.7
2	2.4	1.6	1.2	1.7	6.9
3	w	x	1.5	1.9	3.4
4	2.3	1.9	0.6	*	4.8
5	1.7	1.6	*	*	3.3
6	1.9	2.3	3.9	4.7	12.8
7	2.4	1.6	3.2	3.2	10.4
8	3.7	3.8	2.4	4.1	14.0
9	1.9	2.8	2.3	1.3	8.3
10	3.8	3.2	2.4	4.2	13.6
11	2.7	3.6	3.7	3.7	13.7
12	0.7	2.1	2.2	1.2	6.2
13	2.4	3.3	3.5	2.9	12.1
14	3.4	3.3	1.8	3.7	12.2
15	3.1	2.2	1.2	*	6.5
16	0.9	1.3	1.3	1.9	5.4
17	2.8	2.3	2.0	3.2	10.3
18	0.8	3.0	2.8	3.8	10.4
19	1.4	0.3	2.4	1.5	5.6
20	2.7	2.9	2.6	3.3	11.5
21	2.4	1.9	1.8	1.1	7.2
22	1.4	1.4	1.4	1.7	5.9
23	1.0	1.3	2.8	4.5	9.6
24	1.9	1.7	1.0	2.1	6.7
Treatment Sum	48.5	50.4	50.0	59.6	208.5

+

167.9 (5-A)

$$Y = 376.4$$

Divided by
161.0 *

$$\bar{Y} = 2.3379$$

- 161.0 = Total Number of Observations.

By having a look at Tables 1 and 2, one may realize that we are in front of the second case of lost experimental units because there were 24 missing plots, 22 from 5-A and 2 from 6-A (let us remind you that 6-A had the chance to repeat one of the tests, whereas 5-A, unfortunately, did not.) Apart from that, 3 zeroes were gotten by 5-A, whereas 4, by 6-A. All in all, we have to recover 24 values. The seven zeroes will follow another methodology, whose explanation will soon be ready.

Being this so, again, let us refer to the former pamphlet of Experimental Design, where the Algorithm for case 2 says:

1. *Values for all the lost experimental units are estimated by simple averages, using the double entrance tables, (Tables 1 and 2) except for any one of them.*
2. *With this average values, a new great total, and a new treatment and replicate totals are entered.*
3. *The Yates formula is used to estimate the lost experimental unit, not yet estimated, left.*
4. *With this Yates value of a , new totals are established.*
5. *By the same Yates formula, the value of b is estimated, and so on with more missing plots, if there are any.*

This way, the first cycle of estimations is completed.

6. *There must be as many cycles as the estimated values for each of the experimental units are exactly the same; that is to say, until two contiguous cycles given equal values of the lost experimental units.*
7. *With these so generated values, we may access ANOVA, but one degree of freedom is diminished for each lost experimental unit from the total and from the experimental error.*

Remarks: If many experimental units have been lost, and the degree of freedom, because of this lost, is less than 10, you had better use another design to apply. (Experimental Design Pamphlet, 1993, pages 41 and 42.)

The missing experimental units (plots) have been estimated, although such estimation has been long, tiresome, and laborious; however, after cycle eight, all missing plots have been gotten according to the former procedure. We think that including such a procedure here is not really necessary because time and effort (as well as typing paper) would be wasted; so, we shall merely write the values directly in the main double entrance tables, along with the zeroes, for they are real values anyway.

The *thermometer* which indicates if the results of the sample are adequate is the *Coefficient of Variation*, already seen in Chapter I. If it is too high, e.g., more than a 50%, then one or more of the assumptions for ANOVA must be breaking. The most common of them, the *Normal Distribution*, should be under suspicion. There may be that the sample is not so homogeneous; probably, because, frequently, in high schools such as that of our concern, students of the English language are placed in a classroom without being previously selected to receive the instruction of the target language according to their own aptitude and background, or which we have partially called *The Language Competence Level*. That means, there may be that first grade students are more capable to handle the target language than sixth grade students. An important recommendation may be that, in the future, the High School implements an instructional system where students of the whole institution are ubicated in levels. Therefore, these levels would not discriminate individuals because of their ages.

Fortunately, we have a powerful tool to control to a great extent such problems. We are referring to the method of *Scale Change*, which will be discussed in more detail if it is the case. But first, it is necessary to get to know if the data collected so far is adequate for the analysis. We believe that a coefficient of variation which is around the 20% may be acceptable, considering the problems already mentioned before.

Table 3. Scores for 5-A along with the values for the missing plots. Zeroes appear intact.

t ▸ r ▼	5-A LoSoR	5-A LoSoW	5-A LoS1R	5-A LoS1W	Replicates Sum.
1	2.3	2.2	0.7	3.7	8.9
2	1.7	1.2	1.204	1.298	5.402
3	2.9	2.3	1.7	2.0	8.9
4	3.1	3.1	3.3	3.0	12.5
5	2.5	1.9	0.0	0.4	4.8
6	1.9	2.7	1.4	2.7	8.7
7	3.2	2.3	2.221	2.315	10.036
8	3.89	3.794	3.185	3.279	14.148
9	3.6	3.9	1.5	0.9	9.9
10	1.5	1.5	1.0	0.0	4.0
11	1.9	3.1	1.4	2.3	8.7
12	2.9	1.6	1.5	0.4	6.4
13	3.3	2.3	3.6	2.0	11.2
14	1.6	0.3	1.921	2.015	5.836
15	2.3	4.6	3.5	4.4	14.8
16	2.9	2.6	2.5	2.0	10.0
17	3.8	2.8	2.2	1.3	10.1
18	1.4	0.0	1.538	1.632	4.57
19	3.8	3.4	1.7	0.7	9.6
20	2.4	3.7	1.7	3.0	10.8
21	1.8	2.7	1.521	1.615	7.636
22	2.9	3.5	2.8	3.2	12.4
23	2.79	2.694	2.085	2.179	9.748
24	2.065	1.36	1.36	1.454	6.848
Treatments	62.445	60.157	45.535	47.787	215.924

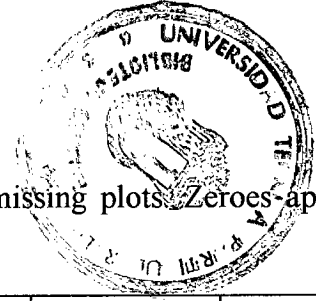


Table 4. Scores for 6-A along with the values for the missing plots. Zeroes appear intact.

t r	6-A L1SoR	6-A L1SoW	6-A L1S1R	6-A L1S1W	Replicates Sum.
1	0.8	1.0	2.0	3.9	7.7
2	2.4	1.6	1.2	1.7	6.9
3	1.889	1.972	1.5	1.9	7.261
4	2.3	1.9	0.6	0.0	4.8
5	1.7	1.6	0.0	0.0	3.3
6	1.9	2.3	3.9	4.7	12.8
7	2.4	1.6	3.2	3.2	10.4
8	3.7	3.8	2.4	4.1	14.0
9	1.9	2.8	2.3	1.3	8.3
10	3.8	3.2	2.4	4.2	13.6
11	2.7	3.6	3.7	3.7	13.7
12	0.7	2.1	2.2	1.2	6.2
13	2.4	3.3	3.5	2.9	12.1
14	3.4	3.3	1.8	3.7	12.2
15	3.1	2.2	1.2	0.0	6.5
16	0.9	1.3	1.3	1.9	5.4
17	2.8	2.3	2.0	3.2	10.3
18	0.8	3.0	2.8	3.8	10.4
19	1.4	0.3	2.4	1.5	5.6
20	2.7	2.9	2.6	3.3	11.5
21	2.4	1.9	1.8	1.1	7.2
22	1.4	1.4	1.4	1.7	5.9
23	1.0	1.3	2.8	4.5	9.6
24	1.9	1.7	1.0	2.1	6.7
Treatments	50.389	52.372	50.0	59.6	212.361

$$212.361 + 215.924 (5-A) = Y = 428.285 / 192; \bar{Y} = 2.231$$

1.9.1. The Coefficient of Variation. There will be two Coefficients of Variation. For the calculation of the first, we have considered Tables 3 and 4 where zeroes appear intact. Now, let us access the first four auxiliary double-entrance tables, which will be shown immediately.

FIRST AUXILIARY DOUBLE –ENTRANCE TABLES

		Schedules			Levels Sum	
Levels	Lo	48	So 122.602 *	S1 93.322	96	215.924
	L1		102.761	109.6		212.361
Schedules Sum		96	225.363	202.922		428.285

- $122.602 = 62.445 + 60.157$

		Skills			Levels Sum	
Levels	Lo	48	R 107.98*	W 107.944	96	215.924
	L1		100.389	111.972		212.361
Skills Sum		96	208.369	219.916		428.285

- $107.98 = 62.445 + 45.535$

		Skills			Schedules Sum	
Schedules	So	48	R 112.834*	W 112.529	96	225.363
	S1		95.535	107.387		202.922
Skills Sum		96	208.369	219.916		428.285

- $112.834 = 62.445 + 50.389$

TABLE OF MEANS

		Schedules		\bar{Y} (L)
		So	S1	
Levels	Lo	2.554	1.944	4.498
	L1	2.141 *	2.283	4.424
\bar{Y} (S)		4.695	4.227	8.922

- $2.141 = 102.761 / 48$

1.9.2. The first set of Calculations

a. Factor of Conversion: $FC = \frac{\sum Y_{ij}^2}{rt}$

$$FC = (428.285)/192; \quad FC = 183428.04/192; \quad FC = 955.354$$

b. Total Sum of Squares: $SST = \sum Y_{ij}^2 - FC$

$$SST = [(2.3)^2 + (1.7)^2 + \dots + (2.1)^2] - FC;$$

$$SST = 1163.35 - 955.354; \quad SST = 207.995$$

c. Sum of Squares of the Treatments: $SSt = \sum Y_i^2/r - FC$;

$$SSt = [(62.445)^2 + (60.157)^2 + \dots + (59.6)^2]/24 - FC;$$

$$SSt = [23209.505/24] - 955.354; \quad SSt = 11.709$$

c.1. Sum of Squares of the Language Competence Levels:

$$SSL = [(215.924)^2 + (212.361)^2]/96 - FC;$$

$$SSL = [91720.368/96] - 955.354; \quad SSL = 0.067$$

c.2. Sum of Squares of the Schedules:

$$SSs = [(225.363)^2 + (202.922)^2]/96 - FC; \quad SSs = 2.623$$

c.3. Sum of Squares of the Level-Schedule Link:

$$SSLs = [(122.602)^2 + (93.322)^2 + \dots + (109.6)^2]/48 - FC - SSL - SSs;$$

$$SSLs = 964.838 - 955.354 - 0.067 - 2.623; \quad SSLs = 6.794$$

c.4. Sum of Squares of the Abilities (Skills):

$$SSA = [(208.369)^2 + (219.916)^2]/96 - FC$$

$$SSA = [91780.687/96] - 955.354; \quad SSA = 0.6948$$

c.5. Sum of Squares of the Level-Ability Link:

$$SS_{LA} = [(107.98)^2 + (107.944)^2 + \dots + (111.972)^2 / 48] - FC - SS_L - SS_A;$$

$$SS_{LA} = [45927.268 / 48] - 955.354 - 0.067 - 0.6948;$$

$$SS_{LA} = 956.818 - 955.354 - 0.067 - 0.6948; \quad \mathbf{SS_{LA} = 0.702}$$

c.6. Sum of Squares of the Schedule-Ability Link:

$$SS_{SA} = [(112.834)^2 + (112.529)^2 + \dots + (107.387)^2 / 48] - FC - SS_S - SS_A;$$

$$SS_{SA} = 959.441 - 955.354 - 0.6948;$$

$$\mathbf{SS_{SA} = 0.769}$$

c.7. Sum of Squares of the Level-Schedule-Ability Link:

$$SS_{LSA} = SS_t - SS_L - SS_S - SS_{LS} - SS_A - SS_{LA} - SS_{SA};$$

$$SS_{LSA} = 11.709 - 0.067 - 2.623 - 6.794 - 0.695 - 0.702 - 0.769;$$

$$\mathbf{SS_{LSA} = 0.059}$$

d. Sum of Square of the Experimental Error:

$$SSE = SST - SS_t; \quad SSE = 207.96 - 11.709;$$

$$\mathbf{SSE = 196.286}$$

- **First Results in an ANOVA Table**

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Square	F. Value	Prob. 0.05	Prob. 0.01
Treat.	7	11.709	1.673	1.304	2.06	2.745
L	1	0.067	0.067	0.052	3.9	6.785
S	1	2.623	2.623	2.045		
LS	1	6.794	6.794	5.296*		
A	1	0.695	0.695	0.542		
LA	1	0.702	0.702	0.547		
SA	1	0.796	0.796	0.599		
LSA	1	0.059	0.059	0.046		
Error	177- 24=153	196.286	1.283			
Total	191- 24=167	207.995				

$$CV = \sqrt{\frac{MSE}{\bar{Y}}} * 100; \quad CV = \sqrt{\frac{1.283}{2.231}} * 100; \quad CV = 0.5077 * 100$$

