CHAPTER-V
The analysis of the data presented in the previous chapter has been able to establish the correlates of Reading Ability as intelligence, phonetic ability, personality traits, availability of reading materials at home, parents' education, parents' occupation etc. The study has also been able to clearly demonstrate that improvement in Reading Ability will cause improvement in the student's academic performance.

Before accepting the above conclusion, it was desired necessary to examine the possibility of relating these findings to some of the major and contemporary studies in the area. To this end, the discussion that follows will begin with the examination of each of the factors of Reading Ability in terms of the general theories in the area, and follow it up with discussions in regard to correlates of Reading Ability in terms of personal attributes, home background, personality traits, sex, types of school and academic performance.

Reading Ability and Theoretical Models

The various models of Reading Ability include the Taxonomic model, Psychometric model, Psychological model (Behavioural model and Cognitive model), information processing model etc. The discussion will thus cover Reading Ability in terms of the relevant theoretical models.
Reading Ability and Taxonomic Model

According to this model, word recognition, comprehension, reaction to words, assimilation and rate of reading are the factors constituting Reading Ability. While these are important in determining Reading Ability, there are many other factors, such as phonic ability, health factors including hearing, vision and speech as well as factors such as background of the students, are all equally important. The Taxonomic model has not considered any of the above factors. As is observed in the present study, all the latter factors have also been found to correlate very highly with Reading Ability and have emerged as important factors in the stepwise regression analysis. The taxonomic model, as put forward by Gray (1950) is thus inadequate in explaining Reading Ability.

Reading Ability and Psychometric model

This model put forward by Holmes and Singer (1966) had conceived Reading Ability in terms of a hierarchical structure based on statistical principles. After a child has attained proficiency in recognising the words correctly, he moves on to become proficient in understanding the meaning of the word concerned. Then he learns to analyse and master this skill, whereupon he becomes proficient in synthesising and associating the material he has read in the particular context with other relevant factors. All these obviously involve considerable auditory, visual, cognitive and speech coordination which are all neurologically determined faculties. The Psychometric theory is sound to the extent
that it has considered the personal health factors of an individual as well as has pointed out the gradual step by step process in achieving mastery in reading. However, this theoretical model is more organic in its approach. Many socio-psychological and environmental factors such as parental stimulation, parental interest, parents' education and occupation as well as the availability of reading materials at home, have all been totally ignored by this theory. Since development of Reading Ability, as pointed out in this study depends to a large extent on the latter mentioned factors also, one may say that the psychometric theory with its hierarchical approach is only able to partially explain Reading Ability. Though compared to the Taxonomic model this theory is relatively more adequate, yet it cannot be considered an appropriate model for explaining Reading Ability.

**Reading Ability and Psychological model**

This model includes both behavioural and cognitive theories. While the former considers Reading Ability being developed as a result of proper habit formulation, the latter considers it as an intellectual exercise. According to the behaviouristic approach, pronouncing a word correctly, reading a word or sentence without a mistake etc. are all developed as a result of developing a habit to read correctly. This behaviour to read correctly is reinforced by appropriate rewards from the environments. On the other hand, according to the cognitive approach (Hebb, 1974), ability to read is acquired as a result of gathering, processing and consuming information rather than being a simple
emission of response to a stimulus. Recognising the alphabets, associating them with certain familiar words, understanding the meaning and conceptualising them and finally expressing them correctly are all the various processes going on within an individual on looking at a sentence for reading purpose.

Both behavioural and cognitive models taken separately hardly are able to explain the development of Reading Ability. On the other hand if both the approaches are combined and considered together, they are able to explain to an extent the acquisition of Reading Ability. While behaviouristic model hints at the environmental factors in terms of reinforcement of correct reading, it has not dealt adequately with the various other psychological, social and familial background variables of students which as demonstrated in this study appear to significantly influence the development of Reading Ability in students. As for the cognitive models, it only deals with internal processes within an individual and hardly gives importance to any environmental variables.

Thus the psychological model appears to come somewhat closer to explaining the development of Reading Ability, though not as adequately as the present research has demonstrated. Perhaps the Information Processing Model may be relatively more suitable which is being discussed in the following section.

**Reading Ability and Information Processing Model**

The information processing model describes reading more as a communication process. It conceives of reading as transferring of
information from a transmitter to a receiver through certain channels of communication. The errors in reading to an extent is attributed to the lack of proper or adequate receipt of communication due to the limitations in the capacity of the channel, which depends on the noise level, the relevance and redundancy of the information. In other words, reading can come about only when the items that have to be learned for reading (a) are relevant to the individual in their information, and (b) are read out at optimal conditions of noise level etc. This theory has considered an important factor which the earlier mentioned theories had not, viz., the maturity and readiness of the organs to receive the information. While this model appears to be able to explain the development of Reading Ability quite successfully, it also suffers from the drawbacks which other theories had suffered, namely, not giving importance to the background and personality factors of the students who are learning to read.

