

**A STUDY OF THE EFFECTIVENESS OF PROGRAMMED  
INSTRUCTION IN LEARNING ENGLISH AS A SECOND  
LANGUAGE BY SECONDARY SCHOOL PUPILS**

**S. SHIHABUDEEN**

*Sr. Lecturer,  
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Thesis  
Submitted for the Degree of  
Doctor of philosophy in Education  
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## CERTIFICATE

I, Dr. T.K. Mohammed, do hereby certify that this thesis "A Study of the Effectiveness of Programmed Instruction in Learning English as a Second Language by Secondary School Pupils" is a record of bonafide study and research carried out by Mr. Shihabudeen. S. under my supervision and guidance.



Dr. T.K. Mohammed

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*A word of thanks is due to all the students who served as subjects for this experimental study without whose help this would not have been possible.*

C. U. Campus,  
19 – 11 – 2001

Shihabudeen. S.

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## DECLARATION

I, Shihabudeen. S., do hereby declare that this thesis “A Study of the Effectiveness of Programmed Instruction in Learning English as a Second Language by Secondary School Pupils” has not been submitted by me for the award of a Degree, Diploma, Title or Recognition before.

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It has been generally observed that students in an ordinary classroom are of different ability levels and therefore, all of them do not find it easy to follow the lessons at the same pace. In such a situation programmed instruction is found to be more effective than traditional methods of instruction. Programmed learning has an advantage that each step is immediately confirmed leading to reinforcement. It is often felt that programmed instruction can be applied to all types of learners, belonging to schools, colleges, professional courses etc.

The present investigator has realised from his own experience of teaching children at the secondary school level that programmed instruction could be a potential tool in developing reading comprehension and written expression. He has strongly felt that if self-study habit using programmed instruction is developed in the learners of English as a second language, there will be speedier development of language skills.

Even though different aspects related to programmed instruction have been investigated into, a review of the researches in the field reveals that no relevant study has been made on the effectiveness of learning English as a second language at the school level, especially in the context of education in Kerala.

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# INTRODUCTION

- Need and significance of the study
- Statement of the problem
- Definition of terms
- Objectives of the study
- Hypotheses
- Methodology of the study
- Scope of the study
- Limitations of the study
- Organisation of the report

## INTRODUCTION

### 1.1 Need and significance of the study

The system of school education in Kerala follows a three-tier structure with lower primary, upper primary and secondary levels. In the school curriculum second language education occupies an important position. English is learnt as a second language by all Malayalam medium pupils.

When the achievement in English of a considerable percentage of Pupils is examined, it seems that there is something wrong with the teaching-learning strategies of English at the school level. The strategy now adopted aims at developing communicative competence in the learners. Even though students learn English at the secondary level with this objective in view a considerable proportion of them miserably fail to achieve the expected standards.

From the very beginning the students are trained to adopt a stereotyped style of learning which makes them dependent on teachers. They should be encouraged to take up responsibility for their own learning so that they can move from dependence on the teacher to a level

of autonomy. They must develop the skill of structuring their own sentences and expressing their ideas in simple English.

As far as language education is concerned the target language should be seen not only as a functional tool, but also as an important instrument of personal development. It is felt that more emphasis on the development of the skills of reading comprehension and written expression is to be given at the secondary school level. Self-study based on self-learning materials would be more useful to avoid monotony, long time concentration and rote memorisation. Programmed instructional techniques exploit the potentialities of learnersto the maximum and make them depend on their own faculties for developing the skills of reading comprehension and written expression to a large extent rather than depending on the teacher.

The main objectives of comprehending the written expression, and expressing in written English, to a considerable extent, can be achieved by following the programmed instructional techniques. The language laboratory can be used for developing oral comprehension and expression.

## **1.2 Statement of the Problem**

The problem for the present study is the comparative effectiveness of programmed instruction in learning English as a second language. The study is entitled “**A STUDY OF THE EFFECTIVENESS OF PROGRAMMED INSTRUCTION IN LEARNING ENGLISH AS A SECOND LANGUAGE BY SECONDARY SCHOOL PUPILS**”.

## **1.3 Definition of Terms**

### **1.3.1 Effectiveness**

As far as the present study is concerned effectiveness refers to the significant difference in achievement of those who learnt through programmed instruction and conventional methods of teaching, and it is measured in terms of pre-test and post-test scores of the control and experimental groups.

### **1.3.2 Programmed Instruction**

Programmed instruction is the use of programmed textual material to help pupils attain specified level of performance by (a) providing instruction in small steps, (b) asking one or more questions about each step of instruction and providing instant knowledge of results and (c) enabling pupils to progress at their own pace individually.

### 1.3.3 Secondary school pupils

The secondary school pupils are pupils undergoing the course of study in the secondary schools of Kerala State.

## 1.4 Objectives of the study

The following are the chief objectives of the study

- 1.4.1 To determine the comparative effectiveness of programmed instruction and conventional method of teaching on achievement in English of secondary school pupils.
- 1.4.2 To study the linear effect of the following select control variables on the scores of achievement in English.
  - a. Pre experimental level of achievement
  - b. Verbal intelligence
  - c. Achievement motivation
  - d. Study habits
  - e. Socio economic status
  - f. Sex
  - g. Local
  - h. Programmed instruction and conventional method of teaching

1.4.3 To find out the main effect of the following select control variables on achievement in English.

- (a) Treatment (Programmed instruction and conventional method of teaching)
- (b) Locale
- (c) Achievement level (High, Low)
- (d) Verbal Intelligence
- (e) Achievement Motivation
- (f) Study habits
- (g) Sex
- (h) Socio Economic Status

1.4.4 To find out the interaction effect of the following select control variables on achievement in English

- (a) Treatment and Locale
- (b) Locale and Level of achievement (High, Low)
- (c) Treatment and Level of achievement
- (d) Treatment and Verbal Intelligence
- (e) Treatment and Achievement motivation
- (f) Treatment and Study habits
- (g) Treatment and Socio economic status
- (h) Locale, Level of Achievement and Treatment.

## **1.5 Hypotheses**

Survey of literature and classroom experience indicate that for a general population of secondary school students, achievement in English is caused by a constellation of variables which could be classified into instructional variables, social variables, and personality variables. In addition to these variables, sex, age and residence (rural/urban) of the subject are known to affect achievement. The present study however, was confined to a group of variables that will be representative of the important areas identified as above. Accordingly, the following hypotheses were formulated for the present study

### **1.5.1 Hypothesis I**

There will be significant difference on achievement in English of the group of pupils learning through the conventional method of teaching English and the group of pupils learning through the programmed instructional procedure.

### **1.5.2 Hypothesis II**

There will be significant linear effect of the following control variables on the scores of achievement in English.

- (a) Pre experimental level of achievement in English (high, low)
- (b) Verbal intelligence
- (c) Achievement motivation
- (d) Study habits
- (e) Socio economic status
- (f) Sex
- (g) Locale

### **1.5.3 Hypothesis III**

There will be significant main effect of the following control Variables on achievement in English.

- (a) Treatment (Programmed instruction and conventional method of teaching)
- (b) Locale
- (c) Achievement level (High and Low)
- (d) Verbal Intelligence
- (e) Achievement motivation
- (f) Study habits
- (g) Sex
- (h) Socio economic status.

### **1.5.4 Hypothesis IV**

There will be significant interaction effect of the following Control Variables on achievement in English.

- (a) Treatment and Locale
- (b) Locale and level of Achievement (High, Low)
- (c) Treatment and level of Achievement
- (d) Treatment and verbal intelligence
- (e) Treatment and Achievement motivation
- (f) Treatment and Study habits
- (g) Treatment and Socio Economic Status
- (h) Locale, Level of Achievement and treatment

(Note: Treatment is programmed instruction and conventional method of teaching)

## **1.6 Methodology of the Study**

### **1.6.1 Sample**

A representative sample of two homogeneous groups of 92 subjects each, i.e. 92 subjects in the experimental group and 92 subjects in the control group, has been selected for this study. The sample was drawn from three schools namely Govt. SarvaJana H.S.S. Sulthan Bathery, Govt. Model H.S.S. Kottayam, Islamic High School, Aluva. These three

schools belong to three districts of Kerala Viz. Wayanad, Kottayam and Ernakulum, respectively.

### **1.6.2 Tools**

The following tools have been used in the study.

1. Kerala University group test of Intelligence (Verbal)
2. Kerala Scale of Achievement Motivation
3. Study Habits Rating Scale
4. Personal Data Sheet
5. Programmed Instruction Materials
6. Pre Experimental test (achievement)
7. Post Experimental test (achievement)

### **1.6.3 Analysis**

The collected data have been subjected to analysis using the following statistical techniques.

1. Multiple regression technique
2. Analysis of variance
3. Analysis of covariance.

#### **1.6.4 Experimental procedure**

The design used for the present investigation is experimental. The experimental group was taught through programmed instructional strategy and the control group through the conventional method of teaching English.

#### **1.7 Scope of the Study**

The study has immense scope for improving English language learning of the pupils in our schools. It is hoped that it will redirect the learning style from the text book dominated learning to self learning. Children in our classrooms, to a large extent are dependent on the explanations of the subject matter given by the teachers and the notes dictated by them. Teacher dominated classroom techniques make students heavily dependent upon the teachers and prescribed text books whereas the programmed instructional strategies will inculcate in them the habit of self learning and self dependence. The present model of research, though carried out in the area of the effectiveness of programmed instruction in English language learning, can be extended to all other curricular areas at the secondary and even lower levels in our schools. It is hoped that the present research will help to prove the suitability of giving an orientation

to teachers towards adopting self instructional materials in all other subject areas, especially for teaching students who need individual help. There is scope for conducting further investigation into the effectiveness of self instructional materials in specific curricular areas of the school level.

### **1.8 Limitations of the study**

The present study has the following limitations

The study has been confined to sample drawn from the schools belonging to three districts of Kerala.

- 1.8.1 The study is limited to select areas of English language learning with the intention of developing certain specified skills.
- 1.8.2 Only two main skills, namely reading comprehension and written expression, have been dealt with whereas the oral skill ie. the listening comprehension and oral expression, have not been considered for the study.
- 1.8.3 The study is experimental in nature and therefore confined to the learning of English by the subjects drawn from ninth standard of the schools selected for the purpose of the investigation.

## **1.9 Organization of the Report**

The report has been divided into five chapters. Chapter I contains a brief discussion of the need and importance of the study, statement of the problem, specific objectives, hypotheses, and the scope and limitations of the study. A short discussion of the relevant aspects of programmed instruction and a brief survey of the related literature have been attempted in Chapter 2. Chapter 3 contains a description of the design of the study in which tools used in the study, the sample, the administration of the tests and scoring, consolidation and codification of data and a short account of statistical techniques used for analysing the data etc. Chapter 4 deals with the analysis of data in detail. Chapter 5 contains a summary of the procedure and results of the study together with certain pedagogic implications and suggestions.

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## **REVIEW OF RELATED LITERATURE**

### **A. THEORETICAL OVERVIEW**

- The earlier work done in the area
- Theory of programmed instruction
- Programmed instruction and educational technology
- Programmed text book
- Advantages of programmed instruction

### **B. REVIEW OF RELATED LITERATURE**

- General studies on the effectiveness of programmed instruction
- Studies on the effectiveness of programmed instruction on achievement in Mathematics
- Achievement in Science
- Achievement in Languages

## **REVIEW OF RELATED LITERATURE**

### **A) THEORETICAL OVERVIEW**

Programmed instruction is a part of instructional technology which means a network of techniques or devices employed to achieve certain learning objectives. It implies the application of psychological, social and scientific principles and knowledge to instruction. However, the origin of instructional technology may be traced back to psychological laboratory experiments and especially to the contributions of Sidney L. Pressey, Robert Mager, Robert M. M. Gagne and B.F. Skinner.

#### **2.1 The Earlier Work done in the Area**

Behavioural models of learning and instruction have their origin in the classical conditioning experiments of Pavlov (1927), the work of Thorndike (1909, 1911, 1913) on reward learning, and the studies of Watson and his associates (1916, 1921) who applied Pavlovian principles to the psychological disorders of human beings. In the past twenty years behaviour theory, systematically applied to school settings, has been greatly influenced by B.F. Skinner's (1953), Science and Human

Behaviour and J.Wolpe's (1958), Psycho-therapy by Reciprocal Inhibition. Milder forms of learning problems have responded to behaviour models as well (Baker 1979, 1980, 1981).

In recent years much attention has been paid to an approach for organizing instruction termed 'Mastery Learning' formulated by John, B. Carroll (1971) and Benjamin Bloom (1971). Mastery learning provides a compact and interesting way of increasing the likelihood that more students will attain a satisfactory level of performance in school subjects. A strong body of research supports the application of the approach.

The historical progress in the production of teaching devices and machines began from the first machine invented by Sidney Pressy in 1918 and Skinner and James Holand in 1958. After 1958, there has been a rapid development in writing programmes, designing machines, and employing computers.

## **2.2 Theory of Programmed Instruction:**

Classical conditioning assumed that the respondent behaviour is concerned with stimulus (S.R. Conditioning). Skinner believed that for most of the responses no stimuli can be attributed. He attached great importance to operant behaviour, the concern of which is responses rather

than stimuli. The experimenter selects appropriate responses and fixes them properly because the operant behaviour can be influenced by events such as rewards and punishments. The operant behaviour that is followed by desirable consequences will be repeated and that which is not followed will not be repeated readily. The rewards like food, drink, a word of appreciation and acceptance, etc. for the appropriate behaviour are called the reinforcers. Application of stimuli that strengthens the probability of a response are called positive reinforcers (e.g., piece of candy) and removal of stimuli that strengthens the probability of a response are called negative reinforcers (e.g., loud noise). So negative reinforce is removal of punishment which again increases the frequency of the appropriate response.

The basic assumption of learning is that the emitted behaviour should be reinforced in order to facilitate learning. Skinner criticised the educational system for lapse of time between behaviour and reinforcement and also for the inadequacy of the frequency with which reinforcement is given. Any field of study should be divided into a large number of steps, and reinforcement must be contingent upon the completion of each step. The frequency of reinforcement can be increased by making each of the successive steps as small as possible.

The principles of programmed learning can be summarized as follows:

- a) Principle of small steps.
- b) Principle of active responding.
- c) Principle of immediate confirmation.
- d) Principle of reinforcement.
- e) Principle of self-pacing.

### **2.3 Programmed Instruction and Educational Technology**

Educational technology refers to the use of instructional designs and teaching models that help the teachers and students to achieve the objectives and goals of education with minimum effort and cost. Educational technology has helped to devise new methods of teaching such as Programmed Instruction, role play, simulation and games, computer assisted instruction and computer managed instruction. A systematic approach to problem solving in the educational environment is also educational technology.

Instructional design must aim at aiding the learning of the individual. The instruction may be oriented to the individual in spite of

the fact that learners may be in large or small groups. Designed instruction must be based on knowledge of how human beings learn. Consideration should be given not only to what the students should learn but how they should learn. Instructional designs can be classified on the basis of teaching -learning process into objective based, skill-based, competency based, model based and learning style based.

Teaching strategies aim at establishing relationship between teaching inputs and learning outcomes. Teaching strategies include teaching methods, approaches and techniques such as lecture method, tutorial approach, case study technique, demonstration method, team teaching approach, programmed instruction etc.

Application of technology will ensure the achievement of objectives with the minimum effort and time required. When teaching results in effective learning of all the students taught, then any strategy that is employed to achieve this can be called educational technology. The teaching strategies suggested have the high probability of effecting effective learning in students.

By programmed instruction is meant the kind of leaning experience in which a 'Programme' takes the place of a tutor for the student, and leads him through a set of frames of specified behaviours designed and sequenced to make it more probable that he will behave in a given desired way. The programme is the important thing about programmed instruction. The subject matter to be programmed is analysed thoroughly and divided into meaningful segments of information. One segment of information is presented at a time to the learner. This piece of information is called a frame. There are three basic types of programmed instructional material – the teaching machine, the programmed text book, and scrambled text-book.

Programmed instruction is viewed here not as a way of teaching without a teacher, but as a method of instruction which has measurable objectives, pre-arranged sequences and methods of presenting materials, and which is self correcting. It is concerned with the wider application of such principles that could result in the development of an 'Educational Technology', and that it offers the real possibility of a revolution in the organization of content, methods and achievements of an education system.

Educational technology is concerned with improving education by using concepts such as measurement, efficiency, productivity and cost effectiveness. These concepts are equally relevant to such things as curriculum reform and student counselling as they are to technological innovation.

Educational systems can try to meet the problems facing them by the development of an educational technology so that all areas in education can be improved by the application of basically simple principles under the programmed instruction.

#### **2.4 Programmed Text Book**

A programmed text book does not differ from an ordinary text-book as far as its external appearance is concerned; but its structure is quite different. Each page of programmed textbook consists of usually four or five panels. The sequence of the panel is not from the top of the page to the bottom as in a conventional text-book.

The student begins with the top panel on page one, responds to it, turns to page two to get his answer confirmed on the top panel and goes to the top panel on page three, responds to it, confirms the answer by

turning the page, and so on to the end of the unit or chapter wherein he is instructed to return to page one and respond to the second panel on each page and so on.

The purpose of the programmed textbook is to produce in the student an emitted response rather than to choose one from a series of alternatives. It is intended to direct the students progress through a sufficient number of steps that have been meticulously conceived in order to reduce the opportunity for incorrect or partial responses.

## **2.5 Advantages of Programmed Instruction**

During the Course of Programmed Instruction the student is kept active and alert. Research studies of P.V. Kulkarni (1968), M.S. Shah (1969) and Kapadia (1972), have shown that students perform significantly better when they are taught programmed material.

In a programmed learning situation both the intelligent students and weak students work at their own pace.

Teacher gets relieved of ordinary classroom chores and he plays the important role of a guide, counselor, motivator, organisor etc.

Many emotional and social problems have been eliminated and problems of discipline have been automatically solved by the use of self-instructional material.

Programmed instruction is a great thrust in the direction of individualised instruction. The novelty of learning by a device provides extra motivation to the learner.

## **B) REVIEW OF RELATED LITERATURE**

Apart from considerable volumes of theoretical works, a large number of papers based on timely researches into the different aspects of programmed instruction have been published. Some of such relevant studies which are related to the present research have been examined in the following pages. They have been classified and presented as follows:

1. General studies on the effectiveness of programmed instruction.
2. Studies on the effectiveness of programmed instruction on
  - (a) Achievement in Mathematics.
  - (b) Achievement in Science.
  - (c) Achievement in Geography.
  - (d) Achievement in Languages

### **2.6 General Studies on the Effectiveness of Programmed Instruction**

Eigen (1961) compared machine and textual programmes and found no significant differences on either immediate post-test or on delayed post-test given after two weeks.

Studies made by Fry and Coulson and Silberman (1961) found that constructed response programmes give higher scores on test of recall through there is no difference when recognition tests are used.

Kay, Annett and Sime (1962) recently summarised investigation which studied the rate of attainment and retention. The survey showed that among the thirty nine unselected studies the programmed learning group achieved better than the class room instruction group. Long term retention was studied in thirteen experiments. Ten experiments favoured the programme group and the remaining three, there were no difference between the two methods, Leedham examined his data of junior school children using 'cheat proof' or cheatable devices and found no difference in attainment or gains.

Stolnor and Walker (1963) compared overt and covert responses in programmed learning at the University of Illinois. The basic concepts of descriptive statistics were taught by programmed instruction. Fifty six subjects worked with covertly by thinking or overtly by writing. Immediate post test and delayed post-test after two weeks were given. Time taken by each individual was noted. Analysis of the covariance of immediate post-test and retention test was performed. No reliable

difference in learning or retention measures were found. The covert response group required less time than overt responses group composed response were found to be generally superior.

Smith and Moore (1963) studied the effectiveness of teaching machine, programmed textbook combined with weekly seminar, and ordinary text book learning with weekly seminar. The study found no significant difference in achievement related to teaching machine, programmed textbook or conventional textbook. They also studied the effectiveness of teaching machine programme, programmed text book and conventional text book without supplementary class work. The machine group scored significantly higher than conventional group, both on immediate and delayed post-tests.

Eigen (1963) surveyed student reaction to programmed instruction. The study found that students using programmed text have a more favourable attitude toward programmed instruction than those who used the teaching machine. Students' total attitude towards accommodated teaching appeared to have no relationship with how much they had learned by the method.

Rudi Dallos (1964) conducted a study on the effect of anxiety and intelligence on programmed instruction. The findings are:

- 1) There is significant difference between the mean scores of programmed learning of high and low intelligence.
- 2) The high and low anxiety groups differ on the mean scores of programmed learning.

Mullick (1964) conducted an experimental study to investigate the effectiveness of programmed learning technique and to study the attitude of pupils towards programmed instructional materials. A sample consisting of 128 B.Ed. (correspondence Course) students of Delhi University were divided into the experimental and control groups. The experimental group was given programmed lessons and the control group conventional lessons. The study found that:

- 1) The programmed lesson was found to be significantly better than the conventional lessons.
- 2) Taking forty per cent as the qualifying marks in the post-test, it was observed that thirty three percent students of the experimental group failed as against forty eight percent failure in the control group.

- 3) In the post-test control group obtained only nine percent whereas twenty five percent of the experimental group for more than seventy five percent marks.
- 4) Majority of students favoured programmed learning technique.

Both Kulkarni and Dewan (1967) tried to apply the principles of programmed learning to television lessons. The television presentation of a question followed by answer from the students and the feed back enabled the students to score much higher.

State Institute of Education Gujarat (1970) conducted a study to find out the effectiveness of programmed learning. The main objectives of the study were to make the teacher aware of the new method and try on the developed programme. Two comparable groups of eight schools were selected. Programmes were developed in different subjects and were administered to the groups. The findings were:

- 1) Programmed learning worked better than the conventional method and could save time.
- 2) Ninety- percent students like to work by this method.
- 3) Teachers were benefited by the programmes because they could get a picture of micro analysis of the subjects.

State Institute of Education, Gujarat (1970) undertook another study to find out the effectiveness of programmed instruction on revision lessons. Sixteen classes of eight schools were taken up for the purpose of study. The experimental groups were given revision work through programmed learning method and the other by conventional method. The whole course of algebra of standard eight was programmed. The study found that the mean achievement of the experimental group was higher than the mean achievement of the control group.

G.B. Shah (1971) in a study compared the relative efficiencies of four response modes used in the programmed learning materials, viz, overt constructed response, overt response prompt, covert constructed response and covert response prompt. The mean scores of the four treatment groups in both the schools showed perfect rank correlation. On comparing the four treatments on the retention scores, it was seen that the over all differences between treatment means were not significant. Treatment covert response prompt secured to be the least time consuming and the most effective in terms of immediate test scores.

Roe (1974) in a study developed linear programmed materials in elementary probability. The programme was presented to 180 engineering

school freshmen by programmed texts, teaching machine and programmed lectures as well as by conventional lecture method. The effectiveness of learning under these various conditions was measured by twenty test items given upon the completion of the course. The study revealed that:

- 1) Students learnt as much from programmed lectures as from programmed textbooks and teaching machines.
- 2) Programmed lectures were more effective than conventional lectures.

R.A. Sharma (1974) studied the interaction effects among types of programming-response mode and taxonomic categories. The sample consisted of 120 male and female student teachers. On the basis of final examinations from high school onward four groups were formed by matched pair technique. They were assigned randomly to the four treatments linear overt and covert response, branching overt and covert response. At the end of the treatment a criterion test was administered to these groups. The criterion test consisted of 50 objective type items. Factorial design analysis revealed that

- 1) The linear programme appears to be effective with overt response.

- 2) The branching programme seems to be effective with covert response.
- 3) Linear programme appears to be effective for knowledge category.
- 4) Branching programme seems to be effective for comprehension and application categories.

A study by Kuruvilla (1977) on programmed instruction found that 80 percent of the students who learnt through programmed materials scored 80 percent or above. Most of the students have positive attitude towards programmed learning. There is positive and significant relationship between performance of students on post-test and reading comprehension.

Sharma and Varma (1977) in their study of interaction between schedules of reinforcement and extraversion reached the conclusion that the scores of extraverts, introverts, neurotics and stables in school type learning situation is related to the schedules of reinforcement employed.

The findings are:

- 1) The continuous and intermittent schedules of reinforcement are equally effective.

- 2) It seems that extraverts performances is significantly higher than the introverts through intermittent reinforcement schedule.
- 3) It also appears that extraverts and stables' performance is higher than introverts and neurotics.
- 4) It appears that introverts' achievement is significantly higher than extraverts' through continuous reinforcements.
- 5) The performance of stables seems to be significantly greater that neurotics through continuous reinforcement.

Joshi, M. (1988) conducted a study on the effects of test anxiety and intelligence on the performance of high school students, using programmed instruction material in linear and branching styles.

The researcher found that when taught through PLM low test anxious students perform significantly better than high test anxious students and so also students with high intelligence. The researcher found both programming styles equally effective.

Manoharan, M. (1988) took up a study on "Relative Effectiveness of Print Media" and found that when one learnt with three printed media together (newspaper, magazine, folder) gains were far more than when learnt through a single medium.

Another quite interesting finding was that young respondents (upto 30 years) gained significantly more than those in the middle age group 30-45 years).

Debi M.K. (1989) worked on “Development and Testing in Effectiveness of Programmed Learning Material (PLM) in the Syllabus of Principles of Education in B.T. Course of Gauhati University”. It was found that students taught through PLM performed better than students taught through traditional methods.

Sharma, A.K. (1989) conducted a study on “Effects of Linear and Branching Instruction Strategies on Performance in Social Science of Tribal High School Students”, and found that students performed equally well when taught through PLM developed in both styles linear and branching. Further students performance was independent of academic motivation and test anxiety.

Srivastava, D. (1990) conducted an independent study on “Programmed Learning (PL) as a function of Anxiety under Different Motivational Conditions and found that PL as a teaching device is particularly useful for low and average achievers. Knowledge of results was a good motivator in itself. But the researcher found that if it was reinforced with praise by the teacher, it contributed additionally.

Ambli, S. (1992) studied the step size, extrinsic-intrinsic reinforcement and overt-covert response transformations in reading materials and their interaction on learner performance. The researcher found that step size was of significance only in the girl's sample. With small step materials girls learnt better but the response mode was found to have significant impact both on boys and girls. On the "thought provoking" response mode, both girls and boys did better.

## **2.7 Studies on the Effectiveness of Programmed Instruction**

### **2.7.1 Achievement in Mathematics**

In Banghart's (1963) study of programmed versus traditional elementary school mathematics, the sample consisted of 195 children, which was an acceptable cross section of fourth graders in a large metropolitan area with respect to intelligence, achievement and socio-economic status. The length of daily periods for both the experimental and control group was thirty to forty minutes.

The pupils in the experimental group were allowed to progress through the programmed materials at their own rate. The major findings are:

- 1) There is no indication in the study that children working with programmed materials achieve differently in Arithmetic problem solving than those who work with conventional materials.
- 2) An important advantage of programmed material is the freedom which each child has to progress at his own rate.
- 3) Programmed materials are most effective when they are used to supplement class room teaching.

M.S. Shah (1964) conducted a study by developing a programme of solving equations and evaluating it against the conventional lecture method. The sample of the study consisted of three sections of standard VI pupils. The sections of these were treated as experimental group and one as control group. The first experimental group was given programmed materials and was asked to study on their own. The second experimental group was given the same programmed material and in addition, the class teacher was asked to help the student in learning the topic. The control group was taught through the conventional lecture method. A post-test was then given to the three groups. The major findings were:

- 1) The experimental group that studied through programmed materials achieved high.
- 2) The programmed instruction seemed to be effective for all the three ability levels.
- 3) Interaction between treatment and ability was found to be significant.
- 4) The group studied through programmed materials with the help of the teacher failed to do better.

In a comparative study of the outcomes of teaching of Algebra by conventional class room method and method of programmed instruction, Sharma (1966) used a delayed post-test. The study consisted of 80 students of class IX. They were first divided into upper, middle and low groups on the basis of marks in the middle examinations and then they were randomly assigned to an experimental and control group. The post-test was administered twice to the effectiveness of the two methods in terms of retention. The study found that:

- 1) The mean achievement of the experimental group studied through the programmed method was found to be higher than that of the group taught through the conventional class room method.
- 2) The obtained mean gain was significant at 0.01 level.

- 3) Sixty percent of the experimental group secured cent percent on the post-test, whereas only twenty percent of the control group could reach that high standard.
- 4) The experimental group had a minimum score of four, whereas the control group showed a minimum of zero.
- 5) The experimental group showed better retention in the delayed post-test.

Shah (1964) studied the effectiveness of auto-instructional method in learning mathematics. He developed auto-instructional programme in Algebra for standard VII and compared the immediate and delayed achievement in Algebra between two groups, experimental and control groups. The study found that the achievement of the experimental group was high when compared to the control group. The study also found that the programmed instruction approach is effective not only in terms of immediate and delayed achievement, but also in terms of time taken to learn a particular topic.

K.K. Gosain (1977) studied the effectiveness of programmed learning by developing linear programme materials on elementary Algebraic concepts. The study was based on sample of 300 VI grade students randomly selected, comprising 150 boys and 150 girls. The tools used were six programme sets based on three taxonomic categories viz.,

knowledge, comprehension and application and an achievement test. 2 x 2 x 3 factorial design analysis revealed that:

- 1) Small step programme was more effective with regard to achievement.
- 2) The relation between sex and attainment through programmed instruction seemed to be not significant either in small steps or large steps.
- 3) Small step programme was more effective for knowledge and comprehension categories, whereas they were equally effective for application category.
- 4) Boys performed better in the comprehension category.
- 5) Small step programme was significantly more effective than large step programme for both boys and girls with respect to knowledge and comprehension categories.

Mark David (1978) studied the relative effectiveness of the programmed instruction method and conventional method of instruction in learning mathematics using a sample of 44 standard VIII secondary school pupils. The comparison revealed that:

- 1) The programmed instruction method has been significantly effective in the teaching of indices.

- 2) The programmed method was effective in the development of skill of symbolisation.
- 3) The programmed method and conventional methods were both effective in learning of use of lateral symbols.
- 4) In the development of manipulator skills, the conventional method is more effective.

Das (1986) developed programmed learning materials in mathematics for standard IX pupils and compared the effectiveness of it with traditional method of teaching. Two equated groups were formed on the basis of different ability levels, different achievement levels and different socio-economic levels. The major conclusions were:

- 1) Programmed instruction is more effective than traditional class room teaching of mathematics in the case of equated groups comparison and in the case of subjects of average non-verbal intelligence, high mathematics achievement, average mathematics achievement, and in the case of girls, average verbal intelligence, average non-verbal intelligence, average mathematics achievement and high mathematics achievement boys.

- 2) Programmed instruction is less effective than traditional class room teaching of mathematics in the case of low verbal intelligence girls.
- 3) Programmed instruction and traditional class room teaching of mathematics is equally effective in the case of subjects of high verbal intelligence, average verbal intelligence, low verbal intelligence, high non-verbal intelligence, low non-verbal intelligence, low mathematics achievement, high socio-economic status, average socio-economic status, low socio-economic status.
- 4) Programmed instruction and traditional class room teaching of mathematics is equally effective in the case of girls of high verbal Intelligence, high non-verbal intelligence, low non-verbal intelligence, high mathematics achievement, low mathematics achievement, high socio-economic status, average socio-economic status, low socio-economic status.
- 5) Programmed instruction and traditional class room teaching of mathematics is equally effective in the case of boys of high verbal intelligence, average verbal intelligence, average non-

verbal intelligence, low non-verbal intelligence, average mathematics achievement, low mathematics achievement, high socio-economic status.

- 6) Programmed instruction and traditional class room teaching of mathematics is equally effective in the case of boys.

Singh, R.D. et al. (1991) took up the study to see the effectiveness of Computer Assisted Instruction (CAI) in teaching mathematics. He found that students who used the computer scored significantly higher than those taught through the conventional method.

## **2.8 Achievement in Science**

### **2.8.1 Physics**

In a study of the effectiveness of programmed learning strategy in learning of physics in class X of secondary schools, Pandya (1974) developed programmes on 'light. The experimental group was taught through the programmed methods and the control group through the conventional method of teaching. The data about students' achievement motivation, SES, and IQ were also collected. The techniques like the analysis of variance and covariance were employed to compare the experimental and control groups. The main findings of the study were:

- 1) The experimental group achieved high in all the four tests.
- 2) The mean gain score of the experimental group was significantly greater than the scores of the control group.
- 3) Learning through programmed material benefited the students with high, average, and low IQ.
- 4) When the effect of the variable 'Motivation' was partialled out, the adjusted mean scores shows that the experimental group achieved higher than the control group.

Singh, S.B.'s work (1988) related to the effect of objective based RCEM system and PSI on cognitive attainment of children in physics and found that PSI and the objective-based system both were superior to traditional teaching, and among the two methods themselves the researcher found no significant differences. It was also found that when it came to "application" both objective-based and PSI had no significant difference on the performance of low achievers.

Jeyamani, P. (1991) developed a Computer Assisted Instruction (CAI) package in physics for Class XI students. The experimental group received CAI and after the experiment it was found that the experimental group

performed better on the post test. The differences were insignificant in terms of sex and medium of instruction.

### **2.8.2 Chemistry**

Arun Kumar and Pramod Kumar (1973) conducted an experimental study on programmed instruction method of teaching chemistry on high and low achievers. The samples consisted of 96 IX class students. On the basis of achievement test scores, the sample was divided into high and low achievers. These groups were again split up by one to one matching technique into two equivalent groups-Experimental and Control. The pre and post-test design was used for the study. The study found that:

- 1) Programmed method of instruction was effective in the case of high achievers.
- 2) Programmed instruction was more effective than the usual class room teaching in the case of low achievers.
- 3) The programmed instruction was more effective than the usual class room instruction as a whole.

