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A study relating to research in reading-readiness

Hutchings, Evelyn Phoebe
Boston University

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Thesis

A STUDY RELATING TO RESEARCH
IN READING-READINESS

Submitted by
Evelyn Phoebe Hutchings
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First Reader: Dr. Helen Blair Sullivan, Professor of Education

Second Reader: Dr. Mary Agnella Gunn, Associate Professor of Education
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PURPOSE OF STUDY

The writer of this paper found herself, after many years of eighth-grade teaching, faced with the administrative problem of providing instruction in beginning reading for children in pre-primary and primary grades. (This study was undertaken in order to classify the various aspects of the readiness period.)

Since much has been written on the subject of reading-readiness, an overlapping of terms found in the research gave the impression that the authorities were contradicting each other. It was most confusing. (It was necessary to compare the contributions of authorities in the field and seek out scientific evidence in the literature to clarify the subject. The result was a study relating to research in Reading-Readiness.)
CHAPTER 1
JUSTIFICATION FOR A PROGRAM OF
READING-READINESS
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JUSTIFICATION FOR A PROGRAM OF READING-READINESS

Introduction.-- Before painting a picture of the subject of Reading-Readiness, it is well to pause, by way of introduction, to think of the importance not of readiness for reading but reading itself.

For the child in the first grade, reading is "(1) recognizing most of the words; (2) guessing or sounding out the others; and (3) getting meaning as a result."

Storm and Smith say:

"The process of learning to read is the most complex of all school activities and the ability to read is the most important of all school arts. This ability is the master key which unlocks the gateway to every other school subject and to life itself."

Adams, Gray, and Reese think the same. They think that apparently a very large share of what the child is supposed to learn in his study of the social science, the


2/ Grace E. Storm and Nila B. Smith, Reading Activities in the Primary Grades, Ginn and Company, Boston, Massachusetts, 1930, p. 106

pure science, and all content subjects is to be acquired by means of intelligent reading. In like manner, much to be gained through acquaintance with music, art, and literature will necessarily come through reading. One uses it in the tool subjects such as arithmetic, language, and spelling.

"Indeed, there is reason to believe that in terms of actual practice, reading is the most widely used by the school to introduce the child to the social heritage which it seeks to teach. Thus in terms of school work, reading is a tool by which the pupil is enabled to learn much that the school has to offer."

On the same subject Witty writes:

"Obviously, the teaching of reading constitutes one of the most crucial responsibilities of the elementary school. The child must be taught to read so that he can live intelligently and with pleasure in our complex civilization, and so that he can learn whatever the school tries to teach through the medium of reading. He needs to use reading as a means of extending his experiences, of following his interests, of keeping abreast of the times, of getting information on his questions, and of obtaining fun and recreation. He must read in order to come to grips with much of the social studies, science, arithmetic, health, and other subjects which the school attempts to teach."

It is written that the schools face two genuine problems, namely, to train all pupils to read effectively and to establish strong motives for, and permanent interests in, reading.

1/Paul Witty, Reading in Modern Education, D. C. Heath and Company, Boston, Massachusetts, Preface, 1949.

The process of reading is divided by McKee into three parts, as follows: "(1) Identifying and recognizing printed words quickly and accurately; (2) arriving at an adequate understanding of the meaning intended by the writer; (3) making use of the meaning arrived at."

A vast amount of research has been done on the subject of Reading-Readiness or Getting Ready to Read. The following pages give evidence of the fact.

Introducing Reading Instruction.—Before 1920, the year that introduced us to the expression "Reading-Readiness, it was thought that a certain chronological age, perhaps 5½ or six years, gave the child the right to enter school, and reading began forthwith. Now, the need for a program of Reading-Readiness is no longer controversial, but the age at which reading should begin is much questioned.

It is the belief of Adams and Reese that:

"Just as a normal child learns to walk and talk when he reaches the proper development for these activities, so he arrives at readiness for reading in his own time. Some teachers still feel guilty unless all their children begin to read from pre-primers soon after school opens in the Fall. However, the well-informed teacher realizes that such hot-house forcing of reading by overzealous teachers will accomplish little good and may do much harm. The results of too much pressure in the initial reading period may be so serious that time cannot heal the scars."


2/Fay Adams, Lillian Gray, and Dora Reese, op. cit.
They speak of the mistake of plunging children into reading before they are capable of dealing with it successfully. Investigators have found that the mental age of the child is far more accurate indication of readiness for reading than the Chronological age. Many reading specialists have accepted the mental age of six and one half years as the age level when reading could most successfully be introduced. Yet it has been demonstrated repeatedly that delaying reading instruction until the child's mental age is six years, six months will not insure successful reading. Harm can be done by forcing children into reading too early.

The evidence is that with respect to chronological age, children should be at least six years before attempting to read.

A study by Thomson extending over a period of four years, supplied clear evidence that children under six years did not develop a liking for reading or make as rapid progress as children who averaged somewhat older.

In a study of bright and average children, Davidson reported success in teaching reading to children four years mentally.

1/ Ibid. p. 109


Raguse came to the conclusion that a mental age of five years was sufficient for success.

Many studies indicate clearly that the postponement of introductory reading until materials can be grasped readily and assimilated in meaningful units leads to superior mastery and sustained interest. Some such studies are those of Meriam, Tippet, and Bigelow.

Upshall compared the reading test scores in grades one, four, and six of one group of pupils who were taught to read immediately upon entering the first grade and of another group which was not given direct reading instructions until about November first. The conclusion was that the delayed reading groups were not handicapped by their later start in learning to read.

1/R. W. Raguse, "Qualitative and Quantitative Achievement in First Grade Reading", Teachers College Record, February 1931, pp. 424-426.


5/C. G. Upshall, Influence of Delayed Reading Program on Reading Ability, Bellingham, Western College of Education, 1939, 8p. ms.
Merrill studying special class children found that those having mental ages below six did not profit much by reading instruction.

Hegge in the Wayne County Training School for Boys, in Michigan, carried on extensive studies to discover a way of teaching mentally defective children to read. He announced gratifying results in reading and personality development by postponing reading until the age of ten or eleven. By then they had acquired rich backgrounds of experience.

Bigelow feels that unless beginning-grade-one pupils who are under six years have an I.Q. of 110 or over, there is little hope for them to succeed in learning the three R's.

It is evident that whether children should be taught to read in grade one or at a later time, is becoming an important issue.

1/ M. A. Merrill, "The Relation of Intelligence to Ability in Three R's in the Case of Retarded Children", Pedagogical Seminary, Vol. XXVI (1921), pp. 249-274.


Leary writes that:

"It has been found that an adult can read in less than two hours all the books read in the class periods in the first three grades. Some educators believe it could be delayed until Grade IV.

Opponents say that through a radical change of materials and methods of instruction in related activities, equal success could come before Grade I."

As to when children are ready for reading, Murphy has this to say:

"Many children come to school ready to learn to read and others may need reading-readiness activities for an entire year before an attempt to teach them formal reading is made."

Maxwell concludes that the first-grade teacher must know the mental, physical, social, and emotional characteristics of the first-grade children and that a testing program should be conducted so that the maturation of the individual child can be determined.


3/Jewell T. Maxwell, Preparation for Primary Reading, Master's 1940, East Texas State Teachers College, 113 p. ms.
A study of the progress of first-grade children of different chronological and mental ages in vocabulary mastery, 
corel reading, and general reading was made by Morphett and 
\[1/\]
Washburn, and they concluded that a mental age of 6\(\frac{1}{2}\) years 
is the best. They did find, however, that some pupils be-
tween the mental age of six and 6\(\frac{1}{2}\) years made satisfactory 
progress.

In 1936 Witty and Kopel \[2/\] analyzed critically ninety-three 
scientific studies, articles, and reports on this subject. 
They implied in their findings that reading should be post-
poned for most children until eight or nine years of age.

"Until children's background of experience and 
mental growth enable them to find meaning in the tasks 
presented to them; and until the process of maturation 
in which reversals are few and perception of words and 
other meaningful units is possible."

They did admit that some children will...."turn spontaneously, joyfully, and successfully to reading in Grade one." 

On delaying beginning reading, Gates \[3/\] showed that the 
pupils who had the advantage of a half term of pre-reading 
schooling revealed a superiority at mid-year which became 
more pronounced at the end of the year.

\[1/\]M. Morphett and E. Washburn, "When Should Children begin 
to Read?", Elementary School Journal, 31: March 1931, pp. 496-
503.

\[2/\]P. A. Witty and David Kopel, "Preventing Reading Disability", 
"The Reading-Readiness Factors", Ed. Adm. and Sup. 22, 1936, 
p. 413.

\[3/\]Gates and D. Russell, "The Effects of Delaying Beginning 
Reading a Half Year in the Case of Underprivileged", Pupils 
with I.Q.'s 75-95, Journal of Educational Research-32,321,328, 
January 1939.
After a detailed study Gates and Bond concluded that Reading-Readiness is not determined uniformly by the presence of certain attitudes or attainments but is the result of a combination of factors. These factors differ in individuals.

According to Reed reading may be introduced in the kindergarten, first grade or second grade, the criterion for placement being readiness to read, that is, the social, physical, intellectual, emotional, and mental readiness of the child, to read.

An experiment carried in at the Edgewood School, a progressive school in Greenwich, Connecticut, seemed to show that there was an advantage in delaying formal work in reading even to the age of eight. Langely believes that a child of seven or eight who has not had formal work in reading—"but who has imaginative and constructive play, has been educated in a sounder and more forward looking manner than a child who has had two years of formal work in reading."


2/Mary M. Reed, "An Investigation of Practices in First Grade Admission and Promotion", Contributions to Education, Number 290, Columbia.

3/Elizabeth Langely, "When Shall We Learn to Read?" Child Study Vol. 8- January 1931, p. 136
She maintains that there is an advantage in delaying formal reading work until the child has a rich background of experience.

In estimating readiness for reading, according to Witty 1):

"The first responsibility of the teacher is to make an appraisal of each child's status. Deficiencies should be corrected and help should be given as needed. Systematic reading instruction offered before such steps are taken may lead to irreparable harm. Parents as well as first grade teachers should give serious attention to the problem of readiness. Home and school should work together to prepare the child for successful reading. This endeavor should include activities which will deepen and enrich experiences, cultivate expression, stimulate vocabulary growth, and foster desirable attitudes."

To many people who ask how long the readiness period would be, Betts replies:

"In the early 19th century children were admitted to learn to read and spell at the age of five years. Because the numbers were large the entrance age was raised to six years, at the beginning of the twentieth century. Dewey and Patrick criticized people who disregarded the motives and capacity of the learner by forcing six-year olds into the learning-to-read process."

1/Paul Witty, Reading in Modern Education, D. C. Heath and Company, Boston, Massachusetts, 1949. p. 65.

In speaking of a lack of understanding of Reading Readiness he speaks of schools where all children must read pre-primer and primers in grade one, of schools which use no pre-primers in grade one, and of schools where all first grades have to spend a required number of weeks on reading work-books before the required pre-primers, primers, etc.

And he also asserts that:

"Readiness does not come packaged as that something that is here today but not present yesterday. The attainment of a given chronological or mental age (such as six and one half years) does not insure success with reading activities. And again, a rich background of experiences coupled with a reasonable facility with language may not be brought into play in the reading situation, because of an emotional blockage or some type of physical handicap. Teachers are given years of preparation for their tasks because many learning factors are elusive and require expertise if dealt with successfully........Reading-readiness factors are the keystone for a preventive program. A child is ready for systematic reading instruction when he can engage in such activities with success and with real satisfaction to himself."

1/ Emmett L. Betts, op. cit.

2/ Ibid. P.P. 107 and 112.
Recognition of Individual Differences.-- Perhaps the greatest problem of the modern school grows out of the range of individual differences within classes. The modern reading programs stress first the pupil and his development.

"It is now recognized that learning to read is a process of growth; hence readiness cannot be sharply determined as to time or grade. Since the first year is the period when the child receives initial formal instruction, it is imperative to make sure that he has the preparation and background necessary for success whenever reading materials are presented.--- Since the first grade, however, is the period when most children begin to read, the extent of the problem is then of greater magnitude than at any other time."

Much the same viewpoint is taken by Betts.

"Teaching is the practical recognition of differences. Until differences among the pupils of a given class are recognized, instruction cannot be on a sound systematic basis. A significant part of the dilemma modern education is in, has been brought about by a failure to admit differences by the treating of all children alike.--- Not until differences are seen is the teacher ready to teach, because learning the child must precede teaching him.

Differentiation of instruction is making a strong bid to supersede the remedial reading of the 1930's. Differentiated instruction is a way of evaluating and living with a group of individuals in a classroom that results in a maximum of development of each individual in terms of his interests, needs, and capacities."

1/Paul Witty, op. cit. p.55.
2/Emmett Betts, op. cit. p. 3.
Betts 1/ shows need for schools to be learner centered, rather than grade and calendar centered. With the introduction of differentiated instruction reading difficulties can be reduced to a minimum because prevention is emphasized instead of correction.

In one classroom there will be, according to the same author:

1) Those who have developed some ability to read.
2) Those who have not learned to read but have readiness for it.
3) Those who have personality handicaps.
4) Those with normal language development but physical limitations.
5) Those with certain language deficiencies.
6) Those characterized by general mental retardation.
7) Those with language handicaps.
8) Those admitted below six years.
9) Those who have no notions about reading.

1/ Emmett L. Betts, op. cit.
2/ Ibid.
Storer has concluded that the best way to meet the problem of when to begin reading is the reorganization of the curriculum to provide for individual differences, and the use of tests to determine those differences, especially in the field of reading-readiness.

Sister Steinbach conducted an experiment with 147 boys and 153 girls who entered parochial schools in Milwaukee and three smaller suburban cities, coming from homes of various levels of socio-economic status. She found that many first grade entrants have a meagre informational background, are deficient in knowledge of word meanings and in the skills of auditory and visual discrimination, that a large number failed to achieve success in reading; that there is a wide range of individual differences in the rate of reading progress, that more boys are retarded than girls in reading, that the chronological age is not an important factor for success or failure in reading, that speech defects seem to be significantly related to reading achievement.


2/Sister Mary Nila Steinbach, An Experimental Study of Progress in First Grade Reading. Doctor's 1940, Catholic University, Washington, Washington Catholic Educational Press, 1940, p.117 Catholic University of America, Educational Research Monographs, Vol. 12, No. 2.
Hildreth tells how a typical class may vary in I.Q. from 60 to 130, a difference of 70 points. She adds:

"Those at the lower end of the distribution in mental level may be driven to disturbing behavior and eventual failure through sheer lack of sufficient mental ability to achieve what is expected of them."

The problem should be how to develop the child within his capacity rather than how to bring all children to reach a given standard, comments Smith.

Witty and Kopel write as follows:

"The assumption that effective reading may be achieved by phonetic drills, eye exercises, or other part-devices neglects the fact that interest and need should be determinants of method, and that uniform and inflexible procedures are indefensible because large and varied individual differences lead to many levels of understanding and many and diverse needs for new reading experience."


3/ Paul Witty and David Kopel, Reading and the Educative Process, Ginn and Company, Boston, Massachusetts, 1939, p. 18.
The most striking facts brought out in readiness survey of school entrants, according to Hildreth are: (1) the extremely wide range of maturity found in any typical entering group; (2) the relative immaturity of a large proportion of the entering population for the conventional first grade program.

Betts feels that primary classes should be relatively small and that, in order to meet individual needs, there should be some form of grouping. The grouping should be flexible to provide for individual variations in growth. In first grade, children are grouped in terms of reading-readiness needs, and from two to four groups are usually formed.

Durrell shows his belief in the importance of individual instruction:

"Adapting instruction to individual differences and needs of pupils is a problem so new to education that we have hardly made a beginning in solving it.

Adaptation of instruction to different levels of abilities, to different rates of learning, and to varied pupil needs is still widely ignored.

There is no simple solution of the problem of providing for individual differences in reading ability. We are ignorant of too many important factors. We do not yet know exactly the abilities essential for reading-readiness at the first grade level."

1/ Gertrude Hildreth, op. cit. p. 20.
2/ Emmett Betts, op. cit. p. 3.
Maladjustments Resulting from Reading Failures:

Gates declares that failure in reading is the cause of approximately ninety per cent of the failures in the first grade.

Clark and Shank after making a study of first grade failures concluded that:

(a) Children learned to read more quickly when reading was taught as a thought-getting-thought-giving process.

(b) Children ready to read succeeded, regardless of method.

(c) Children not ready to read failed to do so, regardless of method, so failure of first grade children is not caused by method.

Adams, Gray, and Reese write:

"Now, more than ever before, educators are emphasizing the relationship between reading, mental hygiene, and personality. Surveys, tests, and experiments have indicated that the inability to cope with reading, results in inferiority complexes and in other ways affects the individual's adjustment. As Arthur I. Gates puts it in forceful terms, "Failure in reading is as serious in its consequences to children as financial or marital failure is to adults."


They show how failures in reading cause personal maladjustment and that serious personality disturbances are bound to develop when the child, already conscious of his failure, must also bear up under the abuse of his fellows and the reproach of his teachers.

They note that teachers should be increasingly aware that the child with reading difficulties quite generally has difficulty in his social relationships. Reading trouble reaches out into the child's life.

They add:

The following list of constructive measures represent a pooling of the stipulations of leading authorities in the field of mental hygiene and reading.

1. Avoid rushing child into reading before he is ready.
2. Avoid making the child feel that he is a failure.
3. Find something he can do, since a feeling of personal worth is a "must" if mental health is to be preserved.
4. Make simple, relatively easy reading assignments, especially when developing new skills.
5. Make reading an interesting experience.
6. Resist the tendency to exert pressure on the child.
7. Avoid making comparisons with progress of other children.
8. Establish sympathetic rapport with the child.
9. Choose books appropriate to his age and interests.
10. Develop a background of meaningful concepts through first-hand experiences.
11. Make use both of a good approach and an efficient follow-through.
12. Allow the child to see evidence of his own improvement.
13. Attempt to identify failures and translate them into successes.