Reading Ability and Linguistic model

It is well known that language and reading are highly interlinked in the sense that unless one knows the language in which something is written, he will not be able to read correctly. This is so because merely recognising the alphabets and words by virtue of familiarity with a script will not lead to correct reading, since understanding of the meaning that is conveyed by the words is extremely essential. Merely reading a script without meaning, is equivalent to a situation of reading some nonsense syllables. Bloomfield and Barnhant (1961)
put forward the linguistic model to explain Reading Ability and conceived it at two levels, viz. early formulation level and transformational-generative grammar level. In the former level, the prime emphasis was on phonetics, whereas in the latter level, the emphasis was on the psycholinguistic process. One may say that this model, which is very similar to Goodman's model (1968), by considering development of Reading Ability clearly at two levels, has been able to successfully imply the various underlying behavioural and cognitive processes needed to master the phonetics in the initial level and the cognitive and other higher level intellectual processes to master the reading proficiency at a later level. The findings in the present study, have categorically shown that phonetic ability is one of the important correlates of Reading Ability, thereby supporting partially the psycholinguistic model. Furthermore, the results have also indicated that personality traits is also an important correlate of Reading Ability.

It is relevant to note here that in this study personality trait comprises of diligence at work, adjustability, neatness, punctuality, helpfulness etc. These factors have not been considered by the linguistic model in addition to many other socio psychological factors as well as the writing factor which are highly interlinked to reading. To an extent this inadequacy appears to be corrected in the reading writing model of Reading Ability put forward by Shanahan and Lamax (1986) Reading Ability and Reading-Writing model

According to this theory, there is a very close relationship
between reading and writing. This model conceives reading as involving word analysis (spelling), vocabulary and text comprehension. If a person learns to write the correct spelling, then he can also read it correctly. It is relatively easier to correctly write a word or a sentence if one understands the word or the sentence in a context. All these are possible only when a person has a fairly good vocabulary in that language in which he is to learn to read. If vocabulary is adequate the understanding of the words and sentences will be also adequate due to the higher level of familiarity with the words. Once the word is understood the person can spell out correctly and write it so. These in turn contribute to development of Reading Ability. This argument goes well in line with the findings in the present study which has found a highly significant correlation between Reading Ability and handwriting. This theory, however, is not able to adequately explain the acquisition of proficiency in reading as it overlooks (as do other theories) the important socio-psychological and background factors of the students needed for development of Reading Ability.

**Reading Ability and Smith's / International model**

As for Smith's model and interactional model in explaining Reading Ability one finds that these approaches emphasise one aspect as the be-all and end-all of development of Reading Ability, which appears to be rather too narrow an approach. For instance, Smith's model focusses upon the eye-voice factors in reading and ignores all other factors. The interactional model on the other hand focusses upon the
teacher-student interaction only, and that too on merely what the teacher does in the class and how he/she teaches a child to read etc. By merely concentrating on one aspect of a classroom variable and ignoring various other factors, which impinge upon the acquisition of Reading Ability outside of the classroom, these theories render themselves, totally inadequate to explain Reading Ability.

Thus to summarise the discussion of the results of this study in terms of the theories of Reading Ability, it may be stated that all the theories have focused merely on one or two factors out of the various factors that contribute to Reading Ability. Thus none of the theories has been able to provide adequate explanation to the development of Reading Ability. As is well known, a theory to be adequate has to consider all the relevant factors and try to weave the same appropriately so that the same could explain every aspect possible of Reading Ability. The lack of such wholesome and comprehensive approach has rendered most theories as being able to only partly explain the development of Reading Ability in students.

The present research has been able to overcome the above defects by including as far as possible all the relevant variables and then arrive at a number of factors which are able to more or less adequately explain Reading Ability. These factors have been presented in the form of a model to explain the development of Reading Ability.
FIGURE 5.1
PROPOSED READING ABILITY MODEL

Personal Attributes
1. Intelligence
2. Phonic Ability
3. Reading interest of Students
4. Reading habit of Students
5. Health of Students

Home Background
1. Availability of Reading material
2. Parents Education
3. Parents Occupation
4. Reading habit of Parents

Personality Traits
1. Diligence at work
2. Cheerfulness
3. Punctuality
4. Adjustability
5. Responsibility

Types of School

Reading Ability
(Vocabulary, Comprehension, Reading speed, Spelling and Handwriting)

Academic Performance
From the above model presented /it is evident that Reading Ability is the result of many component factors such as vocabulary (covered in Psychological model and Reading-Writing model), comprehension (covered in Taxonomic model, psychometric model, linguistic model and Reading-writing model), Reading speed (covered in Goodman's model and Smith's model), spelling (covered in Reading-Writing model), and handwriting (covered in Reading Writing mode), each of which depends upon the individual student's personal attributes (covered in Taxonomic model, psychometric model, behavioural model, cognitive model, Gough's model, Laberge and Samuel's model, Smith's model), home background (covered in cognitive model), personality traits and types of school (covered in interactional model). The following section presents a discussion of the findings in this study in terms of researchers dealing with various other factors related to Reading Ability.