- **The First Coefficient of Variation : CV= 50.8%**

The ANOVA table shows the first results as well as the first Coefficient of Variation. Significance Probability Ratios –the last slot on the right- have been taken from a special table attached to the Experimental Design Text, which has been used as the foundation of the present experiment. This special table refers to the F distribution, where F stands for Fisher, its author. Degrees of freedom of the treatments, factors and the experimental error have been taken to determine the probability ratios. The asterisk (*) shows that there is a significant interaction between the Language Competence Levels and the Schedules. However, The Coefficient of Variation (50,8%) shows that the sample has been not so adequate for the treatments, because of, perhaps, homogeneity has been somewhat poor.

Indeed, it is a matter of current practice, in the world of teaching evaluation, to meet such kind of problems because teachers know somehow that children, teenagers, and learners in general, produce sometimes incredible variation, due to their individual differences. That is why, many times the grades must be *standardised* in order to have a better vision of groups undergoing any evaluation process. This means that the original grades have to be shifted to others according to another scale. We have to be conscious that it is human behaviour which is being measured, and not proportional quantities that are usually evaluated by the Natural Sciences.

Whatever it can be, the Coefficient of Variation tells us that a *Scale Change* is needed for our experiment to be more reliable. Therefore, our next step is to select a convenient scale change, and all suggests that a *Square Root Scale Change* (*1.) looks more adequate to get a moderate sample variation. It also seems quite convenient for zeroes can be shifted into new values; and, so, this problem –mentioned earlier- shall have its solution. The square root scale change we will use is:

1.9.2. The Square Root Scale Change: $X' = \sqrt{x + \frac{1}{2}}$

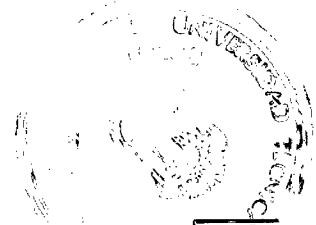


Table 5. 5-A scores changed to new values by means of using $x'_i = \sqrt{x_i + \frac{1}{2}}$ Square Root Scale Change.

t r	5-A LoSoR	5-A LoSoW	5-A LoS1R	5-A LS1W	Replicate Sum.
1	1.67	1.64	1.09	2.05	6.46
2	1.48	1.3	1.31	1.34	5.43
3	1.84	1.67	1.48	1.58	6.57
4	1.9	1.9	1.9	1.9	7.62
5	1.73	1.55	0.71	0.95	4.94
6	1.55	1.79	1.38	1.79	4.72
7	1.92	1.67	1.65	1.68	6.92
8	2.09	2.07	1.92	1.94	8.03
9	2.02	2.09	1.41	1.18	6.72
10	1.41	1.41	1.22	0.71	4.76
11	1.55	1.89	1.38	1.67	5.12
12	1.84	1.45	1.41	0.95	5.66
13	1.95	1.67	2.02	1.58	7.23
14	1.45	0.89	1.56	1.59	5.49
15	1.67	2.26	2.0	2.21	8.15
16	1.84	1.76	1.73	1.58	6.92
17	2.07	1.82	1.64	1.34	6.88
18	1.38	0.71	1.43	1.46	4.97
19	2.07	1.94	1.48	1.09	6.60
20	1.7	2.05	1.48	1.87	7.11
21	1.52	1.79	1.42	1.46	6.18
22	1.54	2.0	1.82	1.92	7.28
23	1.81	1.79	1.6	1.64	6.85
24	1.6	1.57	1.36	1.4	5.93
Tr.	41.9503	40.7416	36.4796	36.8561	156.0276

Both ,Tables 5 and 6, display approximate values to two cyphres; yet, the sum of treatments and replicates have taken the whole number into account, so we cannot have possible mistakes because of the rough approximations. It is recommendable, however, to use a compatible system with an IBM computer to enter data more efficiently when applying the MSTAT programme. If there is no computer available, a good pocket calculator is useful, especially one that can be programmed, so we can calculate both sums and square sums directly.

In our tables, numbers have been approximated for reasons of abbreviation. This is an important feature to be taken into account if another researcher tries to verify data. He/She will have to use numbers with many decimal cyphres if wishing more accuracy. We think this is one of the few disappointing characteristics of a design that needs scale change, but taking this chance is worthwhile.

Table 7. SPECIFIC METHODS SUMMARY

- 1. Missing Plots Estimation.** The Yates Formula was used.
- 2. Testing the Sample Reliability.** The first Coefficient of Variation was calculated.
- 3. Standardising the Scores.** A Square-Root Scale Change was used.
- 4. Testing the Sample Reliability (II.)** Determining the Second Coefficient of Variation.
- 5. Using the Data to verify Hypotheses.** Both the Typificate number Z and direct results from ANOVA were used.

Table 6. 6-A scores, changed into new values by means of using $x' = \sqrt{x + \frac{1}{2}}$ square root scale change.

t ▼	6-A L1SoR	6-A L1SoW	6-A L1S1R	6-A L1S1W	Replicate Sum
1	1.14	1.22	1.58	2.1	6.04
2	1.7	1.45	1.3	1.48	5.94
3	1.55	1.57	1.4142	1.55	6.08
4	1.67	1.55	1.05	0.71	4.98
5	1.48	1.45	0.71	0.71	4.35
6	1.55	1.67	2.1	2.28	7.6
7	1.7	1.45	1.92	1.92	7.0
8	2.05	2.07	1.7	2.14	7.97
9	1.55	1.82	1.67	1.34	3.38
10	2.07	1.92	1.7	2.17	7.87
11	1.79	2.02	2.05	2.05	7.91
12	1.1	1.61	1.64	1.3	5.65
13	1.7	1.94	2.0	1.84	7.5
14	1.97	1.95	1.52	2.05	7.91
15	1.9	1.64	1.3	0.71	5.55
16	1.18	1.34	1.34	1.55	5.42
17	1.82	1.67	1.58	1.92	6.99
18	1.14	1.87	1.82	2.07	6.9
19	1.38	0.89	1.7	1.41	5.39
20	1.79	1.84	1.76	1.95	7.34
21	1.7	1.55	1.52	1.26	6.03
22	1.38	1.38	1.38	1.48	5.62
23	1.22	1.34	1.82	2.24	5.99
24	1.55	1.48	1.22	1.61	5.87
Treat.	38.0916	38.7365	37.8077	39.8628	154.4986

+
156.0276

$$\bar{Y}_{ij} = 310.5262$$

$$310.5262/rt = 310.5262/192 = \bar{Y}_{ij};$$

$$\bar{Y}_{ij} = 1.6173$$

**AUXILIARY DOUBLE-ENTRANCE TABLES
(FOR TABLES 5 AND 6)
Schedules**

			So	S1		Level Sum
Levels	Lo	48	82.6919*	73.3357	96	156.0276
	L1		76.8281	77.6705		154.5986
Schedule Sum		96	159.5200	151.0062		310.5262

*82.6919 = 41.9503 + 40.7416

Skills

			R	W		Level Sum
Levels	Lo	48	78.4299*	79.5977	96	156.0276
	L1		75.8993	78.5993		154.4986
Ability Sum		96	154.3292	156.1970		310.5262

*78.4299 = 41.9503 + 36.4796

Skills

			R	W		Schedule
Schedules	So	48	80.0419*	79.4781	96	159.52
	S1		74.2873	76.7189		151.0062
Ability Sum		96	154.3292	156.1970		310.5262

*80.0419 = 41.9503 + 38.0916

TABLE OF MEANS

Schedules				
	So	S1	Level Sum	
Levels	Lo	1.7227*	1.5278	3.2506
	L1	1.6006	1.6181	3.2187
Schedule Sum	3.3233	3.1459	6.4693	

*1.7227 = 82.6919 / 48

• **Second Set of Calculations**

1. $FC = (310.5262)/192;$ $9642.5209/192;$ **FC = 502.2215**
2. $SST = 524.285 - FC;$ $524.285 - 502.2215;$ **SST = 22.0635**
3. $SSt = (12078.7904/24) - FC;$ $503.2829 - 502.2215;$ **SSt = 1.0614**
- 3.a. $SSL = (48214.4294/96) - FC;$ $502.2336 - 502.2215;$ **SSL = 0.0121**
- 3.b. $SSs = (48249.5028/96) - FC;$ $502.599 - 502.2215;$ **SSs = 0.3775**
- 3.c. $SSLs = (24151.3387/48) - FC - SSL - SSs;$ **SSLs = 0.5418**
- 3.d. $SSA = (48215.0048/96) - FC;$ **SSA = 0.0181**
- 3.e. $SSLA = (24111.2060/48) - FC - SSL - SSA;$ **SSLA = 0.0651**
- 3.f. $SSSA = (24127.8667/48) - FC - SSs - SSA;$ **SSSA = 0.0468**
- 3.g. $SSLSA = SSt - SSL - SSs - SSLs - SSA - SSLA - SSSA;$ **SSLSA = 0.0000**
4. $SSE = SST - SSt;$ $22.0635 - 1.0614;$ **SSE = 21.0021**

• **Second Results in an ANOVA Table**

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Square	F Value	Prob.	
					0.05	0.01
Treatments	7	1.0614	0.1516	1.1044	2.06	2.745
L	1	0.0121	0.0121	0.0881	3.9	6.785
S	1	0.3775	0.3775	2.7501		
LS	1	0.5418	0.5418	3.947*		
A	1	0.0181	0.0181	0.1319		
LA	1	0.0651	0.0651	0.4743		
SA	1	0.0468	0.0468	0.3409		
LSA	1	0.0000	0.0000	0.0000		
Error	153	21.0021	0.1373			
Total	167	22.0635				

$$CV = \sqrt{\frac{MSE}{\bar{Y}}} * 100; \quad CV = \sqrt{\frac{0.1373}{1.6173}} * 100;$$

- **Second Coefficient of Variation** $CV = 0.2291*100;$ **CV = 22.9%**

***3.9470.** This means that the value is **significant** because it is bigger than the expected probable value of 3.9, at a 95%.