1/ Fay Adams, Lillian Gray, and Dora Reese, op. cit. p. 76
2/ Ibid. pp. 84 and 7.
And conclude:

"So utterly dependent is the child's successes in school upon reading that many behavior problems stem from the inability to use this tool."

1/ Percival concluded that grade 1 is the greatest failing grade and that reading was responsible for ninety nine percent of the failures in grade one in cities and for ninety five percent of the failures in rural schools.

2/ Gates studied 100 disability cases and concluded:

"There is much evidence that failure in school is a major catastrophe to many children and that general maladjustment is a frequent consequence."

3/ Stone says that "poor readers" often have emotional maladjustments, but there seems to be more evidence that these emotional disturbances result from reading difficulties than that reading difficulties originally result from emotional instability.

In the Northwestern University Psycho-educational clinic

4/ Witty and Kopel found that fully fifty per cent of the seriously retarded readers are characterized by fears and anxieties.


2/Arthur I. Gates, "Failure in Reading and Social Maladjustment" Journal of the National Education Association, XXV, October 1936, p. 205.


4/ Paul Witty and David Kopel, op. cit.
The child's emotional reactions must not be overlooked, Streitz:

"How many children are allowed to build up aversions to reading. These aversions sometimes result from forcing the child to read when he sees no use or need for reading. Frequently these aversions result from trying to read material that is too difficult."

Betts in discussing individual differences in emotional adjustment, comments as follows;

"In the regimented schools of yesteryear, many practices influenced the development of social behavior in a negative way. When the same pedagogical prescription is given to all children just because they happen to have the same grade classifications, frustration operates two ways. First, the children who lack the ability to deal with the prescription are thwarted in their attempts to learn. Second, those children who are ready for higher level learning activities are not challenged, and consequently the zest for exploration and adventure may wane. Continued frustration is not conducive to the development of a wholesome and well-integrated personality."

Continued frustration is always a possibility to be avoided in reading situations. A child may cry or use other means of giving vent to his feelings when he is denied some small privilege. The occasional outburst of emotion, of course, may do little harm to his emotional status. On the other hand, most children are aware of the importance of reading in the school situation and continued frustration may lead to serious emotional and social maladjustments. Some pupils look forward to the time when a work permit will relieve them of their school agonies. Others who are less fortunate may be held in a frustrating situation by parent and teacher connivance. The debilitating


effect of continued frustration upon the personality of
the individual is well known by psychologists and
psychiatrists.

It is highly important that the child's first contact
with reading situations should be a pleasant and highly
satisfactory one. Emotional problems are created when
the child is prematurely forced into reading situations
for which he is not qualified.

Every individual has a drive toward success. For
each individual this drive is present in a somewhat dif-
ferent form, depending upon previous experiences, capacity
for achievement, the need for compensatory behavior, the
degree to which he is motivated, desire for recognition,
and the like. When the drive for "drive for success" is
frustrated, behavior is likely to reflect social malad-
justment. The need for successful achievement is a basic
need.

Dr. Helen Murphy in a lecture at Boston University
epitomised it by saying; "every single child should know
success at some time each day."

Definitions of Reading-Readiness.-- Before the child be-
gins to learn to read it is necessary to prepare him in order
that he may succeed. McKee says; that it is impossible for
children to learn to read until they have acquired the back-
ground of understandings, skills, and attitudes which constitute
readiness for beginning reading. Furthermore, children en-
tering the first grade vary greatly in the degree to which they
have developed the readiness.

1/Paul McKee, op. cit. p. 142
He also asserts that kindergarten teachers and first grade teachers should make definite provision for stimulating and fostering the child's development of such readiness. The provision should consist of:—(1) carrying on a well planned and workable program of definite instruction in those matters which constitute readiness for reading, and; (2) discovering and helping to remove physical handicaps and emotional disturbances which may block the child's achievement.

The maxim "nothing succeeds like success" is particularly applicable when applied to reading, as Arthur Gates states:

"A major difficulty of the older methods was that the child was expected to acquire all or most of these abilities at once— an assignment so difficult that a fifth or more of the pupils were swamped by it. Now, the teacher can and should carry the children forward in a pre-reading program until these foundation interests and abilities are working in good order before asking the pupils to read in systematic fashion from a book. She continues the pre-reading program until such readiness has been achieved, whether it takes weeks or months."  

Betts believes that careful study of reading-readiness factors should result in the prevention of reading difficulties by giving the teachers bases for beginning instruction where each pupil is. He quotes from M. Madeline Veverka:

"This readiness is not yet definitely established. There are too many factors involved. It is not a matter

1/Arthur Gates, op. cit. p. 145
2/Emmett Betts, op. cit. p. 106
of age nor yet of I.Q. It is not mental maturity alone. Biological factors enter. Personality traits are important. Background of a home with understanding parents helps. An interested attitude towards books and reading is also important. A good oral vocabulary is needed. Experiences with things, people, and situations aid understanding and comprehension.

It seems to be a point below which the lack of reading deprives him of nothing, but above which inadequacy, infantilism, inferiority feelings, being different from his little friends, the cutting off of a rich field of experience, might begin to set in.

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In Los Angeles they have set up the following factors as guides to teachers in determining the point at which reading may begin with promise of success.

1. Mental age 76-80 months.
2. A rich background of experience
3. An adequate verbal vocabulary
4. The ability to speak in sentences
5. Good sight and good hearing
6. Normal health
7. Emotional stability
8. Ability to adjust socially to the group.

Writers vary as to what constitutes a program of getting ready to read. Witty writes concerning the essentials of such a program:

"They include an enthusiastic, capable teacher, a friendly classroom atmosphere, wide experience for pupils, and abundant opportunities for individually suitable language expression. The child will acquire a basic stock of sight words associated with concepts that have grown out of his own experience. Understanding of these words may be classified by discussion of experience charts. Varied picture materials with objects in the pictures labeled, may aid in establishing a sight vocabulary."

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1/ Paul Witty, op. cit. p. 78.
Betts includes many factors in the program:

"The problem of reading-readiness is being studied by both practitioners and research workers in specialized fields. As a result our concept of reading-readiness has been expanded to include physical and emotional preparedness as well as mental readiness for specific progress."

We have many evidences, Dr. Murphy says, that if such plans as these are followed in the initial stages of reading, children will have success. She clinches it thus:

"Experimentally it has been proven that children having specific training in auditory and visual discrimination during the first six weeks of grade one, compared with others not having such training are superior in reading achievement and learning rate.

It is a sure way to help all children learning to read to be successful."

Mrs. Bessie Peyton, a teacher in the Willard School, Dayton, Ohio, experimented with 54 colored children to find if reading-readiness instruction did improve first grade achievement. The test scores of all 54 children indicated definite possibility of poor achievement. She used Dolch's Readiness for Reading as a basis of instruction. At the end of a period of four weeks, 50 of the 54 obtained satisfactory reading-readiness scores, as per test standards. Fifteen others reached

1/ Emmett L. Betts, op. cit. p 33.

2/Helen A. Murphy, "Insuring Success in Beginning Reading", National Educational Association Journal, October 1946, pp. 382-387.

3/ R. W. Edmiston and Bessie Peyton, "Improving First Grade Achievement by Reading Instruction", School and Society, April 15, 1950.
a satisfactory point in four weeks. The reading achievement was measured by the Metropolitan Achievement Test.

She found one pupil whose reading-readiness score was only 20, but who succeeded in obtaining a 1.7 grade achievement after eight weeks of reading-readiness instruction. Her test proved that two types of difficulties which affect the success of first graders were amenable to rather rapid improvement. One was adjustment and the other was readiness.

Unfortunately the law of readiness has been entirely too frequently overlooked in the writings of textbooks, in the making of courses of study, and in teaching, according to Stone 1/.

As Leary 2/ says, the movement towards reading-readiness programs has spread so rapidly during recent years that the principle of readiness is coming to be applied to all levels from nursery school to college. This paper considers only readiness for beginning reading. Research shows the names of pre-reading, non-reading, and reading-readiness used interchangeably.

Readiness is a relatively new concept in education, but it is extremely significant, Witty and Kopel 3/ assert.


3/Paul Witty and David Kopel, op. cit.
In reading-readiness we are concerned with three problems. We are concerned, Folk believes, with: (1) how to discover readiness or lack of it; (2) what experiences will compensate for the inadequacies discovered; (3) how to organize a school program adjusted to the maturation levels and varying needs of children.

Broom et al after listing the objective of good readiness instruction, take each factor and list many ways of developing it. As the objectives of a pre-reading program, they list the following:

"(1) To provide varied social, scientific and artistic experiences as a background of understanding.
(2) To develop facility in use of English language.
(3) To develop muscular coordination and control.
(4) To provide activities to give emotional stability.
(5) To train in visual and auditory discrimination.
(6) To stimulate interest in reading.
(7) To develop appreciation of good literature.
(8) To create a respect for books.
(9) To develop habits of caring for books."

1/ Ethel Mable Folk, "The Development of Basic Attitudes and Habits in the Primary Grades", Reading-Readiness and Recent Trends in Reading, Vol. 1, Number 49, 1939, Illinois, University of Chicago Press, pp. 45-60.

Another investigator, after much study, gives us fourteen points to a similar program:

"(1) Provide for expression and motor development through active play.
(2) Enrich learning and thinking through pictures, discrimination, story-telling.
(3) Have songs, rhythms, active games.
(4) Use drawing and painting, crayons, paper, wood, and clay which train for large muscular control.
(5) Color-discrimination experiences.
(6) Experiences in manipulating objects and materials.
(7) Build good habits of attention.
(8) Group sharing of experiences.
(9) Give responsibility as far as age permits.
(10) Establish better emotional control.
(11) Develop confidence in timid children.
(12) Broaden interest and knowledge of world about them.
(13) Habits of observing, listening, encouraging.
(14) Bring small groups together occasionally."

According to Leary, the kind of readiness needed is a controversial point.

"If we accept the view that readiness is something to be developed, our problem is, "how," Those who interpret reading as a skill place emphasis on training sight and sound discriminations, left-to-right movements of the eye, following directions and the like. Others see reading as one mode of experience and center their programs in extensive firsthand experiences that give the child a rich body of concepts through understanding of the world about him."


2/ Bernice E. Leary, op. cit. p. 31.
Behrens studied the effect of social background and experiences, and physical status of 203 first-grade children to reading-readiness. She concluded that successful functioning of many factors assures success, while the inability of any or more may hinder the child in reading.

Russell and Hill secured data from 271 school systems in California and found that 43 per cent have attempted to meet the problem of immaturity by some sort of special class.

Anderson expands on the question of what constitutes Reading-Readiness. He says, in part;

"At some levels of development and experience the child is better prepared to acquire a skill than at other levels. The term "readiness" expresses the quality. Readiness to read means being prepared to learn to read. The factors behind readiness are found to involve some degree of maturity or growth and some particular types of experience. Thus the child is not ready to read until he has some facility in the spoken language. A fair mastery of speech symbols must be attained before the child can be interested in the visual symbols necessary to reading/"


Russell expresses his ideas on what constitutes readiness:

"The modern concept of readiness, which has grown out of the child study movement, sees it as a complex of various factors. It is not just general maturation, or specific maturation such as in the physical structure of the eye, or interest, or knowledge. It is not something to be waited for passively but a stage into which the child may be guided. Mental hygienists emphasize social and emotional readiness for reading and other school activities. In general, the factors involved seem to be those of growth plus achievement, plus orientation toward the specific task such as reading."

Kavin stresses the importance of background and experiences:

"The real test then is to ascertain the causes of a pupil's lack of readiness. The child who is not ready to read because he is chronologically young and physically and psychologically immature may usually just be allowed to take his time in reaching the stage of maturity necessary for successful reading. But for any child who lacks the environmental and experiential backgrounds which are essential to readiness for reading or who must be helped to want to read, time alone will be inadequate to make him ready. The implications of such non-readiness in any child challenge the home and the school to put into the environment and experience those things which have been lacking and which are essential backgrounds and foundations for readiness to read."


To develop school readiness for reading we should work hard to develop first of all the power of continuous attention. \[1\]
That is Dolch's opinion.

Murphy's definition of Reading-Readiness is simple. She gives it as:-- "The development of the skills necessary to learn to read without confusion."

**Summary**---- Because there are differences of opinion in regard to the time for beginning to read, because it is a recognized fact that individuals differ widely, and because reading failures do cause maladjustments, educators are justified in developing a program of Readiness for Beginning Reading.


CHAPTER 11

FACTORS IN READING-READINESS
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FACTORs IN READING-READINESS

Introduction.--The term, reading-readiness, now concerns itself with all levels of education but this research paper deals with what concerns preparing the pupil for his initial period.

In 1925 The National Committee on Reading recognized the fact that all children who enter first grade are not equally ready for reading, and it emphasized the importance of training and experience that prepare for reading.

As early as 1928 efforts were made to determine the cause of failure in first-grade reading and the investigators gave attention to the factors contributing to Reading-Readiness. Studies by McLaughlin in Los Angeles and San Diego supplied evidence that many first-grade pupils were mentally so immature that they were unable to learn to read successfully. A search was begun for the factors involved in Reading-Readiness.


2/Katherine McLaughlin, First Grade Readiness and Retardation, Research Committee, California Kindergarten, Primary Association, 1928.
Harrison in 1939 summarized available evidence concerning the factors involved in Reading-Readiness using both the results of scientific studies and expert opinion. The factors identified were classified under three headings: (1) Intellectual Development—This included inner maturation as indicated by mental age, ability to perceive likenesses and differences, ability to remember word forms, memory span of ideas, and ability to do abstract thinking; (2) Physical Development; (3) Personal Development—This included emotional stability; desirable attitudes toward reading and classmates; and good work habits.

She summarizes thus:

"Before reading is taught to any child the first-grade teacher should be certain that the necessary factor of readiness, or at least the factors of prime importance are present in the child. The kindergarten teacher should delay promotion to first grade until she is confident that the factors of readiness are present to such an extent that success is assured. The factors as described are related to three types of development, namely: (1) mental, (2) physical, (3) personal.

Of major importance among all factors are those of (a) adequate mental age, (b) good vision, (c) good hearing, (d) emotional stability, (e) adjustment to school situations, and (f) the seven abilities which should result from the preparatory period of instruction in reading. Chronological age is comparatively unimportant and should no longer be considered the sole criterion for entrance to first grade and the beginning of the reading process."

Betts quotes Harrison as saying that the factors which greatly influence reading-readiness are many and of a complex nature, and are often so involved and interwoven that it is difficult to determine what single factor or group of factors bears most significance to readiness for reading.

In speaking of the fact that mental health and physical health are interdependent, he affirms:--"To expect a physically handicapped child to take pleasure in learning, would be about as reasonable as to expect a blind person with blisters on his fingers to enjoy Braille."

He continues by saying that teaching of reading would be less complex if every child could meet these requirements:

"(1) Immediate needs which require satisfaction through reading.
(2) Sufficient pre-reading experiences to whet the reading appetite and be aware of the significance of visual symbols.
(3) A special adjustment sufficiently adequate to cope with give-and-take situations in the average classroom.
(4) A chronological age which would have made possible a general development of the organism sufficient to cope with reading activities.
(5) An interest in and good attitude toward reading.
(6) A level of mental maturity that would insure a reasonably rapid rate of learning.
(7) A background of information pertinent to that which he is to read.
(8) Language facility adequate to deal with direct and vicarious, or second-hand, experience.
(9) Ability to relate ideas accurately and rapidly.

2/Lucille Harrison, op. cit. p. 5.
(10) A memory span that would insure competency in following directions and in relating experience pertinent to that which is being read.

(11) Ability to hear sounds sufficiently well for normal communication.

(12) Ability to make auditory discrimination sufficiently well to acquire phonic technique for word recognition.

(13) A level of visual efficiency sufficient to permit the rapid development of specific visual skills required in reading.

(14) Ability to make visual discrimination sufficiently well to acquire reasonably rapid control over sight words and visual analysis technique.

(15) Ability to perceive differences in colors.

(16) Motor control sufficiently developed to permit efficient eye movement to facilitate the handling of books and to make possible participation in construction and physical activities.

(17) An integrated nervous system free from defects such as speech disorders, confused dominance, and word blindness.

(18) A general health status that promotes a feeling of well being, an attitude of approach to, rather than withdrawal from, worthwhile learning activities.

In a study to compare certain reading-readiness factors with achievement in grade one, it was concluded that there is a definite relationship between the three factors of visual discrimination, auditory discrimination, and reading rate and reading achievement.

In visual discrimination compared with achievement the girls were superior to the boys. The learning rate and auditory series showed almost no difference in sex.

There have many studies of correlations between reading achievement and various factors thought to affect progress in reading. One of the most significant studies relating to the problem of factors in reading-readiness and indicating the importance of predetermining the child's status with respect to the factors affecting progress in reading as an aid to intelligent attention to individual needs is a study of the effect of various factors on reading progress during the first grade for 300 children in twelve parochial schools in and about Milwaukee. This was by Steinbach. She concluded that no one factor is the sole cause of failure or success in reading.

The investigator lists the following in order of rank as the factors seeming to be most closely related to reading as indicated by the various statistical studies made:

1. Auditory discrimination
2. Information
3. Visual discrimination between words

1/Sister Mary Nila Steinbach, "An Experimental Study of Progress in First Grade Reading", Doctor's 1940, Catholic University of America, Washington, Washington Catholic Educational Press, 1940, p. 117. Catholic University of America, Educational Research Monographs, Vol. XII, Number 2.

2/Sister Steinbach, op. cit.
(4) Visual discrimination between letters
(5) Mental age
(6) Vocabulary

The writer repeatedly observed, throughout the study, that certain data provided evidence for concluding that such personality traits as initiative, eagerness or will to learn, concentration of attention and effort, were far more influential in bringing about success in reading than the possession of certain abilities considered to be indispensable factors in readiness for learning to read.  

Durrell goes farther by saying that we do not yet know exactly the abilities essential for reading-readiness at the first-grade level.

Reading-readiness training consists of six jobs according to McKee. They are concerned with:

"(1) Providing training in visual discrimination.
(2) Providing training in auditory discrimination.
(3) Developing the understanding that reading matter us to be observed from left to right.
(4) Providing training in listening.
(5) Creating a desire to learn to read.
(6) If necessary, constructing concepts and developing listening vocabulary needed for beginning reading, (called by some, providing rich and varied experience)."