Novjin, C. Waler (1972) compared the effect of teaching chemistry laboratory experiments by conventional method and programmed

method. One hundred students were selected as sample. Forty-nine students attended the conventional type laboratory with reinforced lecture topics for 6 weeks, while 51 students of the experimental group attended the programmed laboratory course, which utilised the overt response branching technique. The comparisons revealed that programmed learning is not effective for content objectives. It is appreciable for accomplishing non-content objectives.

Prabhullan (1984) studied effectiveness of programmed instructional materials in chemistry in secondary schools. A comparison of the achievement of pupils also studied through programmed material and ordinary classroom methods revealed that:

- 1) Programmed instruction was less effective than ordinary class room teaching.
- 2) No sex difference was seen in the effectiveness of programmed instruction.
- 3) Programmed instruction was less effective than ordinary class room teaching among high achievers.
- 4) Programmed instruction and the ordinary class room teaching were equally effective among low achievers.

Sinnathambi, V. (1991) developed a video programme on Energetics in Chemistry for higher secondary students and found that the experimental group learnt more concepts and gained more on the achievement test in Energetics.

### **2.8.3 Biology**

Chibber (1973) has made a comparative experimental study of programmed instruction and traditional classroom instruction for teaching biology. The researcher found the difference between the two methods to be not significant.

R.N. Gupta (1978) undertook an experimental study, which involved the comparison of programmed instruction and conventional method of teaching biology. The experiment was conducted on 66 VIII standard girl students, divided into two groups. The major findings of the study was that the average attainment of both the groups in pretest, and post-test stages are equal.

### **2.8.4 General Science**

Kamal Yousef Iskander (1972) undertook a study on the effectiveness of learning in General Science using programmed learning and the traditional method (in Egypt). Homogeneity of age, IQ, social

standing, and educational level were taken into consideration for selecting the two groups.

The researcher formed two main groups consisting of six sub groups. One of the two was composed of three adjacent sub groups from the same school and the other was composed of the other three distant groups. The researcher himself was the teacher, but for the adjacent groups the researcher selected efficient demonstrator to teach the subjects to be taught by the traditional method in the groups which learns by using the two methods alternately, and for the group which learns by using the traditional methods alone. The following were the results:

1. The students of the experimental group have assuredly learnt the subject of 'Fire and Fire Prevention' by the linear programmed booklet as efficiently and effectively when they learnt it by the traditional method.
2. There was found in some cases a significant statistical difference at the level of more 0.05 between the average percentage modified gain in the achievement of the pupils of some group which were taught by the traditional method alone, on the side of programmed instruction. But in most cases it was found that there were no

significant statistical differences at the level of 0.05 between the groups taught by programmed instruction alone and by traditional methods of teaching.

There were no significant statistical differences at the level of 0.05 between these groups and the differences, if any, were in favour of programmed instruction at level of 0.05.

Results of comparison of traditional method alone with both methods combined showed the absence of differences statistically significant at the level of 0.05 except two cases in favour of the traditional method at a level above 0.01.

3. Results showed the absence of any significant difference in the time of study between the experimental groups and the control groups at the level 0.05.
4. No significant differences at the level of 0.05 were found between the experimental groups and control group concerning the retention ratio.
5. Most of the pupil who learned by using programmed instruction in the form of a programmed booklet were perfectly satisfied within new method of instruction, liked it and were enthusiastic alone,

independently of their teachers. In spite of the fact that some of them were unwilling to accept the programmed text book as a substitute for the teacher, the teacher rather preferred the programmed text book to the traditional (non-programmed) text with the presence of the teacher.

Joshi, V. (1987) worked on the effectiveness of secondary school TV programmes in science. The researcher found that school TV programmes are run of the mill and have not changed over the years. The study also revealed that the programmes were of poor quality, and no significant difference was found in scholastic achievement and the scientific attitudes of students exposed to STV programmes.

Kalimuthu, T. (1991) developed a video programme on environmental pollution and compared students' performance after receiving instruction through video-viewing and through traditional teaching. The experimental group receiving instruction through the video programme gained more and learnt more concepts as compared to students of the control group.

### 2.8.5 Achievement in Geography

Sharma (1966) studied the effectiveness of programmed instruction over the traditional method of teaching Geography. The comparison was made using random replication design. The sample consisted of four sections of class VIII, selected from urban and rural schools. Two sections are each from urban and rural schools were given programmed lesson and others by conventional method of teaching. The study found that:

- 1) There has a gain of 23.10 points in the post-test scores of the group taught by the programmed learning method.
- 2) The group taught through the conventional method improved on its pre-test score by 9.12 point only.
- 3) The programmed learning is more effective than the traditional method of teaching.

Sharath Kumar (1966) has constructed a programmed learning material with reference to a unit of physical geography in VI standard. The study used matched pair equivalent design on the basis of the previous achievement scores in social studies. After the completion of the experiment a common post test was administered to both the groups. The

major findings of the study was that programmed and conventional instruction were found to be equally effective in terms of achievement of pupils on immediate post test and delayed test for above average and below average pupils.

Sabhahit (1979) developed programmed learning materials in Geography for standard VIII pupils and compared the effectiveness of it with the traditional method of teaching. Two equated groups were formed on the basis of previous achievement scores. A mid test was administered, soon after the completion of 4 units to know the immediate effect of the pupils of experimental group taught through programmed learning. A post-test was administered which included all the eight units. After four weeks a retention test was administered. The technique of analysis of variance was used for analysis. The results were:

- 1) Programmed learning for a few units will not help for better achievement than the traditional method.
- 2) Both the treatments are equally effective for all the achievement levels.

- 3) There is no overall significant difference in the effectiveness of learning Geography through programmed learning and traditional method in the post-test.
- 4) There is no significant difference in the effectiveness of the two methods. The effect of programmed learning varies with the abilities of the pupil.
- 5) Programmed learning is more effective than traditional method on average ability pupils in the matter of retention.

Idayavani, S. (1991) developed two video programmes, one on weathering and another on rivers and made a study to see how viewing of the video programmes affect their achievements. It was found that students who were exposed to the video method performed better than students taught by the traditional lecture method.

## **2.9 Achievement in Languages**

Middleton (1961) studied the effect of small steps by preparing a six hundred-frame programme on spelling and a shorter one (about four frames) which had fewer frames in each sequence. They found that small step programmes made greater gains than those taking larger step programmes.

Porter's (1962) experiment in teaching spelling over a period of twenty two weeks found the programmed method to be better and that method took only a third of the time spent for learning conventional method.

U.R. Desai (1966) conducted a study of programmed learning versus traditional approach in the teaching of Gujarati in standard IX. The study attempted to adopt the technique of programming in the teaching of a language and also to analyse the reaction of pupils to the programmed approach. Experimental and control groups were formed by equating intelligence and academic achievement in Gujarati language of IX standard pupils. The comparison of the two methods in terms of intelligence and achievement resulted in the following findings:

- 1) The programmed learning approach was more effective than the conventional teaching approach for students of high and low IQS.
- 2) Analysis of student's reaction towards the new approach indicated that students welcomed the new approach more than conventional approach of teaching.

G.K. Joshi's (1972) study of a programmed remedial course in Modern English usage for the B.A. students found the following:

- 1) Learning by programmed methods was more effective, permanent and interesting than learning by the conventional method.
- 2) Programmed learning was found to be a device for self-study and was found to be useful for conducting remedial teaching.

S.J. Mehta (1973) undertook an investigation into the effectiveness of programmed material in English for developing reading ability (Class V). The result was that children learning through the programmed learning method (PLM) acquired and retained more information than their counterparts in the teacher-taught groups.

Reddy (1975) compared programmed learning and conventional teaching of language for grade VI students. Two groups were formed by matching factors like age, intelligence, and father's income. The experimental group was given programmed material and the control group was taught in the conventional method. The comparison of the two groups revealed that:

- 1) The mean performance scores of the experimental group on all the five programmes viz., linear programme, intrinsic programme, branching programme, mathematics programme and

language programme were higher than those of the controlled groups.

M.S. Tong and M. S. Mokbel (1977) undertook a study of the effectiveness of programmed instruction in English at secondary school level in Jordan. The experimental and control groups were located by the matched pair technique. The statistical analysis revealed that low achievers benefited more from programmed instruction than regular class room teaching. The results were interpreted on the basis of inherent qualities of programmed instruction such as structuring the learning situation and providing immediate knowledge of results which are lacking in regular class room teaching.

Mangala (1981) developed a programmed learning material in Hindi for standard VIII to find its effectiveness. Achievement was used as a factor to select the experimental and control groups. Major findings of the study are:

1. The programmed instruction was found to be more effective than the conventional method.

2. The programmed instruction was found to be more effective than the conventional method for the above average and average achievers.
3. The programmed instruction was found to be less effective than the conventional class room instruction for below average achievers.

Mohanty, P.C. (1988) took up a study of the ETV programme for primary school children and found that children exposed to ETV programmes had superior scholastic attainment as compared to children of the non-exposed group. The greatest achievement was in respect of “language”.

Mishra, S. (1989) took up “A Critical Analysis of Primary School Radio Programmes” and found that radio programmes in “song” and story” format were liked by children the most. However, children did not like “quiz” and “talk” programmes. He also observed that children did not like long programmes.

Chowdhry, M. (1990) took a development cum-research project to study the potential of radio programmes for providing enriching experiences to anganwadi and primary school children. The findings are

quite interesting. Anganwadi children gained significantly more than their counterparts in the control group in capabilities like listening comprehension, verbal expression, vocabulary gain and sequential thinking. However, no significant difference was found between the experimental and control groups of primary schools.

Narayanasamy, M. (1991) prepared a video programme for sixth grade students to teach Tamil vocabulary. He found that the experimental group learnt more Tamil words using the programme than the control group.

Sumitra, L.G. (1991) has presented a case study of the audio cassette project of Hoshangabad (M.P.) for teaching Hindi. It would be interesting to note that the project first originated as a Radio Pilot Project in the early eighties and was launched by the CIET in two districts of Rajasthan. When the project completed its life, it was re-launched in one of the districts of M.P. where also, like Rajasthan, Hindi is the first language. In the re-launching stage in primary schools and Hosangabad district the Radio Project Programme, which was in the broadcast mode, was changed into the cassette mode.

The salient outlines of the study are as follows:

- 1) Low cost two in one sets have limited life and they need proper budgetary provisions for running and maintaining them.
- 2) Children when interviewed showed their happiness about the programmes and wanted to listen to more of such programmes.
- 3) The best liked programmes were those which had segments of songs, stories, questions and activities.

Kapadia, A.M.'s Ph.D work (1992) was related to the impact of TV on students learning. In contrast to Joshi, V.'s (1987), the study reported that the TV group gained significantly more than the controlled group. Even retention scores of the experimental group were better. Seventy percent of the students opined that TV programmes help them in self-learning.

### **Computer Assisted Instruction and Personalized System of Instruction**

Dasgupta, D.'s (1988) Study revealed that the Personalised System of Instruction (PSI) group performed significantly better on end tests than the conventional group. On retention and attitude tests, there was no significant difference.

Md. Abdu! Odud's (1989) Study "Effects of Strategies of Instruction on Mastery Learning", highlighted the most commonsense feature that formative evaluation pays significantly if followed by adoption of corrective measures, quality instruction and self-evaluation. This potent instructional strategy leads to mastery learning.

Verma, B.C. (1991) conducted a study, "Effects of Personalised System of Instruction (PSI) and Mastery Learning", on achievement of average students and students promoted on lenient criteria. He found that both techniques were better than conventional teaching. He also found that 'promoted' students (low achievers) when taught through the PSI or Mastery Learning approach performed significantly better on the summative test as compared to pass students (average achievers) taught through the conventional method. It implies that low achievers, if taught through PSI techniques, can perform better. It is a pointer to the problem of low achievement which can be effectively tackled.

Rose, A.S.V. (1992) prepared the software for CAI. This was used alongwith the without a trainee support system for teaching under achievers. The results were positive. However CAI used in conjunction with the trainee support system proved to be more beneficial to the under-achievers.

Muhammad Betz (1997) conducted two research efforts in the education faculty at Southeastern Oklahoma State University to determine what inservice teachers felt about educational technology in order to be successful teachers in the public schools and to structure educational technology courses in the teacher education curriculum accordingly. The first component surveyed education technology courses offered by 10 teacher education departments in Oklahoma. Results of the survey revealed that most courses were geared toward traditional audio-visual concepts and practices. The second component surveyed new and veteran teachers and school administrators. Survey findings indicated that only 20 percent of new teachers considered themselves very prepared to use educational technology, 70 percent of administrators considered themselves moderately prepared, and veteran teachers considered themselves least prepared. Nearly 85 percent of administrators and 80 percent of veteran and new teachers felt that university course work in use of educational technology was either very or moderately important. All three groups affirmed that instruction in educational technology should continue to increase in importance.

Reviewing the related literature referred to above, it has been felt that the research into the effectiveness of programmed instruction would be of much value. Most of the studies on the effectiveness of programmed

instruction revealed its positive association with the achievement of the learners. The findings of the studies helped the investigator to set the objectives, formulate the hypotheses and design the present study. The review also helped the investigator to note the effectiveness of programmed instruction. Majority of the studies indicated significant difference in learners' achievement. Therefore it is hoped that a study into the programmed instruction will have some theoretical and practical significance in the field of education. Looking at the trends generally revealed, it is felt that teachers and educational administrators can develop effective learning strategies based on individualised instruction techniques.

**A STUDY OF THE EFFECTIVENESS OF PROGRAMMED  
INSTRUCTION IN LEARNING ENGLISH AS A SECOND  
LANGUAGE BY SECONDARY SCHOOL PUPILS**

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# METHODOLOGY

- Design of the study
- Variables in the experiment
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- Tools used
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- Study Habits Rating Scale
- Personal Data Sheet
- Scoring
- Procedure for Data Collection
- Data Processing and Statistical  
techniques used

## **METHODOLOGY**

As stated in the foregoing paragraphs the main purpose of the present study has been to find out the comparative effectiveness of programmed instruction and conventional method of teaching English with regard to select learning outcomes, and to find whether certain control variables such as sex, locale, intelligence, achievement motivation, study habits, socio economic status have any effect on pupils' achievement in English. The methodology of the investigation is presented under ~~four~~ sections as follows.

1. Design of the study
2. Tools used
3. Procedure for data collection
4. Data processing and statistical techniques used

### **3.1 Design of the Study**

The objectives of the study enabled the investigator to conduct the study using the experimental design. "Experimental design is the blue print of the procedures that enables the researchers to test hypothesis by

reaching valid conclusions about relationships between independent and dependent variables” (Best and Kahn, 1989).

### **3.1.1 Design selected**

The design used for the present study is the design of equated group i.e. control and experimental groups. The two groups were well equated by using the procedure of equated group design. The control variables such as sex, socio economic status, achievement, intelligence, achievement motivation, and study habits were considered for equating the groups. The experimental group was treated with self learning materials and control group with conventional method of teaching.

The organisation of equated groups has been made on the basis of the scores achieved by the subjects on the verbal intelligence test, achievement motivation test and study habits test administered to them and by taking the average scores of achievement tests conducted by schools (quarterly, half yearly and unit tests) in English. Personal data sheet was used for collecting data regarding the socio-economic status and grouping them on the basis of locale.

In order to see that the two groups formed by match-the pair-technique are statistically equated with respect to each control variable,

the multiple regression method with forward stepwise technique, the analysis of variance and analysis of covariance technique have been adopted.

### **3.1.2 Variables in the experiment**

#### **Independent variables (control variables)**

Independent variables are the conditions or characteristics which the experimenter controls in his attempt to ascertain the relationship to the observed phenomena. In the present study, the independent variables are

1. Instructional strategies
  - a. Programmed instruction
  - b. Conventional method of teaching
2. Pre experimental level of achievement in English
3. Intelligence of the subjects
4. Achievement motivation of the subjects
5. Study habits of the subjects
6. Socio economic status of the subjects
7. Locale of the educational institutions
8. Sex of the subjects

## **1. Instructional Strategy**

The strategy of the instruction employed by the teacher has very important role in deciding the effectiveness of learning. In the present study two kinds of instructional strategies, i.e. programmed instruction and conventional method of instruction form important independent or control variable. This assumed that level of achievement in English of the pupils is influenced by the strategies of instruction they undergo. In other words strategies of instruction to a large extent influence the quality of learning. In the present study programmed instruction and conventional method of teaching of English are used as instructional strategies which are likely to influence the dependent variable i.e. achievement in English.

## **2. Pre experimental level of achievement in English**

The level of English language ability which the subjects keep when they undergo the experiment is another important variable on which experimentation depends. It remains as the basis of the measurement of change in the achievement accomplished owing to the strategies of instruction employed, i.e. programmed instructional strategy and conventional methods of teaching English.

### **3. Intelligence of the subjects**

Intelligence is a variable which influences the rate of achievement in language especially the learning of a second language like English. Several studies have already pointed out the positive relation between intelligence and achievement in second language acquisition. It has also been proved that errors in language and intelligence have inverse correlation. Therefore intelligence has been taken as a variable for the present study.

### **4. Achievement motivation of the subjects**

Whether extrinsic or intrinsic, motivation is an essential condition for effective learning. It involves an individual's need to achieve also. As far as a learner is concerned achievement motivation is a significant factor which promotes learning. Achievement motivation plays an important role in learning through programmed instruction especially because that if there is a sense of achievement it positively affects the progress of learning or learners have a tendency to avoid failures. Therefore achievement motivation has been taken as a variable for the present study.

## **5. Study habits of the subjects**

Another Independent variable taken up for the study is the study habits of the subjects. It is an acknowledged fact that there are effects of individual differences in the learning style of each individual pupil which are reflected in their habits of study. Therefore it is assumed that study habits are likely to influence the level of achievement of the pupils whether they undergo programmed instruction or conventional methods of instruction. The study habits of individual pupils contain aspects of remembering the content of lessons, methods of reading the text books, doing the home assignments, using study materials other than the text books, their style of attacking problems and preparing for examinations, daily duration of study, regularity and punctuality in studies etc.

## **6. Socio economic status of the subjects**

Socio economic status is an important independent variable considered for the present study. The pupils who have been included in the sample belong to different socio economic status based on factors such as parental education, occupation, income, the social layer etc. Normally pupils with better socioeconomic status are found to enjoy better facilities for learning and are exposed to better socio familial

conditions conducive to learning. Several studies have proved the effect of socio economic status of the pupils on the level of their learning. Therefore it has been felt appropriate to include socioeconomic status as one of the variables for the present study.

#### **7. Locale of the educational institutions**

The educational institutions in the state of Kerala are situated either in urban or in rural areas. Therefore these educational institutions can be clearly categorized into two i.e. urban and rural. As pupils belonging to educational institutions of urban areas are more exposed to better facilities and learning conditions, their level of achievement is likely to be influenced by urban atmosphere. Therefore locale of the institutions has been considered as an independent variable for the study.

#### **8. Sex of the subjects**

It is experienced that gender difference is a factor which influences the pupils' level of learning. Therefore sex of the subjects undergoing the experiment has been considered as an independent variable for the present study.

### **3.1.3 Dependent variable**

The dependent variable in the study has been achievement in English

### **3.1.4 Sample for the study**

The present study being experimental in nature, it was felt that it would be difficult to conduct the experiment if the sample is too large. Therefore it was decided to select the sample from three schools belonging to districts viz. Waynad, Ernakulum and Kottayam only. Standard IX pupils were selected as representative sample of secondary school pupils of Kerala.

One experimental group and one control group were drawn from each school. Simple random sampling technique was used in the selection of the schools. The schools selected were Govt. Sarvajana Higher Secondary School, Sultan Bathery, Islamic High School, Aluva and Govt. Model Higher Secondary School, Kottayam. Islamic High school Aluva and Govt. Model H.S.S. Kottayam are situated in urban areas. Though sultan Bathery is a small township the students studying in Sarvajana H.S.S. belong to the surrounding rural area. So they are considered as rural population. A total of 184 pupils from these schools consisting of

108 boys and 76 girls were selected. The selected sample included 72 pupils from urban areas and 112 pupils from rural areas. Of these 140 government school pupils and 44 private school pupils.

Finally 92 subjects were selected to comprise the experimental group and 92 the control group. These two groups were homogeneous in all respects.

### **3.1.5 Equating the Group**

An experimental study involves two groups, the control and the experimental. For the identification of the results of the treatment effected to the experimental group with new strategy both groups were to be equated. In the present study the two groups have been equated on basis of following aspects:

1. Social and familial factors like family income, parent's education, parent's profession
2. Personal variables such as intelligence, sex, age
3. Achievement motivation
4. Study habits
5. Achievement in English (pre experimental)

Distribution of the subjects in the homogeneous groups (control and experimental) is as follows.

Table I

School wise distribution of the pupils in the sample

Name of school	Control group		Experimental Group		Total
	Boys	Girls	Boys	Girls	
HSS Sultan Bathery	28	28	28	28	112
HSS Kottayam	14	--	14	--	28
IHS Aluwa	12	10	12	10	44
Total	54	38	54	38	184

Table II

Sex wise distribution of the pupils in the sample

Sex	Control group	Experimental group	Total
Boys	54	54	108
Girls	38	38	76
Total	92	92	184

Table III

Distribution of the pupils in the sample on the basis of locale

Residence	Boys	Girls	Total	Control Group	Experimental Group	Total
Urban	52	20	72	36	36	72
Rural	56	56	112	56	56	112
Total	108	76	184	92	92	184

Table IV

Distribution of the pupils in the sample on the basis of the management of the school (i.e. Govt. & Private)

School	Boys	Girls	Total	Control	Experimental	Total
Private	24	20	44	22	22	44
Government	84	56	140	70	70	140
Total	108	76	184	92	92	184

## **3.2 Tools used**

The following tools have been used in the process of the study

1. Programmed instructional materials developed by the investigator
2. Pre experimental achievement test in English
3. Post experimental achievement test in English
4. Verbal intelligence test
5. Achievement motivation test
6. Personal data sheet
7. Study habits rating scale

### **Instructional Materials**

#### **3.2.1 Selection of the Areas for English Language Teaching**

The areas in English language for teaching were selected from the syllabus prescribed for standard IX for the schools of Kerala. The general area selected was tenses, which has been divided into seven sub units based on the aspects of tenses.

1. Present continuous tense
2. Present simple tense
3. Present perfect tense
4. Present perfect continuous tense

5. Past simple tense
6. Past continuous tense
7. Past perfect tense

### **3.2.2 Instructional Material for Control Group**

A detailed course-outline was prepared for the guidance of the pupils in the control group. It contained the description of skills to be developed and detailed aspects of each tense with examples, rules governing the formation of tenses, exercises similar to those given in the self learning materials, and evaluation items.

The areas selected and instructional objectives specified were the same for both the experimental group and control group. Subjects in both the groups were expected to master the specified sub skills on an equal basis. For this the control group was treated with conventional method and the experimental group with programmed instructional strategies. Therefore the control group followed the prescribed text books in English (Kerala English Reader for Standard IX) whereas the experimental group followed the programmed instructional material developed by the investigator.

### **3.2.3 Instructional material for experimental group**

#### **Developing Programmed Instructional Material**

The programmed instructional material in tenses of English for standard IX pupils was developed by the investigator. It was aimed at that each pupil should develop the following skills with regard to each aspect of tenses.

1. Recognising the tense
2. Understanding the meaning of the tense
3. Understanding the underlying grammatical rules for formation of the tense.
4. Understanding the structure of the tense (Sentence Pattern)
5. Using the tense to express one's meaning, ideas, experience etc.
6. Converting one aspect of the tense into another aspect.
7. Locating the errors in the use of tense
8. Using the tenses autonomously

The material consists of sequential frames, each frame consisting of exercises for understanding and performance. The investigator examined the exercises and synthesized the entire operation into verbal statements in steps. With the synthesized steps he structured

understanding exercises to proceed to the performance exercises. These understanding exercises gave the pupils an overview of the language skills they were expected to learn. All frames were designed to provide the pupils with exercises in selected language skills (Performance exercises). While writing these understanding and performance exercises, it was ensured that each student understands the meaning of the sentence used.

The draft of the Frames were checked by the supervising teacher and necessary corrections were made. The investigator then tried out the programme on actual members of the population. The procedure was carried out with a view to eliminating unsuitable items. Pupils' responses, questions and comments were carefully noted during tryout process and necessary revisions were effected to the test of the material.

When the investigator was empirically confident that the programme has undergone sufficient tryouts and revisions to meet the requirement of the investigation, the material was field tested on sufficiently large number of the population.

In the present programme, there are 19 frames. The error rate of the programme was found to be 2.13 per cent, which is less than 5 percent.

This indicates that the developed-programmed material is reasonably valid for self-instruction. The very low error rate indicates that the frames of programme are properly organised in increasing order of difficulty, i.e. from simple to complex and from known to unknown. This suggested that the programme needed no further revision. The final form of programmed material is given as appendix-I and a programmed material for remedial measures used is given as appendix II.

### **3.2.4 Achievement test in English for standard IX (Pre test)**

This is a teacher made test developed by the investigator. The test was developed giving due weightage to the objectives. The test consists of 50 multiple-choice items. No time limit was specified. Pupils were informed of the purpose of test and they were encouraged to attempt all questions. The test was used for assessing the level of achievement of the pupils included in the experimental and control groups, and thus to design a self learning material for them in the selected areas in English.

The following entering behaviours were considered for the construction of the test:

1. Pupils recognise the different parts of speech.
2. Pupils recognize aspects of present tense, and past tense.

3. Pupils write simple sentences in English, especially in present and past tenses.
4. Pupils distinguish between the affirmative and negative.
5. Pupils identify the assertive, interrogative, imperative and exclamatory sentences.

The pre-test question paper is given as appendix III.

### **3.2.5 Post test**

The investigator developed an achievement test in English for standard 9 in the area of 'tenses' and it was used as the post test. This test consisted of 50 objective type items of one mark each.

The scores on this test were used to find out the effect of programmed instruction strategy.

### **Planning the test**

The achievement test in English that is post experimental test was standardised by following the steps mentioned below.

**a. Preparation of the preliminary test based on the objectives (skills) to be tested**

The investigator in consultation with the research guide, teacher educators and expert teachers of English prepared a preliminary achievement test in English consisting of eighty items. Every care was taken to ensure the content validity. Duration of the test was eighty minutes.

**b. Administering the preliminary test**

The achievement test thus prepared was administered to a random sample of 390 students belonging to 10 different schools which had all the characteristic features of the sample drawn for the experimental study i.e. urban, rural, girls, boys, and socio economic status. For the smooth and efficient administration of the test, the co-operation of the teachers was sought.

**c. Finding the facility value for item analysis**

From the 390 answer scripts, 370 answer scripts which were completely answered by the students were selected for item analysis. For the purpose of item analysis the answer scripts were arranged in the descending order keeping 27% of the top scores and 27% of the bottom

scores in order. Examining each script, the number of students who answered each item was found carefully i.e., for the upper group and the lower group. In this way, applying the standard formula  $D_i = \frac{U+L}{2N}$  the facility index of each item was found and the very easy items and very difficult items were identified. The facility value of a good item was considered to be between 0.4 and 0.6. An item satisfying this condition was accepted for inclusion in the test.

**d. Finding discriminating power:**

Suitability of each item was decided also on the basis of the discriminating power which was found using the standard formula ( $D_p = \frac{U-L}{N}$ ). Items with discriminating power of 0.4 were selected. Thus a total number of 50 items were selected for post experimental achievement test.

The test consisted of objective type items. The objective type test items were of two types. Viz., fill in the blanks and multiple-choice items. The duration of the test was fixed 60 minutes and the maximum mark was 50. Representative items were used to test each skill expected to be developed in the subjects in both the groups, i.e. experimental and control groups.

## **Reliability and Validity**

The reliability of the achievement test was estimated using split-half method. The obtained 'r' was corrected using the Spearman-Brown prophecy formula. The coefficient obtained was 0.83. Which indicated that the test yields reliable measure of the achievement in English.

The validity of the achievement test was estimated with the help of the quarterly examination marks scored by the subjects. The coefficient of correlation was found to be 0.73. These two indices show that the test could be a reasonably valid tool for measuring achievement in the selected areas in English.

### **3.2.6 The Kerala University Verbal Test of Intelligence**

The Kerala University Verbal Group test of intelligence is a test developed and standardised by Pillai .S. Nair and Amma (1968) to measure the general intelligence 'g' of secondary school pupils of Kerala.

The test battery consisted of five sub tests, each containing twenty items. The details of subtests are as given below.

1. Verbal Analogy; 20 items –6 minutes
2. Verbal Classification; 20 items –5 minutes

3. Proverbs; 20 items –8 minutes
4. Number series; 20 items -6 minutes
5. Verbal reasoning, 20 items –10 minutes

### **Verbal Analogy**

This involves the ability to see the relationship between two things or ideas and to apply the relationship to other situations. The items were based on Spearman's principles of Cognition viz.

(A) A person tends to find relationship between the parts of any apprehended by person and a relationship presented with it, the related experience on concept is also evoked.

To each item of the sub test, three words are given with the fourth one missing. The subjects have to find out the missing word from the four alternatives given in brackets.

Example:

Train, station, ship.....

(A sea, B, Lake, C. Harbour, D. Boat)

## Verbal Classification

Each item is a set of five words, of which four can be grouped together according to some principle or law. The subjects have to choose those word that out this group.

Example:

(A. Orange, B. Apple, C. Potato D. Grape E. Banana)

The mental process involved in the answering of these items is identified to be the mental process involved in Education of relationship.

## Proverbs

Each item of this test is a proverb followed by four statements explaining its meaning. The subjects have to choose the statement, which comes very close to the idea contained in the proverb.

All that glitters are not gold.

- A. External and internal characters are not the same.
- B. All shining things are not gold.
- C. Gold need not glitter always
- D. Do not amazed by seeing the outward appearance

Items of this type are mostly saturated with 'g'. The mental ability involved in the selecting the best statement is supposed to be verbal comprehension.

### **Number Series**

In each item a series of numbers formed by a particular relationship is given, of which one is missing. The pupil has to choose the correct missing number from those given in the bracket.

Example:

3,6,12,24,.....,96

(A.50, B.25, C.48, D.90)

Thurston identified that the mental ability involved in this type of problems is inductive reasoning.

### **Verbal reasoning**

Each item is a problem requiring perception of some sort of relationship. Pupils have to select the correct answer to the problem from four alternatives given.

Example:

Krishnan is taller than Ramu, but shorter than venu, and john is taller than venu. who is tallest ?

A. Krishnan,      B. Ramu,      C. Venu,      D. John

Thurston identified that the mental ability involved in answering items of this type is deductive reasoning.

### **Mode of answering and scoring**

The test booklet consists of five sub tests. Each sub test has twenty multiple choice questions. Separate score sheets are provided for the test. To mark the responses, the students had to put an 'x' mark for the correct answer in the circles provided in the score sheet.

### **Reliability and Validity of the test**

The test – retest reliability of the whole test was 79 (N=86). The split half reliability was worked out for the whole test battery (N=120) and corrected for shortening using Spearman Brown formula. The corrected valued of reliability coefficients of the five sub tests and the whole tests are:

Verbal analogy = 0.88, verbal classification = 0.86, proverb = 0.86, number series = 0.86, verbal reasoning = 0.84, whole test = 0.94.

As per the manual of the test, the test components have been adopted from popular standardised test with high 'g' loading. This has been followed by procedures for attaining high internal validity ensured through item analysis. Inter correlation of the sub tests, also been worked out on a select representative sample.

The validity coefficient of sub tests 1 to 5 with school marks, as external criterion was 0.6, 0.53, 0.65, 0.67 and 0.45 respectively. Later the factorial study of the test was determined (P.S. Gopala Krishnan Kurup, 1969). This study showed that 75 percent of the common variance of the battery was accounted for by a general factor, the 'g' factor of intelligence.

The psychometric properties of the test reveal that it is a valid and reliable instrument for measuring verbal intelligence of secondary school pupils. A copy of the Kerala University verbal test of intelligence is given as appendix IV.

### **3.2.7 Kerala Scale of Achievement Motivation**

This is a popular sixty-item test by Nair (A.S. Nair, Kerala Scale of Achievement Motivation, Calicut, Department of Education, University of Calicut 1981) standardised for use with secondary school pupils of Kerala. Each item consists of a statement to which the subjects are expected to indicate their degree of agreement by marking either 'Y' (Yes) 'U' (Undecided) or 'N' (No) on the response below.

There are both positive items (items showing) high achievement motivation) and negative items (Items showing lack of achievement motivation) in the test A mark under 'Y' will be given a unit score for a positive item while a mark under. 'N' will receive a unit score for a negative total score on the test is the sum of the scores obtained by subject in all the items of the test.

## **Validity and Reliability**

The test has been validated against the total achievement of students of secondary school classes as external criterion.

### **Details of reliability**

With school marks of standardised VIII as external criterion validity is 0.44 N=38. With school marks of standard IX as external Criterion validity is 0.39 (N=42)

The reliability of the scale has been estimated by the test-retest reliability coefficient of the scale is 0.73 (N=56) corrected split half reliability coefficient for the scale is 0.82.

It can be seen that the scale is a valid and reliable tool for measuring achievement motivation of the secondary school pupils of Kerala. A copy of the scale is given as appendix V.

### **3.2.8 Study Habits Rating Scale**

Measurement of study habits was done using the Kerala University study Habits Rating Scale (A.S. Nair). This is a standardised scale developed by the university department of Education. This Scale

consists of 24 items . i2 positives and 12 negative ones. The subject has to answer each question by entering ‘A’ or ‘B’ or ‘C’ in the answer sheet.

Scoring was done as shown below.

