CHAPTER III
REVIEW OF THE RELATED LITERATURE

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CHAPTER III
REVIEW OF THE RELATED LITERATURE

Introduction

An intensive study of past work done in the field in which the investigator actually plans to start work, is most essential, for that develops an insight of the researcher and strengthens her information which saves much of her time and energy. It also provides her an opportunity of getting insight into the methods, measures, subjects and approaches employed by other research-workers. At the same time, careful consideration of 'recommendations for further research' in various research studies guides her in the suitability of the problem and in delimiting her research problem. Therefore, the investigator has tried to review the past literature on silent reading comprehension tests and on the studies on the correlates of achievement to benefit herself in understanding the problem.

Hence the reviews of literature have been divided in two broad categories:

i. Researches done in the area of construction and standardization of silent reading comprehension tests and

ii. The researches done in the area of correlates of Achievement.
Silent reading is more important than oral reading because people spend 95% of their total reading time to silent reading. The measurement of silent reading has been classified into two categories:

(a) measurement by photographic eye-movements and
(b) measurement through the technique of paper and pencil tests.

3.1 Measurement by Photographic Eye-Movement

The only aspect of silent reading process evident to an observer is eye-movement except in case of immature reading where lip movement may also be present. Consequently eye-movement is the only phase of the whole complicated procedure of reading that could be measured directly. These tests for one reason or the other have not become very popular in schools in foreign countries. In India too this field is not fully explored till now.

3.2 Standardized Reading Tests

For practical purposes, the only feasible procedure of measuring reading ability is to employ paper pencil tests containing objective questions which measure comprehension of passages indirectly after the passage have been read and not as an aspect of continuous reading process itself.
The certain reading tests were brief and yielded either a single overall reading score or a rate of reading score and general comprehension score. Recent tests are longer and they give three to four different scores which help the user to locate the strength and weakness of the pupils.

Factor analysis of the reading tests have been carried out by psychologists and statisticians in order to formulate some definitions of reading, which could point out the direction that the measurement of reading should take. Several such studies have been published, of which one of the most helpful and important is a factorial analysis of the co-operate Reading Comprehension Tests by Devis. One limitation to factor analysis as a technique for determination of factors of reading ability to which the test should be constructed, is that certain factors which are according to data mathematically independent, cannot readily be named. Factors are of little use in an instructional programme unless they can readily be identified. Awareness of this fact has led, "Some persons to a functional approach to reading test construction by asking teachers to indicate what kind of information they need about individual pupil, in order to be prepared to start an intelligent programme of teaching them. This was the approach taken by the committee on
Diagnostic Reading Tests in the construction of a series of diagnostic tests.1

3.3 Classification of Tests

The available tests on silent reading comprehension could be classified as:

i. Group test and Individual tests,

ii. Diagnostic test and Survey tests

3.3.1 Group Test

Group test is that test which could be administered to more than one individual at a time. Usually the test consists of 75 to 100 multiple choice items, in some cases few more multiple choice items and the examinee has to read the items himself and work ahead. The task is generally to be completed within a stipulated time or he is allowed to take as much time as he wants. This depends upon the purpose of the test. The test booklets and answersheets are to be distributed to the subjects and either they are allowed to work at their own rate or the examiner directs the subjects when to start and to stop. Almost all the tests of Silent Reading ability are group tests with grade and percentile norms. These tests are used to test normal children generally.

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3.3.2 Individual Tests

This type of test could be given to only one individual at a time. Therefore, they are time consuming. Moreover these tests require highly experienced and trained examiners. The examiner has to standardize his own treatment of the child to conform to established methods. He has also to take this into consideration while administering the test, specially in giving instructions and time to be allowed to answer each question. He has to follow the established scoring procedure meticulously and to colour the scoring with his subjective judgement of a child. If he would deviate even slightly from these, there would be a marked difference in the test result which might effect adversely the reliability of the test. Almost all oral reading tests are individual tests. This type of tests are often used in clinical settings.