Subramanyam (1984) studied the importance of factors of home and school in influencing the reading achievement of primary school children. He found that home, culture and education of parents and other members of the family, social participation of the family members, interaction between the members of the family and with the child in his social and intellectual concern etc. play a major role in influencing the reading achievement in children. He also emphasised that the contribution of these factors is much higher on Reading achievement when compared to the other remaining physical environments of schools and home. Based on these findings, Subramanyam (1984) also argued that creating a good reading atmosphere in the home such as providing
adequate interesting books for children, developing good study habits and inculcating in them a positive attitude towards reading, establishing healthy relations among the siblings and other members of the family etc., will certainly help in improving the reading skills of primary school children.

The findings of the present study have substantiated many of the findings of Subramanyam. The present research has also been able to show that other factors such as those which constitute the child's personality, health and certain typical school factors and personal attributes, also affect Reading Ability.

The study by Shah (1981), though did not typically delineate the correlates of Reading Ability, had however, investigated high and low Reading Ability in terms of certain factors. He showed a statistically significant difference between high and low Reading Ability students in regard to parental education, study habits, verbal intelligence and non-verbal intelligence. The findings of the present study have supported the above results partially in that the correlates delineated of Reading Ability include also intelligence and reading habits in students. Furthermore, in the present research, parents' education has emerged as a correlate factor only in some and not in all cases, whereas parents' occupation, has emerged as a correlate in almost all cases. In Shah's (1981) study, parents' education has contributed to Reading Ability whereas parents' occupation had not. The trend in the present research showing parents' occupation as relatively more
influential than parents' educational level in the development of Reading Ability, could be explained in the sense that parents holding higher level occupations appear to send their children relatively more often to only certain types of school such as Missionary school or Public School rather than to state run and Municipal run schools. There appears to be thus a relationship between parents' occupation and the schools to which the parents send their children. As is well known, higher level occupation in most cases also gets higher income and this perhaps enables the parents to send their children to the Public or Missionary schools (Singh 1981), which are considered to be very expensive. These schools have been found to adopt a typical strategy of reading programme (Hughes, 1975) that enables the children to develop Reading Ability.

Thus one may infer from the above, that it is not the parents' occupation which directly contributes to Reading Ability but the choice of school of the parents holding an occupation at higher or lower level which decides this point. This, however, needs further investigation, though this argument gets a setback when one considers the study by Agarwal (1984), which investigated amongst various factors, the influence of parents' occupation on the Reading Ability of students. He found that while parents' education did affect the Reading Ability in students, parents' occupation did not. On the other hand, he also clearly pointed out that the income level of parents significantly affected the Reading Ability in students with higher income level leading to higher Reading Ability. The latter findings lend an excellent support to the arguments advanced in the present section, namely higher
level occupation leads more often to higher income levels and in turn influences the choice of school by parents. Since types of school has emerged as an important variable affecting the Reading Ability by virtue of the differential strategies adopted by them, the parents' occupation appears to be an important influencing factor on Reading Ability.

Agarwal's (1984) study focussed mainly on 2 groups of students, viz., high Reading Ability and low Reading Ability students. He did not delineate the correlates/factors of Reading Ability but found that between the high and low Reading Ability students, there was a significant difference in regard to the parents' education, income levels etc. but not in terms of parents' occupation. The present study, however, has taken each of these factors, in addition to many other factors from all students irrespective of good or poor Reading Ability and has been able to delineate the factors of Reading Ability.

Reading Ability and Personal Attributes

As mentioned elsewhere in this study, personal attributes included factors such as intelligence, reading habit of students, phonic ability, vision, audition, speech, library membership and mother tongue. Analysis of these factors individually and in combination, in terms of Reading Ability showed that there was a significantly high positive correlation between Reading Ability and personal attributes for the three classes, Viz. II, III and IV. The results validated the hypothesis no. 5, which stated that variation in personal attributes in
students will influence the Reading Ability amongst them differentially. These findings appear to be in line with those of many research studies covering many of these variables. For instance, relating Reading Ability with intelligence, Bleismer (1954), Schonell (1965) and Safer and Allen (1973) found a significant positive relationship showing higher the intelligence higher the Reading Ability. Thackray (1965), Morris (1969) and Lewis (1969) found that Reading Ability was influenced by the level of language development in children. On the other hand, relating physical aspects of Reading Ability, Money (1962) and Reed (1966) demonstrated that physical aspects such as good vision and good health influenced Reading Ability in the positive direction. Schonell (1965) had, in addition to the above, also found that general maturity and abilities of the visual and auditory recognition and discrimination of word patterns differentially affected the readiness of reading and reading skills in children.

Reading develops from speech and it can be dangerous to force young children during the initial stages of learning to read if there have not been sufficient activities to create what Schonell called 'a functional language' beforehand. In this context, nearly two decades ago, Kellmer Pringle (1966) had emphasised that the most important period for the fostering of language and speech were the pre-school years.

Reading Ability can be affected by physical defects also (Hughes, 1975). Firstly, students often appear to tire quickly, become inatten-
tive and lack concentration when their constitutional factors have been lowered in that capability as a result of illness or other physical defects. Secondly, this situation may also lead to prolonged illness and absence from school. Frequently, the physical condition that interferes with educational progress consists not of grave or well-defined diseases, but of milder, vogue and more generalised conditions that sap the child's physical strength and so weaken his physical and mental abilities and powers (Robinnowitch, 1962; Bowlby, 1965 and Stott, 1966).