Items	Always (A)	Sometimes(B)	Never(C)
Positive items	3	2	1
Negative items	1	2	3

Scores of the individual items were summated and the total score indicated the study habit of the subject. It would be obvious that the maximum score in this case would be 72 and the minimum 24. A copy of the study habits rating scale is given as appendix VI.

### **3.2.9 Personal Data Sheet**

This tool was used for collecting the socio economic status of the members of the sample based on three components viz father’s education level, father’s occupation level, and father’s income level and such other data necessary for understanding their socio-economic environment, sex, age, locale etc.

This tool is in the form of a questionnaire, which in addition to obtaining data for quantifying, SES is also of help in obtaining personal information relating to each subject.

The socio-economic status has been determined by taking into account the father's education level, occupation level, and income level giving weightages as described below.

### Scoring scheme of the Personal Data Sheet.

Variables	Categories	Weigtage
Father's education level	1. M.A/M Sc/Mcom/ MBBS/M.Ed/Bsc/(Engg) L.L.B etc	10
	2. B.A/BSC/Bcom/Diploma in Engg. etc.	
	3. Pre Degree/TTC/LTT etc	5
	4. Standard 8 to 10	3
	5. Standard 1 to 7	2
	6. Illiterate	0
Father's occupation level	1. High Professional	10
	2. Semi Professional	9
	3. Skilled	8
	4. Semiskilled	5
	5. Unskilled	3
	6. Unemployed	0
Father's Income Level	1. above Rs. 10,000/-	10
	2. Rs. 6,401 to Rs. 10,000/-	8
	3. Rs. 3,001 to Rs. 6,400/-	6
	4. Rs. 1,801 to Rs. 3,000/-	4
	5. Rs. 601 to Rs. 1,800/-	2
	6. Below Rs. 600/-	1

The procedure of quantifying Father's occupation level is described below.

### **Father's Occupation Level**

This has been classified into six categories. These are as follows.

#### **High Professionals**

Ministers, Judges, Bank executives and officials, doctors, engineers, Lawyers. University teachers, Head of research organisations, Head of Government Departments, Secretaries of Government, Big land lords, Business executives, etc. belong to this category and a 10 point score is allotted to this category.

#### **Semi Professional**

Chemists, druggists, qualified nurses, teachers, managers, superintendents of offices, minor business man, contractors, small land lords, sub inspectors of police, sub registrars, Assistant educational officers, Block development officers of the sub district level, public health workers, etc. come under this category and they and assigned a 9 point score.

## **Skilled**

Mechanics, fillers, electricians, drivers, photographers, laboratory assistants, carpenters, document workers, vakil clerks, head constables, village officers etc fall under this semi skilled.

Farmers, small scale merchants, library attends, police constables, etc. belong to this category and they are assigned a 5 point score.

## **Unskilled**

Coolies, ordinary labourers, watch man, peon etc from the unskilled labourers. A 3 point score is assigned to this group.

## **Unemployed**

Those who have no work at all. No weightage assigned to this category (zero score) summated score for Father's education level, Father's occupation level and Father's income level (with equal weightage given for each) is taken as the score for socio economic status of an individual. A copy of the scale is given as appendix VII.

### **3.3 Scoring**

#### **Intelligence**

Scoring was done as detailed in the manual, Achievement motivation was scored using the key given in the manual of instruction.

## **English Achievement**

Scoring was done as detailed in the manual.

### **3.4 Procedure for Data Collection**

The Head masters of the schools were contacted earlier by the investigator. The teaching and testing commenced by the third term of academic year 1998-99.

#### **3.4.1 Administration of the Tests**

The investigator first administered the Kerala University Verbal Group Test of Intelligence, Achievement Motivation Test and Study Habits Test. The subjects also were filled up the personal data sheet.

In administering the three tests, the instruction given in the respective test manuals were strictly followed and were explained to the students. Ideal examination condition as prescribed in the test manuals was followed for test administration.

#### **3.4.2 Learning by the Experimental Group**

For the experimental group programmed instruction strategy was used. The pupils were given 19 frames. One period (40 mts) was given to

learn one frame. A total number of 19 periods were taken for mastering all the frames.

### **3.4.3 Learning by the control Group**

Control group was taught through the conventional method of instruction following the course outline and prescribed textbook. Duration of one period (40 minutes) was given to teach the skills specified. A total number of 19 periods were taken for teaching the specified course on tenses in English.

### **3.4.4 Pre-test and post-test conducted**

Before starting the experiment two groups were given the same pre test (Pre experimental test) and provided remedial measures using programmed materials to experimental groups. The control group was taught through conventional strategies. After completion of the frames on the specified area, both the groups were given the same achievement test, which was used for determining the effectiveness of the two different instructional strategies. Post-test question paper is given as appendix VIII.

### **3.5 Data Processing and Statistical Techniques used**

Scoring of the answer sheets of the pre-test and post-test were done on the basis of the pre fixed value points. Scoring of the verbal group test of intelligence, achievement motivation test, study habits test were done according to the scoring key provided in the manual. The personal data sheet was scored as explained in the foregoing paragraphs.

After valuing the answer sheets the scores were tabulated separately for the experimental group and the control group. The analysis was done on the basis of the obtained data.

#### **3.5.1 Statistical Techniques used**

For the purpose of analysing data, the techniques of multiple regression, Analysis of Variance (ANOVA) and Analysis of Co-variance (ANCOVA) have been used in the present study taking into account the multiple variables in the experiment.

When there are several sub groups in a experiment, the Analysis of Variance (ANOVA) test for one-way classified data or single factor ANOVA is used for comparing the groups. When there is significant difference between the groups, multiple comparison procedures are used

to determine the homogeneous groups and to identify the best group or rank the groups according to their effectiveness.

In the present study there are two groups or comparison i.e., control and experimental groups. Within each group the scores are affected by several variables. By experience and based on the previous related studies, the following variables are identified

Locale

Sex

Socio Economic Status

Intelligence

Achievement in English

Achievement motivation

Study habits

In order to incorporate the above variables and to identify the effects of these variables, the linear model approach is used. In this approach the scores obtained from a respondent is modeled as

$Y = \text{a linear function of variables} + \text{error component}$

The error component is random variable and it is distributed as normal with mean zero and some unknown variance, which is called error variance. In a properly designed experiment, by identifying contributing

variable, the error variance is expected to be less and it determines the efficiency of the design. Since the error component is normal, scores must be distributed according to normal. By experience, in most of the educational/ psychological scores the distribution is found to be normal.

There are mainly three types of linear model.

- 1) Multiple regression model
- 2) Analysis of variance model
- 3) Analysis of covariance model

To test the significance of variables, in all the above models, the F-test is used in ANOVA. In ANOVA, the total variation among the observations is measured using the sum of squares of deviations of all observations from the mean and it is called total sum of squares. The number of independent variables involved in the sum of squares is called degrees of freedom (df). If 'n' is the total number of observations, the df for total sum of squares (SS) is  $n - 1$  (in this study  $n = 184$ , the total  $df = 183$ ). The effect of factors / variables are estimated using least square technique and the corresponding sum of squares is calculated using least square theory and test of linear hypothesis. Higher the value of this SS, higher is the effectiveness of the corresponding variables. The error sum

of squares is the difference of the total SS and the sum of SS of all variables. The df for the SS can be easily found by counting the number of independent variables into SS. The mean SS (MS) is the ratio of SS and df. To test the significance of a variable (a set of variables) the F-value is computed using the formula

$$F = \frac{\text{MS due to factor(s) / variable(s)}}{\text{MS due to error}}$$

If p-value of F- is smaller than 0.05, it is inferred that the factor(s) / variable(s) is significant at 5% level. If p-value is less than 0.01, it is significant at both 1% and 5% level of significance. If  $p > 0.05$ , the factor(s) / variable(s) is not significant. The result of ANOVA is presented in a table called ANOVA table. ANOVA table consists of 6 columns with names source, df, SS, MS, F and p-value. Source means source of variation i.e., factor (s) / variable (s).

### 3.5.2 Multiple Regression

The general purpose of multiple regression is to learn the relationship between several independent variables and a dependent variable. If 'y' is dependent variable and  $x_1, x_2, \dots, x_p$  are p independent

variables, the multiple regression model is  $y = a_1 x_1 + a_2 x_2 + \dots + a_p x_p + e$ , where  $e$  is the error component and  $a_1, a_2, \dots, a_p$  are called multiple regression coefficients.  $a_1$  is the proportion of  $x_1$  which contribute to  $y$ . All the selected independent variables need not contribute to  $y$ . To select a set of contributing variables among  $x_1, x_2, \dots, x_p$  the stepwise method of regression is adopted.

The Multiple regression routine consists of two major parts. The first part calculates a correlation matrix. The second part performs the actual multiple regression analyses.

Statistical significance testing in multiple regression is based on the assumption of homogenous residual variance over the range of the dependent variable.

### **Analysis of Covariance (ANCOVA)**

ANCOVA is used for testing the main effects and interactive effects of locale and sex by eliminating the effects of covariates (the five control variables). The 'F' test which is computed in the similar lines of the computation of sum of squares in ANOVA described above. But only the difference of both SS are calculated by eliminating the effect of covariance.

**A STUDY OF THE EFFECTIVENESS OF PROGRAMMED  
INSTRUCTION IN LEARNING ENGLISH AS A SECOND  
LANGUAGE BY SECONDARY SCHOOL PUPILS**

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Thesis  
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2001

# PRESENTATION AND ANALYSIS OF DATA

- Presentation of Data
- Presentation of Mean and SD of Control Variables
- Presentation of data corresponding to dependent variables
- Correlation Matrix of the variables
- Categorised normal plots
- Verification of homogeneity of control and experimental group with respect to control variables
- Pre experimental level of achievement
- Result of regression
- Verbal Intelligence
- Achievement Motivation
- Study Habits
- Socio economic Status
- Findings of the sections
- Analysis of effectiveness of programmed instruction
- Stepwise regression technique
- Analysis of covariance
- Discussion on statistical findings
- Conclusions

## **PRESENTATION AND ANALYSIS OF DATA**

This part of the study, i.e. the Presentation and Analysis of Data, is presented in three sections. In section one the presentation of data is given in the form of tables. In section two statistical techniques are used for showing that control and experimental groups are equated with respect to the following control variables:

1. Pre experimental level of achievement in English
2. Verbal intelligence
3. Achievement motivation
4. Study habits
5. Socio economic status

In section three the effectiveness of programmed instruction is tested with reference to the hypotheses framed in Chapter I.

The analysis using 't' test is not relevant in this case, as the groups to be compared are not within-the-group which are homogenous with respect to the dependent variable. There are several independent

variables, which have significant influence on dependent variable. The 't' test can be employed only when there is within- the group - homogeneity and it is used to test homogeneity of between the groups. The most appropriate technique in this situation is the technique of linear model and regression analysis.

Multiple regression technique provides a model for dependent variable as a linear combination of independent variables.

Stepwise forward method is used for finding most contributory subset of independent variables over the dependent variable.

Stepwise backward method is used for eliminating less effective independent variables.

Analysis of variance technique is applied to test the effectiveness of control variables/ independent variables over dependent variables. In fact the homogeneity of the variances corresponding to the factors are tested using the above technique.

Analysis of covariance is a statistical technique used to control or adjust for the effects of one or more uncontrolled variables and thereby presents a valued evaluation of the outcome of the treatment. This

technique is applied when there are one or more correlated variables existing with the dependent variable. This method also provides the test of significance of main effects and interactive effects of all the variables.

The analysis is done by using the Software 'Statistica'.

#### **4.1 Presentation of Data**

The data collected is presented in the form of Tables with n, mean and SD.

Means are used for comparing the categories i.e. locale, sex and treatment. High value of the mean indicates high effectiveness. SDS are used for studying the variability of the dependent variables in different categories.

##### **4.1.1 Presentation of mean and SD of Control variables.**

The following tables give the values of n, mean and SD of control variables

Table V  
Achievement Scores

	Control			Experiment	
		Male	Female	Male	Female
Rural	N	28	28	28	28
	M	21	22.14	21.04	22.14
	SD	10.79	8.73	10.93	8.73
Urban	N	26	10	26	10
	M	19.42	19.2	19.42	19.2
	SD	7.65	5.18	7.65	5.18
All groups	M	20.706		20.717	
	SD	8.79			

Table VI  
Intelligence Scores

	Control			Experiment	
		Male	Female	Male	Female
Rural	N	28	28	28	28
	M	65.107	58.07	65.39	57.86
	SD	11.39	10.74	11.49	11.18
Urban	N	26	10	26	10
	M	70.27	65.4	70.27	66.2
	SD	14.14	9.96	15.103	7.16
All groups	M	64.46		64.57	
	SD	12.65		12.95	

Table VII  
Achievement Motivation Scores

	Control			Experiment	
		Male	Female	Male	Female
Rural	N	28	28	28	28
	M	37.25	39.39	36.25	38.93
	SD	5.06	4.81	5.27	5.88
Urban	N	26	10	26	10
	M	32.65	37.8	31.92	38.3
	SD	6.58	5.67	7.39	5.96
All groups	M	36.66		36.05	
	SD	6.057		6.71	

Table VIII  
Study habits scores

	Control			Experiment	
		Male	Female	Male	Female
Rural	N	28	28	28	28
	M	54.04	55.607	52.89	52.107
	SD	6.39	4.76	7.89	10.49
Urban	N	26	10	26	10
	M	48.88	53.8	51.27	54.2
	SD	4.101	3.05	31.009	1.93
All groups	M	53.032		52.34	
	SD	5.626		9.157	

Table IX  
Socio Economic Status Scores

	Control			Experiment	
		Male	Female	Male	Female
Rural	N	28	28	28	28
	M	46.07	53.21	46.79	53.21
	SD	9.94	20.56	9.05	23.42
Urban	N	26	10	26	10
	M	84.23	94	72.19	91
	SD	38.28	26.33	31.01	22.34
All groups	M	64.24		60.73	
	SD	31.25		26.76	

#### 4.1.2 Presentation of data corresponding to dependent variables

Table X  
Pre-test Scores

	Control			Experiment	
		Male	Female	Male	Female
Rural	N	28	28	28	28
	M	11.7	7.8	15.9	10.3
	SD	7.6	4.1	11.5	11.3
Urban	N	26	10	26	10
	M	10.7	9.8	12.2	11.2
	SD	3.7	7.2	4.4	4.5
All groups	M	10.03		12.64	
	SD	5.83		9.48	

Table XI  
Post-test Scores

	Control			Experiment	
		Male	Female	Male	Female
Rural	N	28	28	28	28
	M	21.7	19.1	40.3	35.3
	SD	6.1	6.1	19.3	17.4
Urban	N	26	10	26	10
	M	19	21.6	27.8	34.8
	SD	11.4	8.4	12.8	6.9
All groups	M	20.37		34.62	
	SD	8.23		16.5	

Table XII

**Difference in Mean scores of the two groups**

	Control			Experiment	
		Male	Female	Male	Female
Rural	N	28	28	28	28
	M	10	11.4	24.4	24.9
	SD	8.5	6.3	15.6	12.6
Urban	N	26	10	26	10
	M	8.5	13.8	15.6	23.6
	SD	10.7	6.6	11.4	5.6
All groups	M	10.34		21.98	
	SD	8.46		13.23	

In all categories, the average scores of experimental group is larger than that of control group. Also the variability is a little higher in experimental group than the control group in all categories. This difference may be because of influence of control variables over the dependent variable corresponding to the experimental group. This will be explained in the analysis section. Because of the heterogeneity among the variances, the 't' test and the usual two way analysis of variance techniques cannot be adopted. This is the reason for using the regression technique and analysis of covariance technique for analysing the data.

#### **4.1.3 Correlation Matrix of the Variables**

Correlation Matrix is the rectangular arrangement of Pearson's correlation Coefficient of the variables. It's  $i, j^{\text{th}}$  entry (entry corresponding to  $i^{\text{th}}$  row and  $j^{\text{th}}$  column) is the correlation coefficient between  $i^{\text{th}}$  and  $j^{\text{th}}$  variables. For the same values of  $i$  and  $j$  the entries will be one. All the remaining entries will be a number between -1 and +1. The negative sign indicates that the correlation of the variables are in opposite direction, that is when one increases the other will decrease. The positive sign indicates that the correlation of the variables are in the

same direction, i.e. when one increases the other will increase. The zero value indicates no correlation. The value one indicates perfect correlation.

In regression analysis, correlation Matrix is used to compute all the necessary statistics. The correlation Matrix with reference to all dependent variable and control variables are given below.

Table XIII

**The correlation matrix of Pre-test scores**

	PRE	Covar. ACHT	Covar. INT	Covar. AM	Covar. SH	Covar. SES
PRE	1	0.23	0.16	0.02	0.07	-0.04
ACHT	0.23	1	0.1	0.15	0.15	-0.06
INT	0.16	0.1	1	0.02	0.03	0.24
AM	0.02	0.15	0.02	1	0.15	-0.11
SH	0.07	0.15	0.03	0.15	1	0.01
SES	-0.04	-0.06	0.24	-0.11	-0.01	1

Table XIV

**The correlation matrix of post test scores**

	POST	Covar. ACHT	Covar. INT	Covar. AM	Covar. SH	Covar. SES
POST	1	0.40	0.14	0.12	0.09	-0.03
ACHT	0.40	1	0.1	0.15	0.15	-0.06
INT	0.14	0.1	1	0.02	0.03	0.24
AM	0.12	0.15	0.02	1	0.15	-0.11
SH	0.09	0.15	0.03	0.15	1	-0.01
SES	-0.03	-0.06	0.24	-0.11	-0.01	1

Table XV

**The correlation matrix of difference**

	IMP	Covar. ACHT	Covar. INT	Covar. AM	Covar. SH	Covar. SES
IMP	1	0.33	0.06	0.13	0.07	-0.02
ACHT	0.33	1	0.1	0.15	0.15	-0.06
INT	0.06	0.1	1	0.02	0.03	0.24
AM	0.13	0.15	0.02	1	0.15	-0.11
SH	0.07	0.15	0.03	0.15	1	-0.01
SES	-0.02	-0.06	0.24	-0.11	-0.01	1

Note that correlation between achievement and dependent variable (pre/post/difference) is high as compared to the correlation with other variables.

#### **4.1.4 Categorical normal plots**

For regression analysis, the basic assumption is the normality of error component. The normality can be tested graphically in normal plots. It is a scatter diagram type plotting in which if the points are closed to positively sloped straight line, the underlying assumption is valid. The categorised normal plots are drawn using statistical graph. In all categories, the assumption is valid with pre-test, post test and differential scores, as shown in the following graphs.

Figure 1  
Categorized Normal Plot for variable Pre-test Score (Locale)

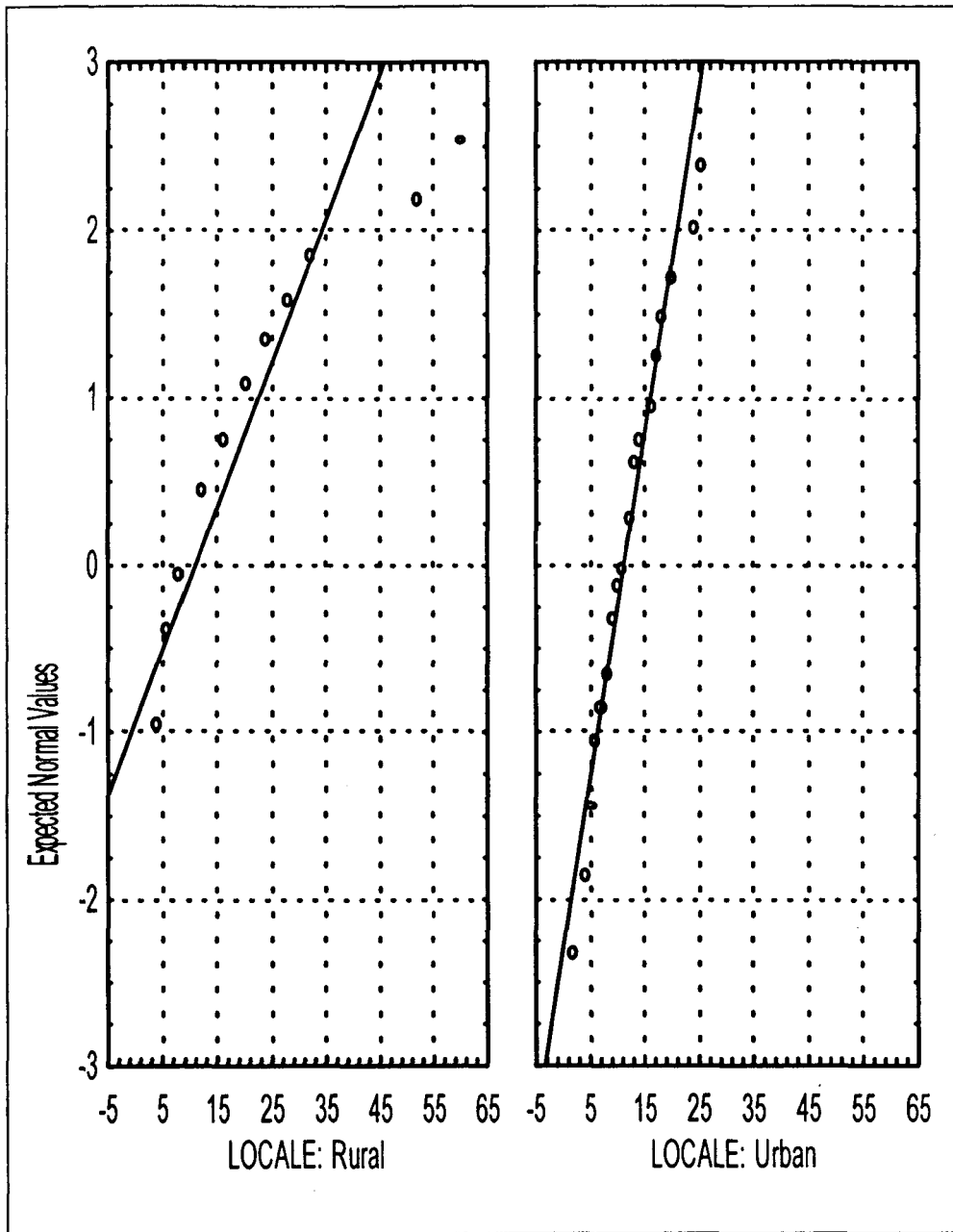


Figure 2  
Categorized Normal Plot for variable Pre-test Score (Sex)

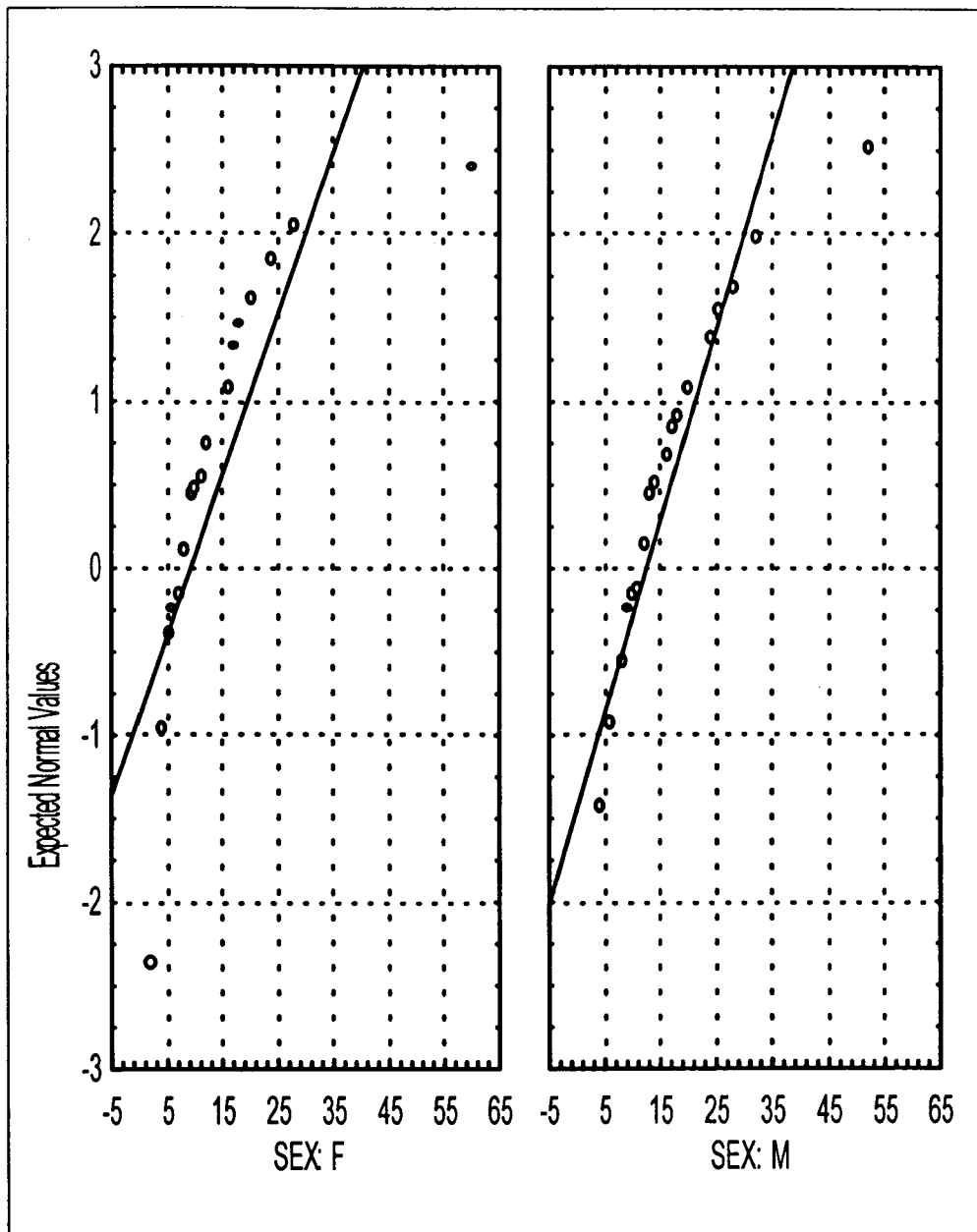


Figure 3

Categorized Normal Plot for variable Pre-test Score (Treatment)

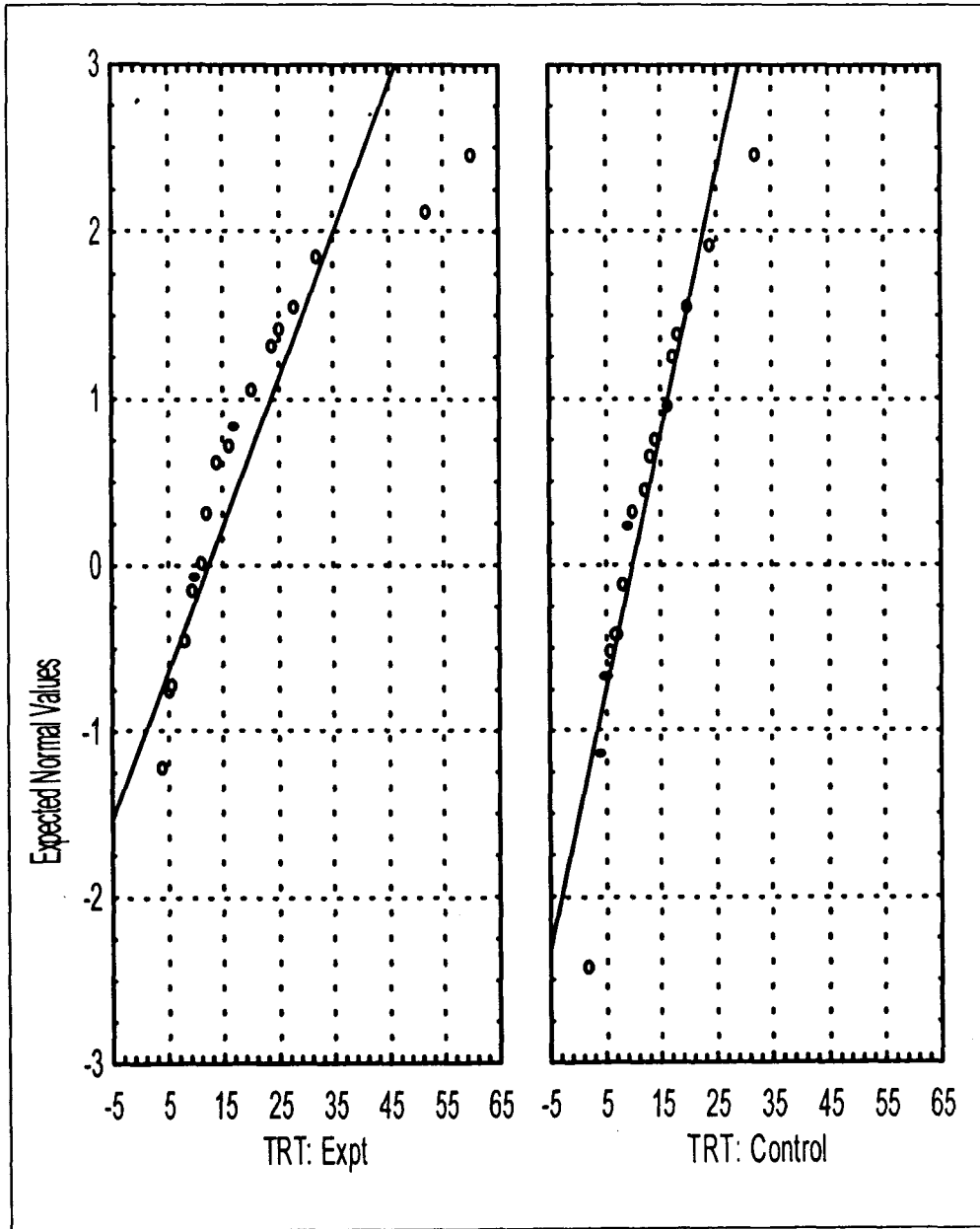


Figure 4  
Categorized Normal Plot for variable Post-test Score (Locale)

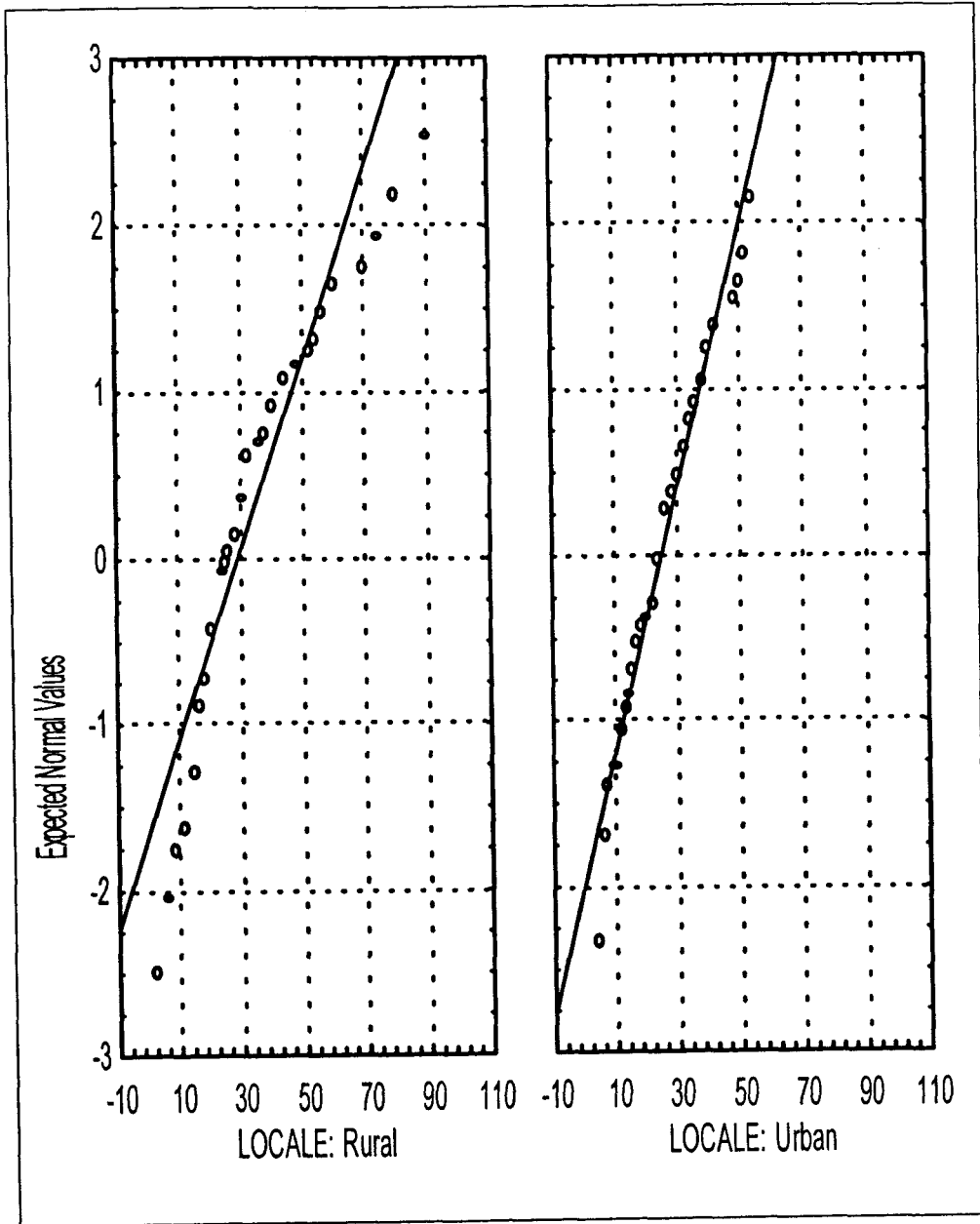


Figure 5  
Categorized Normal Plot for variable Post-test Score (Sex)