2/Paul McKee, op. cit. p. 145
Some writers add:— (1) making use of ideas; (2) training in problematic thinking; (3) training in paying attention; (4) training in following directions.

McKee thinks that these jobs are no more essential to readiness for reading than readiness for the learning of social studies, numbers and other school subjects.

No other writer as far as this research goes has suggested the training in listening. McKee considers it essential because of the close relation between listening and reading.

Bond puts the factors of reading-readiness in two classes as follows:

"Physical factors ———— Visual difficulties, Auditory difficulties, Speech difficulties, Health difficulties.

Personal and Emotional Factors———
Shyness, over-boisterousness, signs of worry or fear, withdrawal behavior, day dreaming."

In considering the factors most important to reading-readiness many studies list the following:—intelligence, interest, home background, meaning vocabulary or experiences, physiological maturity, particularly of the ocular system,

1/Paul McKee, op. cit. p. 145
2/Guy Bond and Eva Bond, Teaching the Child to Read, Macmillan Company, New York, 1949, Chapter 11-IV
ability to see likenesses or differences in objects, geometrical forms and words, motor coordination skills, and many others depending upon the experiments of the investigators.

In 1940 in a study in Texas, Maxwell concluded that the first grade teacher must know the mental, physical, social, and emotional characteristics of the first grade child; that many first grade children are too immature to learn to read; that a testing program should be conducted so that the maturation of the individual child can be determined.

Monroe has given us many ways for increasing readiness with games and exercises. She suggests nine ways for developing visual abilities, seven for developing auditory abilities, seven for developing motor abilities, seven for improving articulation, and nine for increasing language abilities.

It has been found, states Witty, that a number of conditions must be satisfied before success in reading simple passages or stories can reasonably be expected. In some studies the role of intelligence has been stressed; in others,

1/ Joseph T. Maxwell, Preparation for Primary Reading, Master's 1940, East Texas State Teachers College, 113 p. ms.

2/ Marion Monroe, "A Program to Develop Reading Readiness in Grade 1, Newer Practices in Reading in the Elementary Schools, Department of Elementary School Principals, National Educational Association, 1938.

3/ Paul Witty, op. cit. p. 56.
emphasis has been given to the significance of maturation, motive, language development or experience. Investigators no longer attribute readiness to a single item such as mental age. It is generally conceded that readiness is a developmental condition depending upon the operation of a number of related factors. He offers the following:

"Factors-----------------
Home Background
Physical Status and Growth
Mental Maturity
Readiness as determined by tests
Vocabulary Development
Speech Habits and Language Proficiency
Emotional and Social Growth
Interests, Attitudes, and Experiences
Experience Charts
Film Strips
Reading Books."

Gray says that the following factors are necessary for reading:

(1) Wide experience
(2) Reasonable facility for the use of ideas
(3) Reasonable command of English sentences
(4) Relatively wide speaking vocabulary
(5) Accuracy in visual and auditory discrimination

Hildreth says that no one factor but a combination of


factors make the difference between readiness and the lack of it. She lists as follows:

"(1) Ability to comprehend conversation and to use oral language on a normal six year age level.

(2) Mental maturity

(3) Experiential background.

The breadth of a child's information is a significant factor in reading progress."

Dolch gives somewhat similar factors as necessary:

(1) Physical readiness means general health, good nervous condition, and correction of any sensory or special defect.

(2) School readiness means fitting into a group, following directions and paying continuous attention.

(3) Language readiness means an adequate stock of concepts and a considerable maturity in use of sentences.

(4) Interest readiness means a real desire to find out what the printed matter "says".

(5) Perceptual readiness means ability to distinguish slightly different objects from one another, especially slightly different word forms."

Broom and Wright give factors which are much the same.


Bond and Wagner suggest eleven educational factors:

1. Picture interpretation
2. Orientation to the printed page
3. Backgrounds of understanding
4. Extent of vocabulary
5. Accuracy of speech pattern
6. Quality of oral English
7. Ability to read
8. Ability to sense a sequence of ideas
9. Ability to follow instructions
10. Ability to handle equipment
11. Desire to read.

Leary says we are fairly well agreed on the factors, but how to promote the kinds of development essential to Reading-readiness and how to know readiness has been acquired are matters of less universal agreement.

Some say reading reached best through natural processes of growth and development. Others say that although some characteristics develop unaided, others profit from training and guidance. They point to rapid progress of those who attended kindergarten.

Obviously many factors influence a child's readiness for reading.


Physical Status:
A. Sight.--The fact that a child's physical needs must be cared for if he is to sustain attention and to concentrate on abstract symbols, two imperative activities in reading, is well known.

Adams, Gray and Reese say that, when considering a boy's readiness for reading it is most important to determine the condition of his eyes.

"A child who is far-sighted because of slow physical maturation of the eyes will almost certainly have difficulty with reading, since this skill requires a child to see things that are smaller than he has been accustomed to noticing."

The above-mentioned writers consider the Snellen Letter Chart, Eames Eye Test, and Betts Ready-to-Read Tests, good.

The whole physical development should be taken into account, says Harrison, because a child with low general health is likely to be listless, too readily fatigued, and to have a much shortened attention span. She gives the following subdivisions of Physical Development:

1/Fay Adams, Lillian Gray, and Dora Reese, op. cit. p. 122
2/Lucille Harrison, op. cit.
"Defects in vision may hinder a child in learning to read. If the retinal image is blurred, the child may not be able to distinguish the pattern of letters presented, and may confuse patterns which are similar, such as band, hand, etc.

It is also certain to make impossible the rhythm and regular eye movements which are necessary for later rapid reading.

Faulty vision may cause strain and discomfort making the child nervous and necessarily fatigued."

Durrell mentions such deficiencies as special sensory defects and general bodily conditions such as low vitality due to malnutrition or internal glandular disturbances, which produce inattention. He emphasizes that almost any kind of physical defect may affect the child's school work and adds:

"Defective vision or hearing might easily be the sole cause of a reading difficulty. The more common eye defects among children with reading difficulty are far-sightedness, muscular imbalance, and astigmatism."
Near-sightedness occurs very rarely among children with reading difficulty. Other visual factors that may have some relation to reading difficulties are size of retinal fields, differences in ocular images, extreme sensitivity to light, and disease or fatigue factors which make persistent visual attention difficult. The visual school eye test—reading the Snellen Chart at a distance of twenty feet reveals only near-sightedness.¹

Over a period of years Eames has reported visual findings. His last report compares eye conditions among 1,000 reading failures, 500 ophthalmic patients, and 150 unselected children. All cases were examined by the same doctor. The data secured indicated that for the group tested hypermetropia, exophoria at the reading distance, retarded speed of word recognition and intelligence quotients below 90, occur more frequently among poor readers than in the groups tested. ²

Betts has much to say on the importance of good vision to reading-readiness. In a study of 183 first-grade entrants, sixty-seven had astigmatism in both eyes, twenty-five in the right eye and twelve in the left. Using the lateral imbalance and vertical imbalance slides of the Betts Ready to Read Tests he found among first grade entrants 11 per cent lateral imbalance.


He says that 80 per cent of six year old children are normally farsighted; that is, they have short or immature eyeballs. Eye co-ordination required for the noting of fine details in order to discriminate between word forms is not fully developed. He tells how necessary it is, in order to experience comfortable two-eyed vision (fusion) for small targets at reading distance, the action of the two eyes must be co-ordinated. He says:

"The process of blending or unifying the image received by each eye in order to secure single binocular vision is called visual fusion. Using the fusion of the Betts Ready to Read Test, the writer tested 194 first-grade entrants. Thirteen per cent could not fuse the small targets at the distance equivalent of forty inches, 13.7 per cent of the pupils could not co-ordinate their eyes for fusion of the targets at reading distance."  

Moreover he criticises the limitations of the Snellen Chart:

"An analysis of the limitations of the Snellen Chart Test for the diagnosis of reading difficulty shows;

(1) The test does not appraise the efficiency of the eyes at reading distance (ten to sixteen inches).
(2) The test does not appraise the co-ordination of the two eyes. Many individuals have normal visual acuity in each eye, but do not have good two-eyed vision.
(3) The test provides not even a crude index to the degree of far-sightedness.
(4) The test is not critical in detecting astigmatism."

1/ Emmett L. Betts, op. cit. p. 157
2/ Ibid. P. 150.
In a more recent book, the same author announces that vision specialists have shifted the emphasis from "eyes" to "visual skills."

"While they fully recognize the necessity of healthy eye structure, modern vision specialists are now giving much needed attention to the study of how visual skills are developed and how to improve in-efficient visual functions---visual skills are learned---Teachers should be informed concerning this new slant on vision so they can cooperate with vision specialists to the best interests of the child.

The three aspects of visual efficiency are:

1. To see clearly at a working distance.
2. To see singly at all working distances.
3. To see clearly and singly for periods of sustained attention."

Dean conducted an experiment with five first-grade rooms in Billings, Montana to predict reading achievement. He proved that the results of visual deficiency may seriously hamper school progress, but according to his evidence, such defects, on the whole, do not impair reading efficiency to the extent that success or failure can be predicted by the absence or presence of such defects. He says:

1/ Emmett Albert Betts; Foundations of Reading Instructions, American Book Company, New York, 1950.

"The relation between good and poor vision of pupils, and their success in learning to read in Grade 1 is extremely low and even negative in some cases."

Cole says it is not until a child is eight years old that one can be certain his eyes are mature and she recommends four tests, two of which require a stereoscope. They are based upon Betts Tests but greatly simplified.

Gates, too, believes the physiological factors of reading-readiness are important. He writes as follows:

"Although there is little to indicate that constitutional physiological factors require a postponement of reading to later than the usual age, there is evidence that physiological, especially sensory handicaps, may interfere with beginning reading at any time. The remedy is correction of the difficulties or adjustment to them rather than merely waiting for time to cure them."

It is evident that any condition that interferes with visual acuity or with easy fusion of the images of the two eyes in reading would likely be a handicap in reading progress especially if combined with other kinds of handicaps.


B. Hearing.—Some specialists assert that faulty hearing is responsible for 15 per cent of all reading difficulties:

"an auditory loss will handicap him when he starts to read," says Adams.

Harrison stresses the importance of hearing:

"Hearing is important as a factor in reading readiness because the child first learns to attach meaning to printed symbols through the medium of spoken language. He not only needs a high degree of auditory acuity but he also needs the ability to fuse sounds into words, and the ability to sense or perceive the sounds characterized by certain auditory frequencies."

Hearing may be a factor in lack of expected achievement from two points of view, as Betts sees it:

"First, the child's initial contact with language is through speech, and a hearing impairment may retard speech development by incorrect perception of speech sounds and subsequent mispronunciations. Second, a hearing impairment may limit the child's experiences."

The general nature of the hearing impairment should be understood by the teacher, and the type of hearing loss is another problem for the teacher."

1/Fay Adams, Lillian Gray, and Dora Reese, op. cit. p. 124
3/Emmett A. Betts, Foundations of Reading Instruction, p. 128.
A New York City report \(^1\) was issued on the subject of Considering Readiness for Reading. The report stated that approximately five pupils in every class of thirty-three have some hearing defects.

\(^2\) Fiedler tested 1180 children with an audiometer. Because hearing losses were not generally detected by the teacher, the investigator concluded that hearing tests should be given to primary children and that teachers should be made more keenly aware of hearing defects as a possible factor in poor achievement.

An elaborate study was carried on by Henry to determine possible relationships between audiograms and reading achievement. An audiogram is a hearing-loss frequency graph. They treated 295 pupils. A study of the audiograms showed that children of an ordinary school population differ widely in ability to hear audiometer tones. Furthermore, a given pupil may vary in acuity from one tone to another and from one test to another. When the audiograms were compared with reading test scores, significant relationships were found


"between excellent reading and keen hearing for the high tones and between poor and high-toned loss."

A tentative conclusion was drawn that "acute hearing of high frequencies" is more important to the child than "acute hearing for the low and medium frequencies."

Bond, after an extensive investigation of poor readers concluded that deficiency in auditory-discrimination ability is a relatively more important factor associated with reading disability where the phonetic method of reading is used.

More research studies on the subject are needed, but it is clear that hearing has its place as a factor in Reading-Readiness.

C. Speech.-- To be able to read simple sentences, the child must, of course, be able to speak them first; A child who speaks in an easy fluent manner has one prerequisite for good reading.

"The stammering child is literally waving a flag for help. Research specialists believe that this difficulty is caused by nervous strain and deeply seated insecurity and inadequacy.

A stammering first grader is not likely to be ready to read as soon as if he didn't stammer."

Betts, too, places importance on good speech habits:

"Immature speech should be noted and corrected, if possible, before reading is begun. Lisping, baby talk, nervous rapid speech, and indistinct speech can be helped or corrected through patient effort."

Only through a systematic orderly course of conscious speech education can children be taught to talk better. This is the opinion of Rasmussen:

"Speech is a complex act. A learned process, it is dependent upon a desire and need for speech, upon good patterns for imitation, readiness in maturation, and encouragement and motivation for higher standards. Pronunciation is the utterance of speech sounds, with awareness of accent. Articulation is the utterance of consonant sounds. Ennunciation is the utterance of vowel sounds.

1/Fay Adams, Lillian Gray, and Dora Reese, op. cit. p. 127.
2/Emmett Betts, op. cit. p. 61.
Selzer offers suggestions for the treatment of speech defects such as stammering and stuttering.

After telling that ninety-six per cent of the speech-handicapped children of school age go without re-training, Hall continues:

"Not only do speech defects constitute a particularly great obstacle in learning to read, but personality mal-adjustments are often attendant upon long-continued speech disorders."

Johnson's study showed that we might succeed in reducing stuttering because three out of four "stuttering" children regained normal speech after the clinician had succeeded in changing parental policy from that of overt disapproval of the child's speech habits and toward the fostering of friendly relations with the child.

Anderson has this to say about speech difficulties:

"We know there is emotional value in being able to express one's self clearly and effectively, and conversely, there is frustration if one is deficient in this ability. It is well known that the individual who stutters experiences considerable emotional tension as a result of his handicap."


Growth in speech of small children is of particular significance because of its relationship to learning to read.  

Goodrich says the reading-readiness program is based upon the child's ability to talk in sentences and he concludes:

"The speech program must be so devised that it takes the child where he is and by helping him succeed in situations of successively increasing difficulty, causes him to develop into a more confident and competent person."

Artley reviewed 22 studies concerned with reading and speech difficulties and deficiencies in reading ability. He says that there is absence of agreement as to the extent of the relationship, but the evidence indicated that: "speech defects may be the cause of reading defects, the result of reading defects, as the two may exist side by side as a common factor."

Fossom estimates that at least eight to ten per cent of our elementary school children have serious speech defects.


Rossignol, who carried on an investigation with first and second grade pupils found that: "reading performances varies significantly with speech performance."

In first grade the pupil reads almost no words that are not within his speaking vocabulary. If, however, because of immature speech he does not use the expected number of words, he does not have the necessary background. If his pronunciation is defective he will not recognize words after he has spoken them.

Monroe says that a normally developing child reads as he speaks, as he hears. Maturity of auditory perception precedes speech and maturity of speech depends upon auditory acuity. Speaking of the consonant sounds, she says children develop the ability to articulate them—at the following ages:

3, 5 years --- b, p, m, w, h
4, 5 " --- d, t, n, s, k, n, y
5, 5 " --- f, v, -z-, s
6, 5 " --- zh, sh, l, th, (then)th(this)
8 year --- z, s, r, -wh


2/ Marion Monroe, op. cit.
Blanton's report shows that the most frequent age for the onset of stuttering is two and one half years, with the next peak in frequency of onset at six years when the child enters primary school. Bond and Wagner comment that the role of speech defects in causing difficulty in learning to read is uncertain. It all depends on whether oral or silent reading is the desired outcome. The methods of instruction should be adjusted for the child with speech defects and should include those that place oral analysis at a minimum.

In a test of four large classes of first grade children, they found the tests of hand and eye dominance, motor co-ordination and speech defects showed nothing to differentiate the failing group from the whole group.

1/ Smiley Blanten, "Speech Disorders", Mental Hygiene, Xlll, October 1929, 740-753.

2/ Guy L. Bond and Eva Bond Wagner, Teaching the Child to Read (Revised Edition), Macmillan Company, New York, 1950, Chapter 1-Vll (inclusive).

Hildreth surveyed reports of disability cases, involving both speech and reading problems. She concluded the language difficulties impeding reading progress may be:

"(1) Inadequate motor coordination
(2) Indistinct, inaccurate articulation
(3) Inhibiting emotional conflicts due to speech defects
(4) Poor auditory discrimination of speech sounds
(5) Sensory and motor aphasia
(6) Spasms and stuttering
(7) Bilingual background."

Research has not offered us much help on the factor of speech. It would seem that Gray is right when he says:

"more rigorous research procedures are essential in determining the actual influence of such factors."


D. Health.—All the students of the subject of Reading-Readingess seem to agree that the general health of the child is one of the first factors to be considered.

Betts speaks of a neurological status. The term "alexia" is used to designate a cerebral disorder characterized by inability to read. "Word blindness" is another term used in this connection. Fortunately, cases of alexia are rare. Wholesale use of the term "alexia" or "word blindness" is without justification. Neither of these terms should be used until the case has been diagnosed by competent specialists.

In connection with neurological status as a factor in reading-readiness mention should be made of laterality of dominance—The above write continues:

"So far as this problem is concerned, the teacher should be aware of the possible educational implications of a change of handedness and permit each child to use his preferred hand for all unimanual activities such as writing."

The experience of Wright is summed up in this way:

"So far as a child is low in physical vitality and health he is likely to be handicapped by sluggish mental activity, excessive fatigue, short attention span, and emotional instability."

1/Emmett Betts, op. cit. p. 136

Clowes comments on the need of caring for the physical and mental health of children before teaching them to read. In forty-four cases in a clinic, she says the following physical conditions were found:

"20 cases of malnutrition
8 cases of poor dentition
7 cases of defective hearing
6 cases of diseased tonsils
5 cases of mouth breathers
2 cases of speech defects
1 case of goitre."