While physical health is an important factor, it is well known that learning anything depends on the hearing ability in an individual. A child, for instance, can not learn to speak unless he can hear what is being spoken. Thus, defective hearing can pose a very serious obstacle to learning. In this context, Luria (1961) pointed out that not only language development is adversely affected due to auditory or other related deficiency, but many other processes of learning are also affected. Reed (1966) demonstrated that there was a significant association between auditory high frequency weakness and retardation (i.e. distortion in the understanding and articulation of speech, immature language development including gross retardation in reading skills occur due to hearing defects at higher frequency levels).

Not only physical health and hearing ability are prerequisites for Reading Ability to develop, but also clear and healthy vision is especially important, as without clearly seeing what is written, one cannot learn to read. Defective vision, fatigue or strain on the eyes
while reading, etc. may all adversely affect reading. The importance of perceptual abilities in Reading Ability have been stressed upon by Money (1962) and Johnson and Mykleburt (1967). In this context discussing the use of contextual information sources Byrd and Gholson (1985) pointed out that the efficiency with which children use contextual information source is related to child's level of memory organization and perceptual ability.

As is well known, health, perceptual ability alone cannot improve Reading Ability, there are other factors, such as intelligence which has emerged in the students as an important correlates of Reading Ability. In this context, on the basis of an investigation Safer and Allen (1973) opined that the best predictor of reading improvement is the IQ, with verbal IQ, being the most significant. Ramanouskar and Bronow (1973) examining WISC profiles of 62 intellectually above average and 35 mentally retarded children in terms of their performance on a reading achievement test concluded that reading disability should not be considered a phenomenon confined to those of average or above average IQ, since there are good and poor readers at all intellectual levels. Many children of normal intelligence are retarded in reading where as some even if retarded can learn to read. For example, Houghton and Daniels (1966) showed that even children regarded as ineducable (because of low IQ) could also learn to read.

While personal attributes appear to play an important role in reading, learning etc., development of Reading Ability in students may be influenced by certain typical home background of students.
Table 5.1
Intercorrelation Matrix of factors Reading Ability, Academic Performance, Personality Traits, Personal Attributes and Home Background

<table>
<thead>
<tr>
<th></th>
<th>Reading Ability (RA)</th>
<th>Academic Performance (AP)</th>
<th>Personality Trait (PT)</th>
<th>Personal Attributes (PA)</th>
<th>Home Background (HB)</th>
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<td>II</td>
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PS = Public school; MS = Missionary school; NS = Navayug school; CS = Central school
Reading Ability and Home Background

Home background includes factors like parents' education, parents' occupation, availability of reading materials at home, parents' reading habit, parents' encouragement of children etc. As shown in the analysis chapter, the results of the present research indicated that home background as a whole had a significant influence on Reading Ability of students. However, this varied from one school to the other as is seen in the Table 5.1.

From the above correlation matrix it is observed that the home background had relatively lesser influence on students' Reading Ability as compared to either personality traits or personal attributes. This was particularly so in the case of class II, wherein except Missionary school no other schools had shown significant relationship between these two factors. When each of these home background factors was separately considered for their effect on Reading Ability, it was found that a few of these factors did not have the significant impact on Reading Ability as the others.

Another interesting trend noted was that as one ascended the classes from II, III to IV, the correlation value of home background and Reading Ability also increased. A similar trend was also observed in the case of academic performance, i.e., the students from better homebackground showed better academic performance especially in the classes III and IV. Perhaps favourable home background which provides students with lots of books to read, where the student has educated
parents, who are in good jobs, who have interest towards reading and
in turn encourage their children to read, etc. all these factors in
turn contribute to higher Reading Ability and academic performance.
Whereas an unfavourable home background may have relatively far lesser
number of favourable factors and thus in turn adversely affect the
Reading Ability and academic performance of students.

In this context, discussing the influence of home background
on Reading Ability, Srivastava (1979) pointed out how children coming
from home where conversation is limited or books unknown, are slow
in their reading and linguistic growth than those who come from favoura-
ble background. Rigley (1975) had earlier demonstrated that children
defined as socially disadvantaged by family composition, low income
or poor housing needed special reading instruction at the age of 11
years as compared to those from better backgrounds. According to him,
on an average the disadvantaged children were three and a half years
behind the others in reading scores. Studies of similar nature conduc-
ted earlier had shown a lower average reading achievement and a higher
incidence of backwardness among children with lower socio-economic
status (Morris, 1966; Kellmer-Pringle, 1966; Goodacre, 1967; Hughes,
1975). While conducting an intensive study on Reading attainment Rao
and Subramanyam (1982) found home background as positively and sig-
nificantly related to reading attainment. Sahu and Devi (1982) studied
whether under Indian set up advantaged and disadvantaged homes differ
in their quality and quantity of stimulation for their children; and
what variance did they contribute to some of the psycholinguistic and intellectual functions. The study included socially advantaged and disadvantaged pre-school children between three to six years of age. Each group consisted of 35 subjects. Quality and quantity of home stimulation were assessed by using home observation for measurement of environment (HOME) inventory. Psycholinguistic abilities were assessed by Auditory reception, Auditory Association and Visual Sequential Memory tests of ITPA; Intelligence was assessed by Columbia Mental Maturity Scale. Multiple correlation, taking home variables as predictors showed that they contributed to a significant variance on almost all the dependent measures in the case of both group of subjects. Stepwise regression showed that for the advantaged group of subjects "stimulation through toys, games and reading materials" contributed the highest variance to the dependent measures. For the disadvantaged group of subjects "physical environment" contributed to highest to the dependent measures.