Finally, this second coefficient of variation says that the sample is under more reliable conditions. A percentage of 22.9% could be said to be acceptable with this type of experiments. Next step is to supply an adequate functional analysis in order to prove to what extent the significant interaction can verify our hypotheses. As the interaction is only

significant (not highly significant,) we consider useful an **MSD** test (Minimum Significant Difference) which seems more adequate for the proof.**(*1.)**

$MSD = t_{(0.05, 153)} \sqrt{2MSE/m}$; where **m** stands for the replicate value (24), **t** is the tabular value of *t student* to a significant level given; e.g., 5%, 1%, etc., with a given number of degrees of freedom of the experimental error (153); thus:

		LoSo	L1S1	L1So	LoS1
		1.7227	1.6181	1.6006	1.5278
LoSo	1.7277	—			
L1S1	1.6181	0.1046	—		
L1So	1.6006	0.1221	0.0175	—	
LoS1	1.5278	0.1949*	0.0903	0.0728	—

$$\begin{aligned}
 MSD &= 1.645 * \sqrt{2(0.1373)/24} ; \\
 &= 1.645 * \sqrt{0.2746/24}; \\
 &= 1.645 * \sqrt{0.0114} ; \\
 &= 1.645 * 0.1070;
 \end{aligned}$$

1.9.3. Hypotheses Proof by MSD = 0.176. It is the minimum value that a difference of means must have to be considered significant. As **0.1949** is bigger than **0.176**, the interaction Level-Schedule is considered significant, especially when the initial schedule with 5-A is contrasted against the final schedule with 5-A. That means, the performance of 5-A in English at the initial schedule is significantly better than that of 5-A studying English at the final schedule.

***1.** MSD test is shown in the Experimental Design Text, PUCE, 1993, page 29.

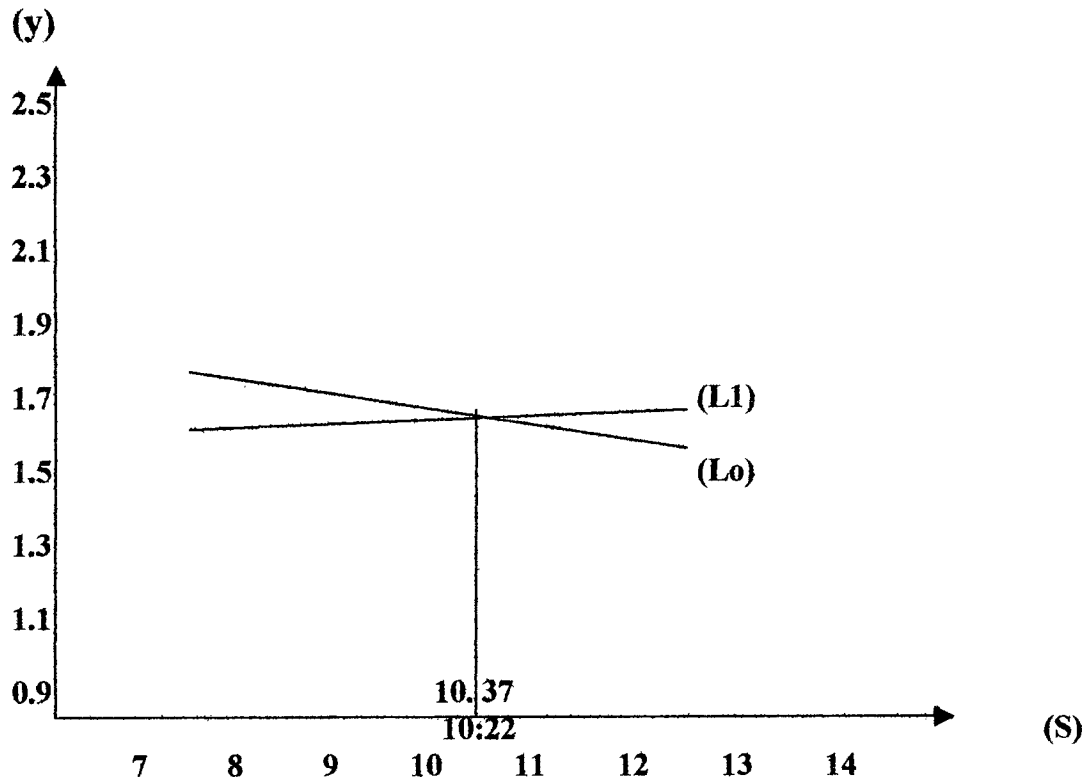


Fig.5. Significant Interaction (LS). The Y axis stands for Performance. The S axis stands for Schedule. The optimum schedule seem more likely to start at **10:22**, where there is an intersection between the level lines, which means the equilibrium point. In the decimal system, the value comes to be 10.37 that results of solving the system of the line equations. However, variations may appear due to the *decimal effect*. Many times, it is necessary to find an average among all the possible results to have more accuracy. In our case, and for purposes of convenience at designing the school schedule, An optimum English lesson would start at 10:00 and end at 11:30.

Also, Fig. 5., shows that *the groups behaved differently*.

The difference of means is significant only when one single group has been contrasted to itself; that is to say, 5-A dramatically decreased its performance from the initial to the final schedule, and this decrease has been found significant, as shown in Figure 5. *It seems clear that the Schedule Factor does have some intermeddling when combined with particular, subtle traits immersed in a given student group; and, sometimes, it may dramatically affect the students' performance to a significant extent.*

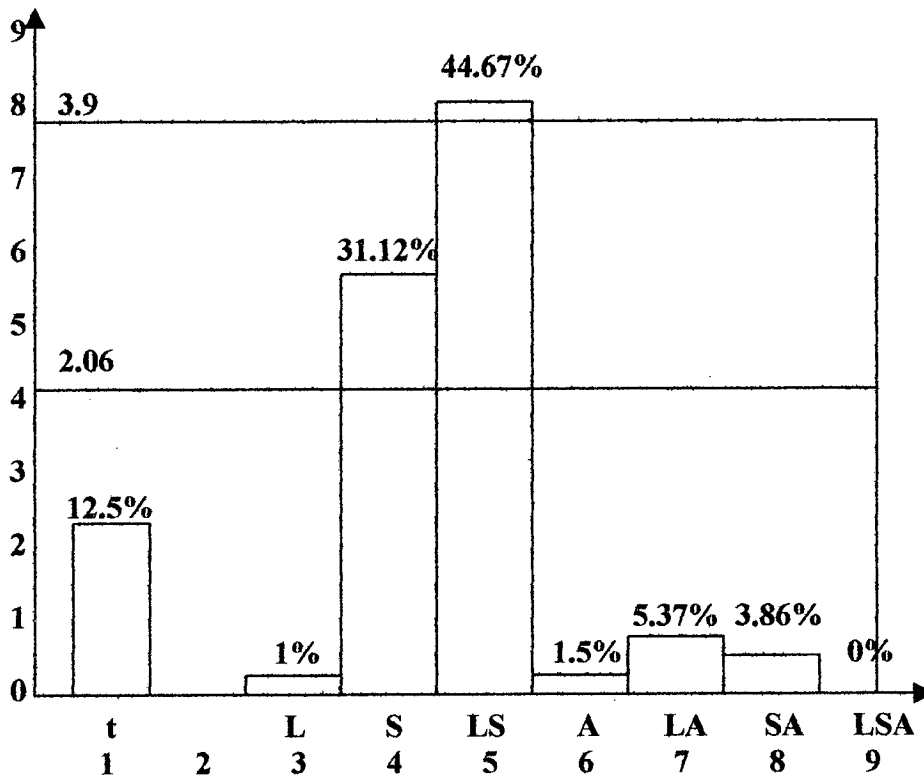


Fig.6. Comparative proportions of factors along with the Treatments. F stands for Fisher Significant Levels (2.06 for the Treatments and 3.09 for the Factors.) Both the Schedule Factor and its interaction with the Level Factor (S and LS) have the bigger proportions. The Interaction is significant because it is larger than 3.9. Percentages are shown to show a better view of the proportions.

By solving the equations system of the segments of Figure 5., and avoiding the variation for the *decimal effect*, by making another average, the Intersection Point may give the clue to find the start an optimum English schedule; that may be 10:17. This point in time shall serve for purposes of suggesting how to make up a more adequate schedule aimed to optimise the English Teaching-Learning Process in high schools of similar characteristics as the one being object of experimentation.

In general, when both skills were involved, 5-A performed better than 6-A, but unfortunately, not evidently significant. That means, we have to accept the second hypothesis rather than the first.

1.9.11. Hypotheses Proof by Typificate Punctuation Z. However, there is also another alternative method to verify the first hypothesis. It refers to the *Typificate Punctuation Z (*1)*, which is going to be used here as a complement of the present research, and so, to supply more lights on the side of the skills, mainly.

a. The null hypothesis $H_0 : \bar{Y}_0 = \bar{Y}_1$ versus the alternative hypothesis,

$H_1 : \bar{Y}_0 \neq \bar{Y}_1$, where \bar{Y}_0 and \bar{Y}_1 are the sample means of the groups.

b. The level of significance: 95%; $Z = 1.96$ or -1.96

c. Skill: **Reading (R)**

5-A

6-A

$$\bar{Y}_0 = 2.6019$$

$$\bar{Y}_1 = 2.0833$$

$$S_0 = 0.77 \text{ (Standard Deviation)}$$

$$S_1 = 0.9712$$

$$m = 24$$

$$m = 24$$

d. Typical Error:

$$S\bar{Y}_0 = \frac{S_0}{\sqrt{m-1}} \qquad S\bar{Y}_1 = \frac{S_1}{\sqrt{m-1}}$$

e. Typical Error of the difference of the sample means:

$$SD\bar{Y} = \sqrt{(S\bar{Y}_0)^2 + (S\bar{Y}_1)^2} = 0.2585$$

$$f. \quad Z = \frac{\bar{Y}_0 - \bar{Y}_1}{SD\bar{Y}}; \quad Z = \frac{2.6019 - 2.0833}{0.2585}$$

$$Z = 2.0065$$

*1. Bustamante, J. 1985 *Estadística Descriptiva e Inferencial*, Ed. El Siglo, Loja, Ecuador.

- g. 2.0065 is bigger than 1.96; therefore, H1 is accepted; that is to say, the performance in reading of 5-A , at the initial schedule was better than that of the 6-A, at the final.
- h. With the same procedure, the skill of writing, as well as both reading and writing for 5-A and 6-A at the two contrastive schedules have been found, and the results showed that Z (writing) = 0.061 was smaller than 1.96; consequently, H_0 has been taken. Z (reading and writing) = 0.832, which is smaller than 1.96; therefore, H_0 has been taken.

Next step will be to show the analysis of these results, which will be the concern of the next chapter.

CHAPTER III

1. DISCUSSION

1.1. Analysis of the Results. Overall, our results showed that:

- The Treatments (t) (Fig. 6.) carried a certain amount of variation; that means both worksheets and tests could have produced some extent of heterogeneity in the sample. Fortunately, such a variation was not so great to be the cause of significant effects. Indeed, its percentage of 12.5% stayed under the security level of 2.06; it let us say that the treatments were somewhat reliable.
- The Language Competence Levels (L) were thought of being made up of not only each group's English background, but also of a constellation of thin traits that are not always easy to measure. We think they come from at least two main living sources; namely, internal and external. A psycholinguistic aptitude, as well as an individual achievement motivation have been considered as two main features proceeding from the first source. A sociolinguistical attitude, as well as a unique group leadership have been considered as two principal characteristics taking charge of, somehow, standardising a group's teenager fashion, proceeding from the second source.

The former affairs are still *virgin* to investigate more in future researches looking for some refinement to the present labour. But to facilitate our experimental *fluency*, we have just found the 5-A level as located in a beginning-upper course, whereas the 6-A level as placed in an intermediate-lower one. (See Fig.1. and 2., on page 24 along with the corresponding test procedure for such a placement.)

Inasmuch these levels appeared rather low than those in other high schools, the teaching-learning process was planned to be mostly remedial. After a somewhat intensive audio-lingual approach, carried out especially during the first –five month programme, a rather advanced textbook was used to develop their reading and writing skills, during the second-five month programme.

To demonstrate to what extent the increase of learning the students achieved was not the central purpose of this research; yet, at comparing the sample means of the departure competence levels (16.3 and 22 for the 5-A and 6-A respectively, as shown in figures 1 and 2 on page 24) to those of the auxiliary table of means on page 40, as well as the general sample mean $\bar{Y}_{ij} = 2.231$, which out of 50 makes 22.31, of the original data, we think the students finished the academic term with a positive surplus. But most important of all, they applied their own strategies to cope with the skills without too much interference on the teacher's side. This is crucial for they will not always have a teacher nearby.

