

A CLINICAL PSYCHOLOGICAL STUDY

OF THE ATTITUDE OF CHILDREN

TOWARDS READING.

An Investigation
of the Relationships
between Reading achievement,
Attitude towards Reading and Intelligence.

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by

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* * * * *

F O R E W O R D.

Although the problem of reading disability in school children has received much attention from educational and experimental psychologists, it was felt that a clinically-oriented study might throw further light on the factors affecting the reading achievement of children.

No one could claim that a complex phenomenon such as reading disability results from one simple cause. Excluding those dyslexias directly traceable to organic abnormalities and those associated with manifest intellectual incapacity, it is probably true as D'Espallier *(1954) suggests, that each child's dyslexia is a unique case. (See case histories, Chapter VI)

Intelligence and motivation are two aspects of individuality which immediately come to mind as playing roles in determining reading achievement. Since reading is an activity carried on satisfactorily by the great majority of the literate population, it seems unwise to regard it as a specific ability or aptitude. Nevertheless this view often underlies assumptions made about reading in the earlier years at school. For example, it is often tacitly assumed that a pupil's reading ability is below average, when in fact the problem is a motivational one. Another source of error, at the opposite extreme, is that when intelligence is adequate or above average, and reading achievement is low, then
the/.....

* Refer to bibliography for full reference where author and date are given.

the explanation is to be found in poor motivation. This hypothesis is tenable to some extent, but the term "motivation" in such a context is apt to be taken as referring to general motivational level and even to temperament. Disparity between intellectual capacity and educational performance has been studied by Edelman (1950) who concluded that in such cases some influence of an emotional nature was at work, interfering with capacity to use intellect consistently in life situations. He distinguished five categories illustrating the main variations of this type of influence. In the first, the disturbance is largely of external origin; here the most important background feature is unsatisfactory home conditions. The second to fifth categories are respectively exemplified by reaction, character formations, infantile neuroses, constitutional character defects, and psychopathic states, including early psychoses. Only the first of Edelman's categories concerns us here.

The initial hypothesis of the present investigation was that reading difficulty might reflect a specific motivational problem, revealing itself in the child's attitude towards reading. This attitude might also be traceable to external factors such as the home environment. In other words, a study of this hypothesis would be expected to throw some light on the interrelationships of intelligence, motivation and reading achievement. Motivation should have an effect on attitude and this effect should be clearer if a specific attitude to reading, rather/.....

rather than a general attitude, say to school, teachers, etc., were measured.

Accordingly an account is given of an attempt to construct such an attitude scale, and the relationships between scores derived from this scale and intelligence and objectively measured reading achievement. This is preceded by a brief survey of the literature, including previous studies of both internal and external factors affecting reading performance.

* * * * *

CHAPTER I.

PREVIOUS INVESTIGATIONS OF PHENOMENA RELATED
TO READING ACHIEVEMENT, WITH PARTICULAR
REFERENCE TO ATTITUDES.

Both reading and writing difficulties were conceived of by Vermoere (1955) as difficulties in learning of language. Consistent with this view is Robinson's (1955) definition of reading as a series of complex activities carried on smoothly and without observable effort by the mature reader. Robinson insisted that learning to read cannot be considered apart from the total learner, or the total situation, but must be regarded in the light of the interaction between the factors characteristic of the learner himself (henceforth referred to as "internal factors") and those outside the learner ("external factors"). This puts the problem into the clinico-social framework with reference to which the present study was conducted. Studies of these two groups of factors are separately recounted below. The relationships between attitudes and reading performance are discussed under external patterns.

(a) INTERNAL FACTORS.

1. BIOCHEMISTRY.

One of the more imaginative studies in this field was reported by Eames (1953) who examined the/.....

the hypothesis that there is a relationship between blood chemistry and reading failure. A group of children with reading difficulties was found to possess certain variations in haemoglobin and cell count and 20% of the group showed abnormal cell forms. Eames concluded that "anaemia in the broadest sense" may be a possible contributory factor to reading failure.

2. PHYSICAL GROWTH

The relationship between achieved growth in height and the beginning of growth in reading was the subject of an investigation by Nally (1953). It was reported that 42 boys began to read at a mean percentage of 72.4 (s.d. 1.2) % of development in height. The figure for a group of 35 girls was 76.3 (s.d. 1.2) %. This was held to indicate a relationship between growth in height and in reading.