Conditions of socially disadvantaged such as low family income, poor educational background, poor locality, caste etc. affected the cognitive and linguistic functions of the subjects (Jensen, 1973; Das, 1973; Rath, 1974; Rath and Samant, 1975; Misra and Tripathi, 1977; Rath, Dash and Dash, 1978; Sahu and Mishra, 1978; Sahu, 1978).

Thus the home background including the social background appear to affect the Reading Ability and academic performance of students considerably. Within this, the most significant aspect appears to
be that of parents' active and positive role in helping students to read and perform better. As Carlson (1972) pointed out, the encouragement and interest of parents, toward their children's reading and performance have a significant impact on the student's achievement. The above ideas appear to have led the National Conference of Parents and Teachers to urge for programme in harmony with this idea. While there appears little doubt regarding parents' ability to help their children to make a more effective, meaningful and constructive parent education programmes and parent teacher conference are essential prerequisites towards making them effective in intervention.

Helene M. Llyod (1969) testified that the "impact of programme which have successfully included parent involvement has been so marked that New York City, at least, is convinced that parent involvement constitutes a vast resource".

Hughes (1975) after going through different studies came to the conclusion that under home background 4 aspects are more important which appear to influence reading ability. These aspects are (a) Cultural, (b) material and economic, (c) motivational, and (d) emotional.

Based on his extensive review, Hughes pointed out that poor economic background and cultural deprivation had a marked effect on student's development especially in the area of language development. Irrespective of intelligence and other other factors maximum language development was found to be dependent upon an adequate environmental stimulation. Where the standard of a particular language was low, where
books were fewer and where conversation was limited in extent and variety, there appeared to be no inclination in many children to express themselves fluently and correctly. According to Hughes, in the past, socio-economic status was frequently defined according to the father's income and occupation. Today, however, one uses an index which reflects housing conditions and various other aspects in addition to income, education and occupation.

Apart from the socio-economic status, imitating parents or modelling after one's parents is also an important aspect that determines a child's behaviour. For example, Hughes (1975) pointed out that children of two years and older generally have a tendency to act in a number of ways like their parents. They adopt parental mannerisms, play parental roles and incorporate in their own value systems many of the values, restrictions and ideals of their parents. Thus, the absence of such models or even lack of parental encouragement of children towards reading etc. may affect a child and his approach to learning.

Perhaps given proper guidance support, care, love and affection as well as adequate exposure to reading materials, many students may be able to learn to read and read well, even though they may be surrounded by many adverse environmental influences. On the other hand, even with proper guidance a child from a poor, over crowded, emotionally unstable and uncultural home may be less interested in learning to read because he receives very little encouragement from his home environment.
While home background appears to play an important role in learning, reading etc., development of Reading Ability in students may be influenced by certain typical personality traits in students.

**Reading Ability and Personality Traits**

It may be recalled that personality traits in this study consisted of factors like, diligence at work, punctuality, honesty, neatness, leadership, adjustability, speech, cheerfulness, responsibility, discipline and respect for elders. These factors were individually scored as per the norms of the school and then the sum total of the scores on each item was taken to determine an individual child's score on personality traits. These scores were then related to the Reading Ability scores of students. Results indicated that Reading Ability was significantly associated with personality trait. The more favourable the personality traits, the better the Reading Ability. The correlations however appeared to vary from one class to another, with highest correlation for class IV, followed by class III and class II in that order (Table 5.1). This variation may perhaps be due to the fact that in the beginning years of reading, personality traits do not appear to affect the Reading Ability to the same extent as they do when students moved to higher classes. In higher classes, as one requires regularity in reading, punctuality, diligence at work etc. to reach a higher level of performance, obviously the correlation between these two factors keep increasing.

As pointed out elsewhere, the analysis of variance which was carried out to ascertain if varying
personality traits have varying effect on Reading Ability, showed that in all classes i.e. II, III and IV students with good personality traits had performed significantly better in Reading Ability than those with poor personality traits. This support the findings of Paris Olson and Stevenson (1983) and of Wigfield and Asher (1984).

Studying the role of skill in the performance of students, Paris, Olson and Stevenson (1983) showed that a child may or may not use his skills to perform at a higher level. However, factors such as interest, the amount of time and effort required, willingness to take risks, self-concept, fear of failure etc. can all influence a child's performance. Thus possession of a skill may help in determining the child's capability to make an appropriate response, but it may not be adequate enough to predict the child's use of the skill.