These cases might have been cured or improved in the kindergarten.

Gates and Bond found that in some physical factors no improvement took place during a period of a year, and in some factors the physical difficulties grew worse. They emphasize the importance of recognizing and adjusting to individual limitations and needs, before and after beginning reading, rather than merely changing the time of beginning reading.

Bond and Wagner refer, among the physical factors to less obviously related to learning difficulties but nonetheless, important—speech defects and health factors, such as poor

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1/Helen C. Clowes, "Measures which can be Used in Kindergarten to Prevent Reading Disability Cases," Childhood Education 6, January 1930, p. 453.

2/Arthur Gates and Guy L. Bond, op. cit.

3/Bond and Wagner, op. cit.
physical stamina, inferior nutritional and glandular conditions, and recurring illnesses.

Broom stresses the importance of a child being free from all effects of food allergy, malnutrition, anemia, or a recurrent physical complication.

Eames compared reading failure causes with non-failures in respect to various diseases. He found diseases to be 21.1 per cent more frequent among those failing. He found diseases of the urogenital system and of the circulating system occurred six times as frequently among reading failures, and speech defects more than five times. Moreover, certain diseases which occurred among reading failures were not found among non-failures.

Those who have clinical experience know the part poor physical condition plays in causing reading disability. Witty and Kopel tell of a case in which faulty metabolism limited both educational achievement and the intelligence quotient. They believe home background has a relation to success in reading.

2/Thomas Eames, op. cit.
3/Paul Witty and David Kopel, Reading and the Educative Process, Ginn and Company, Boston, Massachusetts, 1939.
Washburn suggests the need for more research on the physical factors. There has been a good deal of feeling but a lamentable lack of research to indicate that the fine coordinations of writing are an undesirable strain on the eye of children below six or seven years. He says: 'We are on very insecure foundation in building any positive conclusions as to physical readiness.'

More experimentation and more conclusive proof are needed on the place of the physical factors in reading-readiness.

Mental Age—Intelligence.—All the students of the subject of reading-readiness have much to say regarding the mental age necessary for beginning reading. Scores of studies have been carried on to determine the relationship between intelligence and reading achievement.

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Gates carried on an extensive program to discover the minimum mental age desirable for introducing a child to reading. He reached certain conclusions between mental age and success in reading: (1) children can read with a mental age of five. Some have difficulty at seven years. (2) The correlations between mental age and reading achievement were highest in the class where the best instruction was done and lowest where the poorest instruction was provided. The magnitude of the correlation seems to vary directly with the effectiveness of the provision for individual differences. (3) The study reveals the need of a teacher's understanding the mental age required for successful pursuance of the program that she puts into effect.

The same investigator studied children with an I.Q. from 70-95 and observed that merely delaying reading did not eliminate failures on very low levels of achievement.

Gates says the evidence tends to show that the crucial mental age will vary with the materials, the type of teaching, the skill of the teacher, the size of the class, the amount of preceding preparatory work, the thoroughness of examination, and the frequency and treatment of special difficulties such as


visual defects of the pupils and other factors. In a later statement he says: "It has been found that it is impossible to designate the optimum mental age for all children in all kinds of programs with all kinds of teachers."

As Betts says:

"In general it is a wise procedure to secure an index to the general mental maturity of a child with a short mental span. A desirable memory span apparently is essential to success with reading activities. Whether a short memory span is a product of a defective nervous system or a disinterest and poor attitude, the teacher must differentiate the reading-readiness or the reading program to take care of the problem."

According to Bond, a teacher's first duty is to ascertain which children are ready to begin to read, which need a modified program, and which ones should receive much instruction in reading-readiness. Bond classifies the factors which make for reading-readiness as mental readiness, physical readiness, personal and emotional readiness, and educational readiness.

Mental test ratings are valuable to indicate variation in ability within a class and to provide a basis for adapting methods and materials so as to bring about effective learning.

1/Emmett L. Betts, op. cit., p. 126.
"Too great a dependence upon the results of mental tests should be avoided. Some authorities have recommended that reading instruction be postponed until each child attains a mental age level of six years and six months. Such a recommendation is unjustified. It has been demonstrated repeatedly that delaying reading instruction until the child's mental age is six years and six months will not insure successful reading."

Betts believes mental maturity is important:

"Since reading is largely a thinking process, it follows that mental maturity is a primary factor in reading ability. A child of low mentality is not likely to succeed with typical reading activities because he has little to take to the printed page. Some with normal or superior intelligence do not succeed with reading activities."

We are warned by Eames not to standardize the rate of learners:

"Now the term "individual differences" is trite. Each child is a separate and unique being, and therefore, has his own normal rate of speed in learning. Often the normal range is stepped up or stepped down. Recognition of the normal rate of speed in learning is of first importance in good teaching. Any serious interference with it is certain to bring unhappy consequence. ............

Of all the children promoted at the end of the school year, fully one third have had their normal rate of speed learning interfered with, either through acceleration or retardation--cases of children who are advanced too rapidly, because they are "difficult" are numerous."

1/ Paul Witty, op. cit. p. 57.


3/ Bertha Eames, "Don't Try to Standardize Rate of Learning", Instructor, May 1944, p. 15.
Along the same lines we read:

"Whether a child's I.Q. can be raised or lowered is still a disputed question. The teacher has everything to gain and nothing to lose by proceeding as if the child's mental age could be increased by a favorable environment. She should plan the program as if this were a possibility. On the other hand it is sensible to realize that some children fail to respond in accordance with such assumptions. The teacher should then remember the harm that can be done by making a child feel inadequate. Certainly no objective for beginning school life is more important than the achievement of satisfactory personal adjustment for each child."

### Intellectual Development

#### Inner Maturation

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#### Instruction Fostering

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Some index of capacity for achievement should be secured in order to provide adequate guidance.

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1/ Lucille M. Harrison, "Reading-Readiness"; Houghton-Mifflin Company, Boston, Massachusetts, 1939. pp. 6,7.
Lucille Cole says that with a lower mental age than six and one half years he (the child) will not learn to read because he does not have the intellectual development for so complicated a procedure.

Still another person remarks:—"the factors that make up mental maturity for beginners—capacity to think, to reason, to learn, to observe, to be curious, to remember, to follow directions, and to deal with ideas on a six-year level of understanding—are essential to learning during the first grade."

Wright in studying the relation of mental age at school entrance and teachers marks in reading after a semester of instruction, found that fifty per cent of the children with a mental age of 72 months or less received failing marks, while only about two per cent of those with mental ages of 78 months or more received such marks.

The Yearbook Committee found that studies of the relationship between reading ability and intelligence show in general that the more intelligent the reader, the more fluent and accurate will be his recognition, the broader his associations, the greater his power of apprehension, the keener his

1/Luella Cole, op. cit. 281
4/The Twenty-Fourth Yearbook, op. cit.
evaluation, and the more thoughtful his application or use of the ideas gained through reading. Although a pupil of superior ability may be a poor reader because of particular handicaps, wrong attitudes, or poor application, his chance of overcoming the handicaps and becoming an efficient reader are more favorable than those of a student of low intelligence.

Durrell says:—"It is safe to assume that a child with good eyes and ears, with no physical handicaps to upset his attention, and with a mental age of at least six years can learn to read."

There seems to be no agreement on the question of Mental Age. One authority asserts:--"Numbered among the fairy tales about reading instruction is the often misquoted statement that a child must have a mental age of six and one half years in order to be ready for systematic instruction in reading."

Keister felt that which we know children under six can learn to read, not much testing had been done regarding the permanence of the reading ability. He experimented in Nebraska with five year olds and drew these conclusions:

"(1) It is possible for children who enter grade one before age six to make normal progress.

1/Donald Durrell, op. cit. p. 184
2/Emmett Betts, op. cit. p. 121
(2) The skills attained lack permanence and tend to disappear during summer vacation.

(3) The loss between grade one and Grade two is never made up and they are permanently retarded."

The evidence found by Murphy and Junkins is that the rate of learning to read is not correlated perfectly with mental ability. Two special abilities which affect the learning rate are auditory and visual discrimination. They devised exercise to train them. The experiment showed both sets of exercises effective in increasing the rate of learning to read.

Teegarden attributes casual significance to the reversal tendency in reading failure. She states that the most important elements in success in reading are intelligence and the degree of tendency to reverse and confuse symbols. The tendency to confuse symbols is characteristic of children having mental ages below six years. After an age of seven years mentally, reversals are usually absent.

The study by Steinbach showed that kindergarten training of a year or more, independent of the equating factors, had no

1/Helen A. Murphy and Kathryn M. Junkins, "Increasing the Rate of Learning in First Grade Reading", Education, Vol. 62, pp. 37-39, September 1941.


influence on progress in reading.

The study of three hundred famous persons of history revealed the fact that the great majority of these three hundred unusually gifted persons of history learned to read during the ages of three to five. The writer, Stone doubts that our present knowledge justifies wholesale postponement of beginning reading, although it seems clear that postponement is best for probably a fourth to a third of the children. He adds:

"Controlled teaching experiments up to the present writing are entirely inadequate upon which to base general postponement of reading instruction beyond the chronological and mental age of six years................. The solution of the problem of beginning reading lies in adaptation of the materials and procedures to the varied stages of maturity, abilities, interests, and needs of the children."

Theisen followed the progress of first-grade children in reading and found that the pupils who ranked high mentally made from three to ten times the amount of progress made by pupils who ranked low in the mental tests.

1/Clarence Stone, op. cit. p. 252

Both Theisen and Deputy decided, from their experiment, that intelligence is the most significant factor in determining a child's success in primary reading.

The research supervisor of Winnetka, Illinois tested and studied all the first-grade children in the Winnetka schools and in order to discover the period in the mental development of children who, as a rule, there is the vast chance of their learning to read readily. She concluded:

"(1) Correlations between mental age and ability to learn to read are high.  
(2) Correlations are higher when Detroit First-grade Intelligence Tests are used than when the Stanford Revision of the Binet Simon Scale.  
(3) Children who had a mental age of six years six months made far better progress than did those less mature and practically as satisfactory progress as those of a higher mental age.  
(4) It is safe to state that, by postponing the teaching of reading until children reach a mental age of six and one half years, teachers can decrease chances of failure and discouragement."

Washburne writes that we have many cases of remedial readers, all through the grades, whose difficulties can be traced directly to an emotional reaction set up early failure


2/Erby C. Deputy, "Predicting First-grade Reading Achievement; A Study in Reading Readiness Contributions to Education," No. 426, New York, Bureau of Publications, Teachers College, Columbia University 1930.


which in turn can be traced to the attempt to teach the child before he is ready.

After a study of twenty children over a period of years, Boney and Agnew commenting on the great expenditure of time to teach some children to read propose the question: "Would it not be better to delay reading in the first grade for those children who have to be pulled into the reading process?"

Most educators, according to Leary, now accept a mental age of six or six and a half as a standard. Many consider it inadvisable to adopt any rigid standard of readiness, preferring to adjust the reading program to whatever unevenness in readiness is found in the child who appears generally mature enough to read.

Smith says that the first grades are clogged every year with failures simply because they are not mature enough mentally to learn to read.

Premature efforts to teach children to read may result in discouragement and failure during the first months of school, giving a child a handicap on the threshold of his school career.


which is hard to overcome. Hildreth tells us: --"In a large eastern city, data recently collected showed that the range in mental age of entering classes was from four years five months to over ten years."

Davidson experimented with kindergarten and first grade children on the extent of reversals. She concluded that a mental age of at least seven and one half years was necessary to avoid making the d-b, q-p, and b-d, errors.

Steinbach points out that, although mental age is associated with progress in reading, 57 per cent of the children beginning reading at a mental age below six and a half years, did achieve success up to or above the grade norm of 1.9 by the end of the year. She asks if it is justifiable to exclude all children below 6-6 mentally from first-grade reading instruction.

Betts feels that most reading difficulties could be prevented by increasing the entrance age for the first grade:

"Mental maturity, however, is one significant factor in reading-readiness. A certain amount of mental maturity is essential to success with initial reading activity,


but possession of that mental maturity does not insure success. It is important that an index to the capacity of the learner should be secured by means of an intelligence or learning aptitude test which does not place a premium on reading ability."

Durrell found that 80 per cent of those people who were retarded in reading had either normal or superior intelligence.

An investigation by Strang showed a significant and positive correlation existing between reading and intelligence. However, she showed that other factors also influence reading and mental age above is no guarantee of success.

Deputy's study in 1930 caused him to feel that, although the intelligence of the child has much to do with his progress in reading:-- "the ability demanded for success on intelligence tests is not identical with the ability necessary for reading achievement."

The mental age of first-grade children should not be used as the sole criterion of reading-readiness, but should be supplemented by other factors, thinks Monroe:-- "If he does not hear and distinguish clearly the pronunciation of words, he may readily develop confusion which retards learning."


2/Ruth Strang, "Relationship between Certain Aspects of Intelligence and Certain Aspects of Reading", Educational and Psychological Measurement, November 1944.

3/E. C. Deputy, op. cit. p. 2

4/Marion Monroe, "A program to Develop Reading Readiness in Grade 1", National Elementary Principal Seventeenth Yearbook of Educational Department of Elementary School Principals of National Educational Association, July 1938, p.274.
During the school year 1946-1947 the St. Louis Public School System continued their studies in Reading-Readiness. They found a correlation of .77 between intelligence and reading-readiness and between reading achievement and reading-readiness it was .46. Also evidence was secured that teachers with ten or more years of experience in the low first-grade predicted reading success more accurately than those of less experience.

Dickson in Oakland, California carried on an experiment to show relation of mental age to achievement and concluded: "Mental tests of several hundred first-grade children have shown that mental age and I.Q. are important factors in revealing a child's chances for success in his school work."

As a result of a test Dean concluded that mental age, therefore, seems to be superior to score on reading-readiness tests as an instrument for predicting reading achievement of the first-grade entrants.

The above research clearly points to the fact that while the factor of intelligence is important to Reading-Readiness, it is the subject of much controversy.


3/Charles D. Dean, "Predicting First Grade Reading Achievement", Elementary School Journal, Vol. 39, April 1939.
Visual Discrimination:—Distinguishing between different objects by their forms is called visual discrimination.

McKee says to do well in beginning reading, the child must have sufficient power of visual discrimination to distinguish readily between the forms of the printed words used in the beginning reading matter which he will attempt to read. Consequently providing sensible training which will develop the child's power of visual discrimination to the point where he can distinguish readily between the forms of words is an essential part of helping him to acquire readiness for beginning reading. Such training is part of the beginning of definite instruction in word analysis which promotes the child's acquisition of independence in word identification and of skills in word recognition.

Before he begins to read the child may have come to the place where he thinks "this word is a long one, this word is a little one, this word has some high spots, this word looks something like that word," and finally, "this is exactly the same word as that word, and this word is different from that word."

"To distinguish the form of one word from the form of another."

1/ Paul McKee op. cit.

2/ Ibid p. 145
(4) Matching words in one column with words in another column.

(5) Maring out the word repeated frequently in a short group of sentences.

(6) Marking out the repetition of a word that is often misread as a reversal.

Note: The simplest exercises should be used first. The most difficult exercise should be last. In such exercises, the form to be located is easily confused with the other forms included. Since the most difficult exercises are more representative of the difficulties to be faced by children in reading such exercises should be used more frequently.

................. Practice in distinguishing between the form of one group of letters and the form of another group of letters.

(1) Marking out one-syllable words in a row that have the same two-letter ending as a given one-syllable word.

(2) Underlining one-syllable words in a column that have the same two-letter ending as a one-syllable word given at the head of the column.

(3) Marking out words in a row that have the same beginning two letters as a given word.

(4) Underlining words in a column that have the same beginning two letters as the word at the beginning of the column.

(5) Matching words in one column with words in another column that begin with the same two letters.

(6) Marking out in a row of groups of letters (syllables) the repetition of a given group of letters.

Practice in distinguishing between the form of one letter and the form of another letter.

(1) Marking out in a line of print the repetitions of the letter marked out in the first word.

(2) Matching the two occurrences of the same letter in a group of four or more letters.

(3) Marking out the repetitions of a given letter in a row of letters which includes letters frequently confused with the given letter.

Before he begins to read, he must develop his power of visual discrimination to the point where he is able to observe very small differences in the forms of these words and can study them analytically enough to distinguish one word from a different word
which looks very much like it. Indeed, he should learn to
distinguish the form of each letter from the form of any other
letter.

1/No effort should be made to teach the pupil
to read the words, to match the meaning and the
pronunciation of each word with the form.
also, no effort made to match the sound of a
letter or group of letters with the form.
(2) The words and parts of words used in the exer-
cises should be those which the child will meet
in beginning reading matter.
(3) The exercises should be well graduated in dif-
ficulty. The first exercises should distin-
guish between only those words and word ele-
ments that are quite obviously dissimilar.
The most difficult exercise should require him
to distinguish between words and word elements
which are quite easily and frequently confused.
(4) Special practice in visual discrimination should
be continued after instruction in reading itself has begun."

Helen Davidson found that most kindergarten children and a
substantial percentage of first-grade pupils tend to evidence
reversal tendencies of letters and words. She concluded that
a mental age of at least seven and one half years was necessary
to avoid making the d-b, q-p, and b-d errors.

1/ Ibid.  p.150.
2/Helen Davidson, "An Experimental Study of Bright, Average,
and Dull Children at the Four-Year Mental Level." Genetic
From her we learn that:

(1) A substantial number of first-grade children tend to make reversal errors.

(2) The reversal tendency seems to be independent of intelligence.

(3) Pupils tending to make a number of reversal errors upon admission to first grade have less chance to succeed with immediate reading activities than those who are oriented in this respect.

(4) Reversal errors constitute only a small proportion of reading errors.

(5) The use of purposeful reading situations reduces the tendency to make reversal errors.

Betts says that about four or five percent of boys are color blind and one percent of girls. Of course, these children will be frustrated in all situations requiring color discrimination. The teacher must give tests to discover color blindness, and of course, make no attempt to have such a person distinguish red and green. Such action would be useless but would introduce emotional disturbances.