3. PERSONALITY.

The personality structure of reading failures might be expected to provide a fruitful field of study. Although personality is to such a great extent a psycho-social matter, it is dealt with under this heading as an introduction to an account of studies of intelligence. Siegel (1954) proposed

two/.....

two hypotheses regarding personality structure and reading : Firstly, that no single personality pattern is characteristic of reading failure, and secondly, that the range of personalities within a population of reading disabilities might not be significantly different from that of other children with emotional problems. The latter hypothesis was based on the frequent observation of emotional disturbance in children with reading disability. Siegel studied two groups of children at the Brooklyn College Community Centre. Both groups comprised male children between 8 and 14 years. The first group was 2 years retarded in reading achievement, the second was not retarded. Various diagnostic tools were employed : case-history, the revised Stanford-Binet-Scale, the Cornell-Coxe performance Ability Scale, the Rorschach and the Stanford Achievement Tests. Both groups were found to be "markedly disturbed", showing excessive anxiety, insecurity, feelings of inadequacy, and conflict of a neurotic nature. The first hypothesis was thus supported. Regarding the second hypothesis, Siegel reported that "there was no 'typical' or discrete personality pattern which could be considered characteristic of either group."

Another report of a Rorschach study of retarded readers also appeared in 1954 (Meyer). The Chicago Reading Tests were given to 51 pupils at
the/.....

the beginning of the 3rd grade (Std. 4) for whom Rorschach scales had been obtained during their kindergarten period. There were 19 retarded and 19 non-retarded readers, matched for age and for I.Q. on the Stanford-Binet Scale. There were two differences in the Rorschach records from these groups; firstly in ability to differentiate perceptually beyond rather inaccurate, vague and mediocre perceptions, and secondly, in rapport with the environment. Most of the differences in the Rorschach signs, claimed Meyer, "seemed to reflect to a considerable degree both the adequacy of personality adaptation and intellectual level," and suggested a prognostic value for the Rorschach in this field.

In the light of Siegel's findings in relation to perceptual development, a study published in the previous year should be mentioned. Coleman (1953) attempted to measure "perceptual age" and to determine its relationship with reading achievement. Perceptual age was distinguished from mental age. The subjects were 40 males in need of remedial reading. Scales were derived from the Alpha Test of the Otis Quick-Scoring Tests. Retardation of 10 months or more was found in 20 cases.

Returning to personality studies, the Rosenzweig Picture Frustration Study was applied to children
in/.....

in a reading clinic aged 6 to 14 years. (Spache, 1954). Comparison with the Rosenzweig norms revealed that the retarded readers appeared to be "significantly less insightful, and less apt to accept or to acknowledge blame." Spache concluded that the average retarded reader is a candidate for play-therapy or some other psycho-therapeutic approach.

At the college level, Holmes (1954) administered 3 tests of personality adjustment to a total of 220 students, half of whom were "powerful" and half "non-powerful" readers. He obtained 14 factors and concluded : "A differential analysis of the personality traits does not reveal any distinctions peculiar to the non-powerful group of readers."

In summary, the relationship between personality pattern and reading disability are found by Siegel (1954) and Holmes (1954) to be non-specific. Specific relationships were claimed by Spache (1954).

4. INTELLIGENCE.

Turning now to more specific abilities and intelligence, the following are representative studies published over the past five years : French (1953) started from the assumption that a child who has difficulty in receiving or retaining visual, auditory or kinesthetic cues, or in combining these cues to
form/.....

form a "word-meaning," might encounter difficulty in learning to read. French developed a test of kinesthetic recognition, and, administered it to a group of children who were retarded in oral reading for no known extrinsic or intrinsic cause. The results were compared with a group of non-retarded readers, matched for chronological age, mental age and I.Q. The scores of the retarded readers were found to be significantly inferior to those of the non-retarded readers.

The influence on reading achievement of verbal and non-verbal aspects of intelligence was investigated by Triggs, Cortee, Binks, Foster and Adams (1954). The subjects were 40 pupils in Grades 4 - 6 and 86 pupils in Grades 7 - 12. Scores on the Wechsler-Bellevue Scale and the Diagnostic Reading Tests showed that verbal intelligence was more closely correlated with reading achievement than was non-verbal intelligence.

Of incidental interest is the finding of Stromer (1954) from a study of some of the relations between reading, listening and intelligence. Various aspects of the Wechsler-Bellevue Scale did not discriminate between good and poor listeners.