In all, the difference in language level competence in both groups turned virtually null at affecting the language acquisition in favour of one of them to costs of the other. One may get accounted of this fact by looking at Fig. 6., where factor (L) appears with a tiny 1%. That means, it did not interfere *by itself* on the students' performance.

- The factor Schedule (S) had an important turn in this experiment. Its size; namely, 31.12%, covered a great part of the area under the bars of Fig. 6. However, it was not big enough to become a significant factor. That means, it did not make too much intermeddling *by itself* on the students' performance, for it did not even reach the necessary Fisher's ratio of 3.9. But, as an early recommendation, a wise teacher must not diminish its importance all at once, for the results were acquired under certain environmental conditions that might be different from other high schools' obeying other ecological condition in other geographical locations.
- The Interaction Language Competence-Schedule (LS) was the only effect that turned positively *significant*. Its percentage of 44.67% was large enough to surpass the significance ratio of 3.9. That means, the Language Competence, with all its features included, co-operated with the schedules to vary the students' performance.

By looking at Fig. 5., one may notice that both 5-A and 6-A (L0 and L1) reacted differently to the treatments. Although 6-A performed better in the afternoon than in the morning, this rise was not significant (the segment obeys an almost constant function.) 5-A, on the contrary, performed *significantly* better in the morning than in the afternoon; the segment obeys a function with an evidently negative tilt.)

So far, we can just say that this interaction has been produced by effect of the combination between the level and the schedule (LS,) but this discovery has opened other interesting doors for deeper insights in the future. Finer factors acting isolately or forming other thinner interactions are still fresh for other researches in fields of psycho-sociolinguistics and its application to teaching-learning processes.

For the moment, this initial discovery has been thought to give interesting lights on the side of social groups' behaviour and its reaction to learning a second language because it permits to say more trustfully that, *at times, the schedule may be the cause of dramatic performance variation if a certain group is involved*. But what imports here is the interaction usefulness, for it has also let us find an optimum schedule that should be used in English lessons to potentiate better performance.

At least, for the school of our concern, this schedule may be placed from 10:00 A:M to 11:30 A:M, because the optimum departure time has been found at 10:17 A:M, which was easily determined at replacing the general sample mean $\bar{Y}_{ij} = 1.6173$ in the equation of the line, and making an average with the answer of solving the equation system.

The only thing we can do, in the mean time, is to speculate about the possible causes that might have produced different behaviour in both groups when exposed to contrastive schedules:

- a. Both groups were somehow conditioned for the English lessons to be given at a determined schedule, and when they were shifted, this uncommon situation led the students to diminish their performance. However, this reasoning is not quite sure, for one group diminished and the other increased performance.
- b. 5-A students performed without too much pressure; in fact, they did not have to work on writing a Thesis for their graduation. However, this group should have been obtained better grades in the afternoon if there was not a stress factor among the students.
- c. Each group behaved according to their own *personality*, under the frame of psycho- sociolinguistical laws; indeed, Gagne and Berliner (1988, page 341) say that:

(...) their achievement orientation led subjects to maintain high levels of performance without external monitoring. The positive relation between need of achievement and task persistence (number of tasks attempted) emerged clearly.

Other studies (Weiner & Kukla, 1970) have shown that individuals high in achievement motivation also persist longer than those low in achievement motivation even when they are failing at a task. Those high in achievement motivation often see failure as a result of their own lack of effort, rather than some external force. So they reason that by increasing personal effort they can perform most tasks. Perhaps this personal attribute accounts for the greater success of students who are high in achievement motivation when they take part of in discovery learning, a form of learning in which the students mostly study a great deal on their own .

As the general final balance was in favour of 5-A, one may come to an early conclusion that the students could have had better achievement motivation because of the earlier schedule; that is to say, the earlier the schedule is, the less stress it carries, and so, the 5-A students could have performed better.

- The Skills (A) were poor at intermeddling. Their 1.49% was practically insignificant to interfere with the students' performance. This fact also makes us think that the tests and worksheets were well balanced at evaluating either Reading or Writing.
- The Interaction between Language Competence Level –Skills (LA) neither had a significant intermeddling with performance. Figure 6., shows its percentage of 5.37%. However, at proving the first hypothesis with the method of the Typificate Punctuation Z, it resulted that 5-A seemed to prefer the skill of Reading, because its performance on this skill was better in the morning than that of 6-A in the afternoon, leading us to accept **H1: $Y_0 \neq Y_1$** .
- The Interaction Schedule-Skill (SA) was as well insignificant. Its percentage made only 3.86% meaning that the schedule joining the skills did not vary the students' performance. However, the same reasoning used at the former point may be used here to say that 5-A did prefer the morning to perform better in Reading than 6-A in the afternoon.
- Finally, the Interaction Competence-Schedule-Skill (LSA) resulted null at all, with its 0%.

In order to conclude this section, we think it shall be quite convenient to express some ideas about what other researchers have found in areas that seem near to our view points. Firstly, a clear co-relation between motivation and performance has been found (Child, 1975, page 292.) As a matter of fact, we have mentioned one of the many factors that could be immersed in what we have called the Language Competence Level, and it is the famous *Achievement Motivation*, which can vary among the student groups. Some better performance may be expected in groups that have some better achievement motivation among their members rather than those groups that do not have such a factor. The problem here is that the mentioned co-relation has mostly been measured in rats, and the Yerkes-Dotson law appears as an expression of such relation.

Another problem appears when there are not enough data in current research for primary and secondary educational stages. In fact, most data have been drawn from university or adult students, where the connection between motivation and performance tends to be significantly positive.

According to Child, and in general terms, in pupils from either primary or secondary stages, results have tended to some negative co-relation. There does not seem to be any explanation for this fact, at the moment. It may be that the more experienced students can learn to control their academic energy better than the less experienced students, or intellectual expectations for children and teenagers may be relatively more complex because of their lack of such experience; and so, higher stress levels may be generated against their adequate performance.

Teenagers of our concern are from 17 to 20 years old; that means, they are placed in a *twilight zone*, about to enter another academic, as well as evolutionary stage in their lives. This may be a reason why there is a considerable internal variation inside both groups. Some students must tend to behave like teenagers properly. Others must be showing more mature personalities. And since the results of our concern appear in the limit of a significant ratio, the characteristics mentioned above seem to agree our experiment.

Whatever it can be, it is important to take into account that the characteristics of the personality perform actively not only for the studies as academic or intellectual efforts, but the attitudes in front of those efforts. Performance variations are not merely a question of intellect, achievement motivation, or mental ability, but they may depend on personal attributes capable of increasing or decreasing quantitatively and qualitatively the students' performance. This only fact is important enough for justifying other continuous investigations in this field.

Secondly, there is a still bigger area to investigate when our concerns deal with social affairs interacting on the students' performance.

The so-called Language Competence Levels must be treated as true social units in high schools. They must include other extra traits in addition to simple language acquisition background and personal aptitude.

Although the interaction between teachers and pupils, we believe, has been diminished to a considerable extent along this survey, for planning has examined the possibility to apply a student-centred approach, Child's opinions relate to the general lack of knowledge between such an interaction. Studies on the field appear rather incomplete and their results do not seem very evident.

In our particular case, we think a system that varies between a *laissez faire* and *democratic* styles has been carried out. That means, emphasis on the pupil's participation about taking decisions and co-operation in open structures for human relations is being placed. Also, the teacher can give almost complete liberty to decision taking and reducing to a great extent his/her direct leadership.

Under this point of view, groups may behave according to their own *personalities*, resembling individuals obeying their own temperaments and characters shaped by several influences, such as some substitutive leadership, unique ways to cope with their academic performance, especial customs that are in fashion inside the teenagers' universe, linguistically particular codes, etc.

The styles used here have been appropriate for our particular, experimental purposes. They might as well be followed by other teachers depending upon the direction they want inside the classroom, objectives and contents, level of difficulty, and so on.

The next section will expose the conclusions and recommendations we have come to.

2. CONCLUSIONS

At the end of this survey, we have come to the following conclusions:

- The first hypothesis, *the performance in Reading and/or Writing of the 5-A students, learning English at the initial schedule, is significantly better than that of the 6-A students, learning English at the final schedule*, was positively verified by the method of the Typificate punctuation Z. This means, we have accepted it.

But, as the skill of Reading was the only ability that could verify the first hypothesis, we may trustfully say that the performance in Reading of the 5-A students learning English at the initial schedule *was* significantly better than that of the 6-A students learning English at the final schedule.

- Our second hypothesis, *the performance of student groups in Reading and/or Writing, with particular Language Competence Levels, can vary differently when two contrastive schedules are involved*, was positively verified under more strict methods, and was also accepted. It seems clear that groups tend to show their unique *personalities* which, in connection with particular schedules, may dramatically modify their performance, and this modification may sometimes be significant.
- Neither the skills nor the schedules were determinant *per se* to affect the performance variation. A similar reasoning is made for the language competence levels. By the way, 5-A and 6-A were placed in a beginning-upper and an intermediate-lower courses, respectively; but, our survey has considered them as possessing a lot of more characteristics than simply being represented by a score that poorly reflects aptitude. They have been treated as social units, in high school contexts, with all their very thin subtleties and traits.
- When both skills and both schedules were involved, 5-A performed better in the morning than in the afternoon. This variation surpassed

the significant ratio. 6-A, on the other hand, performed better in the afternoon than in the morning. This variation was not significant.

- In general, when both skills were involved, 5-A did not perform significantly better in the morning than 6-A in the afternoon.
- In relation to the second objective of this research, we must be consequent with our rather strict methodology to evaluate it; therefore, we shall say that the schedule (S) was an important factor in this labour. It reached a percentage of 31.12% of the total, but it was not large enough to surpass the significant ratio imposed by *ANOVA*. So, *by itself*, the schedule difference did not affect the students' performance.
- We have found a tight relationship between both factors the Language Competence Levels and the Schedules (L-S.) This interaction has been found interestingly crucial to determine significant variations in the students' performance. In this research, it has also been found useful to evaluate the first objective, for it lets us suggest how to make up a more convenient schedule design, so that it can palliate the influence of schedule differences on the students' performance.

Again, we have to remind the reader that the factor Language Competence Levels (L) is something more than simple scores for measuring barely a sort of aptitude for handling a second language. For us, this is a factor that contains a *constellation* of subtleties of several kinds and origins, which at times may alter performance co-operating with the time and school labours. That is why we have come to the conclusion that it is necessary a sort of schedule, adjusted to the circumstances, and all seems to indicate that a central point in time may be of a better convenience to wisely design an idealised schedule, which will be shown in the recommendations.

3. RECOMMENDATIONS

At the end of the survey, we shall suggest the following recommendations:

- In this research, what we called Language Competence referred not only to how well students can demonstrate their aptitude and background of a second language, but also their attitude to keep on acquiring it.

The sum of psychological and sociological traits immersed in a given group –studying English- may be determinant on significant performance variations at contrasting schedules.

We recommend teachers to observe carefully the different groups and their behaviour. Sometimes a good indicator for such group difference is how difficult the teaching-learning process runs inside that group. Many times, the affective field is likely to be altered by one or various individuals –including teachers- that become *false leaders* who turn classes reluctant of acquiring polite manners and acceptable performance by simply spreading bad customs.

People with those characteristics need feedback so they can deeply understand the importance of living in peace inside a certain community, for otherwise chaos will tend to destroy society.

Other members of the staff in the high school must be present to help offer this feedback. Psychologists, physicians, nurses, dentists, teachers, inspectors, advisors, etc., will work in the institution, whereas parents, priests, relatives, etc., will work from the outside of the school.

Anyway, an initial point of departure may be to place such problematic groups in a convenient schedule to reduce its negative influence.