1/Emmett L. Betts, op. cit.
The ability to see likenesses and differences is a must in learning to read, say Adams, Gray, and Reese: "A child who cannot quickly distinguish differences or likenesses in objects and pictures will get nowhere when it comes to recognizing different words on the printed page."

Monroe finds that:

"The perception of visual patterns involved more of the nervous system and brain than simply the sensory apparatus. Patterns vary in complexity, and a child who can discriminate simple patterns such as letters may not be able to discriminate complex patterns such as words.

Reading involves visual stimulation, which in turn necessitates a visual sensory apparatus, adequate for refracting upon the retina a clear-cut impression of the object seen. Defects in visual acuity may hinder a child from learning to read. If the retinal image is blurred, the child may not be able to distinguish the pattern of letters presented, and may confuse patterns which are similar, such as "band", "hand", "hard":"

Sullivan and McCarthy proved that visual perception can be greatly improved by flashing-on-screen method.

McKee gives suggestions concerning teaching "Left to Right."

"Suggestions for providing the essential teaching. (1) See that pupils learn the meaning of left and the meaning of right.

1/Fay Adams, et al. op. cit. p.129.

2/Marion Monroe, op. cit.


4/Paul McKee, op. cit. p.155.
(2) When pupils arrange a series of pictures to tell a story, make sure that the arrangement is made so that the series of pictures must be looked at from left to right in order to sense the story.
(3) When writing on the blackboard, call attention of the pupils to the fact that the writing is being made from left to right.
(4) In reading aloud to pupils any material on the blackboard, a poster, or a chart, move the hand slowly from left to right under the words as reading is done.
(5) Occasionally, when writing a word on the blackboard, sound the syllables slowly as they are written so the pupils can learn that both the writing and the pronouncing of the word moves from left to right.
(6) Have pupils match words in a list when reversal spellings are used.
(7) In word-matching exercises teach pupils to begin at the left of each word and examine it carefully all the way through to the end in order to find matching words.
(8) Point out to pupils that the left of a word or a sentence is the beginning of that word or sentence and the right is the end."

Murphy found on evaluating the effect of specific exercises for auditory and visual discrimination that all experimental groups were superior to control group in reading achievement after the auditory and visual discrimination exercises had been given. All experimental groups showed significant increases in rate-of-learning test scores.

It appears that sex difference in reading achievement disappears when specific training for auditory and visual discrimination is given in beginning reading.

The effectiveness of the exercises for developing auditory and visual perception was in relation to the need. Low groups given special training showed much more increase in reading achievement over matched children, the control group, than did children whose auditory and visual test score was high. Crossley experimented with the use of lantern slides in teaching the child to discriminate between likenesses and differences. She evaluated the data to show the effect on such training on the learning rate. She proved it can be taught by that method; however, no matter what method is used it should be taught so the child will have a definite tool to assist him in the "Look and Say" method of reading.

Among the educators there seems to be agreement on the subject of the importance of visual discrimination in a Reading-Readiness program. In her analysis of twelve Reading-Readiness Tests, Jellison found that the area of visual discrimination had a total of 541 items. while the next nearest factor had only 353 items. Five tests were studied by Sullivan and McCarthy. They found the indices of visual discrimination were common to all the tests.


Meek was one of the first to investigate "word perception". She concluded that children recognize words by such characteristics as length, general configuration, peculiar shape of a letter and the like, but their ability to do so depends upon certain perceptual habits. They seem to select as clues, the initial and final letters.

For four years a cooperative study of Reading-Readiness was made at the Horace Mann School, Columbia University. The investigators concluded that ability with letter forms and sounds is, to a large degree, a casual factor in ability to read words and sentences.

The kindergarten and first-grade children who knew the most letter forms and sounds tended, very definitely to be the first to learn to read.

Over a period of a year Murphy studied 540 first grade children to evaluate the effect of the combination of specific exercises for auditory and visual discrimination, the effect of special visual discrimination exercises, and the effect of auditory discrimination exercises. She taught for thirty days.

1/Lois A. Meek, "A Study of Learning and Retention in Young Children", Teachers College of Contributions to Education, Number 164, Teachers College, Columbia University, New York, 1925.


and has given us 80 pages of teaching material for visual perception and auditory discrimination with full directions for the use of it. She found the learning rate increased and a change took place in the child's visual perception and auditory discrimination between likenesses and differences in words.

All the writers seem to agree on the importance of training in visual discrimination. Moreover, many and varied are the exercises that have been created for the purpose of making that factor function in the process of getting ready to read.

Auditory Discrimination.--All writers on the subject of Reading-Readiness seem to agree on the importance of training in auditory perception. Monroe stresses articulation:

"Inaccurate articulation may directly affect the reading by presenting a confusion in the sounds of words to be associated with printed symbols. A child who has an articulatory defect hears the word as spoken by himself in another way. Either of the two memories may be aroused on presentation of a printed word. Thus he may read "gig" "fud" in his own articulation.

Inaccurate articulation and reading disability may come from a common cause, the inability to discriminate successfully the sounds of words. If a child's auditory discrimination is poor, he may confuse similar words in both speech and reading without recognizing the error."

Betts also feels that accurate auditory discrimination contributes to good speech habits and to awareness of speech sounds which are essential to phonetic insight. In view of

1/ Marion Monroe, op. cit. p. 92.
2/ Ibid, p. 93
this it is clear that inaccurate auditory discrimination may contribute to a lack of reading-readiness or to a reading deficiency.

Monroe studied reading defect cases at the Institute for Juvenile Research to study what influence poor auditory discrimination had. She found that the "lack of precise auditory discrimination was found to impede the learning which involves auditory impressions."

Storm and Smith say that the ability to recognize and discriminate between different word sounds is one of the fundamental elements of word analysis. They suggest the following activities for the kindergarten:

"(1) Repeating and creating rhymes and jingles. All this is excellent ear training and should be encouraged.

(2) Clear enunciation--Build habits of clear enunciation and the children will be in a better position to "hear" the different elements in words, when word analysis is studied.

(3) Vocal work--imitating bird and animal sounds."

McKee lays great stress on training in auditory discrimination:

"This distinguishing between sounds is called auditory

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2/Grace E. Storm and Nila B. Smith, "Reading Activities in the Primary Grades", Ginn and Company, Boston, Massachusetts, P.127.

discrimination. To do well in beginning reading, the child must have sufficient power of auditory discrimination to distinguish readily between the pronunciation of words which he will attempt to read. He may need to distinguish between dog and boy, man and men, pin and pen, come and came, catch and match, bed and beg. Such training is part of the beginning of definite instruction in word analysis which promotes the child's acquisition of independence in word identification and of skill in word recognition. He will come to the place where he thinks, "This word sounds something like that word, this word begins the way that word began, this word ends the way that word ends, this word can be said quickly. It takes a long time to say that word, this word has more than one sound to it, and this word (pin) sounds a great deal like but not the same as that word (pen)."

In learning to read, a child needs a high degree of auditory acuity to hear sounds correctly and to reproduce them accurately. He learns that certain printed symbols have meaning by relating them to spoken language. If his hearing is defective, he received wrong impressions or merely hears confusing sounds. This is the opinion of Witty who also advises as follows:

"Very soon after entering first grade, children should be introduced to games and appropriate exercises to promote skill in auditory discrimination. Word games such as the following may be employed:

1. Sounds made by dogs, cats, cows, bees, ducks, may be simulated and repeated by the children, to improve the ability to distinguish difference in sounds.

2. Teacher pronounces words beginning with a certain sound. Children clap when a word beginning with a different sound is heard.

3. Attention directed to beginning sound of a word. Then ask children to name other words beginning with same sound.

4. Practice in recognizing rhyming words."

1/Paul Witty, op. cit. p.72
Murphy defines auditory discrimination and from her great experience, says:

"Careful preparatory work will prevent confusion in the learning process and so guarantee success. Learning to read is a complex process. Two of the important factors included in a reading-readiness program are auditory discrimination and visual discrimination. The ability to recognize similarities and differences in the appearance of words and word elements is an important skill in the beginning of grade one. Most basal readers use the look and say method.

First see no uncorrected visual defect. Then give him objects in classroom to distinguish, next geometric forms and then letters. Give many practices in exercises requiring visual perception in which the child always has the visual form of the letter or word he is to match. Be careful to continue the training to include exercises involving visual memory.

Auditory discrimination may be defined as the ability to recognize similarities and differences in the sounds of words and word elements.

Be careful not to introduce, when working on single sounds, words beginning with a blend.

Final sounds are much more difficult than beginning sounds for children. As children become familiar with final sounds an exercise combining initial and final sounds is of value. The teacher dictates a word and the child gives another word that begins with the sound the teacher ended with."

McKee speaks of the importance of training in listening.

It should start before reading begins and continue through

1/ H. A. Murphy, "Insuring Success in Beginning Reading", October 1946, p. 332

2/ Paul McKee op. cit., p. 161
most of the first grade.

"Practice in using oral context and pictures for getting the pronunciation of a word should be carried out before the pupil receives beginning instruction in identifying strange printed words independently. Training in listening for different purposes should be continued throughout first grade.

Because he needs to reproduce in his mind, what a given statement or question would sound like, and because he needs to learn to cope with meaning difficulties that arise at higher grade levels, he recommends that training in listening be a definite part of the first-grade program of preparation to read and that such training in listening skillfully to pupils and using penetrating questions which center the attention of those pupils upon matters to be considered...............

1/ (1) Read a selection in two ways and let child decide which way shows what is meant.
(2) Read a selection aloud but leave out the one important word. Train child to find that word from the context.
(3) Read a selection, leave out an important word, and show a picture. Lead the child to use pictures to get the meaning of a strange word.
(4) Read a selection which relates a short series of events without naming those events, first, second, etc. Have child sense the sequency of events.
(5) Read a short selection and by questions lead pupil to find the main idea, details, or conclusion."

2/ He gives definite suggestions for practice in listening:

"(1) Listening for rhyming words in a poem or jingle as it is read aloud or spoken.
(2) Saying the second rhyming word in a poem or jingle.
(3) Listening for the one word that does not rhyme with the other words in a group.

1/Paul McKee, op. cit. p. 158.
(4) Saying words which rhyme with a given word.
(5) Practice in listening for and adding endings to given known words, to make variants.
(6) Practice in listening for and giving words which contain the most frequently recurring phonetic elements in the initial position."

Extensive study has led Durrell, Sullivan, and Murphy to conclude that a leading factor in failure to learn to read is lack of auditory discrimination.

Cole suggests and elaborates upon two hearing tests which a teacher can use for purposes of screening.

Tufts gave 201 first grade pupils a test in auditory discrimination and found:

(1) Very little difference between the score of the girls and boys.
(2) The correlation between mental age and auditory discrimination was low.
(3) Chronological age or maturation had little effect on auditory discrimination.

Monroe studied reading defect cases at the Institute for Juvenile Research to study what influence poor auditory discrimination had. She found that the lack of precise auditory discrimination was found to impede the learning which involves


auditory impressions.

The findings of Acomb showed that: (1) the ability to distinguish, through visual and auditory means, small differences between words, depends some on mental age; (2) visual and auditory discrimination are significant factors in reading; (3) the two factors are definitely interrelated.

Bond and Wagner assert that children who have little familiarity with word sound elements and who are taught beginning by a method which makes a large use of phonics do not learn to read as easily as those who are able to discriminate word sounds. Inaccurate articulation and reading disability come from a common cause, the inability to discriminate successfully the sound of words. If a child's auditory discrimination is poor, he may confuse similar words in both speech and reading without recognizing the error.

Steinbach devised an individual auditory discrimination test and found a consistently close relationship between reading-grade scores and scores made on the auditory discrimination test.

1/Allan Acomb, Study of the Psychological Factors in Reading and Spelling, Unpublished Master's theses, Boston University School of Education, Boston, 1934.
2/Bond and Wagner op. cit.
3/Sister Stegbach op. cit.
The development of auditory readiness is an essential part of a reading-readiness program. Such a program should include, according to Betts:

(a) Attention to good speech habits
(b) Development of rhyming sense
(c) Knowledge that words consist of sounds
(d) Recognition of words by sounds
(e) Listening to the good speaking voice of the teacher which children unconsciously imitate.
(f) Practice with phrases enjoyed by children
(g) Imitation of sounds
(h) Whisked directions.

Various studies have been undertaken to show the effect of specific preliminary training on reading. Groups where training and experience that prepare for reading are provided, are called "transition groups or rooms". Woods secured evidence that these rooms do help in getting ready to read. Peterson experimented with transition groups and control groups. She found the program of the transition group had been most helpful. Scott found that membership in the readiness classes was more effective in preparing for reading than either kindergarten attendance or no preparatory work.


Teegarden compared progress in reading in the first grade on the part of children who had received kindergarten training with those who had not. She found that those with training made greater progress in far larger proportion than those without training.

The foregoing evidence proves that training in visual discrimination does help the children in learning to read, and for that reason, holds undisputed right to being a factor of Reading-Readiness.

Language Factors--

"Since reading is primarily concerned with meanings, there is every reason to believe that the child who understands the meaning of a large number of spoken words and is familiar with their use in sentences is better equipped to undertake the next step--working with the symbols that represent these words."

Also Storm and Smith offer:

"Perhaps the greatest contribution which the kindergarten can make to the children's first steps in reading is that of enlarging and enriching their experience. Meaningful concepts aid in reading:

1. By aiding in recognition
2. By aiding in interpreting meaningful concepts.
3. Providing first-hand experiences
   a. Nature excursions
   b. Individual excursions
   c. Social contacts
   d. Experience with raw material
   e. Play activities
   f. Constructive activities
   g. Providing vicarious experiences."

1/ Lorene Teegarden, "The Kindergarten and Reading Reversals," Childhood Education, 1932, pp. 82-83.

2/ Grace E. Storm and Nila B. Smith, op. cit. p. 118
"Since reading is only one step removed from the child's use of auditory symbols, it is reasonable to conclude that control over oral language is a prime requisite to reading. Speech defects, and the use of "baby talk" may be obstacles to successful participation in reading. Some children who have a limited vocabulary are not able to express themselves in sentences; hence, they are not ready to read sentences.

At six years of age, the average child is estimated to have a vocabulary of about twenty-five hundred words. The average child begins to use complete sentences involving all parts of speech at the age of three or four years."

A good speaking vocabulary is of utmost importance as a foundation for learning to read. Given a little encouragement, children are quick to make friends with words. Adams gives us the following ideas for increasing the vocabulary:

"(1) Play preparation games such as "Put the ball into the bag". Go on, using under, beside, below, behind, etc.
(2) Adverb game--Walk to the door quietly or slowly, or noisily, etc.
(3) Adjective games--Think of something in the room that is soft, hard, etc.
(4) Children tell stories of pictures they have drawn.
(5) Children retell or dramatize stories read to them.
(6) Learn new words in relation to film strips or films.
(7) May memorize songs, poems, and rhymes.
(8) Exchange out-of-school experiences.
(9) Teacher helps children to be word conscious."

1/Emmett L. Betts, op. cit., p.128.
2/Fay Adams, Lillian Gray, and Dora Reese, op. cit. p. 151.
Betts contributes that reading is a process, not a subject and:

"Speech, reading, and writing are social instruments; hence, instruction is effective to the degree that these basic skills and abilities are developed in situations socially significant to the learner. The teacher must recognize wide ranges in background of experience. The learner must have had experiences with the facts, if he is to be able to cope with the language used to represent the facts. In short, experience must precede reading, is the reconstruction of the facts behind the symbols."

McKee offers suggestions for developing a good listening vocabulary:

"(1) Provide the pupil with one or more direct experiences in which the given word is used.
(2) Use the new word in talking with the pupil.
(3) Tell or read one or more stories in which the new word is used and its meaning made clear.
(4) Provide opportunity for pupils to carry on conversations about things they have done, seen, and heard. Sometimes a pupil who knows the word will use it in his talking.
(5) Encourage the pupil to make use of the new word in his talking. The best encouragement is a rich course of study in oral composition."

Harrison urges training in using sentences:

"(1) Free and spontaneous conversing
(2) Sharing and relating experiences
(3) Telling stories
(4) Comparing group and individual letters
(5) Dramatizing stories
(6) Playing games having spoken parts

1/ Emmett L. Betts, op. cit. p. 10.
2/ Paul McKee, op. cit. p. 163.
3/ M. Lucille Harrison, op. cit. pp. 50 and 52.
(7) Learning poems and songs
(8) Planning procedures in activities
(9) Imitative conversation on toy telephone
(10) Playing radio
(11) Creating stories and poems.

The development of a broad vocabulary and the ability to use simple English sentences are the best-known weapon against the development of a word calling, meaningless type of reading.¹

Steinbach's experiment caused her to say that bilingualism is a factor quite closely related to efficiency in reading, but also that it is not an impeding obstacle for which pupils cannot compensate.

One publication has an excellent check list for oral vocabulary during the first school year.²

Broom contributes the following: "The development of the ability to recall the incidents that occur during the continuity of a story occupies a major place in the prereading instruction program." And then adds that a child's attainment in beginning reading is affected to a considerable extent by the number of words for which he knows the meaning.

¹Sister Steinbach, op. cit.


Adams, instructor in the elementary school, University of Chicago, believes that not until children have developed some ability in oral expression can they be expected to comprehend or reproduce through reading, the ideas of others. She suggests a self-chosen activity period daily when children are allowed to talk as they work. An ability is developed not only to express individual ideas on a given topic but also to understand and act on the ideas of others, a most important forerunner of the ability to understand printed ideas. — "By the time a child is able to tell about an experience in a sufficiently complete, clear, organized fashion as to command the attention of his audience, so far as language skills are concerned, he is ready to begin to read."

We are asked by Clowes if we can teach children to read before they have an adequate verbal vocabulary. She urges the taking of real experiences into the classroom and allowing and encouraging talking.