Dechant and Smith (1977) found that the incidence of maladjustment amongst poor readers was greater than amongst good readers. They further pointed out that a child who cannot read is deprived of means for widening his interests, satisfying his needs, gaining new experience, filling his leisure time and in turn fails to achieve a higher level of emotional and social adjustment. This may be due to their lack of security, fewer successes and lower social acceptance. Thus reading failure may block the child's free communication with people and objects around in his environment.

Hughes (1975) suggested that failure to read may produce non-attendance almost as much as non-attendance produces reading failure.
The findings also showed that the poor attenders improved in their attendance when they had overcome certain aspects of difficulties in reading. It was found that in many cases, improvement in attendance also ran parallel to the improvement in reading, as was observed in the studies of Kahn (1958), Chazen (1962) and Herson (1960).

Furthermore, Hughes (1975) found a positive correlation between reading attainment and six characteristics of emotional and personality adjustment, viz. self-confidence, sociability, co-operation, perservance, conscientiousness and emotional stability. However, two characteristics i.e. sociability and cooperation, had low correlations with reading attainment and were not found to be significant. The results also showed a low but positive correlation between school attendance and reading attainment.

While the influence of factors related to personal attributes, home background and personality traits were found to be significant on Reading Ability, it was thought worthwhile to also consider the influence of sex factor on Reading Ability.

**Reading Ability and Sex Factor**

The results showed no significant difference in Reading Ability between boys and girls, except in the case of Missionary School class II students wherein the girls had shown significantly better Reading Ability than boys. These findings partially validated hypothesis no. and found support in the studies by Ahuja (1976), who found that there
was no difference in Reading Ability between the boys and girls. In one of the classic studies relating to spelling and language, conducted three decades ago, Traxler and Spaulding (1954) found girls in grade three, five and seven perform consistently higher than the boys in spelling and language, though the two groups were about equal in word meaning and paragraph meaning. In an almost similar study, Hughes (1953), found that in grade five to eight, girls made higher reading scores than did boys, though the difference were not statistically significant. Rejecting the above findings, Shanmugasundaram and Feroze (1971) found that boys showed higher level of comprehension in silent reading as compared to girls.

Agarwal (1984), showed males and females differing significantly in terms of Reading Ability, study habits, academic achievement, neuroticism, extraversion, parental attitude and ideals; specifically, males showed greater predisposition to better study habits, neuroticism, extraversion, favourable parental attitude than their female counterparts. On the contrary, females scored relatively higher on reading ability and academic achievement than males.

Having discussed the findings in this study in regard to the correlates of Reading Ability and sex factor as affecting the same, the following section discusses the results of the study in terms of school.
Reading Ability and types of school

It may be recalled that four types of school (viz. Public school, Missionary school, Navayug school and Central school), were taken as samples for this study, and a total of 360 students were interviewed and administered the Reading Ability tests used in the study. It has been found that the Reading Ability of students had differed significantly in terms of types of school ($F = 53.08$: 16.38 and 24.28 for class II, III and IV respectively). Specifically, the students of Missionary school students had performed significantly better than those from Public school, Navayug school and Central school in that order. This finding supported the hypothesis no. 3, namely, there will be a variation in the Reading Ability of students in terms of the types of school in which they studied.

The above results support the findings in the studies by Rao (1978), Opal and Sen (1979) and Veeraraghavan (1985). While Rao (1978) had compared the privately managed schools with Public and Government schools and found privately managed schools (i.e. Missionary school) had performed significantly better than the students from all other schools. Veeraraghavan (1985) compared students from Public School, Government School and Corporation-run schools and found that the Public School students not only performed better but also had higher ambitions and more ambitious future plans as compared to students from other schools.
In a recent study, Moses and Mayuri (1984) tried to ascertain whether the school system had any influence on the learning abilities and academic achievement of young children. For this purpose the researcher took two schools, one with poor environmental facilities, inappropriate and inadequate instructional procedures, and another school with better facilities and more adequate instructional procedures. Results showed that the students from the latter school showed significantly higher learning ability and higher academic achievement as compared to the former.

Apart from being related to the types of school, poor achievement could also be due to various other school related factors. In this context Hughes (1970) found adverse school conditions such as (a) inadequate school buildings, (b) overcrowding, (c) lack of liaison between infant and junior school, (d) teachers not trained or in experienced in teaching beginning reading, (e) untimely promotion, etc. as having a detrimental effect on the reading progress of students.

Since learning depends to a great extent, on the method of teaching adopted by a teacher, development of Reading Ability may also be influenced by teacher related factors. As pointed out by Mosenthal (1983), in classes where the teacher organised lessons which was reflective of a cognitive developmental ideology, subjects tended to use prior knowledge, prior text and current text as meaning source and reconstruction, embellishment and reproduction as comprehension processes. In classes where the teacher organized lessons reflective of
an academic ideology, subjects tended to use primarily the current text as a meaning source and reproduction as a comprehension process.

Reading Ability as well as learning efficiency vary in terms of the types of ideology that is dominant in teaching. As is well known the teaching ideology, methods of teaching etc. vary in terms of types of school, as different type of school recruit teachers suited to their particular school needs. In an unpublished work, Singh (1981) had put forth certain distinguishing features between public and government school, which included differences in (a) reliance on text books, (b) the socio-economic status of teachers, (c) the activeness of parent-teacher association, (d) political awareness amongst teachers, (e) extra-curricular activities, (f) leadership training, and (g) the socio-economic status of the students. It was argued that the above differences influenced to a great extent the academic performance of students.