- Some other features immersed in student groups include age and sex. Other researchers may find them interesting to study in relation to schedule differences. Are girls more resistant than boys to adverse stressing situations due to mismatched schedules or not?
- At solving the equation system of Fig.5., the answer was 10:00 AM. For an optimum schedule (initial time.) But, at replacing the general arithmetical mean in one of the equations, it made 10:12. This difference may be due to the decimal effect. So, we have found its average that makes 10:17. Whatever it can be, we recommend to start our optimum schedule at 10:00 A.M., according to the following *idealised* schedule design, which may as well be used by other high schools of similar characteristics:

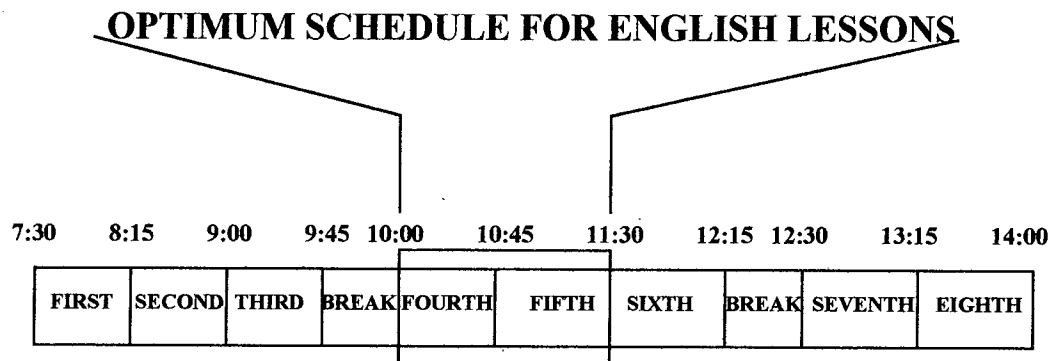


Fig. 7. Optimum Schedule for English Lessons. The central frame which contains the 4th and 5th didactical hours of 45 minutes each belongs to an ideally optimum schedule, from 10:00 to 11:30. One may notice that there are two fifteen-minute breaks.

- Finally, we recommend to use more frequently factorial experiments like the present one, for they can supply more information under more real conditions to be evaluated by ANOVA.

1. FINAL WORDS

Inasmuch some procedures used along this research may appear rather weird for those who wished to follow identical paths, we shall say that the routes of discovery are not so easy. A great deal of patience, persistence, and effort is the clue to overcome difficulties. But, at the end, the sense of satisfaction one feels is worthwhile. And for those who usually feel discouraged of trying it out, let us remind them the verses of the poem *The Road Not Taken*, by Robert Frost, who says:

*Two roads diverged in a yellow wood,
And sorry I could not travel both
And be one traveller, long I stood
And looked down one as far as I could
To where it bent in the undergrowth;*

*Then took the other, as just as fair,
And having perhaps the better claim,
Because it was grassy and wanted wear;
Though as for that the passing there
Had worn them really about the same,*

*And both that morning equally lay
In leaves not step had trodden black.
Oh, I kept the first for another day!
Yet knowing how way leads on to way,
I doubted if I should ever come back.*

*I shall be telling this with a sigh
Somewhere ages and ages hence:
Two roads diverged in a wood, and I-
I took the one less travelled by,
And that has made the difference (*1.)*

*1. Bode, C., 1971 *Highlights of American Literature*, Book IV, pages 29 and 30, English Teaching Division, Washington D.C., USA.

5. REFERENCES

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APPENDIXES

1. APPENDIX 1:

1.1. THE LANGUAGE SYLLABUS FOR 5-A AND 6-A GRADES

2. APPENDIX 2:

2.1. THE FIRST GENERAL PERFORMANCE FOR READING AND WRITING WORKSHEET FOR UNIT 2 (GPRW_o)

2.2. THE SECOND GENERAL PERFORMANCE FOR READING AND WRITING WORKSHEET FOR UNIT 3 (GPRW₁)

3. APPENDIX 3: CLASSIFICATION FOR PURPOSES TESTS

3.1. DEGREES OF PROFICIENCY AND COMPETENCE TEST

3.2. TWO VERSIONS OF TEST _o FOR OBJECTIVES OF UNIT 2

3.2. TWO VERSIONS OF TEST 1 FOR OBJECTIVES OF UNIT 3

4. APPENDIX 4:

4.1. HOMEWORK SAMPLES

APPENDIX 1

LANGUAGE SYLLABUS FOR THE SECOND-FIVE MONTH PROGRAMME

I. INFORMATION DATA

- | | |
|-----------------|---|
| 1. High School: | <i>Israel</i> |
| 2. Grade: | <i>5-A and 6-A</i> |
| 3. Periods: | Two didactic hours a week |
| 4. Subject: | <i>ENGLISH</i> |
| 5. Teacher: | <i>Edgar Fernando Martínez Eskola</i> |
| 6. Year: | <i>1998-1999.</i> |
| 7. Date: | March, Wednesday the 31 st 1999. |

II. DIAGNOSIS

The units planned for the first term have been covered fully; however, some students are reluctant of receiving the language. Indeed, the method used in the classroom introduces an English level that comes from the general to the particular; that means, the pupils must be confronted directly with a virtually real language, complete with most of its subtleties. The general objective of this method is therefore *to revise* the main structures students have already met at an earlier stage in such a way that at the same time they may develop the skills required for them to use these structures fluently in their own writing.

III. OBJECTIVES

By the end of this new term, the pupils will be expected to:

1. Solve the proposed exercises in comprehension for text giving readings.
2. Solve the proposed exercises in pattern practice.
3. Practice additional exercises on pertinent grammar items.
4. Use what has been learned at writing short compositions

IV. TIMING

Number of labourable weeks:-----	20
Minus three weeks for evaluations and holidays -----	17
Minus a 10% of the weeks for unforeseen aspects -----	15
Actual didactical hours -----	30

V. SELECTION OF THE DIDACTICAL UNITS

1. Unit 1. <i>Review</i> : -----	6 hours
2. Unit 2. <i>The First Men on Venus</i> : -----	8 hours
3. Unit 3. <i>Moving Experiences</i> : -----	8 hours
4. Unit 4. <i>Return to Farley</i> : -----	8 hours

VI. PROGRAMMING CONTENTS

1. Unit 1. *Review*:

1.1. Functions:

- Contrasting routine actions with current actions in progress.
- Expressing Future Activities

1.2. Structures:

- Present Simple and Continuous tenses.
- Future Simple and Continuous Tenses.
- Word Order
- Expect, Hope, Look Forward To, Wait (For).
- Prepositions of Time.
- Have Just, Going To, Present Continuous with Future meaning.
- Quite and Rather.
- Think So.
- Time (collocations).
- Particles (with Be).

2. Unit 2. *The First Men on Venus:*

2.1. Functions:

-Expressing Future Ideas.

2.2 Structures:

-Time Clauses in Future.

-Too and Enough.

- As and Like (1).

3. Unit 3. *Moving Experiences:*

3.1. Functions:

-Describing Actions not yet Finished

3.2. Structures:

-Present Perfect Simple and Continuous Tenses,

-Past Tenses with Ago.

-For, Since, and Ago.

-Phrasal Verbs (Put).

4. Unit 4. *Return to Farley:*

4.1. Functions:

-Contrasting Present and Past Actions.

4.2. Structures:

-Present and Past Simple Tenses.

-Used To, Would (past form,) Be Used To.

-Make and Let.

-Remember and Remind.

-Phrasal Verbs (Stand).

-Pronunciation (1.)

VII. DESCRIPTION OF THE DIDACTIC PROCESS

Each session will be broken is such aspects as:

-Motivation

-Individual, pair, and group activities.

-Reinforcing activities.

-Feedback and Self correction.

VIII. EVALUATION

- Oral and Written Quizzes.
- Individual/group projects.
- Written Mid-term and Final Exams.

IX. DIDACTIC RESOURCES

- Copybooks
- Charts
- Whiteboard
- Markers
- Text copies

X. BIBLIOGRAPHY

1. Fowler, W. 1973 *First Certificate English*, Book 1. Language and Composition, Printed in Hong Kong.

XI. REMARKS

APPENDIX 2**GENERAL PERFORMANCE FOR READING AND WRITING
WORKSHEET, UNIT 2 (GPRW_o)**

NAME: _____ DATE: _____

I. READING PROCESS

Please follow these instructions step by step. You had better not try to jump to any other question without having finished the former ones.

Q. 1. Look at the title *The First Men on Venus*. What do you expect the passage to be about? Select the best answer. The passage is about excessive population on ...

- A. the earth
- B. Venus
- C. Mars
- D. the Moon

Q.2. Based on your answer to Q.1., do you think the passage will interest you? Circle the best answer:

- A. Yes
- B. Some
- C. No

Q. 3. Now read the first paragraph, and, **only** when you have read it, **answer this question!**

First paragraph:

The First Men on Venus

If the population of the Earth goes on increasing at its present rate, there eventually not be enough resources left to sustain life on the planet. By the middle of the 21st century, if present trends continue, we will have used up all the oil that drives our cars, for example. Even if scientists develop new ways to feeding the human race, the crowded conditions on Earth will make it necessary for us to look for open space somewhere else. But none of the other planets in our solar system are capable of supporting life at present. One possible solution to the problem, however, has recently been suggested by an American scientist, Professor Carl Sagan.

Have you changed your expectation of what the passage is about?

A. Yes

B. Some

C. No

Q.4. You have read the first paragraph and perhaps changed your expectation. **Now**, do you think the whole passage will interest you?

A. Yes

B. Some

C. No

Q.5. Now that you think the passage is about a sort of ecological problems because people are overcrowding the Earth, **Make** a brief list of topic words you expect to appear in the passage:

Q.6. Now use the sheet of the **copy**, attached to this worksheet, to read the whole passage and (1) see if the words you expected appear; (2) make a list of words and phrases that you do not understand; and, (3) mark any points that are of particular interest to you.

Q.7. Now that you have read the whole passage, did you understand it?

A. Yes **B.** Most **C.** Some **D.** Little **E.** No

Q. 8. If you lost interest, can you write down the words at the point where you lost interest?

Q.9. Did you lost interest because the passage was too difficult?

A. Yes **B.** No

Q. 10. Now that you have read the complete passage, did it interest you?

A. Yes **B.** Some **C.** No

II. READING COMPREHENSION AND VOCABULARY:

Please use the passage sheet and solve exercises **A. Comprehension**, and **B. Words**, by circling the best answer.

The First Men on Venus

If the population of the Earth goes on increasing at its present rate, there will eventually not be enough resources left to sustain life on the planet. *By the middle of the 21st century*, if the present trends continue, *we will have used up all the oil* that drives our cars, for example. Even if scientists develop new ways of feeding the human race, the crowded conditions on Earth will make it necessary for us to look for open space somewhere else. But none of the other planets in our solar system are capable of supporting life at present. One possible solution to the problem, however, has recently been suggested by an American scientist, Professor Carl Sagan.

Sagan believes that before the Earth's resources are completely exhausted it will be possible to change the atmosphere of Venus and so create a new world almost as large as Earth itself. The difficulty is that Venus is much hotter than the Earth and there is only a tiny amount of water there.

Sagan proposes that algae, organisms that can live in extremely hot or cold atmospheres and at the same time produce oxygen, should be bred in conditions similar to those on Venus. As soon as this has been done, the algae will be placed in small rockets. Spaceships will then fly to Venus and fire the rockets into the atmosphere. In a fairly short time, the algae will break down the carbon dioxide into oxygen and carbon.

When the algae have done their work, the atmosphere will become cooler but before man can set foot on Venus, it will be necessary for the oxygen to produce rain. The surface of the planet will still be too hot for man to land on it but the rain will eventually fall and in a few years something like Earth will be reproduced on Venus.

If the experiments are successful, life will become possible there but it will not be pleasant at first. *When they go to Venus, the first colonists will have to take plenty of water* with them and get used to days and nights lasting 60 Earth-days. But there will also be some advantages. The colonists will live longer because their hearts will suffer less strain than on Earth. Apart from that, *they will be exploring a new world while those still on Earth are living in closed, uncomfortable conditions*. Perhaps it will be the only way to ensure the survival of the human race.