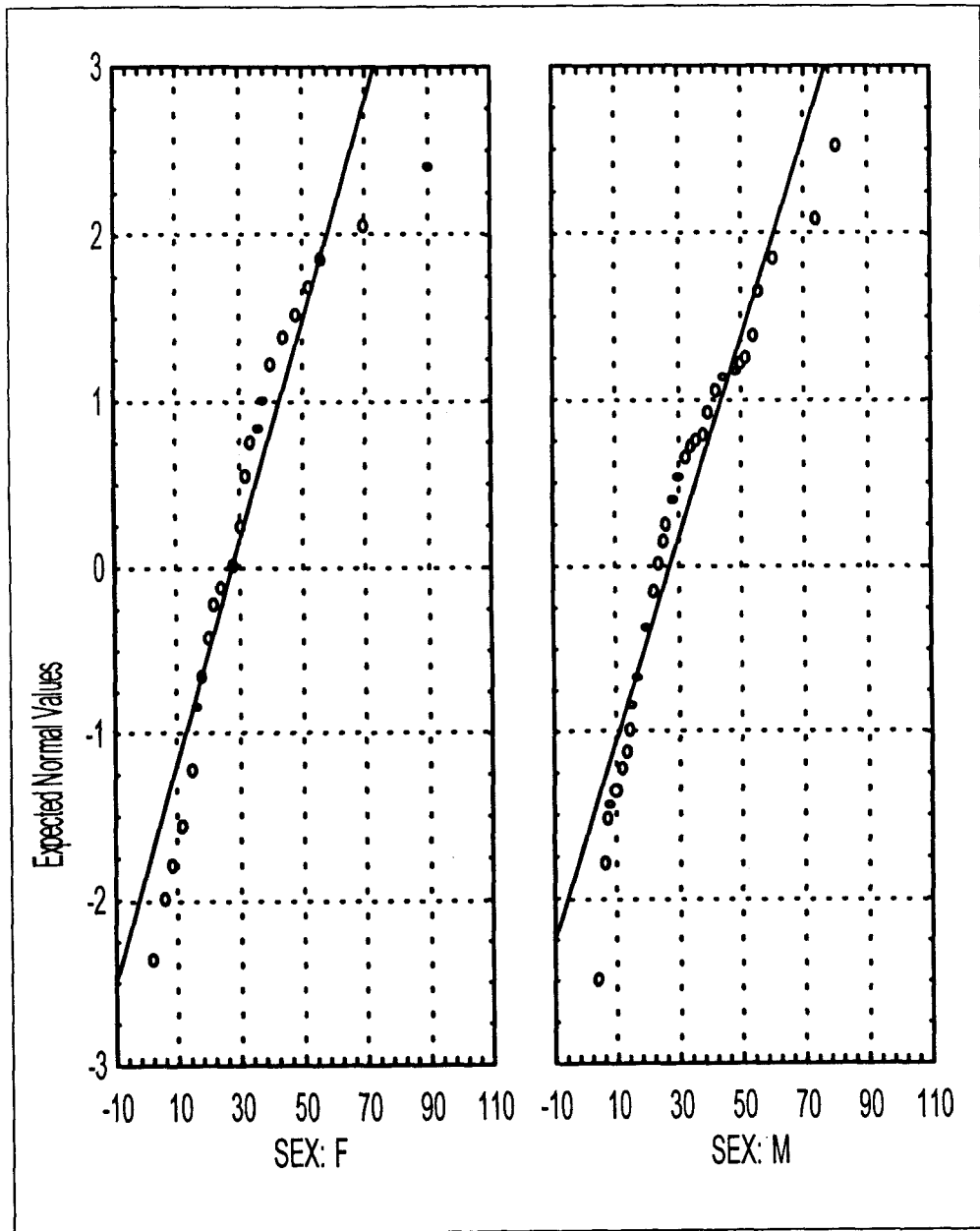


Figure 6  
Categorized Normal Plot for variable Post-test Score (Treatment)

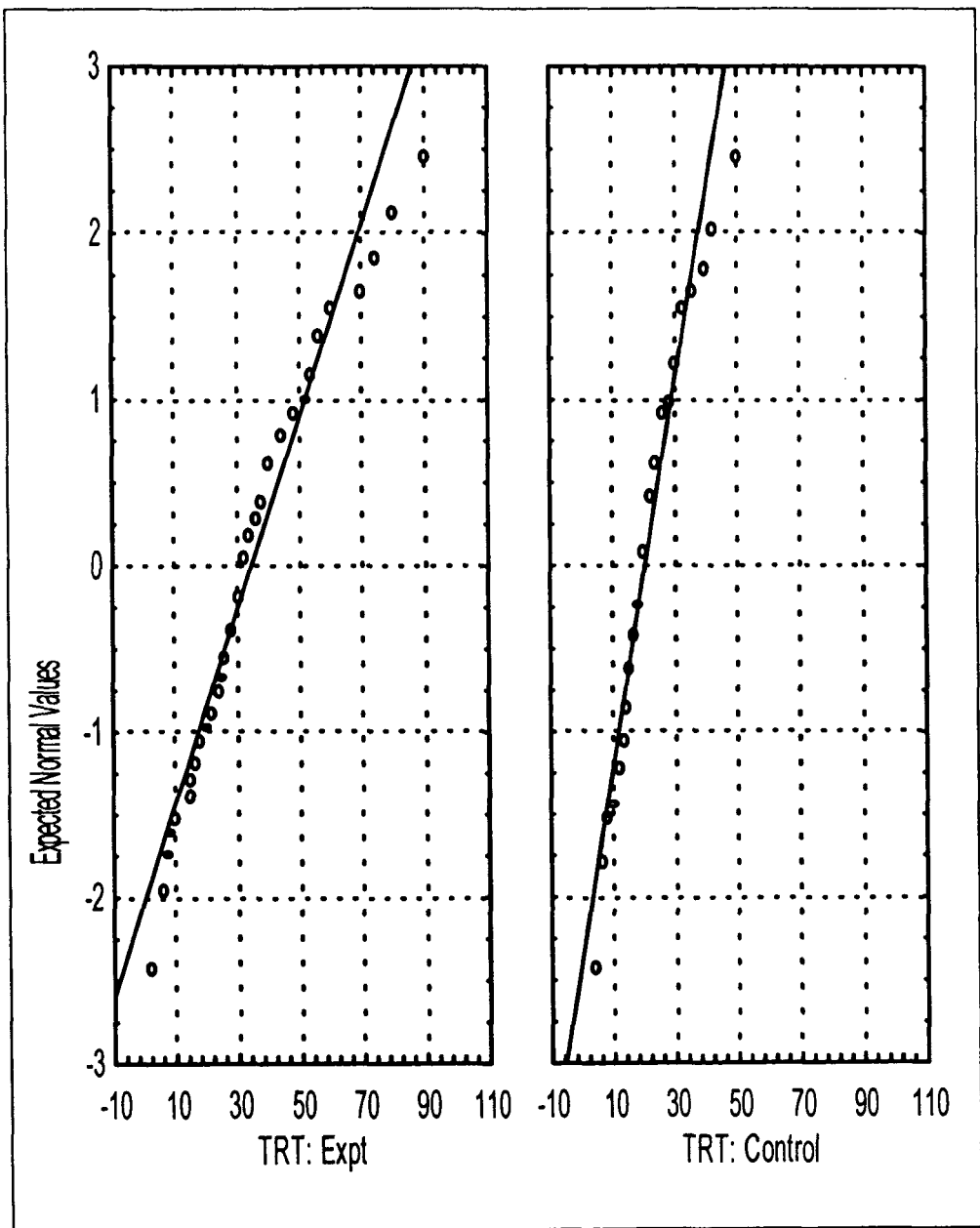


Figure 7

Categorized Normal Plot for variable Differential Score (Locale)

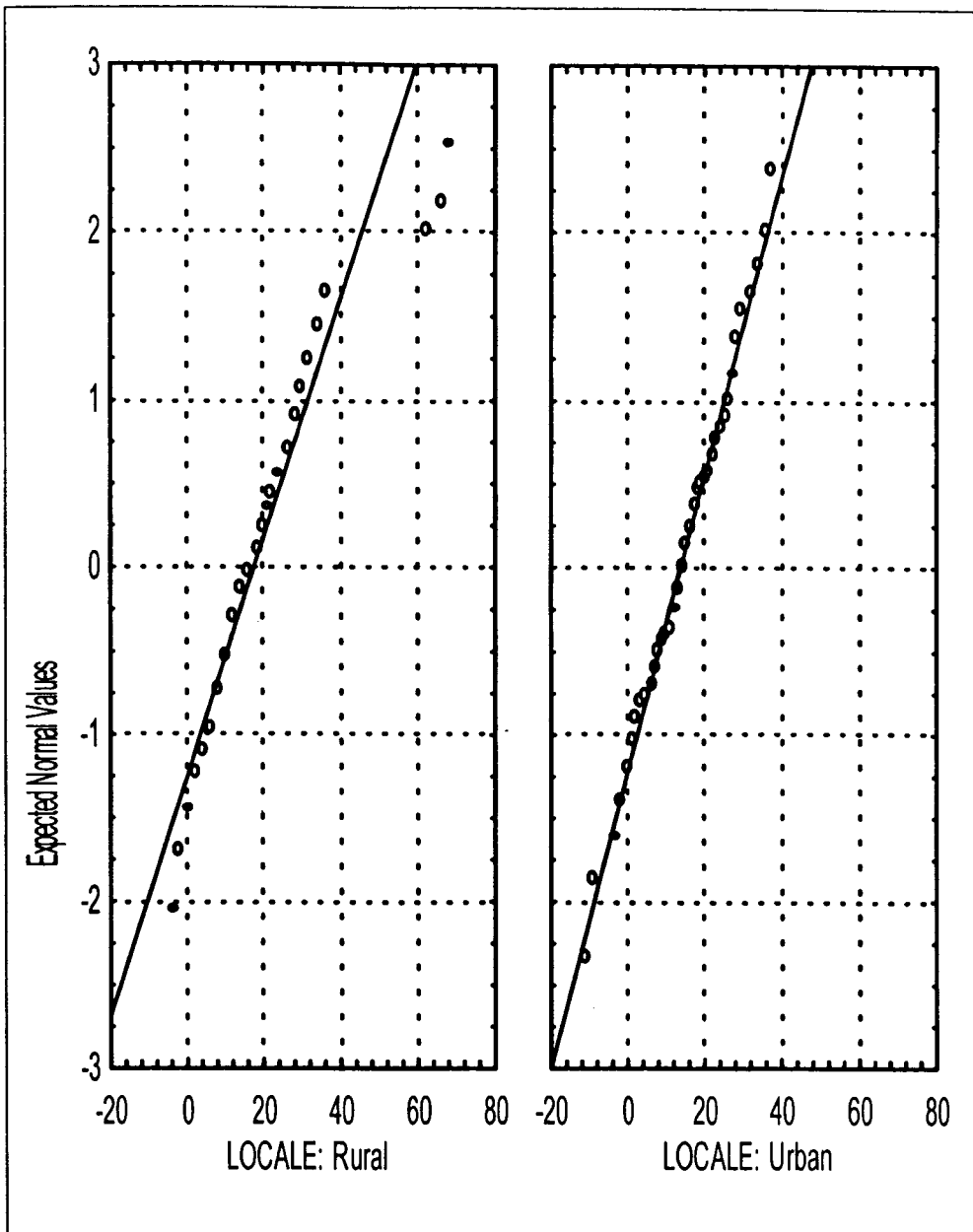


Figure 8  
Categorized Normal Plot for variable Differential Score (Sex)

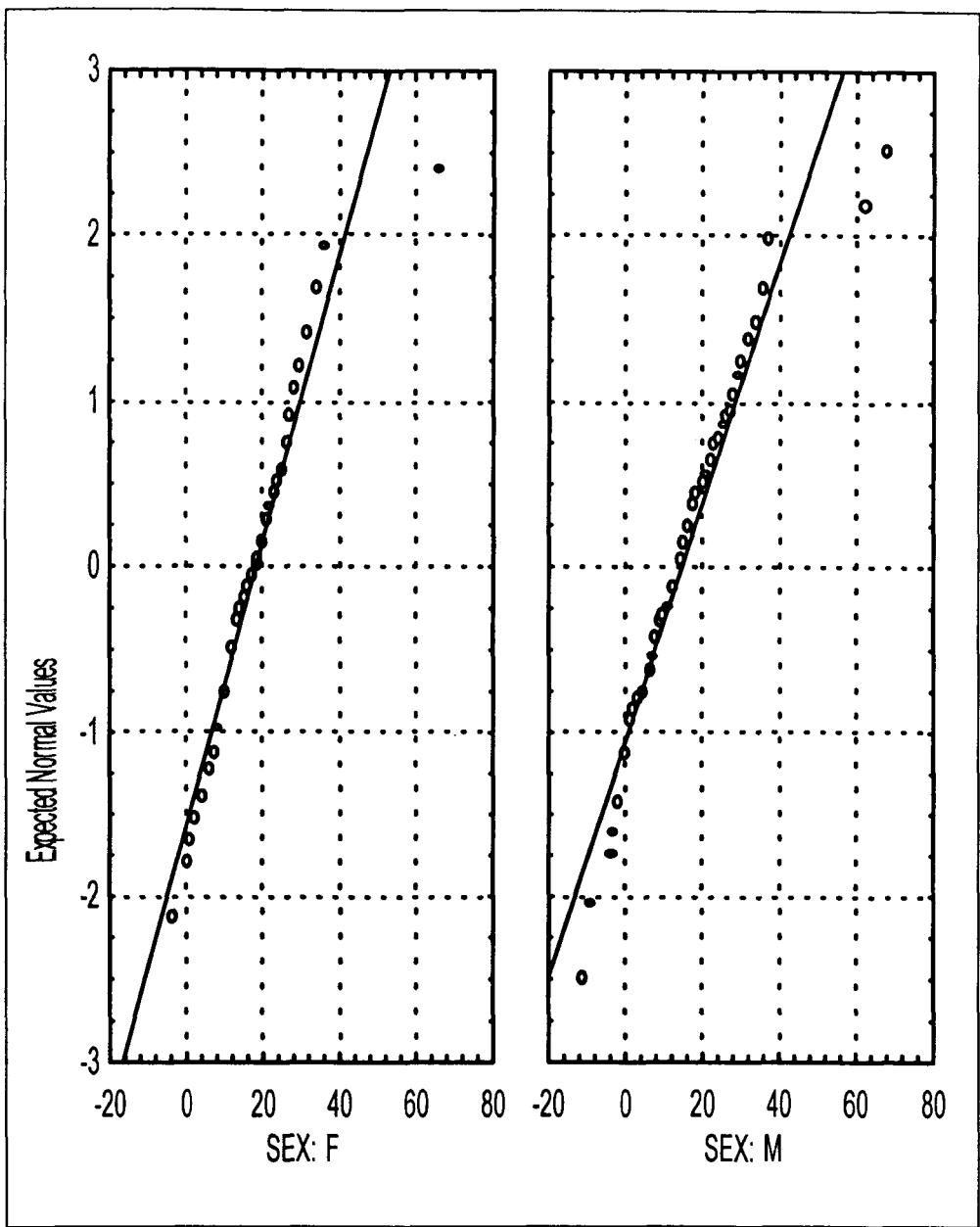
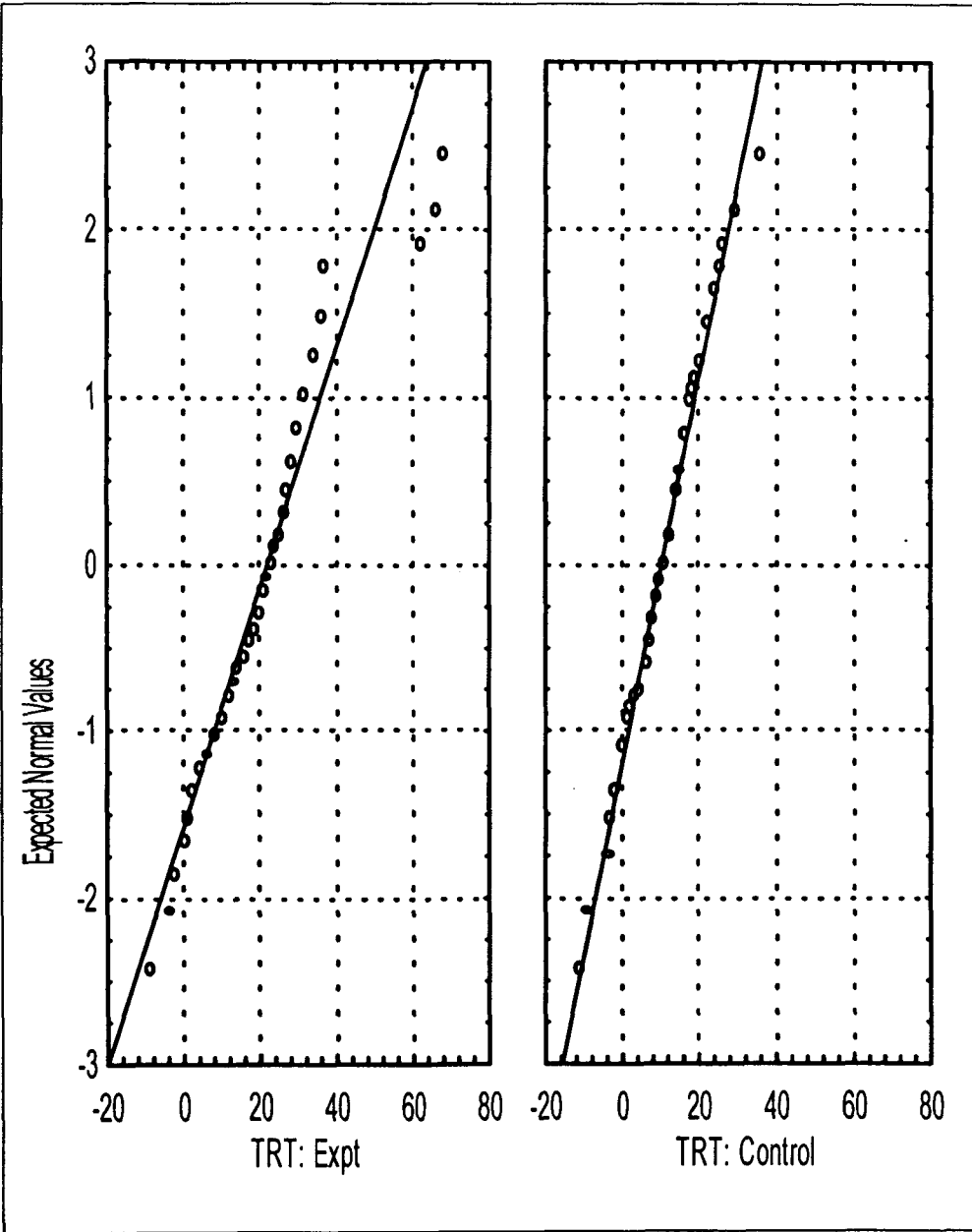


Figure 9  
Categorized Normal Plot for variable Differential Score (Treatment)



## **4.2 Verification of homogeneity of control group and experimental group with respect to control variables**

Equated groups have been framed with respect to the dichotomised variables in locale and sex as described in Chapter III. It is also expected that the groups are equated with respect to the selected control variables. In this section statistical tests are carried out for testing the homogeneity of control and experimental groups with respect to the control variables.

The tests of significance of difference between means of scores described above helped to identify the experimental variables for which there are significant differences between the groups. Factors like sex, locale, educational levels etc. are likely to be affected by the grouping. It is not unlikely that the over representation or under representation of some of these factors will affect the means of the experimental variables. The results of the tests of significance could have been vitiated by the over -representation or under-representation of these factors. Hence it was decided that two equated groups should be selected from the different achievement levels, verbal intelligence, achievement motivation, study habits and socio-economic status and for the two groups compared.

The homogenous groups were obtained by controlling the following variables; locale, sex, achievement level, verbal intelligence, achievement motivation, study habits and socio-economic status of the subjects. The method of selection could be illustrated as follows:

The investigator made two groups of respondents, i.e. experimental and control groups, using match-the-pair technique. In order to see whether the groups formed by match-the-pair technique, the experimental and control groups were statistically homogeneous with respect to the following control variables, the multiple regression method with forward stepwise technique is adopted.

1. Pre experimental level of achievement in English.
2. Verbal intelligence
3. Achievement motivation
4. Study habits
5. Socio economic status

Let 'Y' be a control variable and  $x_1$  be sex,  $x_2$  be locale and  $x_3$  be the grouping variable.

The influence of  $x_1$ ,  $x_2$  and  $x_3$  to 'y' can be modeled statistically as  $y = a_1 x_1 + a_2 x_2 + a_3 x_3 + e$ . where  $a_1$ ,  $a_2$  and  $a_3$  are called the multiple regression coefficient of  $x_1$ ,  $x_2$ ,  $x_3$  respectively on 'Y'.

If  $a_1$  is significant from zero, it is said that  $x_1$  (sex) has significant effect on 'Y'. If  $a_2$  is significant from zero, it can be said that  $x_2$  (locale) has significant effect on 'Y'. Similarly if  $a_3$  is significant from zero it can be said that the formed group is not homogenous.

If the first two variables are not considered in the model and if  $a_3$  is different from zero, it can not be claimed that the groups are not homogeneous (i.e. grouping is effective) because there is a possibility of domination of any of locale or sex in either group.

In each case of 'Y' forward stepwise regression technique is used to find most influencing variables among  $x_1$ ,  $x_2$  and  $x_3$ . If  $x_3$  is not included or included with insignificant F ( $P > 0.05$ ), it can be inferred that the two groups are homogenous. A detailed discussion of the case of all control variables mentioned above is given below:

#### **4.2.1 Pre experimental level of achievement**

Here 'Y' is pre experimental level of achievement. The following table gives the result of stepwise regression to identify the set of influencing variables in  $x_1$ ,  $x_2$ , and  $x_3$ .

Table XVI

**Result of Stepwise regression to identify the set of influencing variables in  $x_1$  (Sex)  $x_2$  (Locale),  $x_3$  (Grouping)**

Step in	Multiple R	Multiple R <sup>2</sup>	R <sup>2</sup> Change	F-to enter
Locale	0.123544	0.015263	0.015263	2.820929

In the above table, only locale is entered and all other variables are not entered. This means that  $a_1$  and  $a_3$  are not significant from zero (near to zero). Since  $a_3$  is not significant from zero, the two groups are statistically homogenous.

The Table XVII gives the result of analysis of variance tests for showing the significance of  $x_2$  (locale).

Table XVII

**Result of analysis of variance tests for showing the significance of  $x_2$  (Locale)**

Source	Sum of squares	df	Mean sum of squares	F	P. level
Locale	215.8458	1	215.8458	2.820929	0.094758
Error	13925.89	182	76.51587		
Total	14141.73				

The influence of locale is significant at p-level of 0.095 since p-level is greater than 0.05, it is not significant at 5%. Hence contribution of locale is not highly significant. Even though locale is entered in the forward method, its influence is not much significant.

Hence from the above analysis, the inference is that control group and experimental group are homogenous with respect to pre experimental level of achievement in English. The variable pre-experimental level of achievement also is not influenced by locale and sex.

#### 4.2.3 Verbal intelligence

Here 'y' is verbal intelligence. The table XVIII gives the result of stepwise regression to identify the set of influencing variables in  $x_1$ ,  $x_2$ , and  $x_3$ .

Table XVIII

**Result of stepwise regression to identify the set of influencing variables in  $x_1$  (Sex)  $x_2$  (Locale) and  $x_3$  (Grouping)**

Step in	Multiple R	Multiple R <sup>2</sup>	R <sup>2</sup> Change	F-to enter	P-level
Locale	0.284598	0.080968	0.080868	16.03437	9.07E-05
Sex	0.360922	0.130264	0.049297	10.25912	0.001607

Locale and sex are entered. The variable  $x_3$  is not entered. This means that  $a_3$  is not significant from zero. Hence the two groups are statistically homogenous.

The following table gives the result of analysis of variance tests for showing the significance of  $x_1$  (sex) and  $x_2$  (Locale).

**Table XIX**  
**Result of analysis of variance tests for showing the**  
**significance of  $x_1$  (Sex) and  $x_2$  (Locale)**

Source	Sum of squares	df	Mean sum of squares	F	p-level
Locale, sex	3882.659	2	1941.33	13.55462	3.27E-06
Error	25923.32	181	143.2227		
Total	29805.98				

The influence of locale and sex to the verbal intelligence is highly significant at p-level of 3.27 E-06 which is less than 0.01.

Hence the inference is the following:

Control group and experimental group are homogeneous with respect to verbal intelligence. The variable verbal intelligence is significantly influenced by locale and sex. The difference in means of control group and experimental group may be significant, because of influence of locale and sex, not because of grouping.

#### 4.2.4 Achievement motivation

Here 'Y' is achievement motivation. The table XX gives the result of stepwise regression to identify the set of influencing variables in  $x_1$ ,  $x_2$  and  $x_3$ . (sex, locale and grouping)

Table XX

**Result of stepwise regression to identify the set of influencing variables in  $x_1$  (sex),  $x_2$  (locale) and  $x_3$  (grouping) on achievement motivation**

Step in	Multiple R	Multiple $R^2$	$R^2$ Change	F-to enter	p-level
Locale	0.311839	0.097243	0.097243	19.6047	1.639E-5
Sex	0.374013	0.139886	0.042642	8.973551	2.20995E-5
Grouping	0.385584	0.148675	0.00879	1.858487	0.1713

Locale and sex entered with  $p < 0.01$  but grouping entered with P-value 0.1713. Hence the influence of grouping is not significant –i.e., control group and experimental group are homogenous.

The table XXI gives the result of analysis of variance tests for showing the significance of locale, sex on achievement motivation.

Table XXI

**Result of analysis of variance tests for showing significance of locale  $x_1$  (sex) and  $x_2$  (locale) on achievement motivation**

Source	Sum of squares	df	Mean Squares	F	p-level
Locale, Sex	1042.512	2	521.2562	14.71857	1.19E-06
Error	6410.091	181	35.41487		
Total	7452.603				

The influence of locale and sex is significant at p-level of 1.19E-06. Since p-level is less than 0.01, it is highly significant, i.e., there is significant influence by locale and sex on Achievement Motivation.

Hence inference is the following:

Control group and experimental group are homogenous with respect achievement motivation. The contributing variables are locale and sex but not the Grouping.

#### 4.2.5 Study Habits

Here 'y' is study habit. The table XXII gives the result of stepwise regression to identify the set of influencing variables in locale, sex and grouping.

Table XXII

**Result of stepwise regression to identify the set of influencing variables on locale, sex and grouping on study habits**

Step in	Multiple R	Multiple R <sup>2</sup>	R-square Change	F-to enter	p-level
Locale	0.160872	0.02588	0.02588	4.835255	0.029144

Only locale is entered in the table. All other variables are not entered. This means that  $a_1$  and  $a_3$  are not significant from zero (near to zero). Since  $a_3$  is not significant from zero, the two groups are statistically homogenous.

The table XXIII gives the result of analysis of variance tests for showing the significance of Locale.

Table XXIII

**Result of analysis of variance tests for showing  
significance of locale on study habits**

Source	Sum of squares	df	Mean of squares	F	p-level
Locale	272.6103	1	272.6103	4.835355	0.029144
Error	10261.11	182	56.37971		
Total	10533.72				

The influence of locale is significant at p-level of 0.029144. Since p-level is less than 0.05, the contribution of locale is significant (only at 5% level) on study habits. From the above analysis, the inference is that control group and experimental group are homogenous with respect to study habits.

#### 4.2.6 Socio Economic Status

Here 'Y' is Socio- economic status. The table XXIV gives the result of stepwise regression to identify the set of influencing variables locale, sex and grouping on socio economic status.

Table XXIV

**Result of stepwise regression to identify the set of influencing variables  $x_1$  (sex),  $x_2$  (locale) and  $x_3$  (Grouping) on Socio economic status**

Step in	Multiple R	Multiple $R^2$	$R^2$ Change	F to enter	p-level
Locale	0.54488	0.296894	76.85139	76.85139	1.36E-15
Sex	0.560963	0.314679	0.017786	4.697338	0.031523
Grouping	0.568378	0.323054	0.008374	2.226727	0.137391

Only locale is entered with p-value less than 0.01. Sex entered with p-value 0.03 and grouping entered with p-value 0.137. Hence the influence of grouping is negligible. It can be summarised that the experimental and control groups are homogenous.

The table XXV gives the result of analysis of variance tests for showing the significance of locale and sex on socio-economic status.

Table XXV

**Result of analysis of variance tests for showing the significance  $x_1$  (Sex) and  $x_2$  (Locale) on socio economic status**

Source	Sum of squares	df	Mean squares	F	p-level
Locale and Sex	48639.98	2	24319.99	41.55498	1.41E-15
Error	105930	181	585.2485		
Total	154570				

The influence of locale and sex is significant at p-level of 1.41E-15. Since p-value is less than 0.01 the influence of locale and sex is highly significant on socio economic status.

From the above analysis, the inference is that experimental and control groups are homogeneous with respect to socio-economic status. Locale and sex are significantly influencing socio-economic status but there is no effect of the grouping.

#### 4.2.7 Findings of the sections

The experimental and control groups are homogeneous with respect to

1. pre-experimental achievement level in English.
2. verbal intelligence.
3. achievement motivation
4. study habits, and
5. socio economic status

The F-test between homogeneity of experimental and control groups may lead to the significance in the case of all variables except pre-experimental level of achievement. But by the above procedure, it can be clarified that the difference shown by the F-test is because of the heterogeneity within the group due to locale and sex. The above procedure eliminates the effect of locale and sex to see the effect of grouping. It is concluded that by eliminating the effect of locale and sex, the control and experimental groups are homogeneous with respect to all the above mentioned variables.

Because of this homogeneity between control group and experimental group, it can be easily visualised difference of effectiveness of programmed instruction and conventional method of teaching. In the

next section the analysis of the effectiveness of programmed instruction over the conventional method is discussed.

### **4.3 Analysis of Effectiveness of Programmed Instruction**

In this section, the effectiveness of programmed instruction is tested with reference to the hypotheses framed in chapter I in general and whether the effectiveness is influenced by the control variables and test of main effects interaction effects sex and locale after eliminating the effect of control variables.

In section 4.3.1, the stepwise (forward and backward) regression techniques are used for eliminating insignificant variables and then finding the significant variables. In sections 4.3.2, ANCOVA is used to test main effects and interaction effects of locale and sex by eliminating the effect of control variables.

To study the effectiveness of controlled variables over the post-score, achievement has been taken as the dependent variable ( $y$  as post score-pre score). The controlled variables are  $x_1$  treatment,  $x_2$  achievement level,  $x_3$  Locale,  $x_4$  sex,  $x_5$  socio economic status,  $x_6$  verbal intelligence,  $x_7$  achievement motivation and  $x_8$  study habits.

The linear regression model for 'Y' is  $Y = a_1 x_1 + a_2 x_2 + a_3 x_3 + a_4 x_4 + a_5 x_5 + a_6 x_6 + a_7 x_7 + a_8 x_8 + e$  (error component).

If 'a' is significant from 0 the corresponding variable is significantly influencing on 'Y'. If 'a' is near to zero the corresponding variable is not significantly affecting 'Y'.

#### 4.3.1 Stepwise regression technique

First we see that whether the influence of six variables are significant for 'Y'. Table XXVI gives the result of ANOVA.

Table XXVI

**Summary of ANOVA showing the significance of the 6 variables i.e. treatment, achievement, locale, socio-economic status, sex and verbal intelligence**

Source	Sum of squares	df	Mean squares	F	p-level
Regression of six variables	10469.92	6	1744.967	16.97934	1.89E-15
Residual/ Error	18190.5	177	102.7712		
Total	28660.43				

From the table it is clear that F is highly significant with ( $p < 0.01$ ).

Hence all the variables are to be considered.

To find out the most significantly influencing variables in  $x_1, x_2, \dots, x_8$  backward and forward stepwise method of regression analysis is used.

The table XXVII gives the summary of the stepwise (backward) regression

Table XXVII

**Summary of the stepwise (backward) regression**

Step out	Multiple R	Multiple R <sup>2</sup>	R-square Change	Backward F-to remove	p-level
Study habit	0.605433	0.366549	-4E-06	0.061114	0.97347
Achievement motivation	0.604408	0.365309	-0.00124	0.344424	0.558018
Verbal intelligence	0.599722	0.359667	-0.00564	1.573668	0.211293
Sex	0.594306	0.353202	-0.00646	1.796927	0.181765
Socioeconomic status	0.584097	0.34117	-0.01203	3.330039	0.069674
Locale	0.573508	0.328912	-0.01226	3.349015	0.06889

In the above table, study habit removed first, then achievement motivation, then verbal intelligence, then sex, then socio economic status, finally locale. Treatment and achievement are not removed. This means that treatment and achievement are significantly contributing on 'Y'.

The table XXVIII gives the summary of stepwise regression (Forward).

Table XXVIII

**Summary of stepwise regression (Forward)**

Step in	Multiple R	Multiple R <sup>2</sup>	R <sup>2</sup> change	F-to enter	p-level
Treatment	0.466379	0.21751	0.21751	50.59071	2.71E-11
Achievement	0.573508	0.328912	0.111402	30.04635	1.43E-67
Locale	0.584097	0.34117	0.012258	3.349015	0.068927
Socio-economic status	0.594308	0.353202	0.612033	3.330039	0.069711
Sex	0.599722	0.359667	0.006464	1.796927	0.181802
Verbal intelligence	0.604408	0.365309	0.005643	1.573668	0.211329

In the above table, the treatment and achievement entered with p-value less than 0.01. Hence those two variables are significantly influencing 'Y'. Locale and socio economic status is entered with p-value 0.069 and the other variables are entered with high p-value. The variables study habit and achievement motivation are not entered in the table and hence there is no effect by these variables on 'Y'.

