CHAPTER II

THEORETICAL PERSPECTIVE

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2.1 Introduction

In this chapter, the concept of general ability, its definitions and concept accepted for the present study have been discussed. The chapter also includes discussion on the nature of reading readiness, its definitions, its components and factors affecting growth of reading readiness, especially general ability.

General mental ability is an abstract concept. Psychologists have tried to define it in their own ways. Hence, there is no general agreement regarding the meaning of general mental ability:

"For the past 75 years psychologists have been using various labels such as intelligence, capacity, potential, aptitude and ability to identify a construct that appears to be useful in helping to predict various kinds of behaviour."\(^1\)

As the test-constructors do not define a construct the same way, different terminologies prevail to denote...

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general ability in the sphere of measurement in psychology and education. Lyman has tried to put in nut'shell the various usages of the terms of general mental ability.

"Intelligence has many pseudonyms: mental maturity, general classification, scholastic aptitude, general ability, mental ability, primary mental abilities etc. They all mean about the same as intelligence, although they may differ somewhat in emphasis or application".  

The terms "intelligence", "general ability", "mental ability", "learning potential", "school and college ability", and "educational ability" are used to designate essentially the same type of test. In the psychometrician's vocabulary, these terms are synonymous and interchangeable".  

Looking to all these points, the investigator has used the word "general ability" in the study. Modern diagnostic tests do obtain useful information about distinct aspects of ability. In Binet's time, one of his great contributions was to replace the idea of separate functions with the concept of general intelligence. Having started  

with the idea that some children were bright and some dull; he found quickly that those who were the best on tests of judgement were also superior in attention, memory, vocabulary, etc. In other words, the tests were correlated. The correlation shows that there must be some underlying unity among these mental tests when psychologists refer to general mental ability, they refer to the characteristic that accounts for the correlation among mental tests.

Binet refined his idea of intelligence by trial and error. "If colour matching does not correlate with other estimates of mental ability, it must not be influenced by the common factor. If knowing certain information correlates with the tests of reasoning, both must measure intelligence." 4

The term intelligence test is being replaced by such terms as test of general mental ability or test of general scholastic ability.

J. C. Flanagan, the Director of Science Research Association (SRA) in the U.S.A. has developed the Tests of General Ability (TOGA) for KG and grades I to XII. He accepted the fact "that General Ability Test is an IQ. Test or Intelligence Test." 5

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Since there is no concurrence of opinion among all psychologists, all the well known psychologists have defined general mental ability in their own way. Some of the very common definitions are as follows:

2.2 Definitions

**Binet**: 
"... the capacity to judge well, to reason well, and to comprehend well."\(^6\)

**Terman**: 
"... the ability to think in terms of abstract ideas."\(^7\)

**Thorndike**: 
"... power of good response from the point of view of truth or fact.".

**Cyril Burt**: 
"... power of readjustment to relatively novel situations by organizing new psychological combinations."

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Stern:
"...general capacity of an individual consciously to adjust his thinking to new requirements."

Pinter:
"...ability of an individual to adopt himself adequately to relatively new situation of life."

Thurstone:
"...a capacity to make impulses focal at their early unfinished stage of formation."\(^8\)

Hazlitt:
"...the problem solving organization of the mind."

Woodworth:
"...ability to see the point of the problem set and adopt what he has learned to the novel situation."

Warren:
"...capacity of certain organization to meet a novel situation by improving a novel adaptive response."

Rexknight:
"... the capacity for rational, constructive thinking, directed to attainment of some end." 9

Dearborn:
"... a capacity to learn and profit by experience".

Wechsler:
"... the aggregate or global capacity of the individual to act purposefully, to think rationally, and to deal effectively with his environment." 10

Stoddard:
"... the ability to undertake activities that are characterized by difficulty, complexity, abstractness, economy, adaptiveness to a goal, social values, emergence of originals, and to maintain such activities under conditions that demand a concentration of energy and a resistance to emotional forces." 11

9. Ibid., p. 17.
Peterson:

"... a biological mechanism by which the effects of a complexity of stimuli are brought together and given a somewhat unified effect in behaviour." 12

Garrett:

"... a set of abilities demanded in the solution of problems which require the comprehension and use of symbols i.e. word, number, diagram, equations, formulas." 13

Freeman:

"... capacity to reorganise one's behaviour patterns so as to act more effectively and more appropriately in novel situation." 14

Goddard:

"... the degree of availability of one's experiences for the solution of immediate problems and the anticipation of future one's." 14


Wells:
"... means precisely the property of so recombining our behaviour patterns as to set better in novel situation." 15

Buckingham:
"... ability to act effectively under given condition." 16

Spencer:
"... the ability which each individual has of guiding or controlling his adjustment to an everchanging environment by combing his impressions and organising his reactions."