The schools may also differ because of different organizational structure. Sinha (1980) studied the organisational structure of the schools and found that public schools had more competent organisational structures than government schools, which he felt could be a factor contributing to better performance among students from public schools. Bisht (1980) showed that school climate and need for academic achievement affected the academic stress of students.

This led to the question whether organisational climate could be of an innovative type which can stimulate academic achievement.
In this context, the study by Ricciotti (1982) indicated that, the students in the schools with innovative organisational designs, i.e. the non-graded and open space, made greater gains in reading achievement than those students in the traditional setting. Furthermore, longer the pupils attended non-graded schools and open space schools, greater was their improvement in their achievement score in relation to their ability. The results of this study indicated that non-graded settings were conducive to reading achievement and supported the viability of these organizational concepts in elementary schools.

Thus the differential achievement in reading appears to be related to different types of school, differentiated by virtue of the differences obtained in the type of teacher recruited to the schools, the different teaching methods adopted by them, the differences in their socio-economic status and the social class to which the school caters as well as the typical climate that exists in the school. Thus one may expect a Missionary school to emphasise more on reading, spelling, pronunciation and insistence of grammatically correct English. This could be one of the reasons for their compulsory reading within the class hour allotted to the subject concerned. Public schools also follow in principle, reading of lessons orally in the classes II, III and IV though not as strictly as the Missionary school. Hence perhaps their students score significantly lesser in Reading Ability as compared to the Missionary school students. However in class IV, Public school students appear to catch up with the Missionary school students in all aspects of Reading Ability and thus one finds no significant diff-
ference in Reading Ability between the two schools in Class IV. As for the Navayug school and Central school they do not appear to give much emphasis on Reading Ability though between them, the Navayug school appear to give relatively more emphasis on this factor than the Central school. Perhaps the relatively lower level academic performance in the latter two schools could be attributed to this factor, though other factors may also be operating in the situation.

Reading Ability and Academic Performance

Strang (1967) pointed out that Reading Ability was essential for the success of all academic subjects. Reading Ability of students was found to be significantly correlated with academic performance. Specifically, students with high Reading Ability showed significantly higher academic performance than students with low Reading Ability. This was found to be true in the case of all schools (viz. Public school, Missionary school, Navayug school, and Central school) and in all classes (viz. Class II, III and IV). The correlation value ranged from .46 to .88 (Table 5.1). These findings support the hypothesis no. 2, namely, the academic performance of students will be a function of Reading Ability in students. These findings have supported the findings of Ansuya (1970), who found that reading efficiency, speed, and comprehension were related to a student's academic performance. Agarwal (1984) also found a positive correlation between academic performance and Reading Ability. In a recent study, SenGupta and Veeraraghavan (1986) found that Reading Ability was positively related to academic performance of students in primary classes.
Thus from the above, it appears that Reading Ability is an important factor for better academic performance. Reading and writing are formal skills which the primary school focusses on developing in students.

In this context, it is worth mentioning the statement of Smith (1971) who stressed the importance of reading. He said that reading is so interrelated with the total educational process that academic success requires successful reading. He concluded that those who fail in school have usually failed in reading.

Bhagoliwal (1979) pointed out that reading is the chief aid of learning. Each subject of study in school depends upon good reading. It is the most important tool of a study. The knowledge contained in text books is useless to pupils if they cannot read and comprehend the ideas properly. The ability to read and comprehend is a pre-requisite to academic success, and successful students are able to study various subjects with reasonable ease and understanding. The poor students, more often lack competence in reading and cannot interpret satisfactorily the materials read by them. He also found that reading comprehension was high with high interest reading materials than low interest reading materials. Butler et al (1982), William and Silva (1985) had showed that reading achievement at early age levels correlated very highly with reading achievement at later age levels.

Thus, if Reading Ability depended on types of school, personal attributes, home background, personality traits etc. and in turn affected
the academic achievement of students, then it may be worthwhile to take up students with poor Reading Ability, give them training in reading and improve their Reading Ability and see if it leads to better academic performance.

Thus as mentioned in Chapter 4 (Results Phase II), an attempt was made to ascertain the effect of Reading Ability on academic performance by taking three groups of students viz. Experimental group, Control group I and Control group II. Reading Ability training was given only to the experimental group. The results showed that the students who had undergone training for a month (Experimental group) had performed significantly better than the other two groups i.e. Control group I and II, indicating positive influence of Reading Ability training on academic performance. These results, as pointed out elsewhere validated the hypothesis no. 8, namely improvement in Reading Ability may lead to improvement in academic performance.

In this context, it is worth noting that studies relating Reading to academic performance had been carried out by Narayanaswamy (1969). He investigated the reading comprehension at college level and found that improvement in reading efficiency amongst school leavers led to better performance.