The step-wise forward and backward regression technique ultimately give the following findings.

1. The treatment is significantly contributing to 'Y'. That means programmed instruction is significantly effective for teaching English as compared to conventional teaching.
2. The effectiveness is also influenced by achievement i.e., effectiveness is different for different achievement levels.
3. No other variables are significantly contributing on 'Y'.

The above conclusion is strengthened by the following ANOVA test.

Table XXIX

**Summary of the ANOVA for showing the significance of treatment and achievement on 'Y' (Post score - Pre score)**

Source	Sum of squares	df	Mean squares	F	p-level
Treatment Achievement	9426.747	2	4713.374	44.35555	2.11E-16
Residual(error)	19233.68	181	106.2634		
Total	28660.43				

From the above table, it is clear that the influence of the two variables viz. treatment and achievement are highly significant with a negligibly small p value. Also note that the p value in table XXVI is much smaller than p value in table XXIX. That means the influence of treatment and achievement is much stronger than initiating influence of all the six variables.

#### **4.3.2 Analysis of covariance**

To see the main effect and possible interaction of treatment, locale and level of achievement (high, low), the analysis of co-variance technique is used with co-variant as the socio economic status.

The table XXX gives the summary of analysis of variance within - cells regressions of socio-economic status.

Table XXX

**Summary of analysis of variance within-cells  
regressions of socio economic status**

Source	Sum of squares	df	Mean square	F	p-level
SES	439.1018	1	439.1018	4.138063	0.043439
Error	18569.75	175	106.1129		

From this table, it can be found that p-value is 0.043439 which is not less than 0.01. Hence the effect of Socio economic status (SES) is not highly significant. It is significant only at 5% level.

The table XXXI gives the summary of all main effects and interaction effects of treatment, locale and achievement groups (high and low).

Table XXXI

**Summary of the main effects and interaction effects of treatment  
(programmed instruction), locale and achievement  
groups (high and low)**

Source	df effect	Ms Effect	df error	Ms Error	F	p-level
1Locale	1	1083.106	175	106.1129	10.20711	0.00166 **
2Treatment	1	5537.256	175	106.1129	52.1827	1.49E-11 **
3Acht.groups	1	1666.838	175	106.1129	15.70816	0.000108 **
12(Lcl&trt)	1	308.8039	175	106.1129	2.910146	0.089798 NS
13(Lcl&acht)	1	83.76556	175	106.1129	0.789401	0.375501 NS
23(Trt&acht)	1	401.901	175	106.1129	3.787486	0.053239 NS
123(lcl,tr,ac)	1	260.2353	175	106.1129	2.452439	0.119149 NS

**\*\* indicate high significance. NS indicates no significance.**

From this table it can be found that none of the interactions are significant. Only the three main effects are significant. It can also be noted that the main effect of treatment is highly significant than that of locale

and achievement levels (high, low). This means that the programmed instructions are highly effective.

Since all the interactions are not significant the effectiveness of programmed instructions is same through all locale and all achievement groups (low and high). Since the F-value for the treatment is very high (as p-value is very small), the influence of programmed instruction is higher than conventional method of teaching on achievement in English in all locale groups and achievement groups.

The table XXXII gives the summary of the effectiveness of programmed instruction and conventional method. From the table 21 and figure 1, it is clear that the programmed instruction is highly effective as compared to conventional method in locale group and achievement group. It is highly effective in rural high achievers, and less effective in urban low achievers.

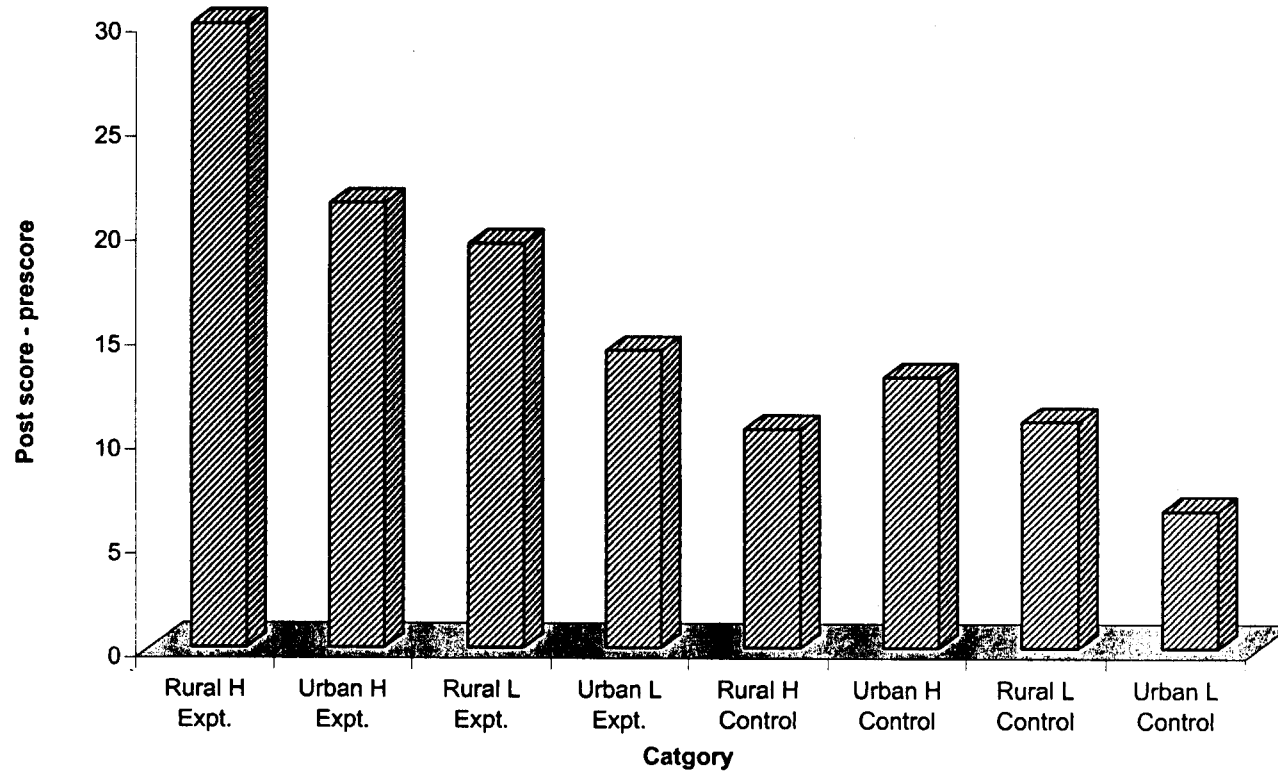
Table XXXII

**Summary of the effectiveness of programmed instruction  
and conventional method of teaching**

Treatment	Level of achievement	Locale	Mean of post score- pre score
Experimental	High	Rural	29.92857
Experimental	High	Urban	21.33333
Experimental	Low	Rural	19.39286
Experimental	Low	Urban	14.27778
Control	High	Rural	10.5
Control	High	Urban	13
Control	Low	Rural	10.85714
Control	Low	Urban	6.611111

The bar diagram of the above data is given in figure 10.

Fig. 10 Diagram showing the Improvement on Post test



#### 4.4 Discussion on Statistical Findings

The findings obtained by the analysis can be summarized as the following.

1. Verbal intelligence, achievement motivation, study habits, socio economic status, sex are eliminated through the step out method and hence they are not influencing the post score on achievement.
2. The influencing variables are treatment, level of achievement (high, low) and locale.
3. The main effect of the influencing variables (treatment, achievement, locale) are significant.
4. Any of interaction among three variables are not significant and hence effectiveness of programmed instruction is the same in the case of locale groups and level of achievement groups.
5. Since verbal intelligence, achievement motivation, study habits, socio economic status, sex are not influencing the post test scores and the main effect of the treatment is significant, the influence of programmed instruction is much more than conventional method in the case of all different groups of those variables- verbal intelligence, achievement motivation, study habits, socio economic status, sex, level of achievement and locale.

6. The programmed instruction was found to be more effective than the conventional method of teaching irrespective of ability groups viz. intelligence, achievement in English, achievement motivation, study habits, socio economic status, sex and locale.

#### **4.5 Conclusions**

The following are the conclusions for the study extracted from the analysis.

1. The experimental group that learnt English through programmed materials achieved high mean scores than that of control group which learnt through conventional method of teaching.
2. The programmed instruction is found to be effective for the two achievement levels (high, low).
3. The programmed instruction is found to be effective for the two ability levels (high, low).
4. The programmed instruction is found to be effective for the two groups of locale (Urban and Rural).

5. The programmed instruction is more effective than conventional method of teaching irrespective of the sex difference.
6. Learning through programmed material was found to be beneficial to the students irrespective of their achievement motivation status.
7. Learning through programmed material was found to be beneficial to the students irrespective of their study habits.
8. Learning through programmed material was found to be beneficial to the students irrespective of their socio-economic status.

**A STUDY OF THE EFFECTIVENESS OF PROGRAMMED  
INSTRUCTION IN LEARNING ENGLISH AS A SECOND  
LANGUAGE BY SECONDARY SCHOOL PUPILS**

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Thesis  
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# CONCLUSIONS AND SUGGESTIONS

- Study in retrospect
- Objectives of the study
- Hypotheses
- Methodology of the study
- Design of the study
- Sample
- Tools
- Statistical techniques and methods of analysis
- Important findings
- Tenability of the hypotheses
- Educational implications of the study
- Suggestions for further research

## CONCLUSIONS AND SUGGESTIONS

The present chapter provides an overview of significant aspects of the study, in the following subsections

1. Study in retrospect
2. Objectives of the study
3. Hypotheses of the study
4. Methodology
5. Tenability of hypotheses
6. Major conclusions
7. Implication of the study
8. Suggestions

### 5.1 The study in retrospect

The major aim of the present research has been to study the effectiveness of programmed instruction in learning English when compared to the traditional classroom teaching of English. The study has been designed with achievement in English as dependent variable. The independent variables used for the present research are as follows:

1. English achievement level
2. Verbal intelligence
3. Achievement motivation
4. Study habits
5. Socio economic status
6. Sex
7. Locale
8. Treatment (experimental and control groups)

## **5.2 Objectives of the study**

5.2.1 To determine the comparative effectiveness of programmed instruction and conventional method of teaching on achievement in English of secondary school pupils.

5.2.2 To study the linear effect of the following select control variables on the scores of achievement in English.

- a. Treatment (Programmed instruction and conventional method)
- b. Pre experimental level of achievement in English
- c. Verbal intelligence
- d. Achievement motivation

- e. Study habits
- f. Socio economic status
- g. Sex
- h. Locale

5.2.3 To find out the main effect of the following select variables on achievement in English.

- a. Treatment (Programmed instruction and conventional method)
- b. Pre experimental level of achievement in English
- c. Verbal intelligence
- d. Achievement motivation
- e. Study habits
- f. Socio economic status
- g. Sex
- h. Locale

5.2.4 To find out the interaction effect of the following select control variables on achievement in English

- a. Treatment and locale
- b. Locale and level of achievement
- c. Treatment and level of achievement
- d. Treatment and verbal intelligence
- e. Treatment and achievement motivation
- f. Treatment and study habits
- g. Treatment and socio economic status
- h. Locale, Level of achievement and Treatment

(Note: Treatment is programmed instruction and conventional method of teaching)

### **5.3 Hypotheses**

5.3.1 There will be significant difference on the achievement in English of the group of pupils learning through the conventional method of teaching English and the group of pupils learning through the programmed instructional procedure.

5.3.2 There will be significant linear effect of the following control variables on the scores of the achievement in English

- a. Treatment (Programmed instruction and conventional method)

- b. Pre experimental level of achievement in English
- c. Verbal intelligence
- d. Achievement motivation
- e. Study habits
- f. Socio economic status
- g. Sex
- h. Locale

5.3.3 There will be significant main effect of the following control variables on achievement in English

- a. Treatment (Programmed instruction and conventional method)
- b. Locale
- c. Achievement level (high and low)
- d. Verbal intelligence
- e. Achievement motivation
- f. Study habits
- g. Sex
- h. Socio economic status

5.3.4 There will be significant interaction effect of the following control variables on achievement in English

- a. Treatment and locale
- b. Locale and level of achievement (high and low)
- c. Treatment and level of achievement
- d. Treatment and verbal intelligence
- e. Treatment and achievement motivation
- f. Treatment and study habits
- g. Treatment and socio economic status
- h. Locale, level of achievement and treatment

*(Note: Treatment is programmed instruction and conventional method of teaching)*

## **5.4 Methodology of the Study**

### **5.4.1 Design of the study**

The objectives selected for the study enabled the investigator to conduct the study using the experimental design. The study used an experimental group and control group testing.

### **5.4.2 Sample**

Simple random sampling technique was used for the selection of the schools. A total of 184 subjects were used for the study. Experimental group was taught by programmed instruction and the control group by conventional method of teaching. The sample of the study consists 92 experimental subjects and 92 control group subjects. The study has been conducted in Govt. Sarvajana Higher Secondary School, Sulthan Bathery, Govt. Model Higher Secondary School, Kottayam and Islamic High School, Aluva from three districts viz. Wayanad, Kottayam and Ernakulam. Pupils of standard IX was selected as representative sample of secondary school pupils of Kerala. The selected sample included 72 pupils from urban areas and 112 pupils from rural areas.

### **5.5 Tools used for the study**

The tools used are

1. Self-instructional materials prepared by the investigator with the help of the Supervising Teacher.
2. Pre Experimental Test in English.
3. Post Experimental Test in English.

4. Kerala University Group Test of Intelligence
5. Kerala Scale of Achievement Motivation
6. Study Habits Rating Scale
7. Personal Data Sheet.

## **5.6 Statistical Techniques and Methods of Analysis**

The analysis was done using the following statistical techniques

### **5.6.1 Multiple regression technique**

- i Stepwise Forward method
- ii Stepwise backward method

### **5.6.2 Analysis of Variance**

### **5.6.3 Analysis of Covariance**

The data collected were used for comparison in the case of

1. Homogeneous groups
2. Achievement levels
3. Verbal intelligence
4. Achievement motivation
5. Study habits

6. Socio economic status
7. Sex
8. Locale

### **5.7 Important Findings**

The effectiveness of two different strategies viz. Conventional method of instruction and programmed instruction on the achievement in English were studied. The Software 'Statistica' was used for statistical analysis of influence and interaction of the variables.

Important findings of the study are presented below.

1. The experimental group that learnt English through programmed instruction achieved high mean scores than that of control group, which learnt through the conventional method of teaching.
2. The programmed instruction is found to be effective for two achievement levels (high, low).
3. The programmed instruction is found to be effective for the two ability levels (high and low intelligence).
4. The programmed instruction is found to be effective for the two groups of locale (Urban and Rural).

5. The programmed instruction is more effective than the conventional method of teaching irrespective of the sex difference.
6. Learning through programmed material was found to be beneficial to the students irrespective of their achievement motivation status.
7. Learning through programmed material was found to be beneficial to the students irrespective of their study habits.
8. Learning through programmed material was found to be beneficial to the students irrespective of their socio-economic status.

## **5.8 Tenability of the Hypotheses**

The analysis throws light on the tenability of the hypotheses set and tested for the study.

- 5.8.1 The obtained significant F ratio 52.1827 and P-value 1.49E-11 show that the influence of programmed instruction is much more than conventional method. So the first hypothesis i.e. there will be significant difference on the achievement in English of the group

of pupils learning through the conventional method of teaching English and the group of pupils learning through the programmed instructional procedure is substantiated to the full extent.

5.8.2 The Second hypothesis is that there will be significant linear effect of the following control variables on achievement in English.

- a. Treatment (Programmed instruction and conventional method)
- b. Locale
- c. Level of achievement (high, low)
- d. Verbal intelligence
- e. Achievement motivation
- f. Study habits
- g. Sex
- h. Socio economic status

The obtained F- ratios and p-values (Table XV to Table XIX) show that only 3 linear effects are significant. The hypotheses with respect to treatment (programmed instruction and conventional method of teaching), locale and level of achievement (low and high), are

therefore substantiated. The hypotheses with respect to verbal intelligence, achievement motivation, study habits, sex and socio-economic status are rejected.

5.8.3 The third hypothesis is that there will be significant main effect of the following control variables on achievement in English.

- a. Treatment (Programmed instruction and conventional method)
- b. Locale
- c. Level of achievement (high, low)
- d. Verbal intelligence
- e. Achievement motivation
- f. Study habits
- g. Sex
- h. Socio economic status

The obtained F- ratios and p-values (the table XX), show that only the three main effects i.e. treatment, level of achievement (high, low) and locale are significant. Also it can be seen that main effect of treatment is highly significant than that of locale and achievement level. This means that the programmed instruction is highly effective. Thus the

hypotheses with respect to treatment, locale and level of achievement are substantiated. The hypotheses with respect to verbal intelligence, achievement motivation, study habits, sex and socio economic status are rejected.

5.8.4 The fourth hypothesis is that there will be significant interaction effect of the following control variables on achievement in English.

- a) Treatment and locale.
- b) Locale and level of achievement.
- c) Treatment and level of achievement.
- d) Treatment and verbal intelligence.
- e) Treatment and achievement motivation.
- f) Treatment and study habits.
- g) Treatment and socio economic status.
- h) Locale, level of achievement and treatment.

(Note: Treatment is programmed instruction and conventional method of teaching)

The obtained F-ratios and P-values (the table XX) show that none of the interactions are significant. The hypothesis No. 4 is therefore rejected.

## **5.9 Educational Implications of the Study**

The study has revealed that the achievement of the students who learnt the lessons using programmed instruction technique shows significant difference from that of those who used traditional techniques. This is in agreement with the findings of most of the earlier studies which showed results in favour of programmed instruction.

Based on the results of the study the following suggestions have been made for improving the existing methods of teaching and educational practices in secondary schools. The results of the present study help to provide practical suggestions and guidelines for changing present strategies of teaching English. The study has found that any group of school children receiving self learning materials and getting enough time for learning English will benefit much from that type of instruction. The teaching strategies are to be oriented towards this direction.

The results show that irrespective of the ability levels, English achievement levels, study habits, achievement motivation, socio economic status, sex and locale of the pupils, programmed learning strategy has significant advantage over conventional method of

instruction. Thus programmed instructional strategy is equally applicable to all categories of pupils of secondary schools.

Programmed instruction strategy enables each student to learn English at his own pace. Teachers need only give guidance and additional instruction. The results also show that programmed instruction strategy have significant effect on achievement in English. Another important implication of the study is that better results can be achieved without using additional instructional time. This would enable the teachers to create among students interest in learning English and also to inculcate favourable attitude towards English.

Since it has been established that the programmed instruction strategy has definite positive impact upon achievement in English of pupils, it can be adopted as an important instructional strategy for teaching English. Since this strategy involves practically no additional financial commitments, the educational administrators will find it financially feasible for implementation as a total strategy or supplementary strategy for teaching English.

Programmed instruction is very useful for conducting remedial teaching and revision. Existing workbooks and exercise books can be modified as programmed instructional material. Programmed instruction can be the best strategy for courses of open school system and distance education programme. It leads to computer assisted instruction also. It is therefore suggested that, from the very beginning pupils may be introduced to the way of graded self-study materials advocated by programmed learning. So that its benefits could be achieved to the maximum possible.

Expert teams have to be trained and guided in the production of excellent programmed instructional materials and teachers are to be trained to produce and use the self-instructional materials. It is therefore recommended that as a pre-requisite for introducing the strategy-excellent self instructional materials should be got developed tried out and made foolproof and those should be used for instruction. Teachers who have to organise such individualised instructional programmes should be conversant with the philosophy, concept and methodology of it. Hence practical training has to be given to them.

Programmed instruction being an effective strategy, the attractiveness of new technologies can be used as a way to win the children over and free them from traditional teaching methods, which are uninteresting to them. Today, most schools, have started using computers for educational purposes. Self instructional soft-wares may be developed for computer assisted instruction. Computer assisted instruction could be followed at school level. Floppy disks and Compact disks could be developed for self-instructional purpose. Audio cassettes could be made for developing oral-aural skills.

The shortage of well qualified teachers can also be solved by introducing programmed materials in a large scale. The present evaluation system has a lot of drawbacks. For immediate feed back and confirmation the formative evaluation is more important than summative evaluation. The major characteristic of the instruction is that it provides ample chances for immediate feedback and confirmation.

### **5.10 Suggestions for further Research**

1. The same study can be extended to larger samples. A more comprehensive study with a longer duration and the coverage of a larger number of units and skills can be attempted.
2. The effectiveness of programmed instruction in lower classes could be studied.
3. The effectiveness of programmed instruction using different types of programmed materials could be studied.
4. Variation of the programmed learning strategy using modern technological devices for revision, remedial instruction and formative evaluation and the like also can be experimented.
5. Effect of programmed instruction on affective and cognitive aspects of achievement in English can be studied.
6. The study of the effect of programmed instruction can be extended to other curricular areas.

**A STUDY OF THE EFFECTIVENESS OF PROGRAMMED  
INSTRUCTION IN LEARNING ENGLISH AS A SECOND  
LANGUAGE BY SECONDARY SCHOOL PUPILS**

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**STANDARDISED TOOLS**

Mohammed, T. K and Shihabudeen, S (1997). *Programmed Instructional Material for 'Tenses' in English of Standard IX*. Department of Education, University of Calicut.

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**A STUDY OF THE EFFECTIVENESS OF PROGRAMMED  
INSTRUCTION IN LEARNING ENGLISH AS A SECOND  
LANGUAGE BY SECONDARY SCHOOL PUPILS**

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2001

# **APPENDICES**

## **Appendix I**

**Programmed Material for 'Tenses'  
in English of standard IX pupils.**

By

Dr. T.K. Mohammed  
and  
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**Department of Education  
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## INSTRUCTIONS TO PUPILS.

This is a programmed text book which is meant for self learning English. Each page consists of Frames. Learn yourself on the following way :

1. Read each frame carefully. Only one frame should be attended to at a time.
2. Write down the answers in the blanks provided in the frame.
3. Check your answers with the key only after writing down your answers in the blanks provided.
4. Do not correct or delete the wrong answers.
5. If your answers are not correct, study the explanation and examples again to see what went wrong.
6. If you do not understand a word, look it up in a dictionary.
7. If your answer is correct please attempt the next frame.
8. In this way attempt all the given frames.

### FRAME 1

I am doing (Present Continuous)

Look at the following sentences

Your friend is writing a letter.

Now he is sitting on the bench.

His brother John is studying painting at present.

He is still drawing a picture.

In each of these sentences continuous action is indicated

Now you are reading this. Your friends Joy and Rahim are sitting on the bench. They are studying at present.

1. What are you doing now? I am .....
2. What are your friends doing now? They are .....
3. What are they doing at present? They are .....

*These sentences are in present continuous tense.*

*We use the present cotinuous for actions in progress at the time of speaking. We sometimes use these words or phrases ( adverbs) - Now, at present, at the moment, still.*

*Read this conversation between A and B and fill in the missing words.*

A : Hello, BB Ltd. Can I help you?

B : Yes, I'd like to speak to the Manager, please.

A : I am afraid he is not available at the moment. He ..... a meeting. (4)

B : Oh, Could I speak to his Secretary, then?

A : I'm afraid she is not available either, she ..... lunch (5)

1. reading, 2. sitting on the bench, 3. studying, 4. is attending, 5. is having.

### FRAME -2

Read this passage carefully.

Salini is a student, Now she is studying in 9th standard. Mr. Gopal is her father. He is a teacher. At present he is teaching English. Mrs. Omana is her mother. She reads a lot of malayalam novels. At the moment she is reading Smaraka Silakal. Mr. Krishnan is her grand father. He repairs musical instruments Just now he is repairing an old violin. Babu is her brother. He is studying painting at present. He is still drawing a picture. Add a second sentence in Column B, as in the examples.

- |  |  |
|--|--|
| 1. My mother reads a lot of Malayalam novels | At the moment she is reading Smaraka silakal |
| 2. Mr. Gopal is our English teacher          | .....  |
| 3. Mr. Krishnan repairs musical instruments. | .....  |

2. At present he is teaching English, 3. Just now he is mending a old violin.

### FRAME - 3

Janu is Working abroad. Here is part of her first letter home to her parents.

I am not really enjoying myself much. I'm finding the language very difficult, and I'm not going out much, because I have'nt met many people yet. I'm thinking of going to a language school for lessons. That way I'll be able to understand people more, and may make a few friends. Another problem is that I don't know the city very well yet, and I keep getting lost. The family I'm staying with are very kind, but I don't feel very relaxed in their company- Perhaps they think I'm a rather Strange person; still, I've only been here for a short time- I'm sure things wi I begin to get better soon.

Now, three months later, Janu is having a much better time. Decide how you think her life has changed, and write part of a letter to her parents, telling them what she is doing these days, and how things are getting better.

.....

.....

.....

At present Janu is going to a language school for lessons - that way she is making a few friends and she is finding the language very well. Now she is knowing the city very well. Still she is really enjoying herself much.

### FRAME - 4

Read the following examples carefully.

I am writing	You are writing	I am not writing	You are not writing
He is writing	They are writing	He is not writing	They are not writing
She is writing	We are writing	She is not writing	We are not writing.

The present Continuous tense is formed by adding 'ing' to the verb.  
Noun + is / are + verb + ing

Now look at the following sentences and fill in the gaps.

Affirmative	Negative	Interrogative	Interrogative negative.
I am reading	I am not reading	Am I reading?	Am I not reading?
You.....	.....	.....	.....
He.....	.....	.....	.....

are reading, are not reading, Are you reading? Are you not reading? Is he reading? Is he not reading? are reading, is not reading, Is he reading? Is he not reading?

Read these current news and fill in the missing words:  
(have, live, sunbath, wear, queue, make)

we ..... very hot weather at the moment. Every one ..... out of doors. There are people ..... in all the parks. The girls ..... their summer dresses. People ..... to get in to the swimming pool. And the ice cream sellers ..... a fortune.

are having, is living, sunbathing, are wearing, are queuing, are making

### FRAME - 5

Here is a list of verbs which are not normally used in continuous tenses.

Smell, hear, see, notice, think, believe, know, remember, forget, suppose, understand, want wish, desire, need, like, dislike, love, hate, detest, prefer, mind, seem, appear, resemble, look, mean, matter, consist of, belong to, contain.

Now look at the following sentences and see whether the verbs in these sentences are Right or WRONG.

- Are you liking Kochi? .....
- I am believing he is coming tomorrow. ....
- I am hearing what you are saying .....
- What is this box containing? .....

a) Do you like? b) I believe, c) I hear, d) What does this box contain  
a) WRONG, b) WRONG, c) WRONG, d) WRONG

WRONG

RIGHT

I am needing a new suit.	I need a new suit.
I am thinking the new stove is leaking	I think .....
John is seeming rather tired today.	John .....
I am supposing I must go now.	I .....

Seems, suppose.

### FRAME - 6

I do/I work/ I like etc. (Present Simple)

Look at the following examples.

Every morning I read the paper.

The sun rises in the east.

The train leaves the station at 2 P.M. today.

My Sister arrives tomorrow from Bombay.

How often do you go to the doctor?

These sentences are in simple present tense.

The simple present tense is used for habitual actions, Universal truths, planned actions, and when we say how often we do things.

Remember that we say he/she/it does. Don't forget the 'S'

I/We/You/they do

Examples.

He goes, she goes, it flies

I go, we go, You go, They go.

He works, She works, It works.

I work, We work, You work, They work.

In this exercise you have to put the verbs given in brackets into the correct forms

- |                                  |                                     |
|----------------------------------|-------------------------------------|
| 1. He .....                      | milk every night (drink)            |
| 2. John .....                    | to church on Sunday (go)            |
| 3. Rahim .....                   | a walk every morning (take)         |
| 4. They .....                    | the dogs daily (train)              |
| 5. The earth .....               | on its axis (revolve)               |
| 6. Trees .....                   | their leaves in autumn (shed)       |
| 7. I .....                       | up at 5'o clock every morning (get) |
| 8. In summer John ususally ..... | tennis twice a week (Play)          |
| 9. Ali doesn't often .....       | tea (drink)                         |
| 10. He .....                     | from Kollam (come)                  |

drinks, goes, takes, trains, plays, gets, sheds, revolves, comes, flies, goes, takes, trains, plays, gets, sheds, revolves, comes

FRAME - 7

Listen to the following examples:

- |                                  |                                    |
|----------------------------------|------------------------------------|
| Excuse me, do you speak English? | What does this word mean?          |
| Would you like a cigarette?      | Rice doesn't grow in Britain.      |
| No, thanks, I don't smoke!       | Where do you come from?            |
|                                  | Why don't you make any suggestion? |

We use do/does to make questions and negative sentences

do I/we/you/they work.	I/we/you/they don't work.
does he/she/it work.	he/she/it doesn't work.

Make questions. Begin your question with the word in brackets.

Eg:- John plays tennis (How often?) How often does John play tennis?

- |   |
|---|
| I get up in the morning (What time/usually) ..... |
| Tom works (Where?) .....                          |
| People do stupid things (Why?) .....              |

What time do you usually get up? Where does Tom work? Why do people do stupid things?

FRAME - 8

don't /doesn't + Verb (Present Simple negative)

Look at the following examples.

Have a cigarett?	I am rich. I don't work.
No, thanks, I don't smoke.	Does he work?
Does she smoke? She doesn't smoke.	He does'nt work.

Read the following sentences and fill in the gaps using verbs in the negative or positive

- |   |
|---|
| 1. I drink coife, but I ..... tea.                                      |
| 2. You don't speak English very well, but she ..... English very well.  |
| 3. Rice doesn't grow in cold contries, but rice ..... in hot countries. |
| 4. Sometimes he is late but it ..... happen very often.                 |

don't drink, speaks, grows, doesn't

FRAME - 9

This time you have to read some sentences and correct them. The language is correct but information is wrong. Write two correct sentences each time.

Example : The sun goes round the earth. This statement is wrong because the sun doesn't go round the earth. It goes round the sun.

Now, look at the following sentences. Write the correct forms.

- The sun rises in the west. The sun doesn't .....
- Mice catch cats. Mice don't .....

1. rise in the west. The sun rises in the east. 2. catch cats. Cats catch mice.

### FRAME - 10

I have done (Present Perfect)

Study this example situation.

John is looking for his key. He can't find it.

'He has lost his Key' means that he lost it a short time ago and he still hasn't got it. This is in the present perfect (simple) tense.

I/we/they/you	have/haven't	
he/she	has/hasn't	+ past participle.

The present perfect tense is used to show an action which began in the past and continues up to the time of speaking. (ie. It is used for an action which took place in the past the results of which we can feel or observe in the present.)  
It is used with such adverbs as these: Just (this minute) today, this morning (week, month) ever, never, not yet, already, recently, lately and phrases beginning with for and since.

- eg :
- They have already passed the first examination.
  - They have just arrived from the school.
  - We have already had breakfast.
  - She has just spent three weeks at her grand mother's house

Complete these sentences using the correct form of the verb.

- He ..... just ..... his coat on (put)
- They ..... already ..... the 1st examination (pass)
- Would you like something to eat? ' No, thanks. I ..... just ..... lunch (had)
- Don't forget to post the letter, will you? I ..... already it (post)

has just put, have already passed, I have just had, I have already posted it.

### FRAME - 11

Have you ever .....

Study these Examples.

- |                            |                               |
|----------------------------|-------------------------------|
| Have you washed your face? | Hello; have you just arrived? |
| Has he phoned yet?.        | Have you seen John anywhere?  |

Answer these questions using the words in brackets.

Example: When did you smoke last? (for two years)  
I haven't smoked for two years.

- When did they last visit you? (Since June)  
They .....
- When did you last go to Kochi? (never)  
I .....
- Have you read Hamlet ? (No)  
No,.....
- Have you ever eaten meat ? (never)  
I have .....
- Is this the first time you've driven a car? (never)  
Yes, .....

1. They haven't visited me since June. 2. I have never been to Kochi. 3. No. I haven't read any of Shakespeare's play. 4. I have never had meat. 5. Yes, I have never driven a car before.

### FRAME - 12

Here are some more examples.

- |   |   |
|---|---|
| A. Have you heard from Thomas?.   | B. No, he hasn't written to me recently.                                |
| A. Have you found my dog?.  | B. No, I can't find him anywhere.                                       |
| A. Every thing is going fine?   | B. I haven't had any problems so far.                                   |
| A. John has been ill a lot in the past few years, hasn't he? I haven't seen him recently. have you? | B. Yes, I have seen him recently.                                       |
| A. Has it stopped raining yet?  | B. It has not yet. (Use 'Yet only in questions and negative Sentences.) |
| A. I have smoked ten cigarettes today. Haven't you had any?   | B. I'll smoke more before the day finishes.                             |
| A. I haven't seen John this morning. Have you seen him?   | B. Yes, I have seen him this morning.                                   |

In this exercise you have to read the situation and then finish a sentence.

Example: Appu is phoning pappa again. He has already phoned him twice this evening.  
It is the third time he has phoned him this evening.

1. You are late again you've already been late once this week. It is the second ..... this week.
2. Ammu has just finished drinking a cup of tea. She has already had four cups this morning. It's the fifth.....
3. The car has broken down. It has already broken down twice this month. It's the .....
1 - time you've been late this week, 2 - cup of tea she has had (or drunk) this morning, 3 - third time the car broken down this month.

### FRAME - 13

Have been doing (present perfect continuous)

Look at the following Sentences.

Ramu is reading now. He has not finished reading. He is continuing now. He has been reading from 8 A.M. in the morning. *This is in the present perfect continuous tense.*

I/we/they/you have he/she/it/has	been doing.
-------------------------------------	-------------

*The present perfect continuous tense is used with the same meaning as the simple tense and with the same adverbs. This tense is more often used with verbs which have the meaning of prolonged action such as live, wait, stay, work, read, sleep, study and with many other verbs when they mean repeated action. The adverbs used with this tense often have all before them to emphasize the meaning of continuous action. Eg: All this morning, all this week, all day, all this year.*

Supply the correct form of the present perfect continuous tense.