3.3.3 Diagnostic and Survey Tests

Reading tests are also classified according to the nature and complexity of the scores they yield. Broadly speaking, they are divided as diagnostic tests and survey tests.

3.3.3.1 Survey tests

Survey tests generally measure vocabulary knowledge, comprehension of sentences or paragraphs and perhaps the rate of reading comprehension. They give general picture of
pupils' strengths and weaknesses. They indicate the grade level. This type of tests generally provide overall scores. Thorndike - McCall Reading Test, published in this century, is an example of this type of test.

3.3.2 Diagnostic tests

The second kind of test measures specific strengths and weaknesses of a pupil. It usually provides three to four separate scores which are specifically useful in locating the specific weakness of an individual. These are diagnostic tests.

The third kind of tests are generally designed to measure the specific skills of reading ability or three to four fundamental aspects of reading ability. They usually measure comprehension or vocabulary, comprehension and rate of reading, or comprehension, rate and vocabulary. Examples of the tests of this type are:

i. Gates Primary Reading Tests, 1958 revision,

ii. Traxler Silent Reading Tests for Grades 7 to 10,

iii. Nelson Denny Reading Test, 1959 revision for grades 10 to 12 and college, and

iv. The co-operative English Test

All these tests may also be included in survey section. Ruth Strang mentioned that "there is no clear demarking line
between these tests. The survey test might be used in a diagnostic way if the user wished to take the trouble to group the questions testing similar abilities and to study the answers with care.

Here the investigator has to review the studies that show the correlation of product variable as academic achievement which gets toned up or down by the positive or negative influence of the independent variables, the role of some of which has already been noticed in the studies reviewed so far. Yet there have been a few studies which have investigated into this area taking up one or two correlates separately, for specific inquiry. Certain demographic and environmental variables like sex, area of residential community, position in family and educational level of parents are related to self concept as well as achievement, though the degree varies.

The effect of language ability on achievement has been concerned along with reasoning and memory to school achievement.

"A close examination of thirty three Ph.D. and eleven independent project abstracts reveals some clear trend. The researches seem, by and large, to be (1) extensive (2) developmental and trial oriented, (3) horizontal (4) based on

2. Ibid., pp. 334-35.
concepts and methodology developed abroad and (5) post facto psycho-social biased.

Despite the recently renewed interest in reading comprehension, there remains a need for clearer specification of the basic processes involved in obtaining meaning from printed discourse. Information about such processes is particularly important beyond the primary grades when there is increased emphasis upon understanding what is read. Ultimately, such insight may lead to improved instructional procedures.

Reading comprehension appears to be less well understood than other aspects of reading behaviour. Although considerable literature has been produced on reading comprehension over the past 75 years, the complex nature of reading comprehension has created difficulties in understanding the covert nature of the processes. Because reading comprehension processes are not directly observable, research efforts have typically been post hoc.

3.4 Overview of the Trend in the Area of Correlates of Achievement

Overview of the trend reports that thirty-four Ph.D. studies of different Indian universities along with ten

projects have been undertaken at different institutions. Dave's review covers the following topics: correlates in general, personality correlates, socio-economic status, backwardness and failure, over and under achievement.

Correlates of achievement such as intelligence, study-habits, attitudes of the pupils towards school, different aspects of their personality, socio-economic status, etc., have been studied as independent variables to find out their effect on academic achievement, the dependent variable. In almost all the studies, a large number of tools has been used, and the samples are comparatively large. Attention has also been focused on such factors of achievement as restraint, thoughtfulness, parents' education, home and health adjustments, achievement ascendance, anxiety, social adjustment and extraversion. Some of these factors have been found to be positively related to achievement, while others are found to correlate negatively with academic achievement.

A different pattern of factors required for successful academic performance in different curricular courses has been searched for in a few studies. Socio-economic status as a significant variable affecting academic achievement has been the main focus of attention of a couple of studies. Backwardness and failure in terms of intelligence study habits, and ego-involvement, the factors underlying the
academic over, under and normal achievement have been investigated in a number of studies and anxiety, intelligence and social adjustment have been some of the most potential factors identified.