2.3 Implications of Definitions

The definitions of general mental ability should be clear and pin-pointed to state entire connotation. Though the definitions differ, for the purpose of studying implications, they can be classified into several groups.

According to Mehrens and Lehmann, 17 the definitions of intelligence generally fall into one or more of the

three categories: the capacity to:
- think abstractly,
- learn, or
- integrate new experiences and adapt to new situations.

One group of definitions lays stress on the ability to carry on abstract thinking. The definitions given by Binet, Terman, Garrett, Rex, night, Hazlitt, etc., more or less contain this view. According to this view, the levels of general ability can be measured from the effective use of concepts and symbols in dealing with situations.

Another group of definitions places emphasis upon adjustment or adaptation of the individual to his total environment. Freeman, Wells, Burt, Woodworth, Pinter, etc., hold this view. According to them, general mental ability is traced from the levels of ability to adapt to new problems and situations in life.

The third group of psychologists believes that general ability is the ability to learn. Buckingham, Thorndike, and Dearborn illustrate this view. According to them, a person with general mental ability possesses extensive ability to learn and to gain a wide range of experience.

It should be apparent that the three foregoing categories of definitions are not, and cannot be, mutually
exclusive. For the most part, their authors differ in emphasis.

"Obviously, ability to learn must provide the foundation for adjustment and adaptation to changing or to new conditions. And a person may be expected to have learned more or less from situations he had encountered and to which he had previously made adjustments. Learning ability, in the sense only of acquisition of information and knowledge, is not a sufficient criterion for the evaluation of a person's intelligence, but a person who can reorganize and apply what he has acquired for the purpose of dealing with varied and novel situations is mere intelligence. Thus, a definition of intelligence as the capacity to behave appropriately and effectively in new situations and a definition of intelligence as the ability to learn represents in fact, two aspects of the same process." 

The definition of intelligence in the light of abstract thinking is also inseparable from the other two. A child learns abstractions principally verbal and numerical through experience, through contact with and perception of objects, events, qualities, or relationships for which the symbols stand. Furthermore, if it is to be said that

an individual has fully learned to deal with the symbols of abstraction, then it must be true that he understands that the word is not the thing or the quality for which it stands. The word and numbers are abstractions that represent objects, events, qualities, or relations, but which, can be dealt with as if they were the things themselves. This aspect of intelligence 'the ability to use symbols' is itself the result of an individual's development and learning. Ability to carry on abstract thinking, contributes to a person's ability to adjust or adapt to changing or new situations, because through the use of symbols we are enabled to think through a problem without spending time and effort on mere trial and error in action. In other words, through the use of symbols and abstract thinking, man is able to enlarge his range of behaviour, to extend his horizons, and to transcend the immediate concrete and specific situation.

Two recent definitions of intelligence have been given by Wechsler and Stoddard. Wechsler believes that an individual's intelligence is revealed by his behaviour towards a goal. Stoddard has not only included the ideas of all the three mentioned groups of definitions but he has gone beyond that and included several attributes of intelligence, not included in the earlier definitions. He has discussed each of the attributes at length.
"Degree or level of 'difficulty' is implied in all definitions; but Stoddard's contribution here lies in the fact that he rightly insists we must, in testing, distinguish between true differences in degree of difficulty and differences that only seem to exist, as between two or more test items, whereas, in fact, there are no inherent differences in difficulty." 19

Some psychologists believe that several kinds of intelligence should be distinguished from one another. E.L. Thorndike divided intelligent activity into three types. 20

1. Social intelligence, or ability to understand and deal with problems i.e. social adjustment.

2. Concrete intelligence, or ability to understand and deal with things; as in skilled trades and scientific appliances.

3. Abstract intelligence, or ability to understand and deal with verbal and mathematical symbols.

Out of the three kinds of abilities mentioned above, abstract intelligence has received great impetus in current tests of intelligence. In the light of the proceeding

discussion on the implications of definitions, Flanagan's observation from the prevailing tests is worth mentioning:

"All the tests of general intelligence include items which measure general ability developed through influence of the following factors:

1. Heredity refers to the genetic constitutional individual differences in general ability.

2. Acculturation refers to general learning experiences, and

3. Special school training."²¹

2.4 Theories of Intelligence Structure

The development of a theory of intellectual structure has occupied the attention of a number of psychologists. Their attack has been both empirical and theoretical but generally has been closely connected with intelligence testing and has utilized factor analysis as the primary analytic technique. Although research on the structure of the intellect has been proceeding throughout the twentieth century, there is still considerable controversy as to the validity of the proposed models.