1. They..... here since 1997 (live)
2. I ..... for you all morning (wait)
3. She ..... for three hours now (sleep)
4. We ..... on the platform since three O' clock. (wait)

1 - have been living, 2 - have been waiting, 3 - has been sleeping, 4 - have been waiting

### FRAME - 14

How long have you .....

Here are some more examples.

- How long have you been learning English?      - Have you been working hard today?
- How long have you been smoking?                - How long have you been reading that book?

*This time you have to imagine that you are talking to a friend.*

Read the situation and ask a question beginning in the way shown.

Example :      Your friend is learning English. How long have you been learning English.

1. Your friend is waiting for you. How long .....
2. Your friend writes books. How many books .....
3. Your friend writes books How long .....
4. Your friend plays football for his country. How many times .....

How long have you been waiting?      How many books have you written?      How long have you been writing books?      How many times have you played for your country?

## FRAME - 15

I arrived/waited/went etc (Past Simple)

Look at the following examples.

John arrived last night. I waited for three minutes while he was telephoning.  
John lost his key yesterday ( not 'has lost')

*Do not use the present perfect when you are talking about a finished time in the past. Use a past tense. The simple past tense is used for an action which took place in the past and is completed by the time of speaking. It is used with such adverbs of past time as these.*

*Yesterday, last night (week, year) a few moments ago = Just now. adverbs of time with ago. A few minutes ago, three days ago a long time ago. adverbial clauses introduced by: when, while, until, before, a soon as, after, once, the moment that*

Use past tense to complete the sentences.

1. John ..... (buy) a new car two weeks ago.
2. His hair is very short. He ..... (have) a hair cut yesterday.
3. Last night I ..... (arrive) home at half past twelve.
4. I ..... (have) a bath and then I ..... (go).
5. When ..... (you/give-up) smoking?

1 bought, 2 had, 3 arrived, had, went, 4 did you give up.

## FRAME - 16

I did'nt.....Did you .....? (Past Simple negative and questions)

Look at the following examples.

I don't watch television very often. Does she often go out?  
I didn't watch television Yesterday. Did she go out last night?

did + subject + infinitive.

What	did	you	do	Yesterday evening?
How	did	the accident	happen?	
Where	did	Your parents	go	for their holidays?
	Did	John	give	you a birthday present?

Short answers.

*Did you see John yesterday? No, I didn't*  
*Did it rain on sunday? Yes, it did.*  
*Did John come to the party? No, he didn't.*  
*Did your friends have a good holiday? Yes, they did.*

You are asking somebody questions. Write questions with Did.....?

Example

I watched T.V. last night. And you? Did you watch T.V. last night? \*

1. I enjoyed the party. And you? .....
2. I had a good holiday. And you? .....

Put the verb in the correct form of past (positive, negative or question form)

I played (play) tennis yesterday but I didn't win (not/win)

1. We ..... (wait) a long time for the bus but it ..... (not come)
2. That's a nice shirt. Where ..... (you/buy/) it?
3. She ..... (see) me but she ..... (not speak) to me.
4. .... (it/rain) Yesterday? No, it was a nice day.
5. That was a stupid thing to do. Why..... (you/do) it?

Did you enjoy the Party? 2. Did you have a good holiday? waited, didn't come, 2. did you buy, 3. saw, didn't speak, 4. Did it rain, 5. Did you do.

## FRAME - 17      was/were

Look at the following Sentences.

Now Joy is at work.    At last midnight he wasn't at work.    He was in bed.    He was asleep.

Present am/is are	Past. was were
-------------------------	----------------------

Positive	negative	question
I was	I was not (wasn't)	was I?
he was	he was not (wasn't)	was he?
she was	she was not (wasn't)	was she?
it was	it was not (wasn't)	was it?

we	werenot	were	we?
you	(weren't)		you?
they			they?

**a. Put in was/wasn't/were/weren't**

1. Last year she ..... 22, So she is not 23 now.
2. We ..... tired after the journey but ..... hungry.
3. The hotel ..... very comfortable and it ..... expensive.

**b. Write questions, Use words given in brackets.**

Eg :- I saw a film (good) was it good?

1. I met some people (friendly) .....
2. I did an examination (difficult) .....
3. I bought some boots (expensive) .....
4. I went to a museum (interesting) .....

a. 1) Was 2) were, weren't 3) was, wasn't b. 1) were they friendly, 2) was it difficult, 3) were expensive 4) was it interesting?

**FRAME - 18**

He was watching, wasn't ..... was he .....?  
Past continuous, negative and questions

Look at the following sentences.

Now it is 6' O clock. John is at home. He is watching television. At 4' o clock he wasn't at home. He was at the sports club. He was playing tennis. He wasn't watching television.

He began Playing		He was playing		He stopped playing		
Positive		negative		question		
I	was + ing	I	was not (wasn't)	Was	I	+ ing
he		he		was	he	+ ing
she		she		was	she	+ing?
it		it		it		
we	were + ing	we	were not (weren't)	were	we	
you		you			you	ing?
they		they		+ ing	they	

Look at the following Sentences.

I was reading a book when you came in.

The continuous past tense is used for continuous actions in the past about whose beginning and end we are not concerned. It is most often found in compound sentences with another verb in the Simple Past tenses, to describe the background against which the simple past tense action took place.

It is often found with verb clauses beginning with while and when and other adverbs which show the duration of the action: all last week, all yesterday, all last night.

Put the verb into the correct form, past continuous or past simple in place of the Verbs in brackets.

Example: while John was cooking (cook) the dinner, the phone rang

1. Last night I .....(read) in bed when suddenly - I .....(hear) a scream.
2. I ..... (break) a plate last night. I ..... (do) the washing up when it .....(slip) out of my hand.
3. I .....(try) to ring you up all yesterday but your telephone wasn't working.

### FRAME - 19

He had gone home, hadn't....., had he .....?  
(Past Perfect, negative and questions)

**Study this example situation:**

I went to a party last week. Tom went to the party, too.  
Tom went home at 10.30. So, When I arrived at 11 'O' clock, Tom wasn't there.

When I arrived at the party, Tom wasn't there.  
*He had gone home* (This is the Past Perfect tense.)

Positive			Negative			Question		
I he she you they	had	past participle	I he she you they	hadn't	past participle	had	you he she they	participle

**Present**

I'm not hungry, I have just had lunch.  
The house is dirty. We haven't  
Cleaned it for weeks.

**past.**

I wasn't hungry. I had had lunch. The house was dirty.  
We had not cleaned it for weeks.

**Here are some more examples.**

- a) He said that he had finished his work.
- b) I had already finished my work before my friends arrived.

*The past perfect tense is used for an action which has already begun before another action which took place in the past. It is generally found.*

- a) in indirect speech, and
- b) in compound sentences in the past with clauses of time introduced by such words as after, before, when, until and as soon as.

**Put the verbs in brackets into the correct tense, simple past or past perfect.**

1. When he ..... already.....(leave) , he .....(realise) he .....(forget) his wallet.
2. His finger..... (begin) to bleed as soon as he .....(cut) himself.
3. He .....(lose) his new knife shortly after he .....(buy) at.
4. Until he .....(explain) the students did not understand.

1. he had already left, realised he had forgotten
2. began had cut
3. lost had bought.
4. he had explained

Appendix II

Programmed Remedial Material

By

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Topic: TENSES IN GENERAL

Entering Behaviour:

1. Pupils can write simple sentences in English.
2. Pupils are able to distinguish the different parts of speech.
3. Pupils distinguish nouns and verbs.

General Statement about the Learner:

The pupils are in the age group 13+ and of lower and working class mostly of first generation learners.

Instructional Objectives in Behavioural Terms:

On completion of the programme the learners will be able to:

- 1) distinguish present tense, present participle, past tense and past participle.
- 2) distinguish the singular and plural numbers.
- 3) distinguish first person, second person and third person.
- 4) distinguish the affirmative and the negative.
- 5) define the Assertive, Interrogative, Imperative and exclamatory sentences.

- 6) identify the simple present tense.
- 7) find out the simple present tense, present continuous, present perfect, present perfect continuous.

### INSTRUCTIONS TO PUPILS

This is a programmed text book which is meant for self learning English. Each page consists of Frames. We will limit our programme to the points of usage to be taught in standard IX - Tenses in general.

Learn yourself on the following way:

1. Read each frame carefully. Only one frame should be attended at a time.
2. Look at the given responses only after writing down your answers in the blank provided.
3. Write down the answers in the blank provided in the frame.
4. Do not correct or delete the wrong answers.
5. In case of wrong answer go through the frame once more.
6. If the answer is incorrect, you can easily locate the reason for the error by going on the frame once more.
7. If your answer is correct please attempt the next frame
8. In this way attempt all the given frames.

## FRAMES

1. Let us begin our study with 'tenses'. As in our mother-tongue, we have three tenses in English language also.

They are :

a)

b)

c)

The past tense,

The present tense and

The future tense.

---

2. But in English we see different sub divisions for these tenses. Let us take the present tense for example.

There, we see four present tense: They are:

a)

b)

c)

d)

Simple present

present continuous

present perfect and

present perfect continuous

---

3. Corresponding to these, we have four past tenses.

They are:

- a)
- b)
- c)
- d)

Simple past

Past continuous

Past perfect and

past perfect continuous

---

4. Corresponding to these, we have four future tenses.

They are:

- a)
- b)
- c)
- d)

Simple future

Future continuous

Future perfect and

Future perfect continuous

---

5. On mastering the present tense, the other tenses become easy. We shall do so. Before coming to the actual study of tenses, we have to learn some other items.

You have already learnt the three tense forms of verbs. They are:

- a)
- b)
- c)

present tense  
past tense and  
past participle.

---

6. Listen the following examples:

run - ran - run

walk - walked - walked

First of all we have to add one more form to this table - the present participle. eg. run- running - ran.

Add 'ing' to the present tense form of the verb to get present participle.

1. Walk \_\_\_\_\_

3. Jump \_\_\_\_\_

2. Stand \_\_\_\_\_

4. Learn \_\_\_\_\_

Walking

standing

jumping

learning

---

7. Now you make a table like this and write down all the four forms of the following verbs:

Present tense	Present participle	Past tense	Past participle
1. run	_____	_____	_____
2. walk	_____	_____	_____
3. write	_____	_____	_____
4. stand	_____	_____	_____
5. cut	_____	_____	_____
6. put	_____	_____	_____
7. speak	_____	_____	_____

running, ran, run  
 walking, walked, walked  
 writing, wrote, written  
 standing, stood, stood  
 cutting, cut, cut  
 putting, put, put  
 speaking, spoke, spoken

8. In English we have two numbers - The singular and the plural.

1. the singular denotes \_\_\_\_\_

2. the plural denotes \_\_\_\_\_

a single object

more than one object.

9. You have already studied the persons in English grammar.

Here these are reminded. They are \_\_\_\_\_

- a)
- b)
- c)

First person  
second person and  
third person.

---

10. First person is the person speaking.

- a) the singular form of the first person is \_\_\_\_\_
- b) the plural form of the first person is \_\_\_\_\_

I  
We

---

11. Second person is the person spoken to. It is used both as singular and plural. The second person is

\_\_\_\_\_

You.

---

12. Third person is the person spoken to.

- 1. the singular forms of third person \_\_\_\_\_
- 2. the plural form of third person \_\_\_\_\_
- 3. a lot of other subjects \_\_\_\_\_ the third person

He, She, It.  
They  
Form

---

13. Listen the following examples:

I work	I do not work
He works	He does not work
I am working.	I am not working.

Sentences are divided into the affirmative and the negative. Affirmative sentence is otherwise called 'positive' sentence. You very well known the meaning of the word 'negative'.

Now you build up a column like this and write down the negative form of all the sentences given below:

<u>Affirmative</u>	<u>Negative</u>
1. I carry	
2. He watches	
3. Birds fly	
4. Wind blows	
5. I am studying	
6. You are jumping	
7. They are playing	
8. We are learning	
9. He worked	
10. We were sleeping.	

I do not carry  
 He does not watch  
 Birds donot fly  
 Wind does not blow  
 I am not studying  
 You are not jumping  
 They are not playing  
 We are not learning  
 He did not work  
 We were not sleeping.

---

14. Listen the following examples:

a) Boys are playing foot ball.

b) What is your name?

These sentences are called \_\_\_\_\_, \_\_\_\_\_.

Assertive, Interrogative

---

15. Statements or assertions called declarative or asser-  
 tive sentences.

questicns, called interrogative sentence.

interrogation means question.

Listen the following examples:

1. Be quiet.

2. How cold the night is !

These sentences are called \_\_\_\_\_, \_\_\_\_\_

Imperative, exclamatory

---

16. Commands, requests, advices etc. called imperative sentence and expressing strong feelings - called exclamatory sentence.

Write five examples for exclamatory sentence.

- 1.
- 2.
- 3.
- 4.
- 5.

What a beautiful flower it is !  
How beautiful the flower is !  
What lovely paintings they are !  
How lovely the paintings are !

---

17. Exclamatory sentences can be written in two ways.

1. Beginning with what.
2. Beginning with how.

Change into exclamatory sentences.

- a) It is a very nice gift
- b) The performance is splendid
- c) The speech is interesting.

How nice is the gift is !  
What a splendid performance !  
What an interesting speech it is !

---

18. Now we come to different kinds of sentence. They are grouped on the basis of the nature of the sentence. Four kinds are there. What are the four kinds of sentence?

- 1.
- 2.
- 3.
- 4.

Declarative or assertive sentence  
Interrogative sentence  
Imperative sentence.  
exclamatory sentence.

---

19. Now we come to the close of the first lesson. In these frames we have learnt:

- a)
- b)
- c)
- d)
- e)
- f)

What are the tenses  
Present participle  
Number  
Person  
Affirmative and Negative  
Kinds of sentence

---

20. You remember what we studied in the previous frames.

Let us memorise it once again. We studied:

What are the tenses, number, person, affirmative and negative, kinds of sentence. What are the tenses?

a)

b)

c)

The past tense

The present tense

The future tense.

21. Now we come to the simple present tense. Listen the following examples:

a) I work

b) We work

c) You work

d) He works, she works, it works.

e) They work.

The simple present has the same form as the affirmative of the infinitive. But in the third person, singular number, an 's' or 'es' is added to the verb.

Let us take examples.

1. I write, you write, we write, they write.

2. He \_\_\_\_\_, She \_\_\_\_\_.

He writes

She writes.

22. Now let us learn the form of each in the affirmative, negative, interrogative and interrogative negative.

Affirmative	Negative	Interrogative	Interrogative negative
1. I work	I do not work.	Do I work?	Do I not work?
2. He works	He does not work	Does he work?	Does he not work?
3. They work	_____	_____	_____
4. It works	_____	_____	_____

They do not work, Do they work? Do they not work?

It does not work, Does it work? Does it not work?

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23. Some very important uses of the simple present are given here. To show habitual action.

1. Sun \_\_\_\_\_ in the east.
2. Dogs \_\_\_\_\_
3. We always \_\_\_\_\_ at night.

rises

bark

work

---

24. It is used when we quote from books, notices, recently received letters etc.

1. The notice \_\_\_\_\_ 'No parking'.
2. Shakespeare \_\_\_\_\_ 'Life is a tale told by an idiot.
3. The letter \_\_\_\_\_ that she comes to Delhi next week.

Says

Says

Says.

25. A third use of the simple present is in news paper head line.

1. PEACE \_\_\_\_\_ FAIL (TALK, TALKS)
1. MURDERER \_\_\_\_\_ FROM JAIL (ESCAPES, ESCAPE)

TALKS

ESCAPES

26. The simple present tense is used in dramatic narratives. It is often used when describing action in a play and is often used in commentaries (in Radio and Television) on sports events, public functions etc. When the curtain rises, Indulekha is writing at her desk. Suddenly the door \_\_\_\_\_ and her mother \_\_\_\_\_. (opens, opened, entered, enters).

Opens, enters.

27. It can be used to describe a planned future action or a series of actions.

- a) The P.M. \_\_\_\_\_ Delhi at 8.00 a.m. next Wednesday and in Moscow at 13.00 hrs.
- b) He \_\_\_\_\_ <sup>hour</sup> two hrs. in Moscow and \_\_\_\_\_ again at 15.00 hrs. for Tokyo. He \_\_\_\_\_ in Tokyo at 19.00 hrs. and \_\_\_\_\_ the Emperor etc.

leaves, arrives.

spends, leaves, arrives, meets.

28. Now we come to the next present tense. The present continuous or the present progressive tense. Listen the following examples.

1. I am working.
2. You are working.
3. He is working
4. They are working.

The present continuous tense is formed by adding 'ing' to the verb. It is formed with the present tense of the verb 'be' + the present participle.

Affirmative	Negative	Interrogative	Interrogative negative.
a) I am working	I am not working	Am I working?	Am I not working?
b) You are working	You are not working	Are you working	Are you not working?

- c) He is working \_\_\_\_\_
- d) We are working \_\_\_\_\_
- e) They are working \_\_\_\_\_

He is not working, Is he working? Is he not working?

We are not working, Are we working? Are we not working?

They are not working, Are they working? Are they not working?

---

29. The next present tense is the present perfect. Listen the following examples.

- a) I have studied.
- b) He has studied.

The present perfect tense is formed with the present tense of have + the past participle.

It is chiefly used in conversation, letters, news papers and T.V. and radio reports. For a recently completed action present perfect is used with 'just'.

- c) He has \_\_\_\_\_ gone out.
- d) I \_\_\_\_\_ seen him.

He has just gone out.

I have just seen him.

---

30. Present perfect is used for past actions whose time is not definite.

a) I \_\_\_\_\_ novel (read)

b) The lift \_\_\_\_\_ down (break)

Have read.

Has broken.

---

31. Now we come to the last of the present tenses - The present perfect continuous. Listen the examples.

a) I have been waiting.

b) He has been working

The present perfect continuous tense is formed by the present perfect of the verb 'to be' + the present participle. Please note that the present perfect of the verb 'to be' is have been / has been.

The present perfect continuous is used to show an action which began in the past and is continuing in the present.

1. I \_\_\_\_\_ for him for an hour. (wait)

2. We \_\_\_\_\_ in this city for the last 20 years.

(live).

Have been waiting.

Have been living.

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## Appendix III

Department of Education

University of Calicut

### Achievement Test in English (pre-test) for Standar IX pupils

I Read the passage and complete the statements given below making your choice from the alternatives given under each question.

Have you ever been to the circus camp? Did you appreciate the acrobats there who show dangerous tricks at the risk of their lives? Sally had been there once. The circus started with a parade. There were a lot of acrobats who did tricks on wires at the top of the tent. Sally sat on the edge of her seat. "I'd like to do that," she said to herself. Even the girls are flourishing a splended occasion in deed! The clowns never show a grave face.

(1) The acrobats risk their lives .....

- (a) Showing dangerous tricks (b) Swinging on wires at the top of the end. (c) running about the camp  
(d) Parading at the circus. (e) banging into each other.

(2) Sally likes to do that. Here 'that' stands for .....

- (a) the circus camp (b) the parade (c) the acrobats (d) the tricks on wires (e) sitting at the edge of her seat.

(3) Here the word 'grave' means .....

- (a) wise (b) serious (c) foolish (d) cunning (e) funny.

II Write a letter to your class teacher asking leave for 3 days and also giving reasons for your absence.

III Write a Paragraph about any interesting event you have read in your Kerala English Reader.

IV Fill in the gaps using verbs in the negative

- (a) I drink coffee, but I ..... tea.  
(b) Sometimes he is late but it ..... happen every often.

V Answer these questions using the words in brackets.

- (a) When did you smoke last? (for two years) I .....

VI Write question with Did .....

I watched T.V. last night. And you? Did ..?

VII Put the Verbs in brackets in to the correct tense, simple past or simple perfect.

- (a) He ..... (lose) his new pen shortly after he ..... (buy) it  
(b) Until he ..... (explain) the students didn't understand

VIII Rewrite the following using the correct form of the verb given in brackets.

When I was 21 I (go) to England to study science. At that time I (know) English quite well because I (study) it for nearly ten years. Now I (finish) my studies.

IX Read this conversation between A and B and fill in the missing words.

A : Hello, B B Ltd, Can I help you?

B : Yes, I'd like to speak to the Manager, Please.

A : I am afraid he is not available at the moment. He ..... a meeting.

X Complete the following questions to get the answers given in brackets.

- (a) How ..... (I go to School on foot)

- XI Put the verbs in brackets in to the present continuous tense.**
- i ..... (will) to give my wealth.
  - We are ..... (look) for the boy.
- XII Fill in the blanks with the correct form (present perfect) of the verb given in brackets.**
- I ..... (hear) that you are very wise.
  - You ..... (ask) me a good question.
- XIII Put the verbs in brackets in to the simple past tense.**
- The three men ..... (cook) their own dinner.
  - She ..... (Shout) from inside the house.
- XIV Put the verbs in brackets in to the past continuous tense.**
- They ..... (return) to their village.
  - The woman ..... (sell) curd.
- XV Put the verbs in brackets in to the correct past tense.**
- He found that he ..... (spend) all his treasure.
  - No one ..... so far (reach) the east in this way.
- XVI Fill in the blanks with the correct form of 'do'**
- Why ..... people see only my virtues?
  - He ..... believe in God.
- XVII Fill in the blanks with have /had.**
- Ali ..... nothing to do that day.
  - Kassim said that he ..... the pencil in his bag.
- XVIII Fill in the blanks the correct form of 'be'**
- The woman ..... very happy
  - The youngest of them ..... a clever man.
- XIX Rewrite the following sentences putting the word in brackets in its proper place.**
- He has finished his home work (already)
  - I have seen him in the play ground (often)
- XX Complete the following with the correct form of the words given in brackets.**
- The designs are very ..... (attract)
  - We made ..... for the journey (prepare)

Appendix IV

**KERALA UNIVERSITY**  
**GROUP TEST OF INTELLIGENCE**  
**( VERBAL )**

വിദ്യാർത്ഥികളുടെ മാനസികമായ കഴിവുകളെ പരിശോധിക്കുന്നതിനുവേണ്ടി തയ്യാറാക്കിയിട്ടുള്ളതാണ് ഈ ടെസ്റ്റ്. വിവിധ തരത്തിലുള്ള 5 ടെസ്റ്റുകൾ ഇതിൽ ഉൾക്കൊള്ളിച്ചിരിക്കുന്നു. ഓരോ ടെസ്റ്റിന്റെയും മുമ്പിൽ കൊടുത്തിട്ടുള്ള നിർദ്ദേശങ്ങൾ എഴുതിത്തുടങ്ങുന്നതിന് മുമ്പ് ശ്രദ്ധിച്ചു വായിക്കേണ്ടതാണ്. ഉത്തരം എഴുതേണ്ട രീതി ഉദാഹരണങ്ങൾ കൊണ്ട് വ്യക്തമാക്കിയിട്ടുണ്ട്. നിർദ്ദേശങ്ങൾ സമയത്തിനുള്ളിൽ ഉത്തരം എഴുതിത്തീർക്കുവാൻ ശ്രമിക്കണം. യാതൊരു കാരണവശാലും കൂടുതൽ സമയം അനുവദിക്കുന്നതല്ല. പറഞ്ഞതിനുശേഷം മാത്രം എഴുതിത്തുടങ്ങുകയും ഏറ്റവും വേഗത്തിൽ എഴുതിത്തീർക്കാൻ ശ്രമിക്കുകയും ചെയ്യേണ്ടതാണ്. തന്നിരിക്കുന്ന ഈ ചോദ്യക്കടലാസിൽ ഏതെങ്കിലും എഴുതുകയോ അടയാളപ്പെടുത്തുകയോ ചെയ്യരുത്. പ്രത്യേകം തന്നിട്ടുള്ള ഉത്തരക്കടലാസിൽ മാത്രമേ ഉത്തരം എഴുതാവൂ. ഉത്തരങ്ങൾ കഴിയുന്നത്ര ശരിയായും വ്യക്തമായും എഴുതേണ്ടതാണ്.

TEST I

ഈ വിഭാഗത്തിൽ കൊടുത്തിട്ടുള്ള ചോദ്യങ്ങളിൽ മൂന്നു വാക്യങ്ങൾ വീതം തന്നിട്ടുണ്ട്. നാലാമത്തെ വാക്ക് എഴുതാതെയും വിട്ടിരിക്കുന്നു. ഒന്നാമത്തെ വാക്കിന് രണ്ടാമത്തെ വാക്കിനോടുള്ള ബന്ധംപോലെ മൂന്നാമത്തെ വാക്കിനോട് യോജിക്കുന്ന വാക്ക് ബ്രാക്കറ്റിനടിയിൽ നിന്നും തിരഞ്ഞെടുത്ത് താഴെ കാണിച്ചിരിക്കുന്ന രീതിയിൽ ഉത്തരക്കടലാസിൽ അടയാളപ്പെടുത്തുക.

ഉദാഹരണം :

1. പശു. പൂല്ല്. സിംഹം.

(a. ആഹാരം b. മാംസം c. വിശപ്പ് d. തീറ്റ)

പശുവിന്റെ ആഹാരസാധനമാണ് പൂല്ല്. അതുപോലെ സിംഹത്തിന്റെ ആഹാരം മാംസമാണ്. അതുകൊണ്ട് b ആണ് ശരിയായ ഉത്തരം.

a    b    c    d                    a. b. c. d. ഇവയുടെ താഴെ  
                             ഓരോ വൃത്തം കാണുന്നുണ്ടല്ലോ.

അതിൽ ശരിയായ ഉത്തരത്തിന്റെ താഴെയുള്ള വൃത്തത്തിൽ 'X' ചിഹ്നമിട്ട് അടയാളപ്പെടുത്തുക. ഇവിടെ b യുടെ താഴെയുള്ള വൃത്തത്തിൽ അടയാളപ്പെടുത്തിയിരിക്കുന്നു. ഈ രീതിയിൽ ഓരോ ചോദ്യത്തിന്റെയും ഉത്തരം ഉത്തരക്കടലാസിൽ എഴുതുക. കഴിയുന്നതും തെറ്റുവരുത്താതെ എഴുതാൻ ശ്രമിക്കുക. ഏതെങ്കിലും ഉത്തരം അടയാളപ്പെടുത്തിയശേഷം തിരുത്തണമെന്നു തോന്നിയാൽ ആ വൃത്തത്തിനു പുറവും ഒരു ചതുരം വരയ്ക്കുക. എന്നിട്ട് ശരിയെന്ന് തോന്നുന്ന വൃത്തത്തിനകത്ത് അടയാളപ്പെടുത്തുക.

2) തീവണ്ടി: സുറേഷൻ: കപ്പൽ:—

[a. കടൽ    b. കായൽ    c. തുറമുഖം    d. ബോട്ട്]

                  a    b    c    d  
        

ശരിയായ ഉത്തരം ഏതെന്ന് ആലോചിക്കുക.

ഇതേ രീതിയിലുള്ള 20 ചോദ്യങ്ങൾ മറുവശത്ത് കൊടുത്തിരിക്കുന്നു. അവ മുഴുവൻ ചെയ്യുന്നതിന് 6 മിനിട്ട് സാധമാണുള്ളത്.

ഉത്തരക്കടലാസിൽ മാത്രം ഉത്തരം എഴുതുക. ഓരോ ചോദ്യത്തിന്റെയും ഉത്തരം അതത് ചോദ്യനമ്പറിനു നേരെ അടയാളപ്പെടുത്തുവാൻ ശ്രദ്ധിക്കുക.  
 പറഞ്ഞതിനുശേഷം മാത്രം പുറം മറിക്കുക

TEST I

1. വിശപ്പ് ആഹാരം: ദാഹം—  
(a. ക്ഷീണം b. തളർച്ച c. വെള്ളം d. വിശ്രമം)
2. മാല കഴുത്ത്: വള—  
(a. സ്വർണ്ണം b. കുപ്പിവള c. മംഗി d. കയ്യ്)
3. രക്തം ചുവപ്പ്: മുടി—  
(a. തല b. കറുപ്പ് c. മനുഷ്യൻ d. നിറം)
4. അച്ഛൻ അമ്മ: ഭർത്താവ്—  
(a. പത്നി b. ഗൃഹനായിക c. ഭാര്യ d. മാതാവ്)
5. മുളക് ഏരിവ്: ശർക്കര—  
(a. പഞ്ചസാര b. കരിമ്പ് c. മധുരം d. പായസം)
6. അഭയാപകൻ വിദ്യാർത്ഥി: ഗുരു—  
(a. കൂട്ടി b. പള്ളിക്കൂടം c. ശിഷ്യൻ d. ശിക്ഷ)
7. കാർ ഡ്രൈവർ: കപ്പൽ—  
(a. കടൽ b. തുറമുഖം c. പാമരം d. കപ്പിത്താൻ)
8. സൂര്യൻ വെയിൽ: ചന്ദ്രൻ—  
(a. ആകാശം b. നിലാവ് c. പ്രകാശം d. വെളിച്ചം)
9. ശാസ്ത്രം ശാസ്ത്രജ്ഞൻ: കല—  
(a. കലാലയം b. കലാകാരൻ c. കലവറ d. കലാകേന്ദ്രം)
10. കാക്ക പക്ഷി: കടുവ....  
(a. മൃഗം b. കാട് c. ഗൃഹം d. കൂട്)
11. പോലീസുകാരൻ തൊപ്പി: രാജാവ്....  
(a. സിംഹാസനം b. കിരീടം c. രാജ്യം d. കൊട്ടാരം)
12. മഞ്ഞുകട്ട വെള്ളം: വെള്ളം....  
(a. ജലം b. തീർത്ത്ത്ത് c. നിരാവി d. ചുട്ട്)
13. കുന്നം കുഴി: കയറം....  
(a. പർവ്വതം b. താഴ്വര c. റോഡ് d. ഇറക്കം)
14. പേന മഷി: ശ്വാക്കം....  
(a. വെടി b. യുദ്ധം c. വെടിയുണ്ട d. പട്ടാളക്കാരൻ)
15. സ്നേഹിതൻ സ്നേഹം: ശത്രു....  
(a. വെറുപ്പ് b. യുദ്ധം c. ആയുധം d. വധം)
16. പട്ടി മൃഗം: കുയിൽ....  
(a. പക്ഷി b. പാട്ട് c. കറുപ്പ് d. കൂട്)
17. സുന്ദരി സുന്ദര്യ: വിരൂപൻ....  
(a. വിരൂപി b. സുന്ദരൻ c. വൈരൂപ്യം d. മംഗി)
18. കൊല്ലൻ ഇരുമ്പ്: ആശാനി....  
(a. ആല b. ഉളി c. തടി d. ചുറ്റിക)
19. വീട് ഗൃഹം: ആകാശം....  
(a. പക്ഷി b. ഗഗനം c. നീല d. മേഘം)
20. പണ്ഡിതൻ പ്രാർത്ഥന: പാപം....  
(a. പടിഞ്ഞാറ് b. ദിക്കു c. കിഴക്കു d. വിട്ടുപോയി)

TEST II

ഈ വിഭാഗത്തിലുള്ള ചോദ്യങ്ങളിൽ ഓരോന്നിലും അഞ്ചുവാക്കുകൾ വീതം തന്നിട്ടുണ്ട്. അതിൽ ഒന്ന് മറ്റു നാലിനോടും യോജിക്കാതെ നിൽക്കുന്നു. അത് ഏതെന്ന് കണ്ടുപിടിച്ചു, താഴെക്കാണിച്ചിരിക്കുന്ന രീതിയിൽ ഉത്തരക്കടലാസിൽ അടയാളപ്പെടുത്തുക.

ഉദാഹരണം.

- 1. a. ബസ്സ്, b. ലോറി, c. കാർ, d. കാളവണ്ടി, e. മോട്ടോർ സൈക്കിൾ.

ഇതിൽ 'കാളവണ്ടി'യാണല്ലോ മറ്റു നാലു വാക്കുകളോടും യോജിക്കാതെ നിൽക്കുന്നത്. 'കാളവണ്ടി'യെ കുറിക്കുന്ന അക്ഷരം d യാണല്ലോ. അതുകൊണ്ട് d യുടെ താഴെയുള്ള വൃത്തത്തിനകത്ത് അടയാളപ്പെടുത്തിയിരിക്കുന്നു.

- a      b      c      d      e
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ഈ രീതിയിൽ ഓരോ ചോദ്യത്തിന്റെയും ഉത്തരം ഉത്തരക്കടലാസിൽ എഴുതുക. ഏതെങ്കിലും ഉത്തരം തിരുത്തേണ്ടിവന്നാൽ Test 1-ൽ പറഞ്ഞതുപോലെ ചെയ്യുക.

- 2. a. ചിത്രകാരൻ, b. ചിത്രം, c. കവി, d. കലാകാരൻ, e. ഗായകൻ.

- a      b      c      d      e
- 

ശരിയായ ഉത്തരം ഏതെന്ന് ആലോചിക്കുക. ഇതേ രീതിയിലുള്ള 20 ചോദ്യങ്ങൾ താഴെ കൊടുത്തിരിക്കുന്നു. അവ മുഴുവൻ ചെയ്യുന്നതിന് 5 മിനിട്ട് സമയമാണുള്ളത്.

ഉത്തരക്കടലാസിൽ മാത്രം ഉത്തരം എഴുതുക. ഓരോ ചോദ്യത്തിന്റെയും ഉത്തരം അതാത് ചോദ്യ നമ്പറിന് നേരെ അടയാളപ്പെടുത്തുവാൻ ശ്രദ്ധിക്കുക. പറഞ്ഞതിനുശേഷം മാത്രം പുറം മറിക്കുക.