Bannon studied to discover the meaning sixty kindergarten children had for certain words in first grade reading books. Two hundred and ninety two words were found that a


2/ Helen C. Clowes, "Measures Which Can be Used in Kindergarten to Prevent Reading Disability Cases", Childhood Education, 6, January 1930, pp.452-57.

child might have difficulty in comprehending. One hundred words were chosen for the test. Sixty children were tested. Airplane was the only word known by all. There were 21 words known by only 50 per cent of the group. The fields of transportation and food were most familiar. The most difficult were the fields of wearing apparel and nature. There was no essential difference between the word comprehension of boys and girls. Results showed a program of word enrichment by kindergarten children.

Enright investigated 63 first grade reading books to find list of unusual words that would require a background of understanding. Six hundred and fifty two words were found. Picture vocabulary tests were given to measure the difficulties of these words and she concluded that: (1) the older the child, the better his vocabulary; (2) there is no essential difference in word knowledge between urban and rural children, and (3) boys vary slightly superior in world knowledge.

Beery cautions us that vocabulary development is viewed as a necessary part of the total program in reading, language, and thinking, but not as an end in itself. She gives the following suggestions for developing word meaning in the kindergarten.

1/Elizabeth Lenora Enright, The Analysis of Kindergarten Children's Speaking Vocabulary in Relation to First Grade Reading Needs, Unpublished Master's thesis, Boston University, 1943.

"(1) Provide many first hand experiences that will stimulate speech—experiences with people, objects, events, and institutions in the immediate environment which have significance for children. Precede, accompany, and follow these experiences with discussion and informal conversation, in small groups as well as large, so that appropriate verbal labels may be attached to concepts.

(2) Encourage class enterprises that enable children to organize and verbalize their experiences and to take responsibility for making, carrying out, and reporting group plans.

(3) Supplement direct experiences with the use of picture books, pictures and other audio-visual aids suitable in content to children's backgrounds and interests.

(4) Provide time and opportunity for much free conversation as children engage in small group activities. Encourage children to talk informally about out-of-school situations. Recent studies indicate that much of the child's vocabulary is not used in school as it is usually conducted. Provide rich language experiences in addition to discussion and conversation, such as listening to the teacher tell or read stories or poems; engaging in dramatic or representative play; retelling and dramatizing stories; dictating to the teacher messages, plans, or labels for pictures.

(5) Encourage children to experiment with many kinds of materials—clay, paints, crayons, paper, cardboard, cloth, wool, blocks. Frequently the discussion growing out of the use of these media will further clarify concepts.

(6) Help individual children to overcome speech irregularities since such irregularities hinder speech development.

(7) Use "instructional" talk and procedures that will contribute to clarify the concepts. Interest children in words by discussing specific words appropriate to the occasion.

(8) Provide consciously for the organization and extension of meanings. Young children can illustrate words and sentences and the subsequent discussion can give children insight into various meanings of a word. Pairs of prepositions as UP, DOWN, and IN, OUT, lend themselves to this type of treatment."
Culkin believes: "The roots of reading are carefully cultivated in the kindergarten. The reading readiness established there greatly expedites the whole process."

Betts says that the best way to evaluate the child's ability in oral language is to observe him in action. He offers the following guide:

"(1) Background of experience.
   A. Does the child speak a foreign language in the home?
   B. Is he reasonably familiar with different types of children's literature?
   C. Is he reasonably familiar with his community?
   D. Does he have a reasonable amount of science information at his command?

(2) Social adjustments in language situations.
   A. Is the child a good listener?
   B. Does he know when to contribute to a discussion?

(3) Vocabulary.
   A. Does the child evidence a control over the many uses of words?
   B. Does he attempt to use new words employed by teacher and classmates?

(4) Sentence Structure.
   A. Does he have adequate control over complex and compound sentences as well as over simple sentences?
   B. Does he use sentences of at least six or seven words in length?

(5) Speech production.
   A. Is he reasonably free from defects?
   B. Is his speech understood by his classmates?

(6) Hearing comprehension.
   A. Does the child understand stories read to him?
   B. Does the child have a hearing impairment?

(7) Visual comprehension.
   A. Can the child interpret a picture sequence?
   B. Can he anticipate a conclusion?
   C. Does he have a visual defect?"


From her studies Anderson gleaned that phonic analysis is an important factor in teaching reading; that phonics should not be regarded as a distinct method of teaching; that all children do not need the same amount of phonic training; that phonics should be introduced after the pupil has acquired a vocabulary of from 60-75 words; that phonic training should be conducted at a separate period from that of the regular work in reading; that ear and voice training should precede eye training; and that short drills and games are desirable media for the teaching of phonics.

The above studies and the comments and suggestions of the aforementioned authorities on reading make us agree with Culkin that: "Language is the essential skill for beginning school work."

The Emotional Factor: A study was made by Wilking to determine whether personality maladjustment was a cause of reading disability. He said he could discover in the literature on the subject only one case where the emotional difficulty preceded the reading difficulty.


2/Mabel L. Culkin, op. cit. p.188.

Witty emphasizes the close association between subject failures and emotional disturbances. He quotes from many studies carried on at Northwestern University which present evidence of clear relationship between poor reading and emotional problems. He stresses their importance of preventing failures and concludes:-- "This can most effectively be accomplished by providing successful first experiences in reading."

We have not obtained conclusive evidence of the necessity for social and emotional adjustment as a basis of reading, Fink says, yet:--"The shock of finding themselves living for several hours of the day in the presence of thirty or forty other children is sufficient to cause emotional strain for certain children."

On the same subject the same author continues:--"Kindergarten teachers should be more concerned about the mental hygiene of their pupils than about their sense of rhythm, their memory of poems, or any other single phase of development."

1/ Paul Witty, Reading in Modern Education, D. C. Heath and Company, Boston, Massachusetts, 1949, p. 447

The part played by the emotions in our Reading-Readiness picture is clear to Harrison, who says:

"General emotional stability is one of the personal factors that is required before a child can react with intellectual efficiency to a new problem. Poor environmental background during his early years may make it quite impossible for him to meet the new and difficult situations without emotional strain. Difficulty in adjusting to the school situation may bring about emotional maladjustment to such an extreme that learning is interfered with. The kindergarten has among its aims those of stabilizing the child's emotional status and adjusting the child to the school situations."

In speaking of the emotional factor of Reading-Readiness, Smith says:--"At the outset the child must have the habit of success in all his undertakings."

According to Betts' social adjustment and emotional adjustment loom large among the many interrupted factors in readiness for reading. He continues:

"One of the chief goals of education is social adjustment; hence, one of the primary factors to be considered in readiness for reading is social adjustment. Personality is something to be achieved. Emotional conditionings during pre-school years and the early school years appear to contribute substantially to personality. Desirable adjustment is reflected in self-confidence, persistame, ability to concentrate attention on the task at hand, desirable school attitudes, and general emotional stability. Personality problems appear to influence behavior in reading situations in two ways. First, the personality of the

1/Lucille M. Harrison, Reading Readiness, Houghton Mifflin Company, Boston, Massachusetts, 1939, pp. 27 and 28.


beginner may facilitate or interfere with adjustment in reading activities. Second, inability to succeed in reading situations may produce undesirable personality traits. In short, personality characteristics may be casual or they may grow out of the reading situation. In any event, they are important factors for the teacher to consider. Social adjustment is one of the factors in readiness for reading that the teacher can do something about."

He emphasizes his belief as follows:

"Professional literature on readiness for reading emphasizes social and emotional adjustment as one of the major factors in success with reading activities. Some of the specific goals may be outlined as follows:

1. To stimulate a desire for and an interest in reading.
   1. to maintain the child's attitude of wanting-to-knownness, 
   2. to promote the child's insight into the relationships between symbols and the things for which they stand 
   3. to encourage the child to browse in books 
   4. to stimulate the child's interest in stories and books.

11. To broaden interests:
   1. to advance interests in various types of children's literature 
   2. to extend interest in environment 
   3. to promote interest in music, arts, and the crafts 
   4. to set the stage so that learning is a personal problem for the child 
   5. to develop attitudes of interest in the activities of others

111. To develop independent work habits:
   1. to develop habits of concentration for reasonable periods of time 
   2. to develop ability to assume responsibility for own supplies 
   3. to develop ability to assume responsibility for own conduct

4. to develop ability to follow instructions
5. to develop ability to work without interrupting activities of classmates
6. to develop the ability to begin an activity without dawdling
7. to develop the ability to plan a sequence of steps for completing a task
8. to promote a feeling of satisfaction in completing an activity

IV. To develop an awareness of pupil responsibility to the group
1. To develop the ability to co-operate with committee
2. to develop ability to plan group or individual activities under guidance of the teacher
3. to develop the co-operative attitude
4. to develop the ability to share ideas and possessions with other children
5. to develop the ability to participate constructively in an activity
6. to develop the ability to evaluate qualifications for leadership
7. to further the child's ability to concede individual ideas in favor of group decisions.

V. To promote social adequacy.
1. to encourage the pupils to make friends with teacher and other children
2. to promote ability to enjoy play activities with other children
3. to develop the ability to give and take in social activities
4. to promote self-confidence borne of self-respect
5. to develop an intelligent and reasoning attitude towards authority

VI. To develop courteous responses in social situations.
1. to develop poise in meeting people
2. to develop the ability to listen attentively
3. to sensitize the child to the need for taking turns in informal discussions and play activities without monopolizing the situation
4. to develop habits of courtesy in conversation, such as, "yes", instead of "uh--huh."
5. to develop habits of working without interrupting the teacher when she is working with other children
6. to develop a healthy attitude towards criticism.
VII. To develop loyalty.
   1. to encourage loyalty to group
   2. to encourage loyalty to school
   3. to promote religious tolerance
   4. to develop tolerance and pride in foreign parentage."

Bond and Wagner note that if the child is emotionally immature or insecure for any reason, his reading will suffer. Much the same idea is expressed by Storm and Smith who say: "It is not only what a child does that educates him. The emotional reactions which accompany the doing play a crucial part." And by Leary:

"Emotions are important determiners of success or failure in learning to read. No teacher can afford to take chances with an atmosphere that is anything but friendly, calm, and livable, free from strain and pressure, and from unnecessary noise and confusion."

And by Fuller:

"The child learns better when he is well adjusted; he is well adjusted when he lives in an environment where he feels reasonably secure; he feels secure when he is with contemporaries in situations where enough control exists to keep his pattern of living somewhat consistent, yet where enough freedom exists to permit free expression of his creative impulses."

1/Bond and Wagner, op. cit. p. 56.

2/Grace E. Storm and Nila B. Smith, Reading Activities in the Primary Grades, Ginn and Company, Boston, Massachusetts, 1930. p. 56.


Washburne also thinks the same:

"A child who is very much upset emotionally as a result of a home situation, as a result of trouble between his father and mother, or by being pushed at home, or by being pampered, or by jealousy of a younger brother is not emotionally ready to learn some of the things we would like to teach him."

Adams, Gray, and Reese have much to say concerning social adjustments:

"All persons need to feel wanted and to have a sense of belonging. A teacher's warm acceptance of each child is essential to his sense of well being. She must make him feel that he is a welcome and important member of the school family.

A smile, a pat, or a cheery comment will show a child the affection which the teacher feels. Ready appraisal of the child's accomplishments, no matter how minor, pays dividends. The teacher should discover the "isolates" and the "neglectees."

They list as the basal needs for social adjustment:

1. The desire for social approval
2. The desire for security
3. The desire for individuality
4. The desire for mastery
5. The desire for new experience.

An attitude of wholesome self-pride is essential to good mental health and reading-readiness.

Sociometric studies indicate that the child's status in the group affects his attitude towards school and leads to the conclusion that, in general, the more social relationship the happier the child, whether he is mentally bright or mentally dull. ....

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1/ Carleton W. Washburne, op. cit. p.33.
3/ Ibid p.115
Children who have developed the quality of self-dependence learn to read more easily. The skilled teacher sees to it that each child has his share of opportunity to participate in any activity, whether it is reading of experience stories, running of errands, or participating in games. She tries to make each child feel that he is contributing something unique and worthwhile to group undertakings. 

McKee speaks of the emotional disturbances connected with maladjustments in the home, in the school, and in other social situations. He suggests that the teacher, to help the emotionally immature, might:

1. Talk tactfully with child and perhaps with his parents to discover the cause or causes of his emotional disturbance.
2. Help the child to feel that you--his teacher--are his friend and to have confidence in you.
3. Help the child to be friendly with the other boys and girls and to act as a member of a group.
4. Help the child to gain self-confidence and to feel that he is important to others.

Hinks, after an experiment at Harvard with fifteen children, concluded that the intellectual difficulty is increased by the emotional traits.

1/Ibid. p.117


In a cooperative study of Reading-Readiness in Madison, the investigators found that about one fourth of the first grade children were socially unadjusted.

Brogan cites several cases showing how self-respect was postured in six year olds.

Broom places importance to music in the pre-reading program because it offers opportunity for the expression of feelings and emotions that are satisfying to children.

It is summed up by Witty in this way:

"Readiness for reading depends also upon emotional development and social maturity, which are reflected in a child's activities as well as in his social relationships. The child who is prepared best for reading is able to work in harmony with other children. He should be able to express his own ideas clearly. He should have developed the ability to give and sustain attention as he listens to stories. And he should have learned to approach new learning situations with feelings of self-confidence and security. Stable home environment and good classroom atmosphere contribute to development of these abilities."

It is clear that the reading authorities place importance to the emotional factor in reading-readiness, but it is clear we need statistical proof of its value.

1/Madison Public Schools, A Co-operative Study of Reading Readiness, Madison, Wisconsin, June 1937.


4/Paul Witty, "Reading Success and Emotional Adjustment", Elementary English XXVII, May 1950, p. 64.
Experience Factors.-- Lamoreaux and Lee speak of the need for plenty of experiences:

"A child must have a background of experience. Our only means of understanding, of interpreting what we see and hear and feel is through our own experiences, real and vicarious. When a child's background of experience is so limited that he can find in it no basis for interpreting the material he reads, it will have no more meaning for him than highly technical material in unfamiliar field would for us. Teachers must be very sure that every child has a background of experience to make the story meaningful."

Adams, Gray, and Reese offer six ways for broadening the general background and providing experiences:

1. Excursions about the neighborhood to a fire station, pet store, post office, house under construction.
2. Making things from clay and blocks of wood.
3. Teacher reading or telling stories.
4. Poems read or learned.
5. Pets brought to school and cared for.
6. Collections of various kinds.
7. Film strips.
8. Science corner."

Harrison stresses the fact that there can be no reading without meanings and that there can be no meanings without a wealth of concepts,


3/Lucille M. Harrison, Reading Readiness, Houghton Mifflin Company, Boston, Massachusetts, p.34.
"Types of first hand experiences.
1. Excursions
2. Social experience
3. Construction activities
4. Practical experience
5. Games

Vicarious experiences by means of:
1. Stories
2. Pictures
3. Poems
4. Songs
5. Discussing and relating experiences."

Experience she says should be in connection with fields of subject matter which are within the comprehension of the children and from which the story matter of first reading books have been taken.

" 1. Excursion to neighborhood grocery store
  2. A trip to any market garden
  3. A trip to the dairy
  4. A trip to Japanese florist
  5. A trip to campers greenhouses
  6. An excursion to a busy street corner
  7. An excursion to a railroad station
  8. To the airport to observe planes
  9. To a broadcasting station
 10. To a chicken hatchery
11. To a boy's house to see chickens and rabbits, pigeons, and ducks.
12. To a farm."

Social experiences in school give concepts:
  Birthday celebrations
  Entertaining others
  Sharing experiences and possessions
  The Toy band
  Dramatic activities

1/ Ibid
Construction Activities:
    Making toy airplanes
    Making a bus
    Making toy boats
    Making a booklet, vegetables, toys, fruit.

Practical experience:
    Jobs in the kindergarten
    Planting a garden
    Planting bulbs for gifts
    A kindergarten sale

Games:
    Playing shadow tag
    Playing zoo.

1/ Monroe believes the making of experience charts is valuable:

"The role of experience is of special significance when the child is introduced to reading materials. The first words to be read should be related to his own experiences at home and in school. The use of pupil-dictated charts offers an effective way of providing reading materials associated with first hand observation and experience. From these charts a vocabulary can be developed to constitute each child's basic stock of sight words."

2/ Cantor made a study of the knowledge, skills, and attitudes gained from nine planned kindergarten excursions. She states that more than two hundred concepts were given background in experience through excursions.

1/ Marion Monroe, op. cit. p. 93.

Culkin has much to say on the value of excursions. She cautions that such excursions must be organized carefully. The teacher's methods are informal, but she must know exactly what she is doing. She suggests carrying a basket to bring back souvenirs and allowing time for "talking" over the trip.

Waters studied the type of experience that pupils should have in order to read and understand the content of the readers used in the first grade. She then provided in the kindergarten types of experience in which the pupils were deficient and found that the experimental group made far more rapid progress in reading during the first grade than a control group which had not had similar experience.

In regard to providing wide experience, the opinion of many men is as follows:

"Pupils who are prepared to learn to read when they enter school usually spend from four to six weeks on reading lessons based on experiences before they are introduced. This is on the assumption that eighty or

1/Mabel L. Culkin, op. cit. pp. 59-74


more minutes are devoted daily to reading or to activities which prepare for reading lessons. Instruction of this kind should be continued until pupils acquire keen interest in reading and a sight vocabulary sufficient to enable them to recognize without help a large majority of words in a primer.

Instilling a Desire to Read.-- Another factor in the reading-readiness program is creating a desire to learn to read.

In her plea for better books for children, Smith declares:--"A love of reading is one of the greatest gifts which school or home can give to children, and love of reading is achieved first of all through finding pleasure in books."

So thinks Cole who says:--"A child who avoids looking at books, never looks at pictures, is not ready to read. Until he wants to learn there is not much use in trying to force him."

On the question of arousing interest in reading Storm and Smith write:

"Psychologists are agreed that interest is a fundamental factor in any type of economical learning. When an individual is keenly desirous of entering into an activity, there is available a fund of energy that is in a state of indifference or disaster. Interest begets attention and learning is acquired more rapidly and permanently


2/Lucille Cole, op. cit. p. 291.

3/Grace E. Storm and Nila B. Smith, op. cit. p. 121
when the learner is working at a high level of attention. All this emphasizes the importance of the kindergarten's contribution in building up interest in reading."