Complex relationships between aspects of intelligence and reading achievement were found by Burks and Bruce (1955) who employed the Wechsler Intelligence Scale for children. Poor readers
obtained/....

obtained significantly lower scales or information, arithmetic and coding subtests, and significantly higher scores on picture arrangement, block designs and comprehension. Good readers were significantly higher on the similarities subtest. It was concluded that poor readers tend to approach learning situations in a concrete manner, lacking the ability to handle abstractions. Good readers, it was claimed, show a better ability to use abstractions, and much more retentive ability.

The problem was approached from the opposite point of view by Manolakes and Sheldon (1955) who inquired into the effect of reading ability on I.Q. Correlations were computed between the total reading scales on achievement tests and the language functions of the intelligence tests. The results suggested the operation of other factors making the relationship between I.Q. and reading ability unclear.

Age of learning to read and its relation to sex, intelligence, and reading achievement were studied by Anderson, Hughes and Dixon (1956). The investigation was carried out on primary school children of superior intelligence. The criterion of having learned to read was a reading age (R.A.) of 84 months on the Gates Primary Reading Tests. Less than half of the subjects reached the criterion by 8 years 3 months of age. For the boys, the correlation of age of learning to read with I.Q. was .54, and with reading achievement .65.

The/.....

The corresponding figures for the girls were .65 and .67.

The data on the precise relations between I.Q. and reading ability are thus also somewhat conflicting.

(b) EXTERNAL FACTORS.

This section will deal with studies of environmental and particularly social psychological factors in relation to reading. Specific attention will be given to the development and significance of attitudes.

1. PREVIOUS TRAINING.

A recent contribution by East (1957) reports an investigation into the effect of kindergarten training on reading achievement in Grade I. There were 134 children with one year's kindergarten training and 46 with no such training. The groups with kindergarten training achieved significantly higher scores on all tests of reading. These children were slightly older than those without kindergarten training, but no relation could be found between age and test scores, suggesting that the kindergarten training did in fact exert a positive effect on subsequent reading achievement.

2. SOCIAL STATUS.

Social psychological aspects of reading have
received/.....

received attention from a number of authors.

In 1944, Bonney studied a group of elementary school children in order to establish whether their social status within the group was in any way related to intelligence. The upper quartile in social choice was found to be distinctly superior intellectually to the lower quartile, and Bonney, concluded that, there was a positive relationship between sociometric choice and I.Q.

Bonny's results were substantiated by Grossman and Wrighter (1948), in 6th grade students. It was in addition found that sociometric status was positively related to reading ability.

3. URBAN-RURAL FACTORS.

One report is available which deals with social psychological factors as causes rather than effects of relative reading disability. Martens (1954) assessed 8th grade children in one-room rural schools and those in graded town schools and found the latter superior in reading vocabulary, reading comprehension and total reading achievement.

4. CLINICAL ASPECTS.

The clinical-social aspect of reading achievement is underlined by Woolf and Woolf (1955) who, working with students, found that social and behavioural
problems/..

problems were alleviated by improving reading skills.

5. ATTITUDES.

This brings us to the point of departure in the present study. It is suggested as a hypothesis that attitudes developed in a social psychological framework and influenced by intellectual factors might be responsible to a considerable extent for the clinical symptom or syndrome of reading disability, with resultant and reciprocal social and individual psychological effects. This type of postulation no doubt lay behind the exhortation of Mead (1954) for further study in teaching experiences needed to improve the attitudes of scholars.

There is abundant evidence that specific attitudes are largely the result of the individual socio-cultural environment (Harris et al 1932); Carlson 1934; Morgan and Remmers, 1935; Stagner, 1936; Newcomb and Svehla, 1938. Intercultural differences in developed attitudes have been described by Hallowell (1937). Such differences are ascribed to heterogeneous and frequently contradictory elements within the cultural pattern itself, commonly lumped together under the heading "educational influences" and including besides formal schooling, the effects exerted by parents, friends, books, the cinema, etc. Of these/.....

these, the influences brought to bear on the growing child by the home environment are probably the most important. Murphy et al (1937) give a clear exposition of how the attitudes of parents (and thus their contribution to those of the child) are part of larger streams of cultural influences. Parents are thus the immediate educational device of society. The process of parental mediation of attitudes is illustrated by the studies of Horowitz (1936) on attitudes towards the Negro in the U.S.A., and of Queener (1947) on attitudes to peace. However, that there are limitations to this process, has been revealed by the work of Hirschberg and Gilliland (1942). It was concluded that, although the family is important in shaping attitudes or beliefs this does not imply that the child will necessarily take over such ready-made attitudes from the parents. This is dependent on the precise nature of the cultural influences to which the child is subjected. Krech and Crutchfield (1948) agree that the family is effective in shaping the attitudes of children but "in proportion to the degree to which their cultural influences operate in the same direction."