A. COMPREHENSION

Choose which one of the following statements is correct in the context of the passage.

- (1) It will eventually become necessary for us to try to colonise another planet because (a) the Earth will have too many people on it (b) we will have used up all the oil that drives our cars (c) there are not enough resources to sustain life on Earth.
- (2) It is not possible for us to colonise Venus immediately because (a) there is no water there (b) it is too far away for us to go there (c) it is too hot to support human life.
- (3) Algae are important for the colonisation of Venus because (a) they can be bred in any conditions (b) they can produce oxygen (c) they can easily be carried in spaceships.
- (4) The first colonists on Venus will find life difficult there because (a) they will suffer from heart strain (b) there will be no water there (c) the days and nights will be very long.
- (5) One of the main advantages for the colonists will be that (a) they will be the only survivors of the human race (b) they will have comfortable houses (c) they will have much more space than before.

B. WORDS

Choose the word or phrase from the alternatives given which is closest in meaning to the words in italics in the context of the passage.

- (1) *Goes on* (1.1) (a) follows (b) continues (c) starts
- (2) *Supporting* (1.9) (a) maintaining (b) Standing (c) holding up
- (3) *At present* (1.9) (a) presently (b) soon (c) now
- (4) *Exhausted* (1.14) (a) tired (b) worn out (c) used up
- (5) *Amount* (1.17) (a) number (b) quantity (c) pool
- (6) *Break down* (1.25) (a) destroy (b) separate (c) collapse
- (7) *Eventually* (1.31) (a) naturally (b) finally (c) inevitably
- (8) *Like* (1-32) (a) as (b) similar (c) attracted to
- (9) *Plenty* (1.35) (a) some (b) a lot of (c) much
- (10) *Apart from* (1.39) (a) besides (b) except (c) beside

III. COMPOSITION

- (1) Put the sentences in a logical order by writing numbers; e.g., 1, 2, 3, ..., etc., in the spaces on the left of the sentences.
- (2) Write the sentences one after another to make up the story.

- Second, pollution is all over the planet.
- It is necessary to install urgent solutions or we will soon die.
- Finally, to complete the situation, the greenhouse effect has already produced deep water changes.
- We are attending the end of the century and it is not so pleasant.
- Third, social violence has increased to very dangerous limits.
- First, poverty comes side by side overpopulation.

- However, they will undergo the exciting task of exploring a new world.
- When the first colonists arrive in Venus, life will not be pleasant at first.
- They will have to take plenty of water with them and get used to days and nights lasting 60 Earth-days.

**GENERAL PERFORMANCE FOR READING AND WRITING
WORKSHEET (GPRW1. UNIT 3.)**

NAME: _____ DATE: _____

I. READING PROCESS: Follow the instructions step by step.

Q. 1. After looking at the title *Moving Experiences*, select the best answer for what you expect the passage is about.

The passage is about ...

A. Races **B.** Taking up new residence **C.** Marathon competitions **D.** Flights

Q.2. Based on your answer to Q.1., do you think the passage will interest you?

A. Yes

B. Some

C. No

Q.3. Please, read the first paragraph now.

Moving Experiences

27 Oak Tree Avenue,
Southbury,
Essex.
8 July 1972

Dear Mary,

As you can see, we have just moved into our new house. In fact, we took up residence three days ago. We received your letter last week at our old address in High Street but I haven't had time to answer it until now.

Now, have you changed your expectation about the passage?

A. Yes

B. Some

C. No

Q.4. Do you think the passage will interest you?

A. Yes

B. Some

C. No

Q. 5. Now that you think the paragraph is about taking up a new residence, make a list of topic words you expect to appear in the passage.

Q.6. Now, use the sheet of paper attached to this worksheet and read the complete passage and (1) see if the words you expected appear; (2) make a list of words and phrases that you do not understand, and (3) mark any points that are of particular interest to you.

Q.7. Now that you have read the passage, did you understand it?

A. Yes

B. Most

C. Some

D. Little

E. No

Q.8. If you lost interest, can you write down the words at the point you lost interest?

Q.9. Did you lose interest because the passage was too difficult?

A. Yes

B. No

Q.10. Now you have read the passage, did it interest you?

A. Yes

B. Some

C. No

II. **READING COMPREHENSION AND VOCABULARY:** On the sheet of the passage solve **A. Comprehension**, and **B. Words**.

Moving Experiences

27 Oak Tree Avenue,
Southbury,
Essex.
8 July 1972

Dear Mary,

As you can see, we've just moved into our new house. In fact, we took up residence three days ago. We received your letter last week at our old address in High Street but I haven't had time to answer it until now.

Have you ever moved house? As you can imagine, George and I have been working hard putting the house in order and *the children have been having a wonderful time for the past three days*, playing hide-and-seek all over the house and getting under the furniture and behind the packing cases. Although *we hadn't had a moment's rest since we've moved in*, it has been an exciting time for us all. We have always wanted to live here on the outskirts of the town, only a stone's throw from open country, and when we saw that this house was for sale, we jumped at the chance and put down a deposit on it straightaway.

George has finished decorating all the rooms except the kitchen. For some reason that he didn't explain to me, he put off painting it until last so we have had to live out of tins because I haven't been able to cook proper meals. However, experience has taught me not to argue with him about such matters.

Several years ago, soon after we were married, George put up a ladder against the outside of the house. I was supposed to hold it steady while he painted the window frames upstairs, but I heard the telephone ringing and let go of the ladder. George slid to the ground. The wet paint brush went up his nose and the tin of paint fell on his head. *He has never forgotten the incident* or let me forget it.

He must have finished painting the kitchen by now. I wonder if he has been experimenting with something new. Regards from us all. Our best wishes to David. We look forward to hearing from you.

Affectionately,

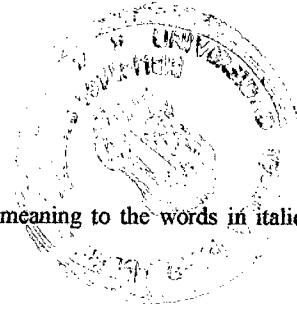
Anne

P.S. I have just come back from the kitchen. When I went in, I had the shock of my life. I thought George was covered in blood. He has painted the walls bright red but spilled half the paint over himself. Still, I have learnt to put up with George so I suppose I'll learn to put up with his idea of a kitchen.

A. Comprehension

Choose which one of the following statements is correct in the context of the passage.

- (1) Mary knows that Anne has moved into a new house because (a) she has been there (b) the new address appears at the top of the letter (c) she wrote to Anne at the new address.
- (2) George and Anne (a) prefer living in the centre of the town (b) wanted to move to the country (c) have always wanted to live away from the centre of the town.
- (3) Anne hasn't been able to cook proper meals because (a) she hasn't unpacked the cooker (b) George is only now decorating the kitchen (c) the children have got in her way.
- (4) Anne and George (a) have just got married (b) have been married for three years (c) have been married for a number of years.
- (5) Anne (a) thinks that George has almost certainly finished painting the kitchen that day (b) thinks George had to finish painting the kitchen that day (c) had told George that he must finish painting the kitchen that day.

**B. Words**

Choose the word or phrase from the alternatives given which is closest in meaning to the words in italics in the context of the passage.

- (1) *Hard* (1.7.) (a) hardly (b) much (c) a great deal
- (2) *On the outskirts* (1.13) (a) in the country (b) outside the town (c) on the edge of the town
- (3) *Open country* (1.14) (a) land with few houses (b) land with few hills or mountains (c) uncultivated land
- (4) *Chance* (1.15) (a) opportunity (b) luck (c) occasion
- (5) *Straightaway* (1.16) (a) direct (b) immediately (c) without thinking
- (6) *Live out of tins* (1.19) (a) have all our possessions in tins (b) eat tinned food (c) eat meals cooked in tins
- (7) *Put up* (1.24) (a) built (b) established (c) leant
- (8) *Experimenting with* (1.31) (a) experiencing (b) trying out (c) trying on
- (9) *Shock* (1.37) (a) crash (b) blow (c) greatest surprise
- (10) *Spilled* (1.39) (a) fell (b) dropped (c) let fall.

III. COMPOSITION

- (1) Put the sentences in a logical order by writing numbers; e.g., 1, 2, 3, ..., etc., in the blanks on the left of the sentences.
- (2) Write the sentences, one after another, to make up the stories below.

- This morning, I met an American girl at the University.
- Dear Daniel.
- I'll tell you more soon. Cheerio.
- As you can see, I've just moved into an apartment with a nice view of the river, but rather expensive for me to pay the rent.
- I asked her to be my roommate and share the apartment expenses.
- I've decided to study marine biology at the ESPOL in Guayaquil.
- She accepted enthusiastically.

- Won't you come?
- She and I have been working hard putting the apartment in order.
- Dear Daniel.
- Write for confirmation. See you soon.
- The girl I told you before is fantastic!
- Next week we're going to give a celebration party with some classmates.
- She has taken up residence a week ago.
- Although we haven't had a moment's rest since she moved in, it has been an exciting time for both of us.

APPENDIX 3
DEGREES OF PROFICIENCY AND COMPETENCE TEST
ANSWER SHEET

NAME: _____ DATE: _____

DIRECTIONS: When marking answers, blank the entire letter. Make your marks heavy and black. Use ordinary soft black-lead pencil. Be sure to erase completely any answer you wish to change. Good luck!

- | | | |
|------------------------------------|------------------------------------|------------------------------------|
| 1. A <input type="checkbox"/> C D | 18. A <input type="checkbox"/> C D | 35. A B <input type="checkbox"/> D |
| 2. A B <input type="checkbox"/> D | 19. A <input type="checkbox"/> C D | 36. A <input type="checkbox"/> C D |
| 3. A B C <input type="checkbox"/> | 20. <input type="checkbox"/> B C D | 37. <input type="checkbox"/> B C D |
| 4. A <input type="checkbox"/> C D | 21. <input type="checkbox"/> B C D | 38. A <input type="checkbox"/> C D |
| 5. <input type="checkbox"/> B C D | 22. A B <input type="checkbox"/> D | 39. A <input type="checkbox"/> C D |
| 6. <input type="checkbox"/> B C D | 23. A <input type="checkbox"/> C D | 40. A B C <input type="checkbox"/> |
| 7. <input type="checkbox"/> B C D | 24. A B <input type="checkbox"/> D | 41. A B <input type="checkbox"/> D |
| 8. A <input type="checkbox"/> C D | 25. A B <input type="checkbox"/> D | 42. A B <input type="checkbox"/> D |
| 9. A <input type="checkbox"/> C D | 26. <input type="checkbox"/> B C D | 43. A <input type="checkbox"/> C D |
| 10. A <input type="checkbox"/> C D | 27. <input type="checkbox"/> B C D | 44. A B <input type="checkbox"/> D |
| 11. A B C <input type="checkbox"/> | 28. <input type="checkbox"/> B C D | 45. A <input type="checkbox"/> C D |
| 12. A <input type="checkbox"/> C D | 29. <input type="checkbox"/> B C D | 46. A B <input type="checkbox"/> D |
| 13. A B C <input type="checkbox"/> | 30. A B <input type="checkbox"/> D | 47. <input type="checkbox"/> B C D |
| 14. <input type="checkbox"/> B C D | 31. <input type="checkbox"/> B C D | 48. A <input type="checkbox"/> C D |
| 15. <input type="checkbox"/> B C D | 32. A B <input type="checkbox"/> D | 49. <input type="checkbox"/> B C D |
| 16. A <input type="checkbox"/> C D | 33. A B C <input type="checkbox"/> | 50. A B C <input type="checkbox"/> |
| 17. <input type="checkbox"/> B C D | 34. <input type="checkbox"/> B C D | |

SCORES: _____

LEVEL ASSIGNED: _____

BOOKLET

DIRECTIONS: Do not write anything on this booklet, but the answer sheet. For questions 1-50, choose the correct answer A, B, C or D.