Halstaed has characterized the theories of intelligence in terms of factors or traits they postulate. But before looking into the theories developed in the twentieth century, it will be useful to peep into historical developments.

Pointing to early history of testing, Spearman summarizes the old doctrines of intelligence by classifying them into three theories - (1) Unifocal or monarchic theories (2) Multifocal or oligarchic theories, and (3) Non-focal or Anarchic Theories.

According to Monarchic view, one ruling ability controls all capacities of the man and that ability is recognized as intelligence. Like a monarch, intelligence is considered controlling all mental activities. But it is observed that the function of intelligence is divisible into several units uncorrelated and each unit is required to be measured separately. Hence, the psychologists have not agreed with this view.

According to oligarchic doctrine, the mental ability consists not of one but of a great few outstanding powers or capacities, requiring separate measurement. The functions of the mind are divided into different powers like memory,

perception, attention, movement, invention, etc. The theory is subject to all objectives raised against faculty psychology.

Anarchic theory admits a multitude of independent elements. Any specific activity calls into play a number of these elements. The theory suggests that general intelligence is the average of abilities and is measured by sampling. Spearman criticises that the theory is not at all workable without some auxiliary hypothesis of averaging.

The formal movement in testing intelligence began in the latter part of the nineteenth century and developed in the twentieth century. Since then, several theories have been developed to understand intelligence structure. The theories of distinguished psychologists have been stated here.

To give a flavour of the various approaches, precise of several historically interesting and currently fashionable models are presented hereafter.

(a) Unifactor Theory23

The simplest approach is to postulate a unitary ability i.e. a single general capacity. This view holds that although

intelligence may be expressed in diverse fashions or may be directed toward a variety of activities, basically it is a single ability. Any test that provides a single score (IQ) is, at least in a broad sense, representing a uni factor theory. However, because the empirical data frequently suggest that a more complex model is needed, the uni factor approach is considered too simple at present.

(b) Thorndike's Multifactor Theory

According to this theory, intelligence is composed of multitude of separate factors, or elements each one being a minute elements of ability. Any social act involves a number of elements and there is really no such factor as general intelligence, there are many highly specific acts.

In constructing a mental test, it appears even to Thorndike himself that atomistic theory and multitude of minute elements of ability are of less practical significance, and that the conception that many of them operate together in any situation demanding intelligence.

(c) Spearman's Two-Factor Theory

In 1927, Spearman developed a two-factor theory suggesting that intelligence is composed of a general factor (g) and

25. Ibid., p. 316.
specific factors \( (S_1, S_2, \ldots, S_n) \). According to this theory, factor \( g \) is involved in all the intellectual activities but the amount of \( g \) needed, depends on the type of work. The second factor 's' combined with 'g' contributes the total activity.

Spearman considers his theory of two-factors 'eclectic', because the amount of truth in each of the three doctrines unifocal, Non-focal and Multi-focal view is considered. The uni-focal view is justified if 'g' is regarded as a ruling ability. The non-focal view accepts existence of specific factors and the multi-focal view regards minor faculties distinct from universal factor.

Spearman's latter method was to evaluate what are called tetrad differences. If \( a, p, b, g \) stand for abilities and \( rap, rbq, raq, rbp \) are coefficients of correlations between the various pairs, then:

\[
rap \times rbq - raq \times rbp = 0
\]

Spearman calls this relation tetrad equation. Critically observing this theory in actual practice, tetrad differences generally deviate from zero. Commenting on the theory Vernon states:
"Factor analysis is an exploratory and suggestive rather than a conclusive technique. But two features of Spearman's theory are thoroughly substantiated and a third feature is definitely wrong. The feature where Spearman went wrong was his belief in determinacy of 'g'—that would yield one and the same 'g'.'" 26

Thomson criticises the theory by arguing that the two factor theory was a possible but not a necessary inference from the statistical results. Thurstone accepts the tetrad differences method only as a historical interest and states that when more than one factor is required, tetrad differences criterion cannot be applicable. But as the practical inference of this theory, the test constructors generally select the test items, which are considered to be saturated with 'g'.

(d) **Thurstone's Group Factor Theory** 27

The group-factor theories of Hull, Kelly and Thurstone are intermediate between the theories of Thorndike and Spearman. Out of them Thorndike's theory has been most highly developed and has resulted in the construction of a set of

measures called tests of primary mental abilities. According to this theory, certain mental operations have in common a primary factor, which gives them psychological and functional unity. These mental operations form a constituent or a 'group'. From this, Thurstone's Theory of multiple factors \((f_1, f_2, \ldots, f_n)\) led him to his test of Primary Mental Abilities.