The effect of language ability on achievement has been the concern of some studies. Certain demographic and environmental variables like sex, area of residential community, position in family and educational level of father and also the correlates like self-concept and creativity have been investigated in a number of studies. The organisational and administrative factors affecting the achievement of the pupils have also been studied.

The research in this area by and large, seems to be:

(i) extensive (ii) developmental and trait oriented (iii) horizontal (iv) based on concepts and methodology developed abroad and (v) post-facto psycho-social biased.

In the opinion of the author, the future research should be:

"(i) functional and curriculum oriented, (ii) sophisticated in all aspects of research - conceptual, operational, and methodological and (iii) with sufficient scope for experimentation and depth investigation."^4

^4. Ibid., p. 323.
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4. Ibid., p. 323.
Number of factors have been studied in different studies but hardly any attention has been paid towards reading: particularly reading comprehension to find out its effect on the academic achievement in different subjects of pupils. The effect of language ability on academic achievement have been the concern of some studies, and keeping this unique feature in mind the report of some of the studies of this kind are described under the caption of 'review of some studies' in the following paragraphs.

3.5 Review of some Studies in India

A few available tests on reading and their correlation with other variables are reviewed with an object to finding out abilities or skills measured by them and their impact on product variable academic achievement. Therefore the studies have been done keeping in mind the following aspects:

a. Abilities or skills measured by the test,
b. Type of scores they give,
c. Norms,
d. Time required to administer the test,
e. Types of questions,
f. Reliability,
g. Researches in correlates of achievement,
h. Impact of independent variables on academic achievement, and
i. A real concern for solving the problems of our education.
3.5.1 Diagnostic Reading Test survey section; Grade 7 through college freshman year.

The survey section of the Diagnostic Reading Test has three sub-tests (i) General Reading, (ii) Vocabulary and (iii) Comprehension.

**General Reading**

The purpose of this test is to measure usual rate of reading through interesting story type material. The story is followed by 20 questions which aim at measuring the skill to note details. The time allowance for taking this test is 15 minutes.

**Vocabulary**

This sub-test is designed to secure measure of vocabulary. It is composed of sixty items drawn from general vocabulary and from the vocabularies of English, Mathematics, Science and Social Studies. Each item consists of a definition of a word followed by five words, one of which is an appropriate response to the definition. The time to be given to the subject to take this sub-test is 10 minutes.

**Comprehension**

This sub-test measures reading comprehension skills. The skills that are measured, are to give the main idea of the paragraph and to draw conclusion. The reading material
(passages) is similar to that found in text books in social studies and science. Each paragraph is followed by five multiple-choice type questions with four foils. The time limit is 15 minutes. The test gives four types of scores namely, score for rate of reading, story comprehension, vocabulary comprehension and total comprehension.

The pupils' responses are to be recorded either in the test booklet or on a separate answer sheet. The norms are established by using separate answer sheets. Percentile norms for each grade are given in the test manual. The pupils are also to be instructed about when to start and stop taking the test.

The reliability of each sub-test and that of the whole test is established by K-R Formula-21; and the sample taken for this from each grade is approximately 100. The reliability coefficients for each sub-tests are 0.74, 0.89 and 0.83 respectively. The reliability of the whole test is 0.91. Thus, the test is reliable too. There is no information about the validity in the test manual.
3.5.2 Investigation into the Academic causes of backwardness in Social Studies at the Elementary Stage (Classes I-VII), by Lulla, Shah and Darji.