- 01) The policeman on the corner busy with the traffic.
- A. are
 - B. is
 - C. does
 - D. am
- 02) The are in the garden.
- A. child
 - B. childs
 - C. children
 - D. childrens
- 03) It is long trip, but it is easy trip.
- A. am – a
 - B. a – a
 - C. an – an
 - D. a – an
- 04) is he? *Mr. Smith.*
- A. What
 - B. Who
 - C. Where
 - D. When
- 05) Those are our books.
- A. new
 - B. beautifuls
 - C. news
 - D. handsome

- 06) She seldom speaks to in Spanish.
- A. us
 - B. our
 - C. we
 - D. ours
- 07) mountain in the distance forms part of the Rocky Mountains.
- A. That
 - B. This
 - C. These
 - D. Those
- 08) Patrick and Stephanie are the school.
- A. at
 - B. in
 - C. on
 - D. to
- 09) He is very of his illness.
- A. good
 - B. well
 - C. best
 - D. fine
- 10) You and I here in Harvard.
- A. am
 - B. are
 - C. is
 - D. was

- 11) I up at 7 o'clock in the morning.
- A. am geting
 - B. am getiting
 - C. getting
 - D. am getting
- 12) Louis is I am.
- A. young than
 - B. younger than
 - C. yonger than
 - D. young
- 13) Alaska is Delaware.
- A. big than
 - B. biger
 - C. bigger
 - D. bigger than
- 14) Is Washington a beautiful city?
- A. Yes, it is
 - B. Yes, it's
 - C. Yes, he is
 - D. Yes, he's
- 15) I am going to Harvard morning.
- A. tomorrow
 - B. now
 - C. everyday
 - D. this moment

- 16)Michelle going to be a student?
- A. Does
 - B. Is
 - C. Are
 - D. Do
- 17) Are Fernando and Erika going to get married?
- A. Yes, they are
 - B. Yes, they are going
 - C. Yes
 - D. Yes, they're going
- 18) Erika plays the piano
- A. good
 - B. well
 - C. OK
 - D. Fine
- 19)we meet you at Grand Central Station?
- A. Are
 - B. Will
 - C. Going
 - D. Is
- 20) We got the repairman our radio.
- A. fixed
 - B. fixing
 - C. fixes
 - D. to fix

- 21) The storms have done *considerable* damage.
- A. a lot of
 - B. some
 - C. little
 - D. no
- 22) The student was *behind time*.
- A. in back of the clock
 - B. on time
 - C. late
 - D. early
- 23) Can you me the correct time?
- A. say
 - B. tell
 - C. speak
 - D. talk
- 24) Which street does Maria live ?
- A. in
 - B. with
 - C. on
 - D. to
- 25) I don't remember the words to that song, but they come back to me.
- A. shouldn't
 - B. mustn't
 - C. perhaps
 - D. may

- 26) They go to the club last night.
- A. couldn't
 - B. cudn't
 - C. shouldn't
 - D. can't
- 27) This knife's blade *is sharp*.
- A. will cut easily
 - B. will not cut
 - C. is blunt
 - D. is rounded
- 28) you find the address yesterday?
- A. Can
 - B. Should
 - C. Could
 - D. May
- 29) Tomorrow is test day. The students study their lessons tonight.
- A. ought to
 - B. have had
 - C. will to
 - D. ought
- 30) The square was so crowded with people that the doctor couldn't get to the injured man.
- A. under
 - B. about
 - C. off
 - D. through



- 31) This coat cost five dollars,?
- A. didn't it
 - B. hasn't it
 - C. don't it
 - D. has it
- 32) Did you buy some notebooks at the bookstore?
- A. he
 - B. his
 - C. him
 - D. himself
- 33) We'll stay in our room until the visitor
- A. come
 - B. would come
 - C. will come
 - D. comes
- 34) I bought a gift for
- A. her
 - B. hers
 - C. your
 - D. mine
- 35) If Robert needs your help, I you right away.
- A. should told
 - B. am telling
 - C. will tell
 - D. have told

- 36) The weather was too cold for
- A. swim
 - B. swimming
 - C. to swim
 - D. to swimming
- 37) The classroom is the film room.
- A. as wide as
 - B. as wide from
 - C. as wide than
 - D. so wide as
- 38) People show teamwork when they work well
- A. by themselves
 - B. together
 - C. in quiet places
 - D. as a worker
- 39) An honest man like Hank is
- A. mean
 - B. truthful
 - C. crooked
 - D. unjust
- 40) The man was his dinner.
- A. eaten
 - B. eat
 - C. ate
 - D. eating

- 41) The day
- A. that was Monday we arrived
 - B. Monday was that when we arrived
 - C. That we arrived was Monday
 - D. was Monday we arrived
- 42) I glanced at my watch and realised
- A. it was time that for class
 - B. it that time was for class
 - C. that it was time for class
 - D. for that time it was class
- 43) Frank *gave up* smoking.
- A. favoured
 - B. stopped
 - C. enjoyed
 - D. began
- 44) If I had known that you were so tired, so late.
- A. I'll stay
 - B. I won't stay
 - C. I wouldn't stay
 - D. I wouldn't have stayed
- 45) The plane was grounded because of bad weather, the pilot
- A. will be able to leave as soon as the plane is repaired.
 - B. cannot leave until the weather clears up
 - C. cannot move the plane because it is stuck in the mud
 - D. will leave regardless of the weather

46) **Select the correct sentence:**

- A. Which friend does your book need?
- B. Which need does your friend book?
- C. Which book does your friend need?
- D. Book which your friend does need?

47) **Select the correct sentence:**

- A. After checking the tires, he started the car.
- B. The car started after he checking the tires.
- C. He after checking the tires, the car started.
- D. The tires after checking, the car started he.

48) **Select the best sentence:**

- A. Guide lines about are eating in the United States some simple there.
- B. There are some simple guide lines about eating in the U.S.
- C. Some simple guide lines about eating in the U.S. there are.
- D. Eating in the U.S. there are some simple guide lines about.

49) **Select the best sentence:**

- A. He'd better step on it he if expects to finish the job.
- B. To finish he expects if the job he'd better step on it.
- C. He expects to finish the job if he'd better step on it.
- D. If he expects to finish the job, he'd better step on it.

50) **Select the best sentence:**

- A. When the driver become aware of the noise in the engine, he stopped.
- B. Aware of the noise in the engine the stopped when the driver became.
- C. The stopped the car when the driver became aware if the noise.
- D. When the driver became aware of the noise in the engine, he stopped.

**COLEGIO TECNICO EXPERIMENTAL DE INFORMATICA
ISRAEL
FIRST VERSION OF TEST o FOR OBJECTIVES OF UNIT 2**

NAME: _____ **DATE:** _____

I. CHOOSE THE CORRECT FORM IN EACH CASE

Before they **will fly/fly** to Venus, the first men chosen to live there **will have to/are having to** get used to the conditions there. While the algae **are doing/will do** their work of producing oxygen, the first colonists **are learning/will be learning** how to survive in the new world. When they **go/are going** to Venus, they **will take/have taken** plenty of water.

II. COMPLETE THE SENTENCES WITH *as* OR *like* WHERE APPROPRIATE

1. I believe in freedom , (I)
2. I like working a teacher
3. The UFO looked an aeroplane.
4. usual, there are a lot of people at the game.
5. Scientists him will be needed in the future.

III. READ THE PARAGRAPH AND SELECT THE BEST ANSWER

Segan proposes that *algae*, organisms that can live in extremely hot or cold atmospheres and at the same time produce oxygen, should be bred in conditions similar to those on Venus. As soon as this has been done, the *algae* will be placed in small rockets. Spaceships will then fly to Venus and fire the rockets into the atmosphere. In a fairly short time, the *algae* will break the carbon dioxide into carbon and oxygen.

1. *Algae* are important for the colonisation of Venus because (a) they can be bred in any conditions (b) they produce oxygen (c) they can easily be carried in spaceships.
2. **Break down** (a) destroy (b) separate (c) collapse

3. The atmosphere of Venus is very hot because of its abundant (a) oxygen (b) carbon (c) carbon dioxide.
4. *Algae* should be bred in (a) laboratories (b) volcanoes (c) the atmosphere of Venus.
5. *Algae* will break down the carbon dioxide into (a) oxygen and water (b) oxygen and carbon (c) oxygen and ozone.

IV. WRITE THE NUMBERS IN THE PARENTHESES TO COMPLETE THE SENTENCES

1. When he completes his experiments,
..... () there aren't many people.
2. As you can see, () he will check the results.
3. When we have used up the Earth's
Resources, () the teacher will collect it.
4. I will be cooking dinner () while he is reading.
5. When you have finished your
composition, () we will colonise other planets.

V. FOLLOW THE MODEL TO CHANGE THE SENTENCES

The surface of the planet *will be too hot* for men to land on it.

The surface of the planet *will not be cool enough* for men to land on it.

1. The river is too dirty for us to bathe in.

2. The atmosphere is too hot for us to live there.

3. The exercises are too difficult for me to write them.

4. The Earth is too crowded for men to live comfortably.

**COLEGIO TECNICO EXPERIMENTAL DE INFORMATICA
ISRAEL
SECOND VERSION OF TESTo FOR OBJECTIVES OF UNIT 2**

NAME: _____ DATE: _____

I. CHOOSE THE CORRECT FORM IN EACH CASE

By that time, it **has rained/will have rained** **for/during** a long time and the temperature of the planet **will have fallen./will fall**. But at first the water on Venus **will be too/is enough** dangerous for man to risk drinking it.

II. COMPLETE THE SENTENCES BELOW WITH *as* AND *like* IN EACH CASE

1. He travels to London by train every summer, (I)
2. I study in high school, (my friend)
3. I live in Ecuador, (you)
4. I like working (a teacher)
5. She looks (her father)

III. READ THE PARAGRAPH AND SELECT THE BEST ANSWER

Even if scientists develop new ways of feeding the human race, the crowded conditions on the Earth will make it necessary for us to look for open space somewhere else. But none of the other planets in our solar system are capable of supporting life at present. One possible solution to the problem, however, has recently been suggested by an American scientist, Professor Carl Sagan.

1. It will eventually become necessary for us to try to colonise another planet because (a) the Earth will have too many people on it (b) there isn't intelligent life in other planets of our solar system (c) there aren't enough resources left to sustain life on the Earth.
2. *At present* (a) presently (b) soon (c) now

3. **Supporting** (a) maintaining (b) standing (c) holding up

4. **Even** (a) still (b) yet (c) though

5. **Look for** (a) find (b) search (c) look

IV. WRITE THE NUMBERS IN THE PARENTHESIS TO MATCH THE SENTENCES

- | | |
|---|--|
| 1. When they fly to Venus, | () they will have a holiday. |
| 2. When they have taken the test, | () they will fire the rockets. |
| 3. While the people on Earth are living
uncomfortably, | () they will be playing cards. |
| 4. While I'm watching television, | () they will be exploring a new
world. |
| 5. By the end of the year, | () they will have spent all the
money. |

V. STUDY THE FOLLOWING EXAMPLES AND REWRITE THE SENTENCES USING **not + the opposite adjective + **enough** INSTEAD OF **too** + adjective.**

Examples: He's **too shy** to be a good salesman.

He's **not self-confident enough** to be a good salesman.

1. The train is too slow to get us there in time.

2. They are too lazy to pass the examination.

3. She is too careless to look after the children.

4. They are too young to go out alone.

5. She's too fat to wear a bikini.

V. COMPOSITION

1. Briefly describe the changes you think will have taken place on the Earth by the end of the century if the population goes on increasing at its present rate.