According to Cronbach,

"Thurstone's theory had great influence on all subsequent classification of abilities. He gave 56 tests to students of the University of Chicago and found six predominant factors: Verbal (V), number (N), spatial (S), word fluency (W), memory (M) and reasoning (R)."\textsuperscript{28}

(e) **Thomson's Sampling Theory**\textsuperscript{29}

Thomson believes that the hierarchical order and zero tetrad differences can be explained by his sampling theory. His view is that the co-efficient of correlation are the results of common samplings and combination of independent factors that are present in two tests, determine the co-efficient correlation between the two. The theory is the same as that of Thorndike except that Thomson considers


\textsuperscript{29} F.S. Freeman, Op. cit., p. 85.
practical usefulness of the concept like 'g'. Thomson believes that if several tests call upon many elementary factors in common, they will give appearance of having one common comprehensive factor. According to the theory, any performance is considered as being carried out by a sample of group factor.

"The theory does not deny the general ability; for if the samples are large, there will of course be a factor common to all activities. On the other hand, it does not affect the general ability if the sample may not be so large as this and no single factor may occur in any activity."30

Thomson has become somewhat ambiguous in the explanation of his own theory.

(f) Burt's Hierarchical Group Factor Theory

According to this theory, abilities are classified into three types:

1. General Ability entering into every test belonging to a certain broad genesis.
2. Special Abilities, each limited to certain group; and

3. Individual Abilities, peculiar to a particular test.

Burt's thesis is that "set of factors can be arranged in a hierarchical order as shown in the scheme. While recognising group and specific factor, he does not deny the 'g' factor."\(^{31}\)

\((g)\) Vernon's Hierarchical Structure of Abilities

The basic idea of this approach is that intellectual structure can be conceived of as a hierarchy, extending from one or more broad general factors through group factors to more and more specific factors. Vernon (1950) has suggested a hierarchical structure of abilities starting with a general factor \((g)\). The general factor is divided into two major group factors; verbal educational \((V.Ed.)\) and kinesthetic mechanical \((K.M.)\). These major group factors are little less general than Spearman's 'g', but more general than Thurstone's group factors. Under each group factor, there are minor group factors. Vernon's sketch of possible hierarchy of abilities is given figuratively (Vide Figure No. 1 on page 46).

**Fig. 1.**

**Vernon's Diagram**

**A Possible Hierarchy of Abilities**

- **General (G)**
  - Major Group Factors
    - Verbal-Educational (V:ED)
    - Practical (K:M)
  - Minor Group Factors
    - Verbal (V)
    - Number (N)
    - Mechanical Spatial Manual Information (M)
  - Specific Factors

**Fig. 2.**

**Guilford's Structure-of-Intellect Model**

- **Operation**
  - Convergent Production
  - Divergent Production
  - Memory
  - Cognition
- **Product**
  - Units
  - Classes
  - Relations
  - Systems
  - Transformations
  - Implications
- **Content**
  - Figural
  - Symbolic
  - Semantic
  - Behavioural
Vernon does clarify that the diagram is "a hypothetical integration of all the factorial investigations that have been carried out, rather than an established fact."\textsuperscript{32}

Discussing relative importance of factors at different levels, Vernon writes:

"If our diagram could be worked out completely to cover all human activities, the g-variance might amount to about 40 per cent, the major and minor group factors to some 10 per cent each, and remaining 40 per cent would consist of very narrow group factors and unreliable. This means that, fairly good predictions of ability in education, industry, or everyday life, can be achieved by g-tests alone."\textsuperscript{33}

(h) Guilford's Three dimensional Model

The most recent development in the factorial analysis of intelligence comes from the long range researches of J.P. Guilford and his associates at the University of Southern California. He has developed a unified theory of human intellect, which organises the known, unique or primary

\begin{itemize}
\item \textsuperscript{33} Ibid., pp. 27-28.
\end{itemize}
intellectual abilities into a single system called the "Structure of Intellect". According to Guilford, the factors can be classified in three different types. (i) content, (ii) operation, and (iii) the product.

In content, he recognised three distinct categories and termed them as figured, symbolic and semantic. Afterwards he added a fourth kind of content which was termed as behavioural. These four contents can be easily compared with three kinds of intelligence of Thorndike.

According to the basic kind of process or operation performed, the intellectual factors can be categorised into five major groups which are cognition, memory, convergent thinking, divergent thinking and evaluation.