The investigation was undertaken with the following objectives:

i. to study the factors in the school which lead to low achievement of normal pupils in social studies,

ii. to know the causes leading to low achievement of the pupils in the subject as viewed by the teachers and headmasters of the elementary schools of Gujarati,

iii. to have an idea of the then prevailing position of teaching of social studies in the elementary schools of Gujarat;

iv. to collect suggestions to improve the teaching of social studies in the elementary schools of Gujarat from the teachers and headmasters of schools;

v. to explore the possibilities of preparing a remedial programme or material for low achievers in social studies and

vi. to recommend measures for improvement of courses, text-books, teaching methods, evaluation scheme and school administration with a view to helping low achievers in the subject.
The investigation was conducted with two approaches, viz., through circulation of questionnaires among teachers and headmasters of the elementary schools of Gujarat and through case studies of the children of municipal schools of Baroda city, whose achievement in social studies was low at three successive examinations. These case studies revealed the factors in home and community and the factors leading in school leading to low achievement of the children in social studies. The data collected through questionnaire revealed the academic factors leading to the low achievement of the children in social studies, as perceived by the teachers and headmasters of the elementary schools of Gujarat. To have a rough idea about the causes of low achievement of the children in general and in different subjects in particular, a seminar of the teachers and the headmasters of elementary schools of the Baroda Municipal Corporation was held. With the help of the deliberations of the seminar, an opinionnaire was constructed and circulated among the teachers and the headmasters of the elementary schools of Baroda Municipal Corporation and the elementary schools of Baroda District. Another questionnaire was constructed on the basis of these opinions and administered. Personal interviews with these teachers and headmasters were also conducted.

The following were found to be the academic causes of backwardness in social studies. They pertained to the
defects in curriculum, teaching material, teachers and teaching methods, administration in schools and of examinations. Majority of the teachers found the prescribed syllabus of the subject as too heavy, divorced from real life situations and sometimes even beyond the grasp of a teacher. Text-books in Geography were found to have outdated maps, while those of History were found overloaded with facts. These books failed to cater to the needs of students. Explanations to the fundamental concepts were lacking. Teaching aids were either not available at all or were scarcely used. Two-third of the teachers lacked training and were wholly dependent on the text-books. On the spot excursions and study tours could not be organised due to paucity of funds. Classes were over crowded. Teachers were overburdened with nonacademic work. Therefore, personal guidance to these low achievers was not possible. Proper inspection and supervision by the heads of the schools were lacking. Teachers were weary of transfers. Private tuitions and cheap guides formed a great hindrance in the mental development of these low achievers. Examination system is vogue failed to evaluate the efficacy of learning experiences provided to the children. Results of these examinations were used only for promotion purposes and no particular follow-up work was done to help the low achievers. Other defects noted for causing under-achievement were that of physical defects in children, poor and discouraging home conditions and lack of motivation and aptitude towards the subject.
3.5.3 A Study of Educationally Backward Children in the Age-Group 8-12 years in Nagpur Schools by Paranik and Kundley.

The study was undertaken to study educationally backward pupils with regard to their intelligence, vocabulary equipment, arithmetic ability and emotional problems.

A sample of 2,000 students in the age group from eight to twelve years from classes VIII, IX, V and VI was drawn from Nagpur. The sample included students from all socioeconomic groups. Annual marks and teachers' rating were used to identify 100 backward and 100 bright students and to have a comparative study on variables stated above. Objectively developed and standardized tests were administered to these two groups to collect required data, which were analysed to study, mean performances of the groups. Data were collected with the help of examination records for achievement, rating scale, intelligence test, vocabulary test, arithmetic test and a problem inventory.

Findings revealed that educationally backward and bright children differed significantly on intelligence, vocabulary and arithmetic ability; bright ones scoring high on each test. These factors seemed responsible for fifty per cent of the background among the children. The backward children had adjustment problems related to studies, teachers and examinations. They suffered from inferiority complex,
health problems, brooding and lack of security. They were, however, adjusted with their families. They failed from very low socio-economic strata. Of the factors studied, poor socio-economic conditions seemed to be more responsible in causing backwardness among the children.

3.5.4 A Study to Determine the Impact of Reading on the Achievement of Pupils in Different School Subjects

The study aimed at determining the impact of reading on the achievement of pupils in different school subjects.