One of the more widely accepted definitions of the term attitude is "an enduring organization of motivational, emotional, perceptual and cognitive processes with respect to some aspect of the individuals world" (Krech and Crutchfield, 1948). Another

useful/.....

useful definition is that of Crafts et al (1950) :
"... a state of readiness to react in a characteristic way to specific objects or situations on the basis of factors related to the experience and the motivation of the individual."

Such definitions give ample reason to suspect a relationship between attitude towards reading on the one hand and reading performance on the other. Not only might one suggest that the attitude of the child will effect his performance. It is clear that minimal experience of reading might be expected to contribute to his attitude.

Relevant studies of the attitudes of children are not abundant. The attitude to school of children aged 7 to 13 years was measured by Fitt (1956), by means of a Thurstone-type scale of 30 items. The attitude of girls was more favourable than boys, and of secondary school pupils more favourable than primary school children. Of particular interest in the present context were the findings that the attitudes of brighter children were more favourable than those of duller children and that there was a positive relationship between socio-economic status and favourable attitude.

The relation between the expressed attitudes of school children and individual abilities is

high/.....

high, according to Mursell (1948) who reported correlations of the order of .3 between school achievement and attitude the school.

The only relatively recent study dealing specifically with attitudes, reading ability and intelligence, appears to be that of Murfin (1952). His scale contained 150 statements designed to measure attitude to school, teachers, intellectual and cultural refinements, ambitions and occupational goals, restrictions of freedom, and parental attitudes towards education. The subjects were 4th to 6th grade pupils in two schools. Murfin's conclusion was that "... the I.Q. or knowledge of the socio-economic status of pupils are better means of prediction of reading achievement than the score secured by the attitude scale."

However, there was a positive relationship between expressed attitudes on this scale and success or failure in reading. Lower quartile readers held significantly more detrimental attitudes than did upper quartile readers. Furthermore, with I.Q. constant, "reading achievement was improved by the addition of a favourable attitude." Murfin suggested that the home background and attitude of the parents may be a vital factor in the low reading achievement of pupils in some communities. (c.f. Martens 1954). Two years after the publication
of/.....

of Murfin's report, appeared a study by Grayson (1954) on the effect of parents' attitudes on childrens reading. She delineated 3 possible ways in which this effect is exerted : firstly through the home environment, secondly, the interaction of the home and school environments, and thirdly, through emotional conditioning.

The investigations described in this chapter seemed to justify further study of the relationships between reading ability and intelligence, and, more particularly, between reading ability and attitudes more specific than those measured by Murfin, namely attitudes towards reading itself.

CHAPTER II.

M A T E R I A L.

The subjects were all pupils in an English medium Government primary school in Johannesburg. The school is situated in an average socio-economic district and the vast majority of pupils are drawn from this area.

The routine procedure in cases of reading difficulty is for the class teacher to refer the child for remedial reading on the basis of assesment of close performance. Employing this criterion, 80 children were included in the experimental group. They were drawn from Standards II to V. There were 40 boys and 40 girls. The age range was 8 years 10 months to 12 years 9 months. The mean age of the boys was 10 years 10 months (s.d. 1.1479 years) and of the girls 10 years 10 months (s.d. 1.1551 years).

This group was further subdivided into four age groups, each containing 10 boys and 10 girls (see tables Ia, b, c, d).

A control group of 40 boys and 40 girls, matched for age and sex, was selected and similarly subdivided. (See tables IIa, b, c, d).

In both groups the ages taken were those at the

end/.....

end of the second school term (June) in 1957.

In order to ensure anonymity a combination of initials was used in stead of subject's full name.

TABLE I(a)

EXPERIMENTAL GROUP.

SUBJECTS IN NEED OF REMEDIAL READING.

GROUP I - 8 years 10 months - 9 years 9 months.