A third way of looking at the abilities and a third way of classifying them came to view more slowly. It came about because of the need for taking into account the parallels that appeared across both the content and the operation categories when a certain operation is applied to a certain kind of content, a certain kind of product may be involved. The six kinds of products, according to Guilford, are units, classes, relations, systems, transformations and implications.

Figure 2 on page 46 shows a single solid model called the "structure of intellect" model or shortly the SI model by means of which the three kinds of classifications of the factors of intellect are represented. In short the model contains 120 cells (5 operation x 4 contents x 6 products). Each of which represents a distinct factor that is measured by a separate test. The structure of intellect is a theoretical-morphological model that predicts as many as 120 cells of the model.

On inspecting the 1960 revision of the Stanford-Binet Intelligence Scale, Guilford states "that among the 140 single tests, including the alternates, some twenty-eight of the intellectual factors are represented, each by at least 1 test, as compared with about eighty that are regarded as known and more than one hundred that are probable when all are known."35 Further he claims to have demonstrated empirically "that 82 of the 120 different structures of intellect factors exist."36

Thus, the various models presented are conceptual and heuristic devices. Because their comparative validity has

35. Ibid., p. 62.
36. Ibid., p. 64.
not been determined, whoever model a particular investigator adopts will generally be a function of his individual preferences. No test is explicitly derived from a hierarchical theory and Guildord's model is too new to be the basis of any widely used test.

It should be emphasized that all test constructors have based their work on a particular theory of intellectual structure. In fact, the dominant approach has been an empirical one of attempting to predict a specific criterion with the maximal accuracy. Thus test of general ability has been developed, not in accord with a prevailing theory of intellectual structure, but by including skills that previous research has shown to be predictive of academic success.

2.5 The Concept of General Ability and the Present Test

It can be realised from the preceding discussion that the psychologists are not of one opinion regarding the nature of intelligence. Some of the theoretical psychologists hold the view that there are specific factors, while some of them believe that there is also a general factor. But the practical psychologists are inclined to use the tests of general ability only because they are found predictive and very helpful.
"Due to the lack of agreement about the nature of intelligence, there are a wide variety of tests that are often subsumed under the phrase "intelligence tests". They do not all measure the same thing. They are not even designed to do so. A rather important implication is that, when selecting and interpreting an intelligence test, one must be completely aware of how the author defines the construct he is trying to measure."\(^{37}\)

The study of the nature and structure of general ability has been helpful in understanding more clearly the development of tests mentioned in the next chapter. It was not attempted to accept any one of the definitions or theories stated in this chapter. However, Flanagan's analysis of the definitions has been found very useful while designing the present test items. The results of the present test have been subjected to factorial analysis to estimate whether any common factor exists.

2.6 **Nature of Reading Readiness**

Until the nineteen twenties, it was an universally accepted fact, both by parents and educationists, that all children should be taught to read on their first entry.

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into the portals of the primary school. The conscientious parents, indeed, considered it a part of their duties to commence teaching a child to read during the pre-school year, and often they did so with considerable success. However, there were also psychological ideas that led to a change of attitude and practice.

"Wide-spread acceptance of the concept itself has finally killed the idea of a uniform, definite and early age for teaching all children to read and has substituted for it the notion that the age for beginning to learn to read is particular to each child." 38

This emphasises the preparedness of an individual child for beginning reading. As a result of this thinking, in recent years, the concept of readiness has come to occupy a very prominent place in educational theory. Educational psychology pays more and more attention on the child's readiness for learning.

Therefore, it could be said that the idea of reading readiness is by and large an off-shoot of the child-study movement. It suggests that there is an optimum time for any particular learning. Hence, the attempts that are

made to teach the child before this stage are usually laborious but successful. A successful programme for young children in reading as in other curricular areas, should be based on a realistic appraisal of what they can do now and what they are ready for the next.

In this connection, Heilman reveals the clear picture of our negligence regarding reading readiness. He says:

"Reading readiness is one of the most talked about and most written about aspects of teaching reading. But in the practice of teaching reading, it is surprising that readiness or more precisely, the lack of readiness - is so often ignored."39

This leads to state that the success of teaching reading largely depends upon the factor of reading readiness.

Learning to read is a continuous process during which one reading experience makes it possible for children to profit from subsequent experiences. One can profit more from subsequent reading experiences only if he is good at reading.

Good reading depends upon the good start made by the teacher in teaching reading to children of grade I of

primary schools. It is already mentioned that success of teaching reading depends upon readiness to read. Hence, the good start can only be possible if the pre-primary school children are ready to learn or read. Therefore, reading readiness is the concern of all the teachers who want to encourage growth in reading.