Children's vocabulary both spoken and written, was collected for the grades I to V. This was subjected to linguistic analysis and frequency counting. The data resulted into the identification of active vocabulary of the children for different classes. Based on these, reading tests were developed. Seven reading tests for class I and III for class II were developed. These tests were tried out on a sample of 250 children from twelve different dialectical areas. Difficulty values and discrimination values were calculated and the tests were revised. These tests were later administered to a sample of around 4100 students of grade I and 4500 students of grade II covering 22 dialectical areas in seven Hindi speaking states. The data were analysed. An attempt was further made to study
the impact of reading ability on achievements in different school subjects.

The following materials have been finalised under the project:

(a) Five standardised tests on reading ability for Grade I and three standardised tests on reading ability for Grade II,

(b) Developing a Handbook in Reading for Primary School Teachers,

(c) Implementing Pre-Service Curriculum in Reading in Junior Teacher Training Institutions,

(d) Preparation of a Graded Bibliography on Children's Literature, and

(e) A manual of instruction for the administration of reading tests. This also contains the norms for the tests.

The following were the main findings of the study:

i. There was positive correlation between reading ability and achievement of the pupils in different school subjects and general academic achievement. The relationship appeared to be significant.
ii. The rural children showed poorer reading ability in comparison to their urban counterparts. The differences were quite significant.

iii. There were quite marked differences in reading ability of children belonging to different dialectical areas.

iv. The difference in reading ability of children belonging to different Hindi-speaking states was significant.

v. The occupation of the families to which the children belonged did not play any specific role in determining the reading ability of the children.

vi. There was no role of sex in determining the reading ability of children.

3.3.5 The Effect of KR on Achievement of School subjects in Relationship with Certain O-variables. Ph.D. study by J. Bayti.

The objectives of the study were:

1. To study if knowledge of results bring in progressive improvement in the academic achievement of pupils.

2. To study the effect of knowledge of results of earlier performance on the later academic achievement of the pupils of various levels of intelligence.
3. To study the effect of knowledge of results on the academic achievement of pupils with different personality traits.

4. To study the sex differences in the academic achievement as produced by the knowledge of results.

5. To study the effect of knowledge of results on the pupils' academic achievement in certain school subjects such as mother-tongue, English, general science and elementary mathematics with regard to the level of intelligence.

The sample consists of 1200 children drawn from six higher secondary schools in Bikaner. The tools administered were (1) the Cattell's Fourteen Personality Factor Questionnaire, (ii) The Jalota's Group test of General Mental Ability and (iii) The records of achievement on six successive tests in four school subjects Mean, Standard Deviation, Deviation, Standard error of means, coefficient of variations and analysis of variance were employed to analyse the data.

The study revealed the following:

1. Above average intelligent boys of experimental group improved their academic achievement with the help of KR in the subsequent tests.
ii. Girls of the above intelligence and low intelligence of the experimental group achieved better academically in all subsequent tests with the help of KR as compared to the girls of control groups.

iii. Outgoing, obedient and tough-minded boys of the experimental group improved their academic achievement with the help of KR in all subsequent tests while boys of control group were fluctuating. The boys of following personality traits, namely reserved, sober, disregarding rules, shy, casual, relaxed, extrovert, assertive, happy-go-lucky, conscientious, venturesome and tense of the experimental group improved their academic achievement with the help of KR in all subsequent tests. While the boys of the above characteristics in control group were fluctuating in their performance in all the subsequent tests. Tender minded and self-sufficient boys of the experimental group achieved better in their academic achievement of the boys with these personality traits of the control group.

iv. The girls of personality traits namely, shy, control, introvert, group dependent, conscientious, casual, toughminded, obedient, disregarding rules, relaxed, extrovert and outgoing improved in all subsequent sub-tests while there were rises and falls in the achievement of girls of the control group.

The study was designed to investigate the effect of socio-economic environment and medium of instruction on mental abilities and academic achievement. The specific objectives of the study were:

i. to study the relationship between socio-economic environment and nonverbal intelligence;

ii. to study the effect of socio-economic environment on academic achievement when the influence of non-verbal and verbal intelligence was partialled out;

iii. to study the influence of medium of instruction - the mother tongue or English - on non-verbal and verbal intelligence;

iv. to study the effect of medium of instruction on academic achievement when the influence of non-verbal and verbal intelligence was partialled out; and

v. to study the interaction among SES, medium of instruction, intelligence and academic achievement.