As a help in creating a desire for reading, the same writers suggest notices on the board to tell:

"You may water the plants, John. You may feed the goldfish, George. You may put the books neatly on the table, Rose. You may wash the blackboard, Mary. You may clean the erasers, Laurence."

Harrison also suggests:

"Because interest is a fundamental factor in any type of learning a wise kindergarten teacher shows how pleasure and satisfaction may be gained from the ability to read. Have a reading corner filled with attractive books. Having children from an upper grade invited to read to kindergarten children is good. Learning to write a few words on a typewriter stimulates an interest in reading."

Six ways of creating the desire to read are given by McKee as follows:

1. Teacher may read aloud. It is important to reading, however, that the success of the teacher's oral reading in stimulating the child's desire to learn to read depends almost entirely upon the degree to which the material fits the child's interests.

2. Plenty of picture books on low book shelves; it is not intended that the pupil read the text given in the books; the books are to serve as sources in which good pictures can be perused by the pupil, in which the teacher can find available selections to read aloud, and which the pupil can turn to go through interesting illustrated selections which teacher has read aloud.

3. Letters, records of group experiences, notices, rules, poems, etc. dictated by the class to the

1/Storm and Smith, op. cit. p. 66.

2/Lucille Harrison, Reading Readiness, Houghton Mifflin, 1939.

teacher may be printed on blackboard or reading chart.

4. A Scrapbook should be made containing good pictures representative of experiences of the class.

5. Pupils from the first or second grade may be invited to read aloud to the class.

6. Posters or printed directions should abound. Objects about the room may be labelled.

The research on this subject is scanty.

Motor Skills. -- Gessell's studies included motor skills emphasizing the hand and eye combination. At the five year age level he included under motor development; steadiness in the fish test, copying a square, a triangle, and a hexagon; tracing a cross, and copying a diamond in ink.

To quote Monroe:

"Poor motor control is often observed in children who show the following characteristics in reading:
1. Excessive reversals and repetitions
2. Erratic, impulsive behavior with frequent failure to attend to reading for more than brief periods.
3. Variations in the rate of reading such as very slow-rate or impulsively rapid, jerky, or spasmodic reading.
4. Stammering during oral reading.
5. Erratic, uncontrolled eye movement."

In September 105 first grade children were given the Gates Reading Readiness Test, the Pintner Cunningham Test of Mental Ability, the Murphy Test of Visual and Auditory Discrimination,

1/A. Gessell, Mental Growth of the Pre-School Child, Macmillan, 1926.

and an original test of Motor Skills. Reading achievement was measured by the Detroit Word Recognition Test in February.

It was a study by Saunders to show the relationship of certain readiness factors to achievement in beginning reading.

After analyzing the scores she concluded that:

1. All factors studied showed fairly low positive correlations.

2. The factors ranged in this order—

   - Mental age .545
   - Auditory .424
   - Visual .348
   - Readiness Tests .348
   - Motor Tests .027

3. A study of sex differences in the factors showed the correlations of auditory and visual discrimination and reading-readiness to be higher with reading achievement for the girls and mental age with reading achievement was higher for the boys.

4. Motor skills do not seem to be an important factor in reading-readiness.

As a summary of an investigation concerning the influence of muscular activity upon the formation of concepts, Mott concluded that children 51 to 72 months learn faster doing than seeing. "In other words, teach this age through his muscles." She says we do have some evidence that muscular activity is an aid to concept formation.

Monroe reminds us that reading is also a motor process requiring a delicate muscular adjustment. The eyes must be trained to follow a line of text, eyes and voices must be coordinated in oral reading, and movements of other parts of the body must be inhibited to a large extent during reading.

Betts believes that a child should not be forced to use the non-preferred hand for unimanual activities such as writing. The added burden is not worth the cost. He writes: "There probably is some degree of relationship between motor control and readiness for reading. Unfortunately, the development of motor control is given too little attention after the child leaves the kindergarten."

1/Sina Mott, Muscular Activity and Concept Formation", Child Development XVI, March-June 1945, p. 108

2/Merion Monroe, op. cit.

Hildreth observes that the child's development in motor co-ordination can be estimated by the teacher through observing the way he handles books, sits down, walks, skips, and runs; his deftness in catching and throwing things, his co-ordination in dancing, in going up and down stairs, in using playground apparatus, and in many other physical adjustments he is obliged to make. "The teacher should also observe the finer muscle dexterity used in the following activities: drawing and writing; handwork and artwork; use of chalk, crayons, paste, and scissors."

To aid in the appraisal of growth in motor control, New York City teachers have drawn up a check list of motor abilities for the first and second grades, as follows:

(1) large-muscle activity; walking, running, dancing
(2) small-muscle activity
(3) dexterity
(4) emotional reaction to motor activity.

The Oseretsky Motor Tests are simple to use in rating the child's accomplishments in motor skills.

Childcraft Teacher's Guide has an informal set of developmental tests.


2/ Exploring a First Grade Curriculum, A Cooperative Project in Three Selected Schools by a Committee of the Division of Instructional Research and Division of Tests and Measurements, Bureau of Reference Research, and Statistics, Publications, Number 30, New York City, Board of Education, 1942.

3/ Published by Educational Test Bureau, Minneapolis, Minnesota.

4/ Published by Guuarrie Corporation, Chicago, Illinois.
Other Factors: The afore-mentioned factors are mentioned by all the authorities. There seems to be a few odd factors that crop out here and there in the literature on the subject.

A. Kinesthetic Approach.—About 1920 Fernald and Keller introduced a method in teaching reading, the basis consideration of which was word-tracing or the kinesthetic approach. They felt it was necessary for the child to develop a certain kinesthetic background before he could apperceive the visual sensations for which the printed words are the stimulus.

Gates in a series of experiments showed that deaf children could learn without the kinesthetic-oral approach. He questions the validity of it.—"To quote Witty:—"It is clear that methods more natural than the kinesthetic can be used in the enabling children to note details and to build vocabularies."

B. Home Background.—The home background is seen as a strong factor by Betts:

"A potent factor in the child's development is the education and intelligence of the parents. A child's


3/Paul Witty and David Kopel, Reading and the Educative Process, Ginn and Company, Boston, Massachusetts, 1939.

4/Emmett L. Betts, op. cit. 127.
facility in the use of English may be conditioned by parents who speak only a foreign language in the home. Home background may have contributed to the development of a wholesome outgoing personality or to a withdrawing child, too dependent upon the parents.

Parents who hear reading lessons at home in the belief that they are helping the situation often do more harm than good. — Home background as a factor in readiness is something the teacher can deal with directly."

Hilliard and Troxell studied as an experiment the informational background as a factor in reading-readiness. Their study showed that, other things being equal, children with rich backgrounds are more strongly equipped to attack the printed page than are pupils of meager background, because of enriched meanings and thought which the former bring to the school task.

A study was made by Ladd at Columbia University concerning the social and economic characteristics in reading ability. In her conclusion she states:—"No marked relationships have been found between reading ability and gross scores on socio-economic status of the home."


2/Margaret Rhoda Ladd, The Relationship of Social, Economic, and Personal Characteristics in Reading Ability, Teachers College Contributions to Education, Number 582, New York Teachers College, Columbia University, 1933.
On the other hand, Witty and Kopel believe home background has a relation to success in reading. They assert on the same subject:

"Reading instruction should build upon language patterns established in the home. At home the child employs words which relate to his efforts in obtaining food, putting on clothing, and other natural activities. His vocabulary thus acquired should be used as the basis for his first reading activities. Increasingly, the value of rich and varied first-hand experience is being recognized in preparing the child to read."

Behrens studied the effect of social background and experiences and physical status of 206 first-grade children to reading-readiness and concluded that successful functioning of many factors assures success, which the inability of one or more may hinder the child in reading.

1/ Paul Witty, Reading in Modern Education, D. C. Heath and Company, Boston, Massachusetts, p. 56.

2/ Minnie Sophia Behrens, An Evaluation of Reading Readiness, Doctor's 1940, George Peabody College for Teachers, Peabody, Nashville, 1940.
C. The Part of the Parents.—Teacher should be ready, according to Murphy to give specific suggestions to parents of things they might do to insure success in beginning reading.

"(1). In looking at picture books, always ask questions concerning the picture which would cause the child to look from left to right.
(2). Be sure that he turns the pages in the correct order.
(3). Games of matching sounds detecting what a noise might be give good practice in auditory discrimination.
(4). Call attention to similarities in appearance of objects the child uses daily, as the shape of blocks and the colors in flowers."

D. Memory Span of Ideas.—The ability to read fairly complex sentences aloud and to say it again (without reversals, substitutions, omissions, or mutilating) is called "Auditory span" or "memory span for ideas." Betts and Van Wagenen have emphasized the positive relationship of this ability to first-grade reading and have developed tests to measure this "memory span for ideas."


Witty and Kopel believe these tests are secondary in importance to more important considerations such as background of experience and general maturation.

Summary:— All the reading authorities agree there is value to a program of Reading-Readiness. All admit the importance of the physical factors of sight, hearing, speech, and health as well as intelligence, visual discrimination, auditory discrimination, and language factors. Some educators include in the program, emotional factors, language factors, instilling a desire to read, motor skill, and some other factors. It is evident that a definite program for the before-reading period does exist, and that program is broad in its scope.

Witty and Kopel, op. cit.
CHAPTER 111

MATERIALS FOR READING-READINESS
CHAPTER III
MATERIALS FOR READING-READINESS

Introduction:—A broad program of Readiness, as was outlined in Chapter 11, makes use of many materials. This chapter treats of only a few of the ones most widely used.

Reading-Readiness Tests:—Much evidence has been accumulated during the past few years to prove the value of reading-readiness tests in predicting reading progress. A comprehensive summary of such was made by Robinson and Hall. They tried to discover to what extent the results of reading-readiness tests could be used as a basis for planning the readiness program for individual pupils. They set up five questions.

1. How reliable are the tests?
2. How well do they predict reading success?
3. What guides may be used in selecting the best reading-readiness test?
4. What is the relationship of reading-readiness tests to intelligence tests and rating scales as prediction of success?
5. If the present tests are limited, in their effectiveness, how may reading-readiness evaluation be improved?

1/Francis P. Robinson and W. E. Hall. Concerning Reading Readiness Tests, Bulletin of the Ohio Conference on Reading, No. 3, Columbus, Ohio State University, March 1942.
6. Can reading-readiness tests give teachers guidance in planning the instructional program for beginners?

They rendered the conclusion that reading-readiness tests are highly reliable, reliability coefficient tending to be in the .90's and that they are fairly good predictors of later reading success, but no better than intelligence tests and scarcely as good as reliable rating scales.

One of the earliest investigators was Deputy who gave first grade pupils a mental test, a visual association test, a word selection test, a visual-auditory association test. Correlations between the scores on the tests showed that the mental test provided the best single means of predicting reading achievement.

Later Lee, Clark, and Lee prepared a test which, according to their data, has a reliability coefficient of .97 and predicts scores on reading tests better than two intelligence tests and more accurately than did the kindergarten teachers through the use of a scale of qualities designed for the purpose.

1/ E. C. Deputy, "Predicting First Grade Reading Achievement--A Study in Reading Readiness", Contributions to Education, N-426, Teachers College, Columbia University, 1930.

Other reports on the predictive value of tests have been published by Wright, Gates and Bond, Broom, and Dean.

Hildreth suggests three methods for ascertaining how far beginners have advanced in readiness and mental development.

"(1). Observation and rating of the pupils when they respond in the classroom, and on the playground, when they are occupied with play materials, when they are associating with other children, and when they are talking with and responding to the teachers.

(2). Making reports—school records of parents concerning the home backgrounds and out-of-school experiences.

(3). Administering tests—primary group intelligence tests suitable for school beginners, general and composite readiness tests, readiness tests and readiness tests for specific subjects."


2/A. I. Gates and G. L. Bond, "Reading Readiness; A Study of the Factors Determining Success and Failure in Beginning Reading", Teachers College Record, 37, May 1936, pp.679-85.


5/Gertrude Hildreth, op. cit. p.44.
One educator would like a complete testing program as the following:

"In considering a testing program for purposes of predicting promotion and readiness for reading. It would be advisable to choose an individual test of readiness for reading if time can be arranged for testing each child individually. This would probably require an examiner or assistant teacher other than the regular kindergarten teacher. If this is not possible, a group test which tests a wide range of abilities is advised. In addition to one of these tests it would be very well to have the information provided by the tests of visual sensations and perceptions, tests of dominance, and tests of hearing.

One or more tests of intelligence are also desirable as additional measures of general ability and mental maturity. Such a battery of tests given at the close of the kindergarten year or beginning of the first grade, supplemented by observations of the abilities of each child by the kindergarten teacher in the learning activities carried on in the kindergarten should reduce the number of unsuccessful readers in the first grades to a minimum."

Pratt studied 266 children in Erie County, Pennsylvania, with two problems in mind. He found that pupils having previous experience in kindergarten ranked higher than non-kindergarten children on Reading-Readiness tests and that it was desirable to treat kindergarten and non-kindergarten children

1/Lucille M. Harrison, op. cit. 9.98.

differently in testing Reading-Readiness.

The Reading-Readiness test is preferred by Washburne who says:—"As between group intelligence tests and regular reading-readiness tests, the latter are probably slightly superior, A single group intelligence test does not give enough light on an individual child's development to be very helpful."

Bond and Bond name and describe the ten tests following:

(1). Group Test for Auditory Discrimination for Grade 1, Helen A. Murphy.

(2). Group Test for Visual Discrimination for Grade 1, Helen A. Murphy, Rhode Island College of Education, 1941.

(3). Beginning First-Grade Intelligence Tests by Anna M. Engel and Harry J. Baker, copyright 1935, World Book Company.


2/Bond and Bond, op. cit.


(9). Classification Test for Beginners in Reading, by Clarence R. Stone and E. C. Grover, Webster Publishing Company, St. Louis, 1933.


Hildreth says the most widely used Standardized Tests are:

2/Betts Ready-to-Read Tests
3/American School Reading Readiness Tests
4/Gates Reading-Readiness Tests
5/Lee-Clark Readiness Tests
6/Metropolitan Reading-Readiness Tests.


5/Murray J. Lee, W. W. Clark, Lee-Clark Reading Readiness Tests, Los Angeles, California, Test Bureau.

7/Monroe Reading Aptitude Test
8/Murphy-Durrell Diagnostic Reading-Readiness Test
9/New York Reading Readiness Inventory
10/Reading Readiness Test (individual)
11/Stone-Grover Classification Tests for Beginners in Reading.

7/Marion Monroe, Monroe Reading Aptitude Test, Boston, Massachusetts, Houghton Mifflin Company.

8/Helen A. Murphy and Donald D. Durrell, Durrell Diagnostic Reading Readiness Test, Yonkers, New York, World Book Company.

9/New York Reading Readiness Inventory, New York, Bureau of Reference, Research and Statistics, Board of Education.

10/K. J. Van Wagenen, Reading Readiness Test (individual), Minneapolis, Minnesota, Educational Test Bureau.

Harrison says that:

(1). Betts Ready to Read Tests attach merely the mechanics of the reading process and do not indicate readiness for reading for comprehension.

(2). Lee-Clark test is limited in its scope. It is of no great value as a test of reading-readiness for all phases. It is good to measure ability to see likenesses and differences.

(3). Metropolitan test is good. It takes four periods, but it is interesting to children.

(4). Monroe Test is excellent. Its only weakness is in measuring extent and richness of vocabulary.

Betts takes all the tests mentioned by last two authors and breaks them up into sub-tests.

To evaluate the Metropolitan Readiness tests in terms of how well they predicted later progress in reading, Grant tested 260 pupils in Cincinnati, Ohio in grade one. In September, he administered the Metropolitan Readiness Test and the Pintner Cunningham Primary Mental Test. In May achievement was checked with the Gates Primary Reading Tests.

1/Lucille M. Harrison, op. cit.
2/ Emmett L. Betts, op. cit.
3/Albert Grant, "The Comparative Validity of the Metropolitan Readiness Tests and the Pintner-Cunningham Primary Mental Test", Elementary School Journal, 38, April 1938, p.604.
His analysis of the data suggested these tentative conclusions: "(1) The Metropolitan Readiness Tests measure factors which are significantly related to later success in reading; (2) The Metropolitan Readiness Tests are on a par with the Pintner-Cunningham Primary Mental Tests in providing a basis for predicting later achievement in reading."

In Columbia University in 1934 a study was undertaken by Gates to test the value of types of tests. He considered his conclusions significant:

From the total list of test ratings, those who gave the best prediction of reading ability, one, two, or three years later were:

- (a) tests of word recognition
- (b) tests of ability to complete a partially told story
- (c) tests giving words which end with and which begin with same sound as a given letter
- (d) tests of blending word sounds given orally
- (e) test of reading letter of alphabet
- (f) ratings of previous instruction in reading.

They are tests of technique which can be learned and therefore taught.

Jellison compared twelve Reading-Readiness tests, noted the different items tested, and counted the number of times each item appeared. She discovered that visual discrimination has a total of 541 items in all twelve tests. Vocabulary items are


next with a total of 353 items, while information and memory follow, with 207 items and 152 items respectively. Auditory items totaled 137. Motor learning words and laterality had the least number of items with 59, 28, and 13 respectively.

Sullivan and McCarthy compared five tests of Reading-Readiness. They summarized the factors used and found that visual discrimination was the highest. The tests were the Lee-Clark, Metropolitan, Monroe, Van Wagenen, and Gates. The tests were administered and they tried to find the order of difficulty of the items treated, as a use for future tests. The rank order of difficulty was as follows:

1. Letter-card matching--capital;
2. Letter-card matching--small capitals
3. Picture card matching
4. Letter-card matching (small capitals)
5. Word matching
6. Picture matching test
7. Rhyming test
8. Word-card matching (capital)
9. Word-card matching (lower case)
10. Initial sound test
11. Motor co-ordination

They found no statistical differences in sex in the twelve tests.