Besides this, it is assumed that the types of information, abilities and interests which the child acquires in the infant stage play a vital role in reading before the time to learn to read. Therefore, it has now become a common practice in some of the progressive schools to provide information and other experiences before the first lesson in reading is undertaken. They think that information and experiences which are provided to the child definitely make the task of teaching reading easy. The advocates of these new idea believes that imposing only paper-pencil-pushing activities on the small children only put the children against reading.

DeBoer and Dallmann write:

"If we press reading instruction upon the child who gives every sign that he is not ready for such instruction and will experience anxiety and frustration as a result, we are not merely making a pedagogical error but are in effect committing an offence against the child."  

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This suggests that without preparing a proper background, the early efforts of the teachers for teaching the child to read and learn are likely to result in wastage. Not only this, but it may create a lasting aversion to reading on the part of the child.

It is, therefore, absolutely right to say that no child can learn when he does not want to learn. Hence, it is the pious duty of each and every teacher to find out who is ready to read. In the absence of the knowledge of the child's reading readiness, the best material and methods of teaching reading would lose their effectiveness. So, the problem of readiness should be the concern of every teacher, regardless of the subject of study.

But it is really difficult to gauge the readiness, for reading of a particular child or in other words there is no definite answer to question - 'When is a child ready for reading?'. It is because that there is no single criterion that applies to all children or to all learning situations. Moreover, children grow towards readiness for reading at different rates and very widely in the various abilities, skills, and understanding which constitute the reading readiness.

Therefore, it could be considered that reading readiness is largely the foundation upon which later maximum
success in reading could be built-up. This period is not a waiting period. On the contrary, this is a highly structured, deliberately teacher-planned programme. It does not aim at removing individual differences among the pupils but at seeing that each child has experiences which will remove hurdles to learning to read. It attempts to synthesize new experiences with children's previous experiences. These previous experiences are extremely important, because they determine to a large degree the kind and the amount of experience that is still needed and which the school must provide prior to formal instruction in reading. The teacher who is in-charge of the first graders should take up and implement reading readiness programme with an attitude of developing reading readiness in them.

In order to determine when and how to begin systematic work in reading, the teacher needs to know to what extent each pupil possesses the essential components of reading readiness. Children lacking in one of the factors of reading readiness possesses factors which may justify teaching them to read.

At the same time the degree of readiness needed for one programme may be insufficient for another. There is no such thing as an ideal or minimum mental age for learning to read. A child may be fully "ready" to learn under teacher "A", but unequal to the more several demands or the
less skilled teaching of Teacher 'B'. Therefore, it is quite reasonable to conclude from this discussion that teaching, reading can be carried out when the child is sufficiently ready for the particular programme. Thus, developing readiness for reading is an individualized programme and hence the length of the period varies from child to child.

2.7 Definitions of Reading Readiness

Different educationists have given different definitions of the term 'reading readiness'. A few of the definitions which are very famous are discussed here.

According to Harris:

"It is a state of general maturity which, when reached, allows a child to learn to read without excess difficulty. It is a composite of many inter-connected traits." 41

This means that when a child has developed certain mental characteristics to a point, he is able to learn to read without any tension or torture. Maturational changes are orderly and sequential. Harries compares the process

of reading with that of walking. He says that when a child is matured physically then and only then he walks easily. Otherwise, the parents' undue haste causes a painful fall on the part of the child. In the same way, when the child is mentally matured, only then he can learn reading with ease. Also, reading readiness is not a single mental characteristic, but it consists of many characteristics.

Dechant states:

"Reading readiness is the developmental stage at which constitutional and environmental factors have prepared the child for reading instruction." 42

This definition emphasises upon the fact that child's mental development depends upon nature and nurture. Hence, we can say that reading readiness is affected by internal and external forces. From this definition, it could also be said that reading readiness by and large depends upon the interaction of nature and nurture.

According to Robinson:

Reading readiness can be defined as various combinations of abilities which result from nature and nurture interacting with each other. 43


The study of this definition leads to state that the reading readiness consists of abilities which are developed as a result of the interaction between the child's heredity and environment.

Besides this, it brings into focus the relationship between a child's particular capacities and the kind of learning opportunities made available to him.

In Ausubel's words: "Reading readiness is the adequacy of existing capacity in relation to the demands of a given learning task." 44

According to this definition, it could be said that the task of learning to read would become easy if the existing capacity - potentiality in the child is adequate.

While defining reading readiness, Nancy Larrick writes: "Reading readiness means the time when a child is mature enough to learn to read without undue difficulty. It varies from child to child." 45

This suggests that in the process of learn to read, readiness is one of the developmental stages in the child.