The sample consisted of 1897 pupils of standards VIII, IX and X (956 of the Kannada medium and 941 of English medium).
chosen randomly from eighteen urban high schools. The tools administered were:

i. the Kuppuswamy's Socio-economic status scale (urban);

ii. the Nafele's Non-verbal Test of Intelligence and the group test of scholastic abilities (verbal) developed by the State Bureau of Educational Guidance, Bangalore;

iii. the Battery of Achievement Tests in general Mathematics, general science and social studies for standards VIII, IX and X; and

iv. the information inventory prepared by the investigator.

The data were analysed with the help of chi-square test and analysis of variance.

The analysis revealed the following:

i. the F values of scores on all the criteria tests were found significant;

ii. three SES groups different significantly from one another in their non-verbal and verbal intelligence; high SES group achieved higher mean score than pupils in both low SES group and middle SES group, whereas the mean score difference between middle and low SES groups was not significant;

iii. the relationship between SES and academic achievement was found to exist even when the influence of intelligence
of nonverbal as well as verbal type was partialled out;

iv. pupils studying through different media of instruction differ significantly from each other in their nonverbal and verbal intelligence; the English medium pupils showed greater verbal intelligence than the former;

v. students studying through Kannada medium achieved significantly higher mean score than those studying through English medium; and

vi. the relationship of media of instruction to intelligence was found inconsistent, whereas, that of socio-economic environment remained almost identical; the impact of socio-economic environment was found to influence mental abilities and academic achievement.

3.5.7 Survey of the Effect of Language Medium on School Achievement in Kendriya Vidyalayas, Mysore, (1973) by Misra C., Misra J. and Jayaram.

The objectives were to test whether there was:

i. difference in Achievement in Social Studies through Hindi medium between Hindi speakers and non-Hindi speakers;

ii. difference in achievement in Hindi between speakers of Dravidian languages and other languages deemed closer to Hindi; and
iii. difference in achievement in social studies through Hindi medium between the students of group 'A' consisting of students having mother-tongue of Punjabi, Marathi, Sindhi and Urdu and that of group 'B' consisting of those having Kannada, Tamil, Telugu and Malayalam as their mother tongue.

The study was based on the statistical treatment of data received from central schools in and around Delhi. The raw data were converted into percentages to make them comparable. The percentages were classified into ten groups of equal intervals for which the frequencies were computed for each criterion group separately. The Kolmogrov - Smirnov two example-tests were applied to the data, thus obtained.

The findings revealed that:

i. there was no difference in achievement in social studies through Hindi medium between Hindi speakers and non-Hindi speakers;

ii. There was no initial advantage in learning Hindi during the first year for the child whose mother tongue was nearer to Hindi over the child who spoke a Dravidian language; however, that child was found to have a little advantage during the next three years; and

iii. there was no difference between the students of group 'A' and those of group 'B' as far as their achievement in social studies through Hindi medium was concerned.
3.5.8 The Study of Intelligence Socio-economic status and family size as correlates of Achievement by Sam and Rita Krishnan.

The study aimed at determining the extent of relationship between (1) Achievement and Intelligence (2) Achievement and Socio-economic status; and (3) Achievement and family size.

Results

The results have been discussed under two heads viz.,
(1) Correlation co-efficients among different variables and
(2) Partial correlates coefficients.

The findings of the present study reveal that:

1. The correlation between academic achievement and socio-economic status is moderate, positive and significant.

2. The correlation between academic achievement and family size is low negative, and significant.

3. When the effect of the socio-economic status is partialled out, the relation between academic achievement and intelligence increases to some extent.

4. When the effect of intelligence is partialled out, the correlation between academic achievement and socio-economic status decreases to some extent.
3.5.9 A Study of Achievement of Students of different socio-economic status by Venkataiah.