TEST II

- 1 a നക്കി, b തോട്, c കായൽ, d കടൽ, e സമതലം.
- 2 a അരി, b ഗോതമ്പ്, c ചോളം, d ചണം, e പയറ്റ്,
- 3 a പൂർവ്വം, b പശ്ചിമം, c കേന്ദ്രം, d ഉത്തരം, e ഉന്നതം.
- 4 a ചുവപ്പ്, b ആകാശം, c പച്ച, d നീല, e കറുപ്പ്
- 5 a പിച്ച്, b മുല്ല, c ജമന്തി, d റോസ, e പൂമാല
- 6 a റെഞ്ച്, b നാരങ്ങ, c ആപ്പിൾ, d മുന്തിരിങ്ങ, e ഉരുളക്കിഴങ്ങ്
- 7 a സെന്റീമീറ്റർ, b മില്ലീമീറ്റർ, c മീറ്റർ, d ഗ്രാം, e കിലോമീറ്റർ
- 8 a ഗാന്ധിജി, b നെഹ്റു, c ഗോഖല, d തിലകൻ, e ലിങ്കൻ
- 9 a കട്ടിൽ, b ഒത്ത, c മേശ, d വിരിപ്പ്, e തലയിണ
- 10 a ഫുട്ബോൾ, b ക്രിക്കറ്റ്, c ഹോക്കി, d ചതുരംഗം, e വോളിബോൾ
- 11 a സങ്കല്പം, b വ്യവകലനം, c ഗുണനം, d അങ്കഗണിതം, e ഹരണം
- 12 a മാല, b വട്ട, c ആഭരണം, d മോതിരം, e കമ്മൽ
- 13 a ബാല്യം, b കൗതരം, c യൗവ്വനം, d വൃദ്ധൻ, e വാർദ്ധക്യം
- 14 a മുദ്രം, b മദ്യം, c തബല, d ചെണ്ട, e നാദസ്വരം
- 15 a സ.ഗീതം, b നാടകം, c ചെറുകഥ, d നാട്യവിവരണം, e റോഡ്
- 16 a കേരളം, b മദ്രാസ്, c കേരളം, d ആന്ധ്രം, e ഡൽഹി
- 17 a ഭൂമി, b ബുധൻ, c ശുക്രൻ, d ചന്ദ്രൻ, e വ്യാഴം
- 18 a എരിവ്, b മധുരം, c പുളി, d മുള്ളുക, e കയ്പു
- 19 a ലക്ഷദ്വീപ്, b ആന്ധ്രപ്രദേശ്, c നിക്കോബാർ, d സിലോൺ, e കാശ്മീർ
- 20 a ഇംഗ്ലീഷ്, b മലയാളം, c ഹിന്ദി, d തമിഴ്, e തെലുങ്ക്

TEST III

ഈ വിഭാഗത്തിൽ ഏതാനും പട്ടഞ്ചൊല്ലുകൾ കൊടുത്തിരിക്കുന്നു. ഓരോ പട്ടഞ്ചൊല്ലിനും അതിന്റെ അർത്ഥം ഏതാണ് വ്യക്തമാക്കുന്ന നാല് ഉത്തരങ്ങൾ വീതം കൊടുത്തിട്ടുണ്ട്. ഇവയിൽ ഓരോ പട്ടഞ്ചൊല്ലിന്റെയും അർത്ഥം ഏറ്റവും വ്യക്തമാക്കുന്ന ഉത്തരം ഏതാണെന്ന് കണ്ടുപിടിച്ചു, താഴെക്കാണിച്ചിരിക്കുന്ന രീതിയിൽ ഉത്തരക്കടലാസിൽ അടയാളപ്പെടുത്തുക.

ഉദാഹരണം:-

- 1 അപ്പം തിന്നാൽ പോരെ, കുഴിയെണ്ണണമോ.
  - a ആഹാരകാര്യത്തിൽ മാത്രം ശ്രദ്ധിക്കുന്ന ചിലരുണ്ട്
  - b നിസ്സാരകാര്യങ്ങൾക്ക് പ്രാധാന്യം കൽപ്പിക്കുന്ന ചില ആളുകളുണ്ട്
  - c ഒരു കാര്യത്തിന്റെയും ഉത്ഭവത്തെക്കുറിച്ച് അന്വേഷിക്കരുത്
  - d ആവശ്യമില്ലാത്ത കാര്യങ്ങളറിയാൻ നാം ഒരിക്കലും വെമ്പൽ കാണിക്കരുത്

ഇവയിൽ ഏറ്റവും ശരിയായ ഉത്തരം നാലാമത്തേത് ആണല്ലോ. അതായത് d. അതുകൊണ്ട് d യ്ക്ക് താഴെയുള്ള വൃത്തത്തിൽ അടയാളപ്പെടുത്തുക.

a    b    c    d  
○   ○   ○   ○

ഈ രീതിയിൽ ഉത്തരക്കടലാസിൽ എഴുതുക. ഏതെങ്കിലും ഉത്തരം തിരുത്തേണ്ടി വന്നാൽ Test-1ൽ പറഞ്ഞതുപോലെ ചെയ്യുക.

- 2 ഉത്സാഹമുണ്ടെങ്കിൽ അത്താഴമുണ്ണാ.
  - a ഉത്സാഹിക്കുന്നവനെ അത്താഴം കഴിക്കാൻ സാധിക്കുകയുള്ളൂ
  - b പരിശ്രമിച്ചാൽ കാര്യം സാധിക്കും
  - c ഏത് കാര്യത്തിനും ഉത്സാഹം വേണ്ടതാണ്
  - d ഉത്സാഹിക്കുന്നവനെ വിജയിക്കുകയുള്ളൂ

a    b    c    d  
○   ○   ○   ○

ശരിയായ ഉത്തരം ഏതെന്ന് ആലോചിക്കുക. ഇതേ രീതിയിലുള്ള 20 ചോദ്യങ്ങൾ താഴെ തന്നിട്ടുണ്ട്. അവ മുഴുവൻ ചെയ്യുന്നതിന് 8 മിനിട്ട് സമയമാണുള്ളത്.

ഉത്തരക്കടലാസിൽ മാത്രം ഉത്തരം എഴുതുക. ഒരോ ചോദ്യത്തിന്റെയും ഉത്തരം അതാത് ചോദ്യനമ്പറിന് നേരെ അടയാളപ്പെടുത്തുവാൻ ശ്രമിക്കുക.  
പറഞ്ഞതിനുശേഷം മാത്രം പുറം മറിക്കുക

TEST III

- 1 എല്ലുമാറ്റിയെ പണിതാൽ പല്ലുമാറ്റിയെ തിന്നാം.
  - a കഠിനമായി അദ്ധ്വാനിക്കുന്നവർക്കേ ആഹാരം കഴിക്കാൻ സാധിക്കുകയുള്ളൂ
  - b കഠിനാദ്ധ്വാനം ചെയ്യുന്നവർ അധിക; ആഹാരം കഴിക്കുന്നത് പല്ലിന് കേടാണ്
  - c കഠിനമായി അദ്ധ്വാനിച്ചാൽ നമുക്ക് ശരിയായി കഴിക്കാനുള്ള ആഹാരവും സമ്പാദിക്കാം
  - d കഠിനാദ്ധ്വാനം ചെയ്യുന്നവരെ ധാരാളം ആഹാരം കഴിക്കാവി

- 2 ചൊട്ടയിലെ ശീലം ചുട്ടലവരെ
  - a കട്ടിക്കാലത്ത് അഭ്യസിക്കുന്ന ശീലമാണ് നല്ലത്
  - b കൂട്ടിക്കാലത്ത് നല്ല കാര്യങ്ങൾ ശീലിക്കണം
  - c ഏതു കാര്യവും ചെറുപ്പത്തിലെ ശീലിക്കേണ്ടതാണ്
  - d കൂട്ടിക്കാലത്ത് അഭ്യസിച്ചത് ജീവാവസാനംവരെ നിലനിൽക്കും

- 3 പയ്യെത്തിനാൽ പനയും തിന്നാം.
- a സാവധാനം കഴിച്ചാൽ നമുക്ക് ധാരാളം ഭക്ഷിക്കാൻ സാധിക്കും
  - b സാവധാനത്തിൽ ചെയ്താൽ എത്ര പ്രയാസമുള്ള ജോലിയും നമുക്ക് ചെയ്തു തീർക്ക
  - c ഏതു ജോലിയും സാവധാനത്തിൽ ചെയ്യേണ്ടതുണ്ട്
  - d സാവധാനത്തിൽ ചെയ്യുന്ന പ്രവർത്തിയാണ് എപ്പോഴും നല്ലത്
- 
- 4 അഞ്ചിയോടടുത്ത മാങ്ങയുടെ പുളിയറിയു.
- a മാങ്ങയുടെ പുറം കണ്ടാൽ അതിന്റെ പുളിയറിയൻ കൈകയില്ല
  - b അടുത്ത പെരുമാറ്റം കൊണ്ടേ യഥാർത്ഥ സ്വഭാവം മനസിലാക്കാൻ സാധിക്കൂ
  - c ചില ആളുകളോട് കൂടുതൽ അടുക്കാൻ പാടില്ല
  - d യഥാർത്ഥ സ്വഭാവം മനസിലാക്കാതെ ആരോടും അടുക്കരുത്
- 
- 5 മഞ്ഞപ്പിത്തം പിടിച്ചാൽ കണുന്നതെല്ലാം മഞ്ഞ.
- a ദോഷൈകദൃശ്യങ്ങൾ എവിടെയും ദോഷം മാത്രമെ കാണുകയുള്ളൂ
  - b നാം ഏതിന്റെയും നല്ല വശം കാണേണ്ടതാണ്
  - c ദുഷ്ടന്മാർ തിന്മ ചെയ്യുന്നു
  - d ദോഷം ചെയ്യുന്ന ആളുകൾക്ക് നന്മ കൈവരുകയില്ല
- 
- 6 ആർക്കാനിരൂപിടിയ്ക്കും അവനവന് തവിടിടിക്കുകയില്ല.
- a സ്വന്തം നന്മയ്ക്കു വേണ്ടി യാതൊന്നും പ്രവർത്തിക്കാത്ത ആളുകളുണ്ട്
  - b നിസ്വാർത്ഥ സേവനം ജീവിതലക്ഷ്യമായി കരുതുന്നവരുണ്ട്
  - c ചിലർ സ്വാർത്ഥ താല്പര്യം തീരെയില്ലാത്തവരാണ്
  - d ചില ആളുകൾ അന്യർക്കുവേണ്ടി കഠിനമായി അഭയാനിക്കുകയും അവനവനുവേണ്ടി സഹായകാര്യങ്ങൾ പോലും പ്രവർത്തിക്കാതിരിക്കുകയും ചെയ്യാറുണ്ട്
- 
- 7 മെത്തമേൽ കിടന്നാൽ വിദ്യയുണ്ടാവില്ല.
- a മെത്തമേൽ കിടന്നാൽ സുഖമാണ്
  - b സുഖിയൻമാർക്ക് ശ്രേയസുണ്ടാകുകയില്ല
  - c ചില ആളുകൾ എപ്പോഴും വിശ്രമിക്കാൻ ആഗ്രഹിക്കുന്നു
  - d എപ്പോഴും വിശ്രമിക്കുന്നത് നല്ലത്
- 
- 8 മടിയൻ മല ചുമക്കും.
- a അന്നന്നുള്ള ജോലി കൃത്യമായി ചെയ്യാത്ത ആളുകൾക്ക് ഒടുവിൽ എല്ലാംകൂടി ഒരുമി ചെയ്യേണ്ടിവരും.
  - b മടിയൻമാരായ ആളുകൾക്ക് ഭാരമുള്ള വസ്തുക്കൾ ചുമക്കേണ്ടിവരും.
  - c മടിയൻമാർക്ക് ജോലി ചെയ്യുന്നത് മല ചുമക്കുന്നതിന് സമമാണ്
  - d കൃത്യമായി ജോലി ചെയ്യാത്തവർ വിഷമിക്കും.
- 
- 9 ഇരുട്ടുകൊണ്ട് ഓട്ടയടയ്ക്കുക.
- a സൂത്രപ്പണികൊണ്ട് കാര്യം സാധിക്കുക
  - b തെറ്റായ പ്രവർത്തി ചെയ്യുക
  - c കൃത്യസമയത്ത് കാര്യങ്ങൾ ചെയ്യാതിരിക്കുക
  - d ഒഴിവുകഴിവുകൾ പറഞ്ഞത് കാര്യങ്ങൾ താമസിപ്പിക്കുക
- 
- 10 മൂക്കില്ലാത്താട്ടിൽ മുറിയുക്കൻ രാജാവ്.
- a തീരെ കഴിവില്ലാത്തതിനെക്കാൾ അല്പം കഴിവുള്ളതാണ് നല്ലത്
  - b നമുക്കുള്ള ചെറിയ കഴിവുകൾ മറ്റുള്ളവരുടെ മുൻപിൽ കാണിച്ചാൽ മഹാനുമാരാകാം
  - c നിസ്സാര കഴിവുള്ളവർ കേമന്മാരാകും
  - d നിസ്സാരന്മാരുടെ കൂട്ടത്തിൽ നിസ്സാരമായ കേമത്തമുള്ളവർ മഹാനുമാരാണ്
- 
- 11 കക്കാൻ പറിച്ചാൽ പേര നീൽക്കാനും പഠിക്കണം.
- a കർമ്മം ചെയ്യുവാനിടയിൽ അത്യുദ്ധമുണ്ടാകുന്ന ഭവിഷ്യത്തുകൾ നേരിടാനും അതിനെതിരിക്കണം.
  - b നാം ചെയ്യുന്ന പ്രവർത്തിയുടെ ഫലം നാം തന്നെ അനുഭവിക്കണം.
  - c എന്തു പ്രവർത്തിയും ധൈര്യത്തോടെ ചെയ്യണം.
  - d നാം ചെയ്യുന്ന പ്രവർത്തികളെല്ലാം നല്ലതായിരിക്കണം.

- 12 അട്ടയെപ്പിടിച്ച് മെത്തമേൽ കിടത്തിയാൽ കിടക്കുമോ ?
- a ദുർജ്ജനങ്ങളെ നന്നാക്കാൻ ശ്രമിക്കുന്നത് വെറുതെയാണ്
  - b ദുർജ്ജനങ്ങൾ നന്നാക്കാൻ ഇഷ്ടപ്പെടുന്നില്ല
  - c ചില ആളുകൾ സുഖിക്കാൻ ഇഷ്ടപ്പെടുന്നില്ല
  - d വിഫലശ്രമം ചെയ്തിട്ട് കാര്യമില്ല

- 13 അങ്ങാടിയിൽ തോറ്റതിനമ്മയോട്
- a വേണ്ടിടത്ത് പ്രവർത്തിക്കേണ്ടത് വേണ്ടാത്ത സ്ഥാനത്ത് കാണിക്കുക
  - b ഓരോ സ്ഥലത്തും ഓരോ രീതിയിൽ പ്രവർത്തിക്കുക
  - c സന്ദർഭം അറിയാതെ പ്രവർത്തിക്കുക
  - d വേണ്ടാത്ത കാര്യം പ്രവർത്തിക്കുക

- 14 മിണ്ടാപ്പിച്ച കലമുടയ്ക്കും.
- a നിരപരാധിത്വം നടിക്കുന്നവരായിരിക്കും വലിയ അപരാധികൾ
  - b ആദ്യം മിണ്ടാതിരിക്കുന്നവരാണ് ഒടുവിൽ തെറ്റുചെയ്യുന്നത്
  - c പൂച്ച ശാന്തസ്വഭാവമുള്ള മുഗമാണ്
  - d ഏതു പ്രവൃത്തിയും നിശബ്ദമായി ചെയ്താൽ ആപത്തുണ്ടാകുന്നതാണ്

- 15 വിളയും വിത്ത് മുളയിലറിയാം.
- a വിത്തിന്റെ വിളവ് മുളയിലേന്നോക്കി മനസ്സിലാക്കാൻ സാധിക്കും
  - b ചെറു പ്രായത്തിലേ തന്നെ ഭാവിയിലെങ്ങനെയായിത്തീരുമെന്ന് മനസ്സിലാക്കാം
  - c ചെറിയപ്രായത്തിൽ ചെയ്യുന്ന ശീലമാണ് ഭാവിയിലും കാണിക്കുന്നത്
  - d നല്ലതു ചെയ്യുന്നവർക്കേ നന്മ വരികയുള്ളൂ

- 16 അണ്ണാൻകുഞ്ഞും തന്നാലായത്
- a നിസ്സാരന്മാർ വെറുതെയിരിക്കാൻ പാടില്ല
  - b നിസ്സാരന്മാർക്ക് അൽപമായിട്ടെങ്കിലും വല്ലതും പ്രവർത്തിക്കാൻ കഴിയും
  - c നിസ്സാരന്മാരായ ആളുകൾ ചെയ്യുന്ന പ്രവൃത്തിയാണ് നല്ലത്
  - d ചില ആളുകൾ ചെയ്യുന്നത് നാം നിസ്സാരമായി കരുതുന്നു

- 17 ഉപ്പു തിന്നവൻ വെള്ളം കുടിക്കും.
- a തിന്മ ചെയ്യുന്നവൻ അതിന്റെ ഫലം അനുഭവിക്കും
  - b ഉപ്പു കൂടുതൽ കഴിക്കുന്നവന് വെള്ളം കുടിയ്ക്കേണ്ടിവരും
  - c ഒരോ ചെയ്യുന്ന പ്രവൃത്തികൾക്കനുസരിച്ചുള്ള ഫലം അയാൾക്ക് കിട്ടും
  - d നല്ലവണ്ണം ആലോചിച്ചെ ഏതു പ്രവൃത്തിയും ചെയ്യാവൂ

- 18 ചേര തിന്നുന്ന നാട്ടിൽ ചെന്നാൽ നടുക്കണ്ടം തിന്നണം.
- a കാലശേഷികൾക്കനുസരിച്ച് നമ്മുടെ സ്വഭാവവും പെരുമാറ്റവും മാറണം
  - b ഒരു സ്ഥലത്തുചെന്നാൽ അവിടത്തെ എല്ലാ രീതികളും ശീലിക്കേണ്ടതാണ്
  - c ചില രാജ്യത്തിലെ ജനങ്ങൾ ചേരയെ തിന്നുന്നവരാണ്
  - d നാം ഏതാഹാരവും കഴിക്കുന്നതിന് ശീലിക്കണം

- 19 അഴകുള്ള ചക്കയിൽ ചുളയില്ല
- a കാഴ്ചയ്ക്കു ഭംഗിയുള്ള ചക്കയിൽ ചുള കാണുകയില്ല
  - b കാഴ്ചയ്ക്ക് മനോഹരമായി തോന്നുന്ന വസ്തുവിന്റെ ഉള്ളിൽ കഴമ്പുണ്ടാവുകയില്ല
  - c ഭംഗിയുള്ള വസ്തുക്കളുടെ ഉള്ളു പൊള്ളയായിരിക്കും
  - d ഒരു വസ്തുവിന്റെയും പുറമെയുള്ള ഭംഗി കണക്കാക്കരുത്

- 20 മിന്നുന്നതെല്ലാം പൊന്നല്ല
- a ബുദ്ധ്യസ്വഭാവവും ആന്തരസ്വഭാവവും ഒന്നല്ല
  - b തിളങ്ങുന്ന വസ്തുക്കളെല്ലാം സ്വർണ്ണമായിരിക്കണമെന്നില്ല
  - c പൊന്ന് എല്ലായ്പ്പോഴും മിന്നണമെന്നില്ല
  - d പുറംമോടി കണ്ട് ഭ്രമിക്കരുത്

TEST IV

ഈ വിഭാഗത്തിലുള്ള ചോദ്യങ്ങളിൽ ഓരോന്നിലും കുറെ സംഖ്യകൾ ഓരോ ക്രമത്തിൽ കൊടുത്തിരിക്കുന്നു. ഒന്ന് എഴുതാതെയും വിട്ടിരിക്കുന്നു. ബ്രാക്കറ്റിൽ കൊടുത്തിട്ടുള്ളതിൽ നിന്ന് ശരിയായ സംഖ്യ ഏതെന്ന് കണ്ടുപിടിച്ചു, താഴെക്കാണിച്ചിരിക്കുന്ന രീതിയിൽ ഉത്തരക്കടലാസിൽ എഴുതുക.

ഉദാഹരണം.

1. 7, 6, 7, 8, 7, — (a 7, b 10, c 14)

6, 8 എന്ന ക്രമത്തിൽ അടുത്തതായി വരേണ്ട സംഖ്യ 10 ആണ്. അതായത് b ആണ് ശരിയായ ഉത്തരം. അതുകൊണ്ട് b യ്ക്ക് താഴെയുള്ള വൃത്തത്തിനകത്ത് അടയാളപ്പെടുത്തിയിരിക്കുന്നു.

a      b      c  
       

ഈ രീതിയിൽ ഉത്തരക്കടലാസിൽ എഴുതുക. ഏതെങ്കിലും ഉത്തരം തിരുത്തേണ്ടി വന്നാൽ Test I-ൽ പറഞ്ഞതുപോലെ ചെയ്യുക.

2. 55, 50, 250, 245, —, 1220 (a 1225, b 1215, c 244)

ശരിയായ ഉത്തരം ഏതെന്ന് അലോചിക്കുക

ഇതേ രീതിയിലുള്ള 20 ചോദ്യങ്ങൾ താഴെ കൊടുത്തിരിക്കുന്നു. അവ മുഴുവൻ ചെയ്യുന്നതിന് 6 മിനിട്ട് സമയമാണുള്ളത്

ഉത്തരക്കടലാസിൽ മാത്രം ഉത്തരമെഴുതുക. ഓരോ ചോദ്യത്തിന്റെയും ഉത്തരം അതാത് ചോദ്യനമ്പറിന് നേരെ അടയാളപ്പെടുത്തുവാൻ ശ്രദ്ധിക്കുക.

പറഞ്ഞതിനുശേഷം മാത്രം പുറം മറിക്കുക.

1.	2,	4,	6,	8,	10,	(a 20,	b 12,	c 14)	
2.	$\frac{3}{4}$	$\frac{4}{5}$	$\frac{5}{6}$	$\frac{6}{7}$	$\frac{7}{8}$	(a $\frac{7}{16}$	b $\frac{8}{9}$	c $\frac{1}{8}$	
3.	5,	9,	13,	17,	21,	....	(a 25	b 84	c 7)
4.	40,	$\frac{1}{40}$	30,	$\frac{1}{30}$	20,	....	(a 20	b 10	c $\frac{1}{20}$
5.	96,	48,	24,	12,	6,	....	(a 3	b 2,	c $1\frac{1}{2}$
6.	82,	79,	76,	73,	70,	....	(a 66,	b 73,	c 67)
7.	18,	21,	25,	30,	36,	....	(a 29,	b 43	c 252)
8.	90,	81,	72,	63,	54,	....	(a 6,	b 45	c 18)
9.	12,	14,	13,	15,	14,	....	(a 15	b 17	c 16)
10.	120	60,	30,	15,	$7\frac{1}{2}$ ,	....	(a 8,	b $3\frac{3}{4}$	c $1\frac{7}{8}$
11.	1,	1,	—,	3,	5,	5	(a 2,	b 3,	c 1)
12.	50,	46,	42,	38,	—,	30	(a 26,	b 34,	c 56)
13.	29,	28,	19,	18,	9,	—	(a 8,	b 6,	c 17)
14.	0,	3,	0,	5,	—,	7	(a 0,	b 5,	c 7)
15.	11,	2,	9,	2,	—,	2	(a 7,	b 5,	c 2)
16.	21,	17,	20,	16,	19,	—	(a 15	b 28,	c 18)
17.	3,	4,	6,	9,	13,	—	(a 15,	b 18,	c 17)
18.	95,	90,	90,	85,	—	80	(a 65,	b 75,	c 85)
19.	1,	4,	9,	16,	25,	...	(a 34,	b 37,	c 36)
20.	75,	73,	70,	66,	61,	....	(a 55,	b 5,	c 57)

TEST V

ഈ വിഭാഗത്തിൽ കൊടുത്തിട്ടുള്ള ചോദ്യങ്ങളിൽ ചിലതിന് മൂന്നും മറ്റുള്ളവയ്ക്ക് നാലും ഉത്തരങ്ങൾ വീതം കൊടുത്തിട്ടുണ്ട്. അവയിൽ ശരിയായ ഉത്തരം ഏതെന്നു കണ്ടുപിടിച്ച് താഴെ കാണിച്ചിരിക്കുന്ന രീതിയിൽ ഉത്തരക്കടലാസിൽ അടയാളപ്പെടുത്തുക.

ഉദാഹരണം:—

1. ജയക്ക് ഷീലയെക്കാൾ പൊക്കം കുറവാണ്. തങ്കത്തിനാണ് ഷീലയെക്കാൾ പൊക്കം കൂടുതൽ എന്നാൽ ഇവരിൽ ഏറ്റവും പൊക്കം കുറഞ്ഞതാരാണ്?

- a ജയ b ഷീല c തങ്കം

ഇവരിൽ ഏറ്റവും പൊക്കം കുറഞ്ഞത് ജയ ആണല്ലോ. അതായത് a ആണ് ശരിയായ ഉത്തരം. അതുകൊണ്ട് a യ്ക്ക് താഴെയുള്ള വൃത്തത്തിനകത്ത് അടയാളപ്പെടുത്തിയിരിക്കുന്നു.

- a  b  c

ഈ രീതിയിൽ ഓരോ ചോദ്യത്തിന്റെയും ഉത്തരം ഉത്തരക്കടലാസിൽ എഴുതുക. ഏതെങ്കിലും ഉത്തരം തിരുത്തേണ്ടിവന്നാൽ Test I ൽ പറഞ്ഞതുപോലെ ചെയ്യുക.

2. ക്ലാസ്സിൽ നാലുകുട്ടികൾ ഒരു ബഞ്ചിലാണിരിക്കുന്നത്. ജോൺ, മാത്യുവിന്റെ ഇടതുവശത്തും റഷീദിന്റെ വലതു വശത്തുമായിട്ടാണിരിക്കുന്നത്. റഷീദ് അശോകന്റെ വലതുവശത്താണ്. എന്നാൽ ഏറ്റവും ഇടതുവശത്തിരിക്കുന്നതാരാണ്?

- a ജോൺ b മാത്യു c റഷീദ് d അശോക്

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ശരിയായ ഉത്തരം ഏതെന്ന് ആലോചിക്കുക. ഇതേ രീതിയിലുള്ള 20 ചോദ്യങ്ങൾ താഴെ കൊടുത്തിരിക്കുന്നു. അവ മുഴുവൻ ചെയ്യുന്നതിന് 10 മിനിട്ട് സമയമാണുള്ളത്.

ഉത്തരക്കടലാസിൽ മാത്രം ഉത്തരം എഴുതുക. ഓരോ ചോദ്യത്തിന്റെയും ഉത്തരം അതത് ചോദ്യ നമ്പറിനു നേരെ അടയാളപ്പെടുത്താൻ ശ്രമിക്കുക.

1. റാണി റൂബിക്ക് മുമ്പെ ജനിച്ചു. ലീന റാണിയെക്കാൾ മുമ്പെ ജനിച്ചു. എന്നാൽ ഈ മൂന്നു പേരിൽ മുമ്പെ ജനിച്ചതാരാണ്?

- a റാണി b റൂബി c ലീന

2. അച്ഛനും അമ്മയും മകനും മകളും കൂടി നടക്കാനിറങ്ങി. മകൻ അച്ഛന്റെ മുമ്പിലാണ് നടന്നിരുന്നത്. മകൾ അച്ഛന്റെ പുറകിലും അമ്മയെക്കാൾ മുമ്പിലുമാണ് നടന്നിരുന്നത്. എന്നാൽ ഏറ്റവും പുറകെ നടന്നതാരാണ്?

- a അച്ഛൻ b അമ്മ c മകൻ d മകൾ

3. രാധ ലീലയെക്കാൾ കൂടുതൽ മാർക്കു വാങ്ങി. രമയ്ക്ക് ലീലയ്ക്ക് കിട്ടിയതിനെക്കാൾ കുറവു മാർക്കാണ് കിട്ടിയത്. എന്നാൽ ആരാണ് കൂടുതൽ മാർക്കു വാങ്ങിയത്?

- a രാധ b ലീല c രമ

4. രമണി പത്മയെക്കാൾ സുന്ദരിയാണ്. ലൈല രമണിയെക്കാൾ സുന്ദര്യം കുറഞ്ഞവളാണ്. എന്നാൽ അവരിൽ ഏറ്റവും സുന്ദരി ആരാണ്?

- a രമണി b പത്മ c ലൈല

5. രവിക്ക് തോമസിനെക്കാൾ വേഗത്തിലും ഹരിയോടൊപ്പവും ഓടാൻ സാധിക്കും. എന്നാൽ രാജൻ രവിയെക്കാൾ വേഗത്തിൽ ഓടും. ഇവരിൽ ഏറ്റവും വേഗത്തിൽ ഓടുന്നതാരാണ്?

- a രവി b തോമസ് c ഹരി d രാജൻ

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6. ബാലൻ നല്ലവനാണ്. രാമു ബാലനെക്കാൾ നല്ലവൻ. ഹരി രാമുവോളം നല്ലവനെല്ലെങ്കിലും ഗോപിയെക്കാൾ നല്ലവനാണ്. ഗോപിയാകട്ടെ, ബാലനോളം നല്ലവനെല്ല. എന്നാൽ ഏറ്റവും നല്ലവനാരും?

- a ബാലൻ b രാമു c ഹരി d ഗോപി

7. രാജു രഘുവിന്റെ മുഞ്ച നടക്കുന്നു. അപ്പുവിന്റെ പുറകിലാണ് രാജു നടക്കുന്നത്. എന്നാൽ ഏറ്റവും പുറകിൽ നടക്കുന്നതാരും?

- a രാജു b രഘു c അപ്പു

8. പഠിത്തത്തിൽ ശ്രദ്ധചന്ദ്രനെക്കാൾ മിടുക്കനാണ് പ്രേമചന്ദ്രൻ. ബാലചന്ദ്രൻ പ്രേമചന്ദ്രനെക്കാൾ മിടുക്ക് കുറവാണ്. മോഹനചന്ദ്രൻ പ്രേമചന്ദ്രനെക്കാൾ മിടുക്കനാണ്. എന്നാൽ ഇവരിൽ ആരാണ് ഏറ്റവും മിടുക്കൻ?

- a ശ്രദ്ധചന്ദ്രൻ b പ്രേമചന്ദ്രൻ c ബാലചന്ദ്രൻ d മോഹനചന്ദ്രൻ

9. കൃഷ്ണൻ ഗോപുവിനെക്കാൾ പൊക്കം കൂടുതലും വേണുവിനെക്കാൾ പൊക്കം കുറവുമാണ്. സോമൻ വേണുവിനെക്കാൾ പൊക്കം കൂടുതലുണ്ട്. എന്നാൽ ഇവരിൽ ഏറ്റവും പൊക്കം കൂടിയവനാരും?

- a കൃഷ്ണൻ b ഗോപു c വേണു d സോമൻ

10. സതി അംബികയോളവും വൽസ വസന്തയെക്കാളും സുന്ദരിയാണ്. സതി വൽസയോളം സുന്ദരിയല്ലെങ്കിൽ ഏറ്റവും സുന്ദരി ആരും?

- a സതി b അംബിക c വൽസ d വസന്ത

11. A യ്ക്ക് B യെക്കാൾ പൊക്കം കൂടുതലും C യെക്കാൾ പൊക്കം കുറവുമാണ്. C യ്ക്കും D യ്ക്കും ഒരേ പൊക്കമാണ്. എന്നാൽ ഇവരിൽ ഏറ്റവും പൊക്കം കുറഞ്ഞവനാരും?

- a A b B c C d D

12. A യോളം ഭാരം B യ്ക്കും B യെക്കാൾ ഭാരം C യ്ക്കുമുണ്ട്. D യുടെ ഭാരം C യുടേതിനെക്കാൾ കുറവും A യുടെതിനെക്കാൾ കൂടുതലുമായാൽ ഏറ്റവും കൂടുതൽ ഭാരമുള്ളതാർക്കും?

- a A b B c C d D

13. ഒരു നീന്തൽ മൽസരത്തിൽ ഭാസി വിജയനെക്കാൾ പുറകിലായിരുന്നെങ്കിലും രാധാകൃഷ്ണനെക്കാൾ മുന്നിലായിരുന്നു. രാമചന്ദ്രൻ വിജയനെക്കാൾ മുന്നിലായിരുന്നു. എന്നാൽ ഏറ്റവും മുന്നിൽ ആയിരുന്നു?

- a ഭാസി b വിജയൻ c രാധാകൃഷ്ണൻ d രാമചന്ദ്രൻ

14. ഒരു ഓട്ടപ്പന്തത്തിൽ ഗോപി ചന്ദ്രനെക്കാൾ മുന്നിലായിരുന്നു, ശശി രാമുവിനെക്കാൾ മുന്നിലായിരുന്നു. ചന്ദ്രനും ശശിയും ഒരേ ലവലിലായിരുന്നു. എന്നാൽ ആരാണ് മൽസരത്തിൽ ജയിച്ചത്?

- a ഗോപി b ചന്ദ്രൻ c ശശി d രാമു

15. ഉണ്ണികൃഷ്ണൻ സതീശനെക്കാൾ ബുദ്ധിയുണ്ട്. ഗോപൻ ജോയിയെക്കാൾ ബുദ്ധി കുറഞ്ഞവനാണ്. സതീശൻ ജോയിയെക്കാൾ ബുദ്ധിയുണ്ട്. എന്നാൽ ഏറ്റവും കൂടുതൽ ബുദ്ധിയുള്ളതാർക്കാണ്.