2. Say what you think life will be like on Venus when the first colonists arrive there.



**COLEGIO TECNICO EXPERIMENTAL DE INFORMATICA
ISRAEL**

FIRST VERSION OF TEST 1 WITH OBJECTIVES OF UNIT 3

NAME: _____ DATE: _____

I. CHOOSE THE BEST FORM IN EACH CASE

Today I **have been working/am working** since/for breakfast and **am not having/have not had** anything to eat. Anne **has brought/brought** me a sandwich an hour **ago/since** but I **have told/told** not to come into the kitchen. I **have never/am never forgotten/forgetting** what **happened/has happened** several years **since/ago** when she **has tried/tried** to help me.

**II. COMPLETE THE SENTENCES WITH ONE PREPOSITION:
down, off, out, up, up with, on**

1. He's very bad-tempered. I don't know how she can puthim.
2. How much did you have to putas a deposit on your house?
3. George puta ladder against the wall.
4. I'll be all right. Please don't put yourself on my account.
5. It's cold. Put your coat when you go out.
6. We'll have to put the match until next week because of the rain.

**III. READ THROUGH THE PARAGRAPH AND SELECT THE
BEST ANSWER**

Several years ago, soon after we were married, George put up a ladder against the outside of the house. I was suppose to hold it steady while he painted the window frames upstairs, but I heard the telephone ringing and let go of the ladder. George slid to the ground. The wet paint brush went up his nose and the tin of paint fell on his head. He has never forgotten the incident or let me forget it.

(1) Anne and George (a) have just got married (2) have been married for three years (c) have been married for a number of years

(2) **Put up** (a) built (b) established (c) leant

IV. WRITE THE NUMBERS IN THE PARENTHESES TO COMPLETE THE SENTENCES

- 1. I have been learning English for () six years ago
- 2. I have been learning English since () halve a decade
- 3. I started learning English () 1993

V. STUDY THE PATTERN AND THEN REPRODUCE IT WITH THE CLUES GIVEN

Pattern: The children have been having a wonderful time for the past three days.

1. George/paint/kitchen/four hours

2. We/live/London/six/months

3. She/study/French/year

4. I/work/High School/two years

5. He/stay/hotel/week

VI. COMPOSITION

(1) You have just moved into a new house. Describe what you have been doing in the two days since you arrived. Solve this exercise in the next page please.

- (2) You have been staying at a hotel by the seaside for the past three days. Describe what you have been doing in that time.

**COLEGIO TECNICO EXPERIMENTAL DE INFORMATICA
ISRAEL
SECOND VERSION OF TEST 1 FOR OBJECTIVES OF UNIT 3**

NAME: _____ DATE: _____

I. CHOOSE THE CORRECT FORM OF THE VERB IN EACH CASE AND CHOOSE THE CORRECT WORD (for, since, ago) IN THE CONTEXT OF THE PASSAGE

For/Since the last three years, I **have been working/ am working** hard decorating our new house. When we **have moved/moved** in three days **since,/ago**, everything **has been/was** in a mess, but now I **have almost finished/have almost been finishing** the job.

II. COMPLETE THE SENTENCES WITH ONE OF THE FOLLOWING PREPOSITIONS: down, off, on, out, up, up with

1. They arrived suddenly with nowhere to stay so I put them for the night.
2. He talked so much while we were playing chess that he put me my game.
3. *Put* *your hands!* Shouted the bank robber.
4. I'll be all right. Please don't put yourself my account.
5. We'll have to put the match until next week because of the rain.

III. READ THROUGH THE PARAGRAPH AND SELECT THE BEST ANSWER

George has finished decorating all the rooms except the kitchen. For some reason that he didn't explain to me, he put off painting it until last so we have had to live out of tins because I haven't been able to cook proper meals. However, experience has taught me not to argue with him about such matters.



1. Anne hasn't been able to cook proper meals because (a) she hasn't unpacked the cooker (b) George is only now decorating the kitchen (3) the children have got in her way.
2. **Live out of tins** (a) have all our possessions in tins (b) eat tinned food (c) eat meals cooked in tins
3. **Put off** (a) postpone (b) stop (c) quit
4. **Argue** (a) fight (b) discuss (c) quarrel

IV. WRITE THE NUMBERS IN THE PARENTHESES TO COMPLETE THE SENTENCES

1. The children have been having
A wonderful time () moved house?
2. He has never () we moved in.
3. We took up residence three () for the past three days.
4. Have you ever () forgotten the incident.
5. We haven't had time since () days ago.

V. STUDY THE EXAMPLES AND COMPLETE THE SENTENCES BELOW USING for, since, ago AND A PAST TIME EXPRESSION

Examples: The children have been having a wonderful time for three days.

The children have been having a wonderful time since Tuesday.

We moved in three days ago/on Tuesday.

- (a) I have been living in this town for
- (b) I came to live in this town ago.
- (c) I have been living in this town since
- (d) I have been learning English for
- (e) I have been learning English since
- (f) I started learning English ago.

VI. COMPOSITION

- (1) You have just moved into a new house. Describe what you have been doing in the two days since you arrived.

- (2) You have been staying at a hotel by the seaside for the past three days. Describe what you have been doing in that time.

HOMework

Moving Experiences

27 Oak Tree
Avenue,
Southbury,
Essex.
8 July 1972

Dear Mary,

As you can see, we have just moved into our new house. In fact, *we took up residence three days ago*. We received your letter last week at our old address in High Street but I haven't had time to answer it until now.

Have you ever moved house? As you can imagine, George and I have been working hard putting the house in order and *the children have been having a wonderful time for the past three days*, playing hide-and-seek all over the house and getting under the furniture and behind the packing cases. Although *we haven't had a moment's rest since we moved in*, it has been an exciting time for us all. We have always wanted to live here on the outskirts of the town, only a stone's throw from open country, and when we saw that this house was for sale, we jumped at the chance and put down a deposit on it straightaway.

George has finished decorating all the rooms except the kitchen. For some reason that he didn't explain to me, he put off painting it until last so we have had to live out of tins because I haven't been able to cook proper meals. However experience has taught me not to argue with him about such matters.

Several years ago, soon after we were married, George put up a ladder against the outside of the house. I was supposed to hold it steady while he painted the window frames upstairs, but I heard the telephone ringing and let go of the ladder. George slid to the ground. The wet paint brush went up his nose and the tin of paint fell on his head. *He has never forgotten the incident* or let me forget it.

He must have finished painting the kitchen by flow. I wonder if he has been experimenting with something new. Regards from us all. Our best wishes to David. We look forward to hearing from you.

Affectionately,

Anne

P.S. I have just come back from the kitchen. When I went in, I had the shock of my life. I thought George was covered in blood. He has painted the walls bright red but spilled half the paint over himself. Still, I have learnt to put up with George so I suppose I'll learn to put up with his idea of a kitchen.

Patterns

Study the pattern in italic type in each case and then reproduce it, substituting the words given but taking care to form the verbs correctly. Change or put in articles, possessives, prepositions where necessary.

(1) *Have you ever moved house?*

(a) read/'Hamlet'?

- Have you ever read 'Hamlet'?

(b) play/hide-and-seek?

- Have you ever played hide-and-seek?

(c) live/the country?

- Have you ever lived the country?

(d) visit/zoo?

- Have you ever visited the zoo?

(e) work/factory?

- Have you ever worked in the factory?

(2) *He has never forgotten the incident*

(a) They/decorate/house

- They have never decorated the house

(b) We/meet/Queen

- We have never met the Queen

(c) I/write/novel

- I have never written a novel
- (f) She/drive/car
 - She has never driven a car
- (g) He/tell/lie
 - He has never told a lie

(3) *The children have been having a wonderful time for the past three days*

- (a) George/paint/kitchen/four hours
 - George have been painting the kitchen for four hours
- (b) We/live/London/six months
 - We have been living in London for six months
- (c) She/study/French/year
 - She have been studing French for a year
- (d) I/work/estate agent's/two years
 - I have been working as a estate agent's for two years
- (e) He/stay/his mother's/week
 - He has been staying with his mother for a week

(4) *We haven't had a moment's rest since we moved in*

- (a) He/do/an honest day's work/be born
 - He hasn't done an honest day's work since

he was born

- (b) I/have/a good night's sleep/the motorway/be built
- He *hasn't had* a good night's sleep in the motorway *since he built*
- (c) He/pay/a week's rent/he/move in
- He hasn't paid a week's rent since he moved in
- (d) You/make/a single mistake/class/begin
- You haven't made a single mistake in class since you began
- (e) They/lose/a single game/championship/start
- They haven't lost a single game in the championship since they started

(5) *We took up residence three days ago*

- (a) She/pack cases/two days
- She packed cases two days ago
- (b) We/receive letter/a week
- We received a letter a week ago
- (c) I/ring the estate agent's/an hour
- I ringed the estate agent's an hour ago
- (d) He/sell house/a year
- He sold a house a year ago
- (e) They/go abroad/a fortnight
- They went abroad a fortnight ago

For, Since and Ago



(1) *The children have been having a wonderful time for three days*
The children have been having a wonderful time since we moved in/since Tuesday

We moved in three days ago/on Tuesday

Study these sentences and complete the sentences below using *for*, *since*, *ago* and a past time expression.

(a) George has been working in the kitchen **for three hours**

George has been working in the kitchen **since the morning**

George started working in the kitchen **three hours ago**

George started working in the kitchen **at three P.M.**

(b) George and Anne have been married **for six years**

George and Anne have been married **since 1993**

George and Anne got married **six years ago**

George and Anne got married **in 1993**

(c) I have been learning English **for four**

years

I have been learning English since 1995

I started learning English **four years ago**

I started learning English in 1995

(d) I have been living in this town for **17 years**

I have been living in this town since 1982

I came to live in this town **17 years ago**

I came to live in this town in 1982

(2) *He worked in France for five years*

He worked in France from 1962 to 1967

For can be used in the past tense when the period referred to is finished.

Rewrite the following sentences, using *for*.

(a) He taught at the Institute from 1964 to 1968.

- He taught at the Institute for four years

(b) Elizabeth I was Queen of England from 1558 to 1603.

- Elizabeth I was Queen of England for 45 years

(c) The Second World War lasted from 1939 to 1945.

- The Second World War lasted for six years

(d) He was champion of the world from 1920 to 1927.

- He was champion of the world for seven years

Phrasal Verbs-Put

Complete the sentences with one of the following prepositions - *down*, *off* (2), *on* (2), *out*, *up* (3), *up*

with

- (1) How much did you have to put down as a deposit on your house?
- (2) It's cold. Put your coat on when you go out.
- (3) George put out a ladder against the wall.
- (4) He is very bad-tempered. I don't know how she can put up with him.
- (5) It's dark in here. I'll put the light on
- (6) We'll have to put the match up until next week because of the rain.
- (7) I'll be all right. Please don't put yourself down on my account.
- (8) 'Put up your hands!' shouted the bank robber.
- (9) He talked so much while we were playing chess that he put me out my game.
- (10) They arrived suddenly with nowhere to stay so I put them out for the night.

Composition

(1) You have just moved into a new house.

Describe what you have been doing in the two days since you arrived.

- Well, If the case has been happened in life, then the first day, I've put everything in the new house, rest because of the travel, in the second day, start putting all in order to live happy.

(2) You have been staying at a hotel by the seaside for the past three days. Describe what you have been doing in that time.

- In that time I should have enjoyed about the sea, the beach, no alone, else with my boyfriend, take sun and be happy.

PROGRESS TEST

Choose the correct form of the in each case and choose the correct word (*for, since or go*) in the context.

For the last three days, I have been working hard decorating our new house. When we moved in three days ago, everything was in a mess but now I have almost finished the job. Today I am working for breakfast and am not having anything to eat. Anne brought me a sandwich an hour ago but I told her not to come into the kitchen. I have never forgotten

what happened several years ago when she tried to help me. I have not had many accidents since then but Anne has often been warning me to be careful. She warned me again this morning at breakfast-time but I am working for four hours and nothing goes wrong. Damn!

Now I dropped the tin of pain. Has anything like that ever happened to you?