The study aimed to examine the relationship between achievement of students of different SES offering arts subjects and science subjects. To know whether the influence of SES was more marked on the science students or on arts students, 300 science students, and 300 hundred arts students, who passed intermediate public examination, were selected randomly. The results showed that the SES was positively related to the academic performance of both arts and science students. In other words, the SES i.e. the family background and other environmental conditions have the same effect on both the arts and science students.

3.6.1 Review of Some Studies undertaken in Foreign Countries

The question of differences between reading attainment levels of girls and boys has frequently been the subject of comment by educators. A greater proportion of boys than girls among children, background in reading has often been noted.

Examination of investigations from several English speaking countries showed that the trend of sex differences in mean reading attainment for children under ten years of age was different from the trend for older children. Mean attainments in both the reading comprehension and reading
vocabulary were lower for boys than girls in results obtained by Carroll (1948).

In word recognition, mean attainments were reported lower for boys than girls by Southgate (1959) for six to seven years old and by Kellum Pringle, et al. (1966) for a national sample of seven-year-olds. The difference between the means in every one of these investigations was statistically significant at .01 level.

These findings are not confirmed in several other investigations. The differences between the means of boys and girls in both reading comprehension and reading vocabulary were not significant in the results of Melaven (1950) for seven to nine-year-olds. Sex differences were also not statistically significant in the results for reading comprehension report by Southgate (1962) for seven to eight-year-olds and by Morris (1966) for eight-to-nine year-olds.

Group administered tests provided the measures of reading attainment in all the studies so far considered. A few reports of sex differences in individually administered tests of oral reading are available. Differences between boys and girls were reported to be not significant for individually administered tests of oral word reading by Vernon (1938) for six to nine-year-olds and by Clark (1970) for seven-year-olds. And this finding is not confined to oral reading of unconnected words. Neale (1938) reported
that no consistent sex differences were found for six-to-nine-year olds in either accuracy or comprehension of oral reading of continuous text. However, not all the findings for individual test of oral reading are consistent. Rogers (1971) found in a sample of 500 children aged five-and-a-half and six years that boys had a lower mean attainment in oral word reading than girls, the differences being significant at the .01 level.

For children 10 to 15 years of age, sex differences in mean reading attainments are commonly reported not statistically significant as measured by group tests of reading comprehension and reading vocabulary (Elley and Reid, 1969, Heilman, 1933; Horton 1973; Haghas, 1953; McLutry and Wood, 1935; Ministry of Education, 1957; Norris, 1966; Parsley et al., 1963; Butter et al., 1970; Start and Wells, 1972; Wozencraft, 1963). There were no sex differences in the 10 to 15 age range on individually administered tests of oral reading (Neale, 1958; Vernon, 1938). There are, however, a few divergent findings. Stroud and Lindquist (1942) found the mean attainments in reading comprehension and reading vocabulary lower for boys than girls among nine-to-ten-year-olds, but the sex differences were not significant for 11 to 14-year olds. Gates (1961) reported group test results for reading comprehension and reading vocabulary which showed the mean attainments of 14 year-olds and Preston (1962) obtained similar results for reading.
comprehension of 11 year-olds. These findings appears to be exceptions to the bulk of evidence which supports the claim that there is no difference between the mean reading attainment of boys and girls ten years of age and over.

Silent reading comprehension, reading vocabulary, and oral reading have been considered in the studies examined. Another measure of reading attainment which has occasionally been employed is reading speed. Speed of oral reading of both the unconnected words and continuous text was reported to be lower for boys than girls at ages seven to 11 years (Neale, 1958). Speed of silent reading was found lower for boys than girls at ages 11 and 12 but no difference was apparent at age ten (McIntyre and Wood, 1935). In addition it should be noted that it is a common finding that 'perceptual speed', as measured for example by the coding sub-test of the Wechsler Intelligence Scale for children, is lower in boys than girls (Oetzel, 1966). Both performance in such 'perceptual speed' tasks and in reading speed tasks and in reading speed may well be instances of an individual difference factor which is superior in females.