- a ഉണ്ണികൃഷ്ണൻ b സതീഷ് c ഗോപൻ d ജോയി

16. ക്ളാസിൽ ശോഭയുടെ ഇടതുവശത്താണ് ജമീല ഇരിക്കുന്നത്. ശോഭയുടെ ഇടത് വശത്താണ് മേരി ഇരിക്കുന്നത്. എന്നാൽ നടുവിൽ ഇരിക്കുന്നതാരും?

- a മേരി b ജമീല c ശോഭ

17. ലതയെക്കാൾ പഠിപ്പുണ്ട് ഹേമയ്ക്ക്. കുമാരിയെക്കാൾ പഠിച്ചിട്ടുണ്ട് ലത. ശാരിയെക്കാൾ പഠിപ്പുണ്ട് കുമാരിക്ക്. എന്നാൽ ഏറ്റവും കൂടുതൽ പഠിപ്പുള്ളതാർക്ക് ?  
a ലത    b കുമാരി    c ശാരി    d ഹേമ

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18. ഒരു വരിയുടെ രണ്ടരത്ത് നിന്നെണ്ണിനോക്കിയാലും ഉമ അഞ്ചാമത്തതാണ്. എന്നാൽ ആ വരിയിൽ എത്ര പേരുണ്ട് ?  
a 10    b 11    c 7    d 9

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19. ലക്ഷ്മി സുശീലയെക്കാൾ സൗമ്യശീലയാണ്. മാലിനി ലക്ഷ്മിയെക്കാൾ സൗമ്യശീലയാണ്. മാലിനിക്ക് വനജയെ അപേക്ഷിച്ച് സൗമ്യശീല. വളരെ കുറവാണ്. എന്നാൽ ഏറ്റവും സൗമ്യശീല ആരാണ് ?  
a ലക്ഷ്മി    b സുശീല    c മാലിനി    d വനജ

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20. AB, CD, EF, GH, ഇവ നാല് രേഖകളാണ്. GH രേഖ AB യെക്കാൾ വലുതും EF നെക്കാൾ ചെറുതുമാണ്. EF, CD യെക്കാൾ ചെറുതാണെങ്കിൽ ഏറ്റവും നീളം കുറഞ്ഞ രേഖ ഏത് ?  
a AB    b CD    c EF    d GH

# KERALA SCALE OF ACHIEVEMENT MOTIVATION

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താഴെ കൊടുത്തിരിക്കുന്ന ഓരോ പ്രസ്താവനയും ശ്രദ്ധാപൂർവ്വം വായിച്ച് നിങ്ങളുടെ പ്രതികരണം ഉത്തരക്കടലാസിൽ 'Y', 'U', 'N' ഇവയ്ക്കിടയിൽ കൊടുത്തിരിക്കുന്ന വൃത്തത്തിൽ ഏതെങ്കിലും 'X' ചിഹ്നം കൊണ്ട് രേഖപ്പെടുത്തുക. ഇവിടെ 'Y' അതെ (Yes) എന്നതിനെയും, 'U' തീർച്ചയില്ല (Undecided) എന്നതിനെയും, 'N' അല്ല (No) എന്നതിനെയുമാണ് സൂചിപ്പിക്കുന്നത്. എല്ലാ പ്രസ്താവനകൾക്കും ഉത്തരം അടയാളപ്പെടുത്താൻ പ്രത്യേകം ശ്രദ്ധിക്കുക.

- 1 വിദ്യാർത്ഥികളെ പഠനകാര്യങ്ങളിൽ കുറ്റപ്പെടുത്തുന്ന അപമാനമോർ അവർതന്നെ വിദ്യാർത്ഥികൾ എന്ന നിലക്ക് ഒരു പരാജയമായിരുന്നു എന്ന കാര്യം മറക്കുന്നു.
- 2 ഇപ്പോൾ പഠിക്കുന്നതിലും നന്നായി പഠിക്കണമെന്ന് എന്റെ അപമാനം അമ്മയോ എപ്പോഴും എന്റെ ഓർമ്മിപ്പിക്കുമ്പോൾ എന്റെ അമ്മർഷ്യം പ്രകടിപ്പിക്കണമെന്ന് തോന്നിപ്പോകാറുണ്ട്.
- 3 വിലപ്പെട്ട യാതൊന്നും ചെയ്യാൻ കഴിയാത്ത ആളാണ് ഞാനെന്ന് എന്റെ കൂട്ടുകാർ കരുതുന്നു.
- 4 ഞാനൊരു നല്ല വിദ്യാർത്ഥിയാണെന്ന് മറ്റുള്ളവരെ വിശ്വസിക്കണമെന്ന രീതിയിൽ ഞാൻ പലപ്പോഴും അഭിനയിക്കാറുണ്ട്.
- 5 എന്തെങ്കിലും ഒരിക്കൽ ഒരു മഹാനായിത്തീരണമെന്ന് എനിക്ക് രഹസ്യമായ ഒരാഗ്രഹമുണ്ടെന്ന കാര്യം എന്റെ വിമർശിക്കുന്നവർക്ക് അറിയാൻ പാടില്ല.
- 6 മറ്റുള്ളവർ എന്നെക്കുറിച്ച് എന്തു വിചാരിച്ചാലും അത് എനിക്ക് ജീവിതത്തിൽ വിജയം വരിക്കുന്നതിന് തടസ്സമായിരിക്കുകയില്ല.
- 7 ഒരു മഹാനാകാൻ വിധിക്കപ്പെട്ടിട്ടുള്ള ഒരാളാണ് ഞാൻ എന്ന് എന്റെ വിമർശിക്കുന്ന മുതിർന്ന ആളുകളിൽ പലരും മനസ്സിലാക്കിയിട്ടില്ല.
- 8 ഉള്ള നേട്ടങ്ങൾക്കൊണ്ട് തൃപ്തിപ്പെടുന്നവരെ എനിക്ക് ഇഷ്ടമല്ല.
- 9 എന്റെ മതാപിതാക്കളുടെ സ്ഥിതിക്ക് അനുസരണമായി എന്റെ അഭിലാഷങ്ങൾ നിയന്ത്രിക്കണമെന്ന ഉപദേശത്തെ ഞാൻ ബഹുമാനിക്കുന്നു.
- 10 അസാധ്യമെന്ന് തോന്നുന്നത് സാധ്യമാക്കുവാൻ വേണ്ടി പ്രവർത്തിക്കുന്നവരെ ഞാൻ ആദരിക്കുന്നു.
- 11 ഒരാൾക്ക് എല്ലായ്പ്പോഴും അയാൾ ആഗ്രഹിക്കുന്ന കാര്യങ്ങൾ കിട്ടുകയില്ലെന്ന് നാം അറിഞ്ഞിരിക്കണമെന്നതാണ്.
- 12 ഒരാൾക്ക് ഏതു ഉന്നത നിലയിലും എത്തിച്ചേരാമെന്ന് കാണിച്ചിട്ടുള്ള ആളുകളോട് എനിക്കു ബഹുമാനമാണ്.
- 13 ഉന്നത സ്ഥാനങ്ങളിൽ എത്തിച്ചേരുന്നതിന് സഹായകമാകുമെന്ന് കരുതി പഠിത്തത്തിനു മാത്രമായി മുഴുവൻ സമയവും ഉപയോഗിക്കുന്ന എന്റെ കൂട്ടുകാരോട് എനിക്ക് സഹതാപമാണുള്ളത്.
- 14 ഞാൻ ചെയ്യുന്നതെന്തും അതിലും നന്നായി മറ്റുള്ളവർക്ക് ചെയ്യാൻ കഴിയുമെന്ന് എനിക്ക് തോന്നാറുണ്ട്.
- 15 കിട്ടുന്ന സമയം മുഴുവനും ജോലിയെടുക്കാൻ കഴിയുന്ന കുറെ ആളുകൾ ഉണ്ടെന്നുള്ളത് ശ്രദ്ധിക്കേണ്ടതാണ്. നിർഭാഗ്യവശാൽ ഞാൻ അവരിൽ ഒരാളല്ല.
- 16 ഞാൻ ഏറെക്കുറെ ഏതു കാര്യവും ഏറ്റവും നന്നായി ചെയ്യാൻ കഴിയുന്നവൻ ഞാൻ താല്പര്യപ്പെടുന്നു.
- 17 പ്രയാസങ്ങൾ അഭിമുഖീകരിക്കേണ്ടിവരുന്നെന്ന് കണ്ടാൽ ഞാൻ തുടങ്ങിവെച്ച ജോലികൾ ഇടക്കുവെച്ച് ഉപേക്ഷിക്കാറുണ്ട്.
- 18 വളരെ പ്രധാനപ്പെട്ട കാര്യങ്ങൾ ചെയ്യേണ്ടി വരുമ്പോൾ എനിക്ക് പെട്ടെന്ന് ക്ഷീണം അനുഭവപ്പെടാറുണ്ട്.

- 19 പ്രധാനപ്പെട്ട കാര്യങ്ങൾ ചെയ്യുവാൻ ഇപ്പോഴുള്ളതിൽ കൂടുതൽ അവസരങ്ങൾ കിട്ടിയിരുന്നില്ലെങ്കിൽ എന്ന് ഞാൻ ആശിക്കുന്നു.
- 20 മറ്റുള്ള കൂട്ടികൾക്ക് ചെയ്യുവാൻ പ്രയാസമുള്ള കാര്യങ്ങൾ ക്ലാസിൽവെച്ച് അദ്യയാപകൻ എന്നോട് ചെയ്യുവാൻ ആവശ്യപ്പെടുമ്പോൾ എനിക്ക് സന്തോഷം മെൽനൊറുണ്ട്.
- 21 പഠന സംബന്ധമായ കാര്യങ്ങൾക്ക് നേതൃത്വം കൊടുക്കേണ്ട കാര്യങ്ങളുണ്ടാകുമ്പോൾ, എന്റെ അദ്യയാപകർ എല്ലായ്പ്പോഴും എന്തെന്തെന്ന് നേതൃത്വമായി ഒഴിഞ്ഞുപോകാറുണ്ട്.
- 22 എന്റെ ആശയങ്ങൾ പ്രായോഗികമാണെന്ന് എന്റെ ക്ലാസിലെ ആരുംതന്നെ വിശ്വസിക്കുന്നില്ല,
- 23 ഏതെങ്കിലും കാര്യങ്ങൾ ഞാൻ ഏറ്റെടുത്താൽ എന്തു ത്യോഗവും-സഹിച്ച് ഞാൻ അത് സമയത്ത് തീർക്കാറുണ്ട്.
- 24 കാര്യങ്ങൾ ശരിയായി ചെയ്ത് തീർക്കുന്നതിനുള്ള ക്ലമ ഇല്ലാത്തതിനാൽ ഇടയ്ക്കുവെച്ച് ഞാൻ അവ ഉപേക്ഷിക്കാറുണ്ട്.
- 25 ശരിയായി കാര്യങ്ങൾ ചെയ്തു തീർക്കുവാൻ കഴിയുകയില്ല എന്ന് ഭീതി നിമിത്തം അപൂർവ്വമായി മാത്രമേ ഞാൻ കാര്യങ്ങൾ ഏറ്റെടുക്കാറുള്ളൂ.
- 26 എന്നോട് ചെയ്യുവാൻ ആവശ്യപ്പെടുന്ന കാര്യങ്ങൾ പലപ്പോഴും എന്റെ പരിമിതിയിൽ കവിഞ്ഞതാണെന്ന് എനിക്ക് തോന്നിയിട്ടുണ്ട്.
- 27 ഞാൻ ഏറ്റെടുക്കുന്ന കാര്യങ്ങൾ പരിപൂർണ്ണതയിലെത്തിക്കുവാൻ ഞാൻ ചെയ്ത കാര്യങ്ങൾ വീണ്ടും വീണ്ടും തീരുത്താറുണ്ട്.
- 28 ഞാൻ ചെയ്യുന്ന പല കാര്യങ്ങളിലും ഞാൻ അഭിമാനം കൊള്ളുന്നതുകൊണ്ട് അവ എന്റെ കൂട്ടുകാരെ കാണിക്കാൻ ഞാൻ ഇഷ്ടപ്പെടുന്നു.
- 29 ഏതെങ്കിലും ജോലി ഏറ്റെടുക്കാൻ എന്നോട് ആരെങ്കിലും ആവശ്യപ്പെട്ടാൽ ഞാൻ ആ അവസരം ആഹ്ളാദത്തോടെ ഉപയോഗപ്പെടുത്താറുണ്ട്,
- 30 പ്രവൃത്തികൾ പലതും വിവിധ സ്വഭാവമുള്ളതുകൊണ്ട് ഏതെങ്കിലും ഏറ്റെടുക്കാൻ സമ്മതിക്കുന്നതിനുമുമ്പ് അതിനെക്കുറിച്ച് ആലോചിക്കുവാൻ കൂറെ സമയം ഞാൻ ചെലവാക്കാറുണ്ട്.
- 31 ഒരു ജോലി ഞാൻ ഏറ്റെടുത്താൽ അത് സ്വയം ചെയ്തു തീർക്കാൻ സാധിക്കുന്നതാണെന്ന് ഞാൻ സങ്കല്പിക്കാറുണ്ട്.
- 32 ഒരു കാര്യത്തിൽതന്നെ അധികസമയം ശ്രദ്ധ ചെലുത്തുവാൻ സാധിക്കുന്നില്ലെന്ന് എന്റെ വലിയ ഒരു ബലഹീനതയാണ്.
- 33 രസകരമല്ലാത്ത പ്രവൃത്തികളിൽ ഏറെ സമയം ശ്രദ്ധ ചെലുത്തുവാൻ കഴിവുള്ള സ്നേഹിതരെ ഞാൻ ആദരിക്കാറുണ്ട്.
- 34 എനിക്ക് പ്രധാനമെന്ന് തോന്നുന്ന കാര്യങ്ങളിൽ ശ്രദ്ധ ചെലുത്തുവാൻ എനിക്ക് കഴിയും.
- 35 കൂട്ടുപ്രവർത്തനങ്ങൾ നടപ്പിലാക്കുന്നതിനുകൂറുന്ന പുതിയ ആശയങ്ങൾ പ്രകടിപ്പിക്കുന്ന എന്റെ സ്നേഹിതൻമാരെ ഞാൻ മനസ്സുകൊണ്ട് ആദരിക്കാറുണ്ട്.
- 36 എന്റെ താൽപര്യങ്ങൾ സമാധാനസമയങ്ങളിൽ മാറിക്കൊണ്ടിരിക്കുന്നതിനാൽ ഞാൻ ചെയ്തുകൊണ്ടിരിക്കുന്ന കാര്യങ്ങൾ കൂടുതൽ പ്രധാനപ്പെട്ട മറ്റു കാര്യങ്ങൾക്കുവേണ്ടി ഉപേക്ഷിക്കാറുണ്ട്.
- 37 ഒരു മഹാനായിത്തീരുന്നതിനുവേണ്ടി ആഗ്രഹിക്കുന്നവർക്കുവേണ്ടി അതിനുവേണ്ട മാതൃകയായ കഴിവ് എനിക്കുണ്ടോ എന്നെനിക്കറിയാൻ പാടില്ല.
- 38 പഠനകാര്യങ്ങൾക്കോ സ്കൂൾസംബന്ധമായ ജോലികൾക്കോവേണ്ടി എന്റെ കഴിവിന്റെ പകുതിപോലും ഞാൻ ഉപയോഗിക്കുന്നില്ല.
- 39 കൂടുതൽ പ്രധാനപ്പെട്ട കാര്യങ്ങൾ ചെയ്യുവാൻ അവസരം ലഭിച്ചിരുന്നില്ലെങ്കിൽ എന്ന് ഞാൻ ആഗ്രഹിക്കുന്നു.
- 40 രസകരങ്ങളായ കാര്യങ്ങൾ ഏറ്റെടുക്കുന്നതിനുവേണ്ടി രസകരങ്ങളല്ലാത്ത കാര്യങ്ങൾ ഞാൻ തള്ളിക്കളയാറുണ്ട്.
- 41 എനിക്ക് ഏറെയും നല്ലതെന്താണെന്ന് തീരുമാനിക്കാൻ സാധിക്കാത്തതിനാൽ എനിക്ക് വിഷമവും മനഃപ്രയാസവും തോന്നാറുണ്ട്.

- 42 അംഗീകാരം കരസ്ഥമാക്കാൻ കഴിയാത്തതിനാൽ എനിക്കെപ്പോഴും ദുഃഖം തോന്നാറുണ്ട്.
- 43 എനിക്കു് എന്നെത്തന്നെ കൃപ്തിപ്പെടുത്താൻ കഴിഞ്ഞുവോ എന്നതിനെപ്പറ്റി എനിക്കു് നല്ല തീർച്ചയില്ല,
- 44 പരിഹാരം കണ്ടെത്തുവാനായി എന്നെ ഏൽപ്പിക്കുന്ന പ്രയാസമേറിയ പല പ്രശ്നങ്ങൾക്കും പരിഹാരം നിർദ്ദേശിക്കുവാൻ എന്റെ പരിചയക്കുർവ്വം അറിവില്ലായ്മയും പ്രാപ്തനാക്കുന്നില്ലായെന്നു് എനിക്കെപ്പോഴും തേന്നിയിട്ടുണ്ട്.
- 45 രൊളിനു് ജീവിതത്തിൽ ഉണ്ടാകുന്ന നേട്ടങ്ങൾ യഥാർത്ഥത്തിൽ അയാളുടെ കഴിവുകൾ ഉപയോഗിച്ചു് അയാൾ സ്വായത്തമാക്കുന്നതാണ്.
- 46 വിധിയിൽ എനിക്കു് വിശ്വാസമില്ല.
- 47 എനിക്കു് തീർച്ചയായും ഒരു നല്ല ജീവിതം നയിക്കണം.
- 48 ജീവിതത്തിൽ വിജയിച്ചിട്ടുള്ള ആളുകളിൽ എനിക്കറിയാവുന്ന എല്ലാവരെയും അനുകരിക്കാൻ ഞാൻ ശ്രമിക്കുന്നു.
- 49 ഒരു മഹാനായി തീരുവാൻ ഞാൻ തീരുമാനിച്ചിട്ടുണ്ട്.
- 50 വിലയേറിയ(മഹത്തരമായ)എന്തെങ്കിലും ചെയ്യുവാൻ കഴിഞ്ഞില്ലെങ്കിൽ ജീവിതംകൊണ്ട് പ്രയോജനമില്ല
- 51 എനിക്കു് ധനവും അധികാരവും കൈവരിക്കണം.
- 52 എന്നെ ഒരു മഹാനായി മററുള്ളവർ കരുതിയെങ്കിൽ എന്ന് ഞാൻ ആശിക്കുന്നു.
- 53 ഞാൻ വളരെ അക്ഷമനാണ്. എന്റെ ജീവിതത്തിലെ ഓരോ മിനിട്ടും പ്രയോജനകരമായി ഉപയോഗിക്കേണ്ടതാണെന്നു് എനിക്കു തോന്നുന്നു.
- 54 സമയം വളരെ സാവധാനത്തിൽ ഇഴഞ്ഞുനീങ്ങുന്നതായി എനിക്കു് കൂടെക്കൂടെ തോന്നുന്നു.
- 55 അൽഭുതങ്ങൾ സംഭവിക്കുമെന്ന് എനിക്കു് വിശ്വാസമില്ല. എല്ലാ മഹാൻമാരും ജീവിതത്തിൽ ഉന്നതസ്ഥാനം നേടുന്നതിനുവേണ്ടി കഠിന പ്രയത്നം ചെയ്യുകയും, പ്രതിസന്ധിക്കെതിരെ പോരാടുകയും ചെയ്തിട്ടുള്ളവരാണ്.
- 56 എനിക്കു് ജോലിത്തീരക്കില്ലാത്ത കുറെ സമയം കിട്ടിയിരുന്നെങ്കിൽ അതിനെ പ്രയോജനകരമായ എന്തെങ്കിലും കഴിവുകൾ വികസിപ്പിച്ചെടുക്കുന്നതിനു് ഞാൻ ഉപയോഗിക്കുമായിരുന്നു.
- 57 കഠിനപ്രയത്നം, സുഖലോലുപത ഇവയിൽ എന്തെങ്കിലും ഒന്ന് തെരഞ്ഞെടുക്കുവാൻ എന്നോട് ആവശ്യപ്പെട്ടാൽ ഞാൻ തീർച്ചയായും രണ്ടാമത്തേതായിരിക്കും തെരഞ്ഞെടുക്കുക.
- 58 അലസനായി ജീവിക്കുവാനാശിക്കുന്നയാൾക്കു് ജീവിതത്തിൽ നല്ല അനുഭവങ്ങൾ പ്രതീക്ഷിക്കുവാൻ അവകാശമില്ല.
- 59 പെട്ടെന്നു് വിദ്യാഭ്യാസം പൂർത്തിയാകത്തക്ക വിധത്തിൽ സമയം പെട്ടെന്നു് പോയെങ്കിൽ എന്ന് ഞാൻ ആശിക്കുന്നു.
- 60 എന്റെ ആശയങ്ങൾ വളരെ പുതുമയുള്ളതാണെന്നു് മററുള്ളവരെ ബോദ്ധ്യപ്പെടുത്താൻ എനിക്കു് കഴിയുന്നതുകൊണ്ട് എന്റെ പാഠ്യതികൾക്കു് പലപ്പോഴും മററുള്ളവരുടെ അംഗീകാരം ലഭിക്കാറുണ്ട്.

APPENDIX VI  
Study Habits Rating Scale

By Dr. A.S. NAIR

നിർദ്ദേശങ്ങൾ

കുട്ടികളുടെ പഠനരീതികളെ കാണിക്കുന്ന ഏതാനും കുറെ ചോദ്യങ്ങൾ താഴെക്കൊടുത്തിരിക്കുന്നു. അവ ഓരോന്നും എത്രമാത്രം ശരിയാണെന്ന് കാണിക്കുന്നതിനുവേണ്ടി ഉത്തരക്കടലാസിൽ കൊടുത്തിട്ടുള്ള നമ്പരിനെതിരെയുള്ള കോളത്തിൽ A, B, C എന്ന മൂന്നക്ഷരങ്ങളിൽ ഏതെങ്കിലും ഒന്നുകൊണ്ടു സൂചിപ്പിക്കാവുന്നതാണ്. ഓരോ ചോദ്യത്തിനും ആധാരമായ കാര്യങ്ങൾ:-

നിങ്ങൾ 'എല്ലായ്പ്പോഴും' ചെയ്യാറുണ്ടെങ്കിൽ 'A' എന്നെഴുതുക.

നിങ്ങൾ 'ചിലപ്പോൾ' ചെയ്യാറുണ്ടെങ്കിൽ 'B' എന്നെഴുതുക.

നിങ്ങൾ 'ഒരിക്കലും ചെയ്യാറില്ല'യെങ്കിൽ 'C' എന്നെഴുതുക.

മേൽപ്പറഞ്ഞകാര്യങ്ങൾ ശരിയായി മനസ്സിലാക്കിയ ശേഷം എല്ലാ ചോദ്യങ്ങൾക്കും ഉള്ള ഉത്തരം അടയാളപ്പെടുത്തുക.

1. ക്ലാസിൽ കൊണ്ടുപോകേണ്ട സാമഗ്രികൾ (പുസ്തകങ്ങൾ, പേന, ഇൻസ്ട്രുമെന്റ് ബോക്സ് തുടങ്ങിയവ ക്രമീകരിച്ചിട്ടുണ്ടോ എന്ന് പരിശോധിക്കാറുണ്ടോ ?
2. പാഠഭാഗങ്ങളിൽ സ്വയം മനസ്സിലാക്കാൻ കഴിയാത്ത കാര്യങ്ങൾ മറ്റു കഴിവുള്ള കുട്ടികളുമായി ചർച്ചചെയ്തു മനസ്സിലാക്കാൻ ശ്രമിക്കാറുണ്ടോ ?
3. ഏതെങ്കിലും ഭാഗം പഠിച്ചു പൂർത്തിയാകുമ്പോൾ അതിലെ പ്രധാന കാര്യങ്ങൾ പഠിച്ച ക്രമത്തിൽ മനസ്സിൽ ആവർത്തിക്കാറുണ്ടോ ?
4. നന്നായി പഠിച്ച ഭാഗങ്ങൾ മറക്കാതിരിക്കാൻ കുറെ ദിവസങ്ങൾ കൂടുമ്പോൾ ആവർത്തിച്ചു പഠിക്കാറുണ്ടോ ?
5. ഓരോ വിഷയത്തിന്റേയും പ്രാധാന്യം കണക്കിലെടുത്ത് ഒരു ടൈംടേബിൾ തയ്യാറാക്കി അതനുസരിച്ച് പഠിക്കാറുണ്ടോ ?
6. നിങ്ങളുടെ വ്യക്തിപരമായ കാര്യങ്ങളെപ്പറ്റി ആലോചിച്ചുകൊണ്ടിരിക്കുന്നതു നല്ലവണ്ണം പഠിക്കുന്നതിനു കഴിയാതാകുന്നുണ്ടോ ?
7. നീളം കൂടിയ പാഠഭാഗങ്ങൾ ഒന്നിച്ചു പഠിക്കുന്നതിനുപകരം ചെറിയ ഭാഗങ്ങളാക്കി പഠിക്കാൻ ശ്രമിക്കാറുണ്ടോ ?
8. മൗനവായന നടത്തുന്നതു പ്രയോജനമില്ലെന്നു കരുതി പാഠങ്ങൾ ഉറക്കെ വായിക്കാറുണ്ടോ ?
9. ഓരോ വിഷയത്തിലും മനസ്സിലാക്കാൻ വിഷമമുള്ള ഭാഗങ്ങൾ കണ്ടുപിടിച്ച്, പഠിക്കുമ്പോൾ പ്രത്യേകം ശ്രദ്ധ ചെലുത്താറുണ്ടോ ?
10. ഭൂപടങ്ങൾ, ചാർട്ടുകൾ. ഡയഗ്രാമുകൾ തുടങ്ങിയവ വരച്ചു പരിശീലിക്കുന്നതു

വായിക്കുന്നതിനുള്ള സമയം ദുരുപയോഗപ്പെടുത്തണമെന്നു കരുതി ചെയ്യാതിരുന്നിട്ടുണ്ടോ ?

11. വീട്ടിലെ മുതിർന്ന ആളുകൾ ഓർമ്മിപ്പിക്കാതെയിരുന്നാൽ പഠിക്കേണ്ട സമയം പലപ്പോഴും നിങ്ങൾക്കു മറന്നുപോകാറുണ്ടോ ?
12. വായിച്ചുകഴിഞ്ഞ പാഠഭാഗങ്ങൾ ഓർക്കുന്നതിനായി ചുരുക്കിയെഴുതി വയ്ക്കാറുണ്ടോ ?
13. ക്ലാസിൽ പഠിക്കുന്ന ഭാഗങ്ങൾ പലപ്പോഴും മുഷിപ്പനായതുകൊണ്ട്, ആ സമയം കൂടി സന്തോഷകരമായ കാര്യങ്ങൾ ഓർത്തിരിക്കാറുണ്ടോ ?
14. അന്നന്നുള്ള പാഠങ്ങൾ പലപ്പോഴും പഠിക്കാൻ നിവൃത്തിയില്ലാതെ വരുമ്പോൾ മറ്റുദിവസങ്ങളിലേക്ക് മാറ്റി വയ്ക്കാറുണ്ടോ ?
15. മുഷിപ്പൻ വിഷയങ്ങൾ നിശ്ശേഷം മാറ്റിവെച്ചിട്ട് നിങ്ങൾക്കു താല്പര്യമുള്ള കാര്യങ്ങൾ പഠിക്കുന്നതിനു മുഴുവൻ സമയവും ചിലവഴിക്കാറുണ്ടോ ?
16. അദ്ധ്യാപകർ തരുന്ന ഗൃഹപാഠങ്ങൾ ഓർക്കാത്തതുകൊണ്ട് പലപ്പോഴും ചെയ്യാതെ ക്ലാസ്സിൽ പോകാൻ ഇടയായിട്ടുണ്ടോ ?
17. ക്ലാസ്സ് നടക്കുമ്പോൾ ഉണ്ടാകുന്ന സംശയങ്ങൾ അപ്പോഴപ്പോൾ അദ്ധ്യാപകരോടു ചോദിക്കുന്നതു തെറ്റാണെന്നു കരുതി ചോദിക്കാതിരുന്നിട്ടുണ്ടോ ?
18. പാഠഭാഗങ്ങൾക്ക് സഹായകരമായ കാര്യങ്ങൾ മറ്റു ബുക്കുകളിലോ മാസികകളിലോ കണ്ടാൽ അവ ശ്രദ്ധിച്ച് പഠിക്കാൻ ശ്രമിക്കാറുണ്ടോ ?
19. ഓരോ പാഠഭാഗങ്ങളും പഠിക്കുന്നതിനു മുൻപ്, അതിനോടു ബന്ധപ്പെട്ട മുൻ പാഠഭാഗങ്ങൾ ഓർമ്മിക്കാൻ ശ്രമിക്കാറുണ്ടോ ?
20. പുസ്തകങ്ങളും മറ്റു പഠനസാമഗ്രികളും പഠിക്കേണ്ട ക്രമത്തിൽ അടുക്കി വയ്ക്കാറുണ്ടോ ?
21. പ്രധാന പാഠഭാഗങ്ങൾക്കു പുറമെ, അദ്ധ്യാപകൻ തരുന്ന ജോലികൾ കൂടുതൽ ചെയ്യുന്നതു ഉപയോഗശൂന്യമാണെന്നു കരുതി, അങ്ങനെയുള്ളവ ഉപേക്ഷിക്കാറുണ്ടോ ?
22. ക്ഷീണവും മുഷിച്ചിലും തോന്നുന്ന അവസരങ്ങളിലും പഠനം തുടരാറുണ്ടോ ?
23. പാഠഭാഗങ്ങളിൽ ചിലതു മനസ്സിലാക്കാൻ വിഷമമായതുകൊണ്ട് അവ മനസ്സിലാക്കാൻ ശ്രമിക്കാതെ മന:പാഠമാക്കാറുണ്ടോ ?
24. പരീക്ഷകൾ എഴുതുന്നതിനു മുൻവർഷത്തെ വിദ്യാർത്ഥികളിൽ നിന്നും നിർദ്ദേശങ്ങൾ സ്വീകരിക്കാറുണ്ടോ?



## APPENDIX VIII

Department of Education

University of Calicut

Achievement Test in English (post –test) for Standard IX Pupils

**Choose the appropriate verbs from the pair given in brackets and fill in the blanks.**

2. He is an English teacher. He..... English (teach, teaches)
3. But I..... you that I have to pay off the dues. (tell, tells)
4. Joy didn't..... to school yesterday. (come, came)
5. Last month, I..... to village but your letter disturbed my programme (had planned, has planned)
6. Joy's father..... to his office regularly (go, goes)
7. My uncle often.....us (visit, visits)
8. Many.....arrived early to attend the meeting (has, have)
9. Some of my friends..... to school by bus (come, comes)
10. One of my friends..... to school by car (come, comes)
11. She often..... songs (sing/ sings)

**Fill the gaps with the correct tense from the verbs in brackets.**

12. Last year we .....to Ooty during the holidays (go)
13. While I was reading my little brother ..... with his toys (play)
14. He always ..... the class. (disturb)
15. Don't try to get into a bus while it ..... (move)

**Make questions. Begin your question with the word in brackets**

16. John plays tennis (How often)
17. I get up in the morning (what time/ usually)
18. Sasi works (where)
19. People do stupid things (why)

**Read the following sentences and fill in the gaps using verbs in the negative or positive**

20. Rice doesn't grow in cold countries, but rice.....in hot countries  
21. Sometimes he is late but it..... happen very often.

**Look at the following sentences and write whether the verbs in these sentences are Right or wrong and correct them**

22. I am needing new suit.  
23. I am hearing what you are saying.  
24. Are you liking the Kochi?

**The language of the following sentences is correct but in formation is wrong. This time you have to write two correct sentences each time.**

25. The sun goes around the earth  
The sun doesn't.....  
The Earth.....

**Complete the sentences using the correct form of the verbs**

26. Would you like something to eat? No, thanks, I .....just.  
..... lunch (had).

**Answer the following using the words in brackets**

27. When did you smoke last (for two years)  
28. When did they last visit you (since June)  
29. Have you ever eaten meat (never)

**Read the situation and finish a sentence**

30. The car has broken down. It has already broken down twice this month.  
It is the third time.....

**Read the sentence and ask a question beginning in the way shown**

31. Your friend is learning English. How long.....

**Write question with did.....?**

32. I enjoyed the party, And you?.....  
33. I had a good holiday. And you?.....

**Put in was/ wasn't/ were/weren't**

34. Last year she..... 22. So she is not 23 now.  
35. We..... tired after the journey but we..... hungry  
36. The hotel..... very comfortable and it ..... expensive

**Write questions using words given in brackets**

- 37. I saw a film (good)
- 38. I bought some books (expensive)
- 39. I went to a museum(interesting)

**Put the verbs in brackets into the correct tenses**

- 40. When he ..... already..... (leave), he ..... (realise) he.....forget) his wallet.
- 41. His finger..... (begin) to bleed as soon as he..... (cut) himself.
- 42. He ..... (lose) his new knife shortly after he ..... (buy) it.
- 43. Until he..... (explain) the students did not understand.
- 44. He said that he ..... (finish) his work
- 45. I .....already ..... (finish) my work before my friends arrived

**Read these current news and fill in the missing words (have, live, sunbath, wear, queue, make)**

- 46. We.....very hot weather at the moment
- 47. Every one..... out of doors
- 48. There are people..... in all the parks
- 49. The girls..... their summary dresses.
- 50. People.....to get into the swimming pool.  
And the ice cream sellers.....a fortune.