Also, it emphasises that there are individual differences as far as reading readiness is concerned. Reading readiness may be found at different levels at different ages in different children.

Almy states: "Reading is an educational concept concerned with the timeliness of what we wish to teach the child in the light of his ability to make use of it." 46

Here, Almy has tried to point out that reading readiness is the opportune moment which when exploited by the teacher to teach reading would pay the maximum dividend of his efforts. Therefore, if the child is not ready to read, the teacher should not make haste in teaching him to learn to read.

Dechant has supported this view by saying "Reading readiness is the teachable moment for reading." 47

Again, here it can be concluded safely that reading readiness is an opportune moment for teaching or reading. It is an opportunity for the teacher to begin to teach reading to the child because at this stage the child can

learn reading with ease and peace. Not only this, but it also enjoys reading.

Grassam is apt in saying: "Readiness for reading denotes a stage of mental maturity at which a child can begin profitably to learn to read." 48

The study of this definition also emphasises upon the same idea as described in previous definitions that reading readiness is a stage of mental maturity at which if the child is taught to read, he will learn reading easily and profitably.

Converse of this statement is also equally true. If attempts are made to teach reading to a child in which reading readiness is not developed upto the level, the child will neither find pleasure nor profit from reading. He has no desire for reading.

The analytical study of the various definitions of reading readiness leads to state that it is an opportune moment a mental maturity - which is composed of various mental abilities developed as a result of interaction between nature and nurture. Therefore, it will be proper now to spell out various components of reading readiness.

Components of Reading Readiness

The answer to a question: What the child will be able to do if proper reading readiness is developed in him? may be considered as components or the behavioural specifications of Reading Readiness. The components that are given below are by and large discussed by different authors in their books on 'Reading'. The child in which the proper reading readiness is developed will be able to:

i. name the object or give the name of the object (concept formation),

ii. find out the similarities in simple figures (visual discrimination),

iii. discriminate between sounds (auditory discrimination),

iv. recognise the alphabets (knowledge of alphabets),

v. move eyes from left to right (left to right progression),

vi. handle the book correctly,

vii. associate meaning to printed symbols,

viii. copy the simple figures,

ix. pronounce words independently, and

x. give the meaning of the words (vocabulary).

In order to have a clear idea of the components, they are discussed in brief in the paragraphs to follow.
2.8 (i) **Concept Formation**

The child obtains different types of audio-visual experiences from home, school and society. These experiences help the child to formulate the recognise certain concepts. Therefore, it could be said without any hesitation that the formation of correct concept depends largely upon the experiences, the child acquires from his environment. If the child has varied experiences, he will have clear concepts and understanding of many things.

2.8 (ii) **Visual Discrimination**

With the help of the visual experiences, the child is able to recognise the picture, object, alphabets, arithmetic figures or geometrical figures.

2.8 (iii) **Auditory Discrimination**

Auditory discrimination is the ability to discriminate between the sounds or phonemes of a language. It is evident that this skill is essential to successful achievement in reading. However by hearing only, he is able to discriminate between the pictures or alphabets, occurring with common initial letter sound.

2.8 (iv) **Knowledge of the Alphabets**

The teacher can not teach the child to read unless he has the knowledge of the alphabet. It is absolutely
necessary for the child to know a few alphabets before he starts reading. If a child recognises a few alphabets with the help of the pictures, he is ready for reading.

2.8 (v) Left to Right Progression

The success of reading largely depends upon the left to right movement of eyes. This could be called a new habit of perception. The children in their everyday life, are taught to observe directions.

2.8 (vi) Correct Handling of a Book

This is not a difficult task to teach the child how to handle a book. At the same time, it is very necessary for the child to recognise which is the front of the book, how to turn the pages, and how to hold a book.

This component has very little to do with mental activity. It is just a training for motor, co-ordination of hand and eye.

2.8 (vii) Associating Meaning to the Printed Symbols

It is the general tendency of all individuals to associate meaning to symbols. Hence, when the child sees the printed symbols, he tries to associate the meaning to symbols.
2.8 (viii) **Copying the Simple Figures**

The development of this component can be helpful to the child in later reading instruction. Therefore, the child should learn eye-hand coordination and visual motor skills.

2.8 (ix) **Pronunciation of Words - Independently**

This is a component which is by and large a concern of the speech activity. In the reading programme, speech plays an important role. The teaching of reading generally starts with pronunciating a word. This component cannot be overlooked in evaluating the reading readiness.