Deshpande (1973) made an attempt to bring about an improvement in teaching of Reading to beginners. He taught teachers how to prepare reading materials so that children can learn to read well and fluently. In the process of evaluating this programme, he concluded that reading
programme should be based on the concept of reading and that the teachers should be properly oriented and the pupils should be given reading readiness programme before the actual teaching of reading starts. The findings of his study led to the conclusion that before one starts teaching children to read, reading readiness programme should be introduced so that they can learn to read effectively under the new method of teaching of reading.

Narang (1979) suggested some points for improvement of Reading Ability on Indian children, such as (1) teacher should understand the students and accept them, (2) the children need warmth, respect and understanding, (3) the curriculum content should include cultural heritage and (4) a variety of books should be made available in the classrooms so that children get into the habit of reading. Most of these suggestions were tried out in the present study leading to better results.

Alegria et al (1982) found that children who began to learn to read, following the phonic method did better than those who began with the whole word method. The difference in performance between the two groups was significant for both rhyming and nonrhyming series of memory items. The phonic method was the one used in the present study and the results appear to support the above contention.

Khare (1984) exploring the possibilities of developing courses for improvement in reading, defined Reading Ability as the skill of perception and comprehension, which depended on retention, motivation
and interest of the individuals. The perceptual skills included accuracy and speed of word recognition, right vocabulary, reading by visual images, selective perception and also eye training (for e.g. eye span, left to right orientation and vertical eye movement). Comprehension referred to understanding and thinking which included the mental activities such as finding main ideas, interpretation, summarizing, concluding for the implications and so on. This study also used 3 different methods of teaching Reading. The Results showed that all methods at all levels showed significant improvements; however, different methods did not vary significantly in effectiveness. Lower grade level children showed greater improvement on comprehension. The analysis of improvement in subskills of reading also indicated the same. The recent study by Byrd and Gholson (1985) showed that good readers differed from poor readers in their ability to use efficient reading strategies. This finding support the findings of the present study (Phase II) wherein poor readers showed much higher improvement in their academic performance as compared to good readers, though both had improved in academic performance after Reading Ability training.

Thus from the various studies mentioned above, it is possible to conclude that despite the different levels of personal attributes, home background, personality traits, types of school etc., Reading Ability of students can be improved by giving proper Reading Ability training, which in turn may affect the academic performance of students in a positive direction.
Concluding note on this chapter

To conclude, an attempt was made in this chapter to discuss the findings of the present study in the light of various studies and researches conducted in the field of Reading Ability. While relating the findings to the theoretical models available on Reading Ability it was found that none of the proposed models was able to adequately explain the acquisition of Reading Ability. It was pointed out that a model to be adequate should cover many factors such as personality traits, personal attributes, home background etc. On the basis of the findings of the present study a model was proposed by the researcher which covered all the relevant factors that influence the development of Reading Ability. The discussion then passed on to various researches relating Reading Ability to types of school, personal attributes, personality traits and home background. This exercise led to the conclusion, that most studies in this field had only dealt with a few of the constituent factors that comprise personal attributes, home background, personality traits, etc. None of the studies dealt with Reading Ability on as comprehensive a level as the present study had done. However, many of the findings in this study relating the individual constituent factor to Reading Ability supported the findings in the existing literature. The present study could, to an extent, claim to be a unique one, in the sense that it has not only been able to delineate the correlates of Reading Ability but also has been able to unambiguously demonstrate that by improving all the constituent factors (delineated as correlates of Reading Ability in this study)
in students, it is possible to improve the academic performance of the concerned students.

Thus the present study has not been merely an empirical investigation but has been able to show the practical value of this empirical investigation in an educational setting. The latter part especially could be considered as a unique contribution made by the present study.

The following chapter presents the conclusion and implications for further research in the field of Reading Ability.
THE STUDY AT A GLANCE

PHASE I

Correlates of Reading Ability

Interaction of Reading Ability with Personal Attributes, Home Background, Personality Traits and Types of School

Sample

360 students of class II, III, and IV of Public school, Missionary school, Navayug school and Central school

Research design

Inter correlation matrix

Material used

Test scores of all 16 variables (15 Independent variable, 1 dependent variable)

Statistical Analysis

Stepwise regression analysis

Results

A. Correlates of Reading Ability are
1) Personality traits
2) Intelligence
3) Phonemic ability
4) Reading habit of students
5) Reading interest of students
6) Health of students
7) Availability of reading materials at home
8) Parents' education
9) Parents' occupation
10) Reading habit of parents.

B. Reading Ability was significantly correlated with academic performance

PHASE II

Improvement in Reading Ability

Sample

120 students of Public school, Missionary school, Navayug school and Central school in Class II, III and IV respectively.

Research design

Factorial design (4 x 2)

Material used

Total score of Reading Ability, Personal attributes, Home background and Personality traits for all the 4 schools separately.

Statistical Analysis

Analysis of variance

Results

A. For all classes, Main effect
1) Reading Ability scores differ significantly in terms of different types of school viz. Missionary school students scored the highest. Reading Ability scores followed by Public school, Navayug school and Central school.

B. Reading Ability training was given to experimental group students. The scores of academic performance was taken, before and after Reading Ability training.

Interaction Effect

1) Interaction effect between types of school and personal attributes has been found to be significantly affect Reading Ability, only in the case of Class II.