3.6.2 Differences among Pupils of low and high reading attainment.

Although the difference between the mean reading attainment levels of boys and girls be not significant, there
may be a significant difference between the proportion of boys and girls among pupils of very low reading attainment. Clark (1970) reported a greater proportion of boys than girls among the lowest 15 per cent of seven-year-olds in a test of oral word reading.

For children of age ten years, Morris (1966) found the proportions of boys and girls among the lowest 15 per cent in reading comprehension to be not significantly different (.01 level). This result is of particular interest because the investigation was longitudinal, the ten-year-olds being the same children that Morris tested previously at nine years and at eight years of age.

For children under ten years of age the evidence indicates that where the sex difference in mean reading attainment is not significant, there is a large proportion of boys than girls among the lowest 15 per cent in reading attainment.

Consideration has also been given to differences between the proportion of boys and girls among pupils of very high reading attainment. There is a notion that distribution of attainment scores shows greater variability for boys than girls, with a greater proportion of boys than girls among pupils of very high attainment as well as among those of very low attainment (Hutt, 1972a). The findings do not adequately support this notion.
3.6.3 Origins of Sex differences in Reading Attainment.

Sex difference in reading comprehension, reading vocabulary or oral reading are not general but are limited to children under ten years of age and sometimes only to pupils under ten who are of low reading attainment. In short, the evidence shows that a large proportion of boys than girls make relatively slow initial progress in learning to read.

It has been proposed that sex differences in reading attainment are the result of a "feminine bias" of the school environment. There is a very high ratio of female to male teachers of pupils under ten years of age. Typically, the child in his first few years at school has only female teachers.

Some foreign studies indicate that boys perceive school as feminine. Common objects of the class-room were categorized more frequently as feminine than masculine by both boys and girls (Kagan, 1964).

3.6.4 Overall conclusion of foreign studies.

To summarize, there is a developmental trend for sex differences in reading attainment of English speaking children, whereby a longer proportion of boys than girls make a slow beginning at learning to read but by ten years of age population differences between boys and girls are no
longer apparent. Population differences of various socio-economic backgrounds are well reorganised by educators. Population differences between girls and boys should also be recognised. Unlike socio-economic differences in reading attainment, sex differences do not persist throughout the school years. Sex differences in reading attainment are present during the initial years of schooling but no longer apparent after five or four years of schooling.

Differences in attained levels between socio-economic groups are less than many differences between individuals within a socio-economic group. In this respect sex differences are like socio-economic differences. Sex differences in reading attainment are less than many differences between individuals of either sex. Nevertheless, it is important that teachers, and also parents, be aware of sex differences in reading attainment and the development trend of these sex differences. Teachers and parents should know that a boy under ten years who is making a slower beginning at learning to read than his sister, will only rarely be a case of such pathology as dyslexia, but may be an instance of a developmental phenomenon of the general population. This phenomenon is that a longer proportion of boys than girls make a slow beginning at learning to read but by ten years of age. Such differences between boys and girls are no longer apparent.
3.7 Overall View

The investigator in the present study has been benefitted out of the reviews of the related literature in several ways.

The review of the survey tests and diagnostic tests in reading comprehension and its impact on the achievement of different school subjects reveal that, most reading tests do not measure all the skills of reading comprehension, which are considered highly important by the authorities in the field. These skills have been mentioned in the previous chapter. One single test generally measures two to four different skills. It could be noted that different tests give somewhat different emphasis on the several skills which they purport to measure. Almost all the tests contain vocabulary section and paragraph reading section to measure comprehension that is to note the details, to draw inferences, to find out the main idea and to draw generalization. The review has provided the much needed insight for making a selection of an appropriate formula. It has also helped in deciding about certain modifications in the plan of research and given insight in the probable research design for the problem under study.

The material presented in the chapter would serve as a background information essential to plan intelligently the proposed test of silent reading comprehension and its
impact on the academic achievement of the pupils.

After reviewing the relevant studies and related literature the investigator is in much better position to think about the planning and procedure of her own study, which she is going to discuss and explain in next chapter.