2.8 (x) **Acquisition of Vocabulary**

The heart of the task is to obtain appropriate meaning from the printed word. This depends on the word recognition. The first type of vocabulary that a child acquires is the hearing vocabulary and when he starts to read, he begins to acquire a sight vocabulary.

The discussion of the various components of reading readiness leads to state that it is not a simple concept but a highly complex concept. Therefore, all these components may not be found at any stage in an individual. At the same time, all these components do not develop equally or proportionately in the same individual. Thus, there is every
possibility of individual differences with regard to the components and also with regard to reading-readiness.

Many attempts have been made to analyse and define the term 'reading readiness'. But from the study of various definitions one can conclude that there is not a single good definition of reading readiness. But for the present study, the investigator has decided to consider reading readiness as a mental maturity composed of various abilities developed as a result of interaction between nature and nurture. On the basis of complex skill as described earlier a few of the researchers have constructed and standardised tests to measure reading readiness. The reviews of such tests on reading readiness have been presented in the next chapter.

2.9 Factors Related to Reading Readiness

As stated in the previous pages, Reading Readiness has been defined as the 'stage in development when, either through maturation or through previous learning, or both the individual child can learn .. to read easily and profitably'. There are many abilities, skills, influences and interests which may develop through maturation or learning and thereby contribute in some measure to the stage of readiness for beginning to learn to read. Some authorities produce long lists of specific traits and influences that
determine a child's readiness for reading; most writers group these traits and influences under a small number of broad headings. Harrison, (1939), and Inglis (1949), use the three broad headings of physiological, intellectual and personal readiness; Smith (1950), Hildreth (1958) and Schonell (1961), use physiological readiness and intellectual readiness but subdivide personal readiness further, using such headings as social, emotional, experimental, linguistic and environmental readiness.

The following four factors have been formulated according to the above mentioned views by Thackray:

(i) Physiological factors, (ii) Environmental factors, (iii) Emotional, motivational and personality factors, and (iv) Intellectual factors.

In order to find out the relative importance and the predictive value of various reading measures researches have been undertaken in U.S.A. and U.K.

2.10 General Ability and Reading Readiness

There are several correlates of academic achievement of the children. It is an established fact that general

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ability also influences as one of the correlates of achievement. In the same way general ability may affect reading readiness of the children before they started taking compulsory education. Researches have emphasized that the level of general mental ability is an extremely important determinant of reading readiness and reading progress. A close relationship between general ability and reading would be expected for two important reasons:

i. The ultimate goal of reading is the comprehension of the communication transmitted by authors' writings. This involves, at least, the understanding and interpreting the author's ideas.

ii. Learning to read requires the development of new concepts of linguistic elements, such as 'word', 'phoneme', 'letter', etc. It also requires reasoning and problem-solving operations in developing the skill of decoding the written form of language back into its primary spoken form.

General ability implies all of these abilities; comprehension, interpretation, concept learning, problem-solving, reasoning. Therefore, one would expect general ability to be closely related to reading readiness, especially if its application to language skill was well developed.
"Manolakes and Sheldon (1955) and Bond and Tinker (1957) studying the relationship between general ability and reading at various age levels have proposed that the level of general ability determines the level of reading ability."\(^{50}\)

Earlier investigators, for example McLaughlin (1928), Raybold (1929), Deputy (1930), Tincker (1932) and Hayes (1933), have claimed that general mental ability is the most important single factor in determining reading progress. In more recent studies, both Malmquist (1969) in Sweden, and Vormeland (1967) in Norway have reaffirmed the high correlation between general ability and reading ability. Malmquist (1970) concludes that in his research "the relation was of such an order of magnitude by previous investigators that general ability is an important factor in the development of reading ability."\(^{51}\)

General ability is so closely related to reading ability that it seems reasonable to propose that a certain level of general mental ability may be necessary before a child can succeed in learning to read. Reading readiness

\(^{50}\) Ibid., p. 51.

\(^{51}\) Ibid., p. 51.
of the children with higher level of general ability is more promising than that of children with below average level of general ability. From the above discussion, it can be concluded that general ability and reading readiness interact with each other positively.

2.11 The Present Study

The present study is an investigation into the role of general ability of pre-primary school children in relation to reading readiness.

The study has been divided into two parts. As there was no test of general ability available, the investigator has ventured to develop such a test for the children studying in K.G. Classes. Thereafter, with the use of the test a study on the role of general ability in reading readiness of kindergarten children has been undertaken.

The present study is an addition to a very few researches in the field of reading readiness so far as Gujarat and India are concerned. It is hoped that the present study will serve two purposes (i) Providing of a test to measure general ability of kindergarten children, and (ii) studying reading readiness of the pre-school age children in relation to their general ability.