According to Gates:

"The diagnostic value of a battery of reading-readiness tests is of greater general usefulness than the predictive services of such tests. The prediction of reading progress made by any of reading-readiness test or group of tests vary with the skill of the teacher in adjusting her instruction to individual needs."

As a result of a detailed study involving the use of the Pintner-Cunningham Primary Mental Test and a Reading-Readiness Test of seven parts, the same investigator concluded that both a mental test and a Reading-Readiness Test should be used in studying children. Each test supplements without supplanting the other.

Senour compared the value of the Detroit First Grade Intelligence Test and the Metropolitan Reading-Readiness Test. He found that either test may be used to advantage in predicting success in reading and that neither test has a distinct superiority over the other.

Witty and Kopel remind us that although the Van Wagenen and some of the other readiness tests have high validity coefficients, it must be remembered that these tests are valid as predictive devices only to the extent to which the children and their reading program are similar to the population and curriculum respectively on which the tests were standardized.


Wilson made an extensive study in the Horace Mann School at Columbia University and carried it on for several years to discover the value of reading-readiness tests. His conclusion was that they gave very little evidence of predictive value as to reading progress in grade one.

Gates believes that reading-readiness tests as constructed at present are not sufficiently reliable to use as instruments of prediction. Their chief value is a guide to indicate to the teacher areas in which the child's experience or ability needs supplementing.

In 1941, in Durham County, North Carolina an experiment was carried on to ascertain which was more effective in determining the groups for a first grade reading, readiness tests or teacher's judgment. The investigation proved that:

"The average estimate of the teachers for purposes of relative ranking is about as good as the best prediction obtained with readiness-to-read tests. But when groups of pupils are relatively homogeneous, as in the case when they are composed of retarded pupils, the tests may be used in helping the teacher to make the fine distinctions which are needed."

In the light of evidence it seems to Stone that many of the concepts required in some of the tests included in widely used


4/ Clarence R. Stone, op. cit.
batteries of readiness tests are not essential to early book reading and therefore are inappropriate for inclusion in reading-readiness tests. The same observations may be made with respect to many preparatory programs outlines in courses of study and also with respect to some reading-readiness workbooks. Hildreth suggests checking with the parents by means of a questionnaire of forty items. It would include such questions as: "Can the child put on his rubbers without assistance? And, is the child obedient most of the time?" She also mentions a check list for parents in which they are asked to indicate the various sorts of familiar life experiences the children had had before entering first grade and the use of anecdotal records by the teacher.

From the research submitted it appears that much has been written concerning the value of reading-readiness tests. Some of the evidence shows readiness tests superior to intelligence tests in predicting reading ability. Some readiness tests seem to rank higher than others. More intensive studies are needed in this area before definite conclusions are made.

1/ Gertrude Hildreth, op. cit. p.46.
Reading Materials for Readiness Period.-- Workbooks are often used in connection with the Reading-Readiness program, but there is no agreement on the subject of their value.

In speaking of the seat work which often preceded the pre-primer, Betts says:--"Much of the seat work is overdone and of little educative value---Poor habits are acquired unless the work is carefully supervised."

We are told by Adams that Reading-Readiness books are designed to give careful introduction to the skills needed in reading. One skill necessary for beginning reading is the ability to see likenesses and differences. In most books the child is presented with pictures some of which are alike. He picks the different one.

Hildreth warns that readiness booklets should be used with discretion. Teachers may fall back on readiness booklets instead of providing for beginners the fuller range of experiences. Teachers know that providing a more functional type of living and learning at school is a more difficult task than assigning work sheets lesson. She says that:--"These books should never be used.


in kindergarten."

Whipple says:

"Workbooks should not be assigned merely to keep pupils occupied, nor should they be given such a large part of the reading time that other types of materials are overlooked. Excellent summaries of the advantages and disadvantages of workbooks have been presented by Emmett, Bond, Hockett, and Ginzton, Stone, Gates, and Russell in comparing the progress of two beginning reading groups, distinguished between workbooks in the sense of preparatory books, and in the sense of service books, and reported unfavorable results in the use of extensive review materials."

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2/ Emmett L. Betts, op. cit.


Pupils found to be ready to undertake systematic learning to read soon after entrance in the first grade do not particularly need such material, says Stone. However, if no reading readiness test is available and suitable readiness workbooks are, the teacher can make a tentative grouping, start each group in the workbook, shift pupils from group to group as needed, and let the groups proceed at different rates through the workbook. Naturally those pupils rating high in readiness will progress rapidly, come to the end of the workbook in a relatively short time, and proceed in pre-primer reading.

There is, however, a great difference in readiness workbooks with respect to the functions for which training is given and in the effectiveness of the practice exercises provided. For example, to test visual discrimination adequately and to develop the skill effectively so as to function in the visual perception and discrimination of words in reading, we must go much farther than merely to have the children observe similarities and differences of drawings that are very large in comparison to the size of words. Furthermore, the number of items in a practice exercise must be large enough and the items must increase in difficulty sufficiently to bring improvement in the child's ability in visual discrimination of letters and words.

Stone, op. cit. p.291.
In writing of the important points of such workbooks, 1/ Stone states:

Too often the readiness workbook does not go much beyond merely having the children practice in observing likenesses and differences in drawings that are very much larger than the word form which they will have to be able to discriminate. Another plan relates to the number of items in a practice exercise that are required for the exercise to be effective in improving the child's skill in the function involved. Evidently a few large sized items of one page will not be enough. In the writer's judgment a practice exercise of this type should increase in difficulty, the items should preferably decrease in size, and the exercise should occupy at least two opposite pages in the workbook, making altogether twelve to twenty items.

From the same author, Stone, we quote the objectives in designing readiness-workbook pages:

"Objectives in designing reading-readiness workbook pages:

(1) To provide the experience and to develop the experience and to develop the concept most widely embodied in pre-readers. This object is attained through an abundance of pictures and their cooperative, conversational interpretation; through the responses involved in the exercises, and through correlated activities.

(2) To develop a sense of story sequence. This objective is attained through the use of many sets of pictures in sequence for cooperative interpretation on the part of the children under the guidance of the teacher.

(3) To develop word-form discrimination. In the early stages of learning to read, the child connects the right meaning to reading symbols by means of picture and context clues and word form clues. Lack of word-form discrimination and proper habits of perception accounts for most failures in beginning reading on the part of children with adequate mentality and background of experience.

1/Stone, op. cit. p.317.
Consequently many exercises for developing word form discrimination, especially word-form and letter-form discrimination, are needed.

(4) To increase the child's oral familiarity with the vocabulary. Picture-interpretation activities and many other exercises help the child to become more familiar orally with the pre-primer vocabulary from the standpoint of both meaning and correct pronunciation.

(5) To insure a successful start in word recognition. Too many children encounter difficulties in reading and develop wrong habits and unfortunate attitudes because they fail to make a successful start in word recognition. Hence a considerable portion of a readiness workbook may be devoted to interesting vocabulary-learning activities so that the child may have a working knowledge of the words appearing most widely and commonly in pre-primers.

Expert students of primary reading are generally agreed that pre-primer reading should be based upon visual perception and meaning, and that auditory or phonetic aids should not be introduced until later. Some authorities, however, think that some exercises in auditory discrimination should be included in the first readiness book."

In speaking of the fact that slow learners are guessers, Sullivan says:--"If teachers do not use the workbooks correctly and check them as the work is done, they shouldn't have workbooks."

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Hildreth\(^1\) approves of workbooks but believes that in the first grade they should be closely supervised so that bad habits, poor technique, and ignorance may be promptly detected.

Falk does not place high value on workbooks. They may, she hints, keep us from making more careful analysis and seeking more vital experiences. There are no-pencil-and-paper substitutes for taking the children out into the world and teaching them to see:—"No objective measure, workbook, nor other mechanical device can discover some of the more illusive but important aspects of non-readiness and compensate for them."

In the teachers' edition of their sub-primary workbook\(^2\) Durrell and Sullivan say:

"The purpose of "Steps to Reading" is to enable the child to develop, in accordance with his individual potentialities, the required background abilities for success in learning to read, write, spell, and converse." It begins with simple language and motor abilities; leads gradually into other abilities, appreciations, and specific skills; and finally develop progress with the basic phrases of two related abilities that are essential for successful reading—the ability to see differences between printed letters and words (visual discrimination) and the ability to learn the sounds in spoken words (that is called auditory discrimination)."

On the subject of Workbooks, again scientific evidence is lacking.

\(^1\)Gertrude Hildreth, "Reading Programs in the Early Primary Period", Reading in the Elementary School, Forty-Eighth Yearbook, Part II of the National Society for the Study of Education, Chicago, Illinois.

\(^2\)Ethel Mable Falk, "The Development of Basic Attitudes and Habits in the Primary Grades", Reading Readiness, Recent Trends in Reading, Vol. 1, Number 49, 1939, University of Chicago Press, Illinois, pp.45-60.

\(^3\)Donald D. Durrell and Helen Blair Sullivan, "Steps to Reading" Part 1, We Meet New Friends.
Experience Charts:— All the writers concur on the value of wide experience as a background for reading. This leads to the use of experience or record charts, and their use proves to be a controversial subject. As far back as 1924 it was written:

"Kindergarten and primary teachers should provide a wealth of interesting, vivid experiences about the home, the community, animals, flowers, trees, and the common relations of group and community life. Various group activities should be organized, such as gardening, caring for pets, building bird houses, etc. The pupils should be encouraged to discuss such experiences freely and to add rapidly to their stock of ideas. The larger the number of interesting experiences which they encounter, the broader will be their background for the interpretation of what they read. Simple stories, poems, and songs form a second source of valuable experiences."

The true purpose of reading charts as seen by Dolch is to develop the various kinds of readiness, school and language readiness, attention and interest readiness, and finally perceptual readiness.

Smith tells how one class used charts. The class prepared stories, poems, and news items to put in their books. They were composed by the teacher and children working together. The teacher wrote each sentence on the board as it was suggested.


Later she printed the sentences on a large sheet of paper. The next day they were read by the group from this printed chart.

After two or three days of this kind of work, the teacher prepared strips of sentences to correspond with those on the chart. As soon as a child could match and read all the sentences, he was permitted to paste a typed reproduction of the chart in his own book, which he was building up. Then he proceeded to illustrate the contents with crayon or water colors.

Miss Thurston tells how in Hartford, Connecticut, she developed reading-readiness. They made about three charts a week. She presented a blue and white gingham horse. They talked about it, drew its picture and then wrote four lines about it.

Because children are told what the chart says and repeat the lines largely from memory, the teacher should, Dolch says:

"(1) use the most natural phrasing; (2) pay attention to the repetition of words; (3) use short sentences and as few as possible; (4) divide sentences, when necessary, by phrase units."

Betts cautions that teachers who plan to build charts based on children's interests should acquaint themselves with the

1/Mildred Thurston, "How One First Grade Developed Reading Readiness", Childhood Education, 12, November 1935, pp.79-81.


vocabulary of children at a given age level. He lists what he terms as characteristics of desirable charts.

"(a) Stories based on class interests and experiences.
(b) Short one-line simple sentences. If the line is broken, it should be done only between phrases.
(c) Maximum of five or six simple sentences for beginners. (Avoid too many sentences in beginning lessons.)
(d) Vocabulary directed by teacher so as to prepare children for the vocabulary of pre-primers. (Avoid too many words in each lesson).
(e) Writing, preferably manuscript, done on blackboard or large sized chart-paper, oak-tag, or white wrapping paper.
(f) Lettering of printing done in large letters with wide lines and liberal spacing between the words and between the lines.
(g) Placed on level with the children's eyes."

According to the same writer, these are the chief advantages of the use of charts:

"(a) Left to right eye progression can be established under controlled conditions. Too frequently teachers take for granted such simple reading informations and skills. In addition to this, some children experience confusions, regarding the left-right eye movements.
(b) The large size type read at a distance of four to ten feet does not require the degree of visual acuity or eye coordination that reading small type at ten inches requires.
(c) Symbols are immediately associated with meaning because the group has thought out the content and the teacher has lettered or printed it for them. For the same reason, the materials possess added interest for the learner.
(d) Correct oral reading habits, such as pronunciation, can be achieved with the attention and help of the group.
(e) Silent reading habits, such as reading without lip movement, can be fostered with the aid of the group.
(f) A common center of attention is afforded the group.
(g) Children are provided with an opportunity to learn from each other.
(h) Experience charts are of interest to children because they have helped to build them."

1/ Emmett Albert Betts, op. cit. p.28.
We are told how to develop the experience records in a systematic sequence.

1. The children are prepared by means of special experiences and discussions.
2. A reason for recording the experience is clearly established.
3. A group decision is made regarding the organization of the record.
4. The preliminary draft is a cooperative enterprise.
5. The editing and final revision is done co-operatively.
6. The teacher or pupils puts the charts in permanent form.

Not all writers are enthusiastic about the use of experience charts. Some feel that most of the children read them on the basis of memory reading. Advocates of the method assert that reading which is based on children's immediate activities is more purposeful and interesting than that which is isolated from experience. However, Leary believes that experience reading method uses content that is too difficult and too extensive vocabulary. Also the teacher makes the chart stories from children's statements and she lacks the ability to do so. She says: - "Besides, experimentation shows that the experience method does not solve the problem of first grade reading because


it is based on the false assumption that all children are interested alike in group activities and will like to read about them."

Stone criticizes the experience method as an approach to reading:

"The theory that all reading activities must be related to, and grow out of, these activities, is psychologically unsound, unduly restricts the program in reading, and in practice fails to provide adequately for the instructional needs of children. It should parallel rather than supplant a systematic and sequential plan in beginning reading."

Another criterion comes from Dolch:

"Experience charts do develop the different kinds of readiness but they are not sufficient to develop a sight vocabulary because they are bound to use new words at a tremendous rate and are unable to give repetition to most of the words."

Murphy cautions the beginning teacher to be careful if she uses it because:

"She is apt to neglect to control the difficulty and scope of the material she writes. It is an excellent method of providing supplementary reading material if the teacher controls the vocabulary by using few new words at a time, and by providing many repetitions of words needed in sight vocabulary."

Of the same opinion are Bond and Wagner: They say: "The experience chart, if used, should be used as a supplementary aid.


2/E. W. Dolch, op. cit. p.133.


It has a positive contribution to make in the learning of reading."

The above evidence tends to make this student believe that the incidental reading of experience charts has an important place in beginning reading, yet it has its limitations as an adequate preparation for the basal textbook.

Audio-Visual Aids.—Adams, et al show the need for the ability to arrange pictures in sequence and to recognize the relationship of one picture to another. Until they have that ability it is useless to try to read stories as a thought-getting process, they believe.

Davis, et al conducted an experiment to determine the effect on reading-readiness of pictures presented on slides. They used 28 kindergarten children and followed their progress through several semesters. They decided that among other results the perceptual training given had facilitated progress in learning to read.

McCracken tells of using daily text-film strips to accompany the basic reader in Grade 1. He speaks of the need of the slow learners for more vivid explanations, more sensory experiences

1/Adams, Gray, and Reese, op. cit.

2/Louise F. Davis, Vivienne Ilg, K. Springer, and Doreen A. Hanck, Perceptual Training in Young Children, Monographson Language Arts published under the direction of the Research Department of Row, Peterson and Company, 1949, Number 56.

and more concrete illustrations. He says:

"The textfilm provides just such lesson approaches. We are inclined to assume that this new addition to our reading program is in a great measure responsible for the fact that very few of our first grade children seem to be below normal in reading growth."

Sitty tells of a filmstrip made by a first grade class. A child's goat was brought to class. The teacher photographed the pupils caring for their pet and they wrote a story to follow the picture story. They called it "The Stiff-Legged Goat."

Gray in speaking of film, says films provide motivation for the beginning reader and they help in vocabulary growth.

Crossley used lantern slides to teach sounds and develop language. She tried to find the affect on learning rate, auditory discrimination, and visual discrimination. Her conclusions were that:

(1) The experimental group was superior to control group in all analyses of auditory discrimination.
(2) No statistically significant difference in visual discrimination.
(3) There were significant differences in learning rate.
(4) It is possible to teach letters as beginnings and endings at the same time.
(5) No statistically important differences in sex.

Whipple believes that audio-visual aids are helpful at all grade levels.

1/Paul Witty, op. cit.
2/H. A. Gray, "Sound Film for Reading Programs," School Executive Number 60, February 1941.
Summary:-- Mention might be made of flannelgraph picture charts, phonograph records, and endless others. There appears to be an endless line of available audio-visual aids.
SUMMARY

The preceding chapters indicate that real progress has been made in understanding the factors that contribute to Reading-Readiness and in developing measures that predict success in learning to read. With the facts available it should be possible to initiate other studies that will clarify thinking on the requisites of learning to read.

It is summed up for us by Betts when he says:

"A well-planned, differentiated program for the development of reading readiness should result in certain gains that would at once enlist the co-operation of school board members, administration officers, and parents. Some of the outcomes can be briefed: First, reduction of pupil failures; second, elimination of much of the remedial instruction by shifting the emphasis to differentiated instruction; third, intelligent co-operation of parents and teachers to the end that the broad goals of education are achieved; fourth, better adjustment of pupils; fifth, enlistment of teacher interest in reading readiness on an all-school basis. Schools are operated for children; hence, the emphasis should be placed on the resulting pupil adjustments."

1/ Emmett L. Betts, op. cit. P. 277.
SUGGESTIONS FOR FUTURE STUDY

1. Studies are needed to isolate factors which have thus far not been established as essential to the reading-readiness period.

2. Studies of the progress of individual children before, during, and after the reading-readiness period are needed.

3. The advisability of requiring a complete physical examination before entering school can be studied on a long-term plan.

4. More evidence is needed of the necessity for social and emotional adjustment as a basis for reading. Is adjustment a corollary of success, or can it be secured before reading begins? Does adjustment during the readiness period insure adjustment through reading progress of elementary school?

5. More study is needed on how to take reading-readiness into the home, or stated differently, a study of parent education for participation in reading-readiness is needed.

6. We should seek to discover what experiences are important in order to acquire concepts to make beginning reading meaningful.

7. More scientific studies could be undertaken to rate the value of various ways of utilizing the workbook.
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