BOYS:

No.	Subjects	Date Birth	Age end June 1957.
1.	R.G.	17. 2.48.	9.33
2.	T.J.	2. 5.48.	9.17
3.	T.F.	6.11.47.	9.67
4.	B.F.	30.11.47.	9.58
5.	G.J.	14. 3.48.	9.33
6.	B.G.	25. 6.48.	9.00
7.	G.V.	7. 4.48.	9.25
8.	A.W.	24. 8.47.	9.83
9.	G.B.	16. 7.48.	8.92
10.	G.J.	2. 9.47.	9.83

GIRLS:

No.	SUBJECTS	Date Birth	Age end June 1957.
1.	B.A.	18. 8.48.	8.83
2.	D.B.	5.11.47.	9.67
3.	M.B.	31.10.47.	9.67
4.	G.D.	21.10.47.	9.67
5.	J.G.	1. 2.48.	9.42
6.	H.I.	17.12.47.	9.50
7.	A.M.	14. 2.48.	9.42
8.	A.R.	7. 5.48.	9.17
9.	M.W.	5. 5.48.	9.17
10.	J.M.	13. 3.48.	9.33

TABLE I (b).

EXPERIMENTAL GROUP.

SUBJECTS IN NEED OF REMEDIAL READING.

GROUP II - 9 years 10 months - 10 years 9 months.

BOYS:

No.	Subjects	Date Birth	Age end June 1957.
1.	E.B.	15. 9.46.	10.75
2.	F.B.	22.11.46.	10.58
3.	B.H.	24. 9.46.	10.75
4.	T.K.	26. 7.47.	9.92
5.	I.H.	13.12.46.	10.58
6.	R.H.	20. 2.47.	10.33
7.	B.M.	26.10.46.	10.67
8.	I.M.	20. 6.47.	10.00
9.	N.S.	20. 5.47.	10.08
10.	J.R.	2. 2.47.	10.42

GIRLS:

No.	Subjects	Date Birth	Age end June 1957.
1.	E.C.	12.12.46.	10.58
2.	J.D.	24. 5.47.	10.08
3.	G.D.	29.11.46.	10.58
4.	B.P.	17. 3.47.	10.25
5.	R.M.	23. 3.47.	10.25
6.	B.K.	18.11.47.	10.58
7.	D.E.	18.11.47.	10.58
8.	A.L.	16. 1.47.	10.42
9.	M.S.	7. 5.47.	10.17
10.	M.V.	3. 3.47.	10.33

TABLE I (c)

SUBJECTS IN NEED OF REMEDIAL READING.

GROUP III - 10 years 10 months - 11 years 9 months.

BOYS:

No.	Subjects	Date Birth	Age end June 1957.
1.	L.B.	28. 9.45.	11.75
2.	Q.E.	17. 7.46.	10.92
3.	R.E.	12.12.45.	11.58
4.	R.F.	7. 8.46.	10.92
5.	L.H.	25. 8.46.	10.83
6.	K.R.	28.12.45.	11.50
7.	K.M.	5. 4.46.	11.25
8.	D.M.	26. 2.46.	11.33
9.	B.T.	11.12.45.	11.58
10.	B.S.	14. 2.46.	11.42

GIRLS:

No.	Subjects.	Date Birth	Age end June 1957.
1.	P.A.	18. 5.46.	11.08
2.	B.A.	11. 7.46.	11.00
3.	W.F.	22. 5.46.	11.08
4.	I.H.	18. 6.46.	11.00
5.	E.M.	13. 5.46.	11.17
6.	A.M.	12. 3.46.	11.33
7.	L.M.	17. 4.46.	11.17
8.	V.S.	18. 3.46.	11.25
9.	S.A.	17. 5.46.	11.08
10.	H.Z.	10.12.45.	11.58

TABLE I (d)

EXPERIMENTAL GROUP.

SUBJECTS IN NEED OF REMEDIAL READING.

GROUP IV - 11 years 10 months - 12 years 9 months.

BOYS:

No.	Subjects	Date Birth	Age end June 1957.
1.	D.C.	18. 9.44.	12.75
2.	N.C.	30. 5.45.	12.08
3.	J.E.	21. 8.45.	11.83
4.	S.E.	5. 3.45.	12.33
5.	J.H.	27. 8.44.	12.83
6.	K.L.	26. 7.45.	11.92
7.	C.L.	3. 4.45.	12.25
8.	T.P.	7.11.44.	12.67
9.	D.T.	23. 2.45.	12.33
10.	A.V.	6.10.44.	12.75

GIRLS:

No.	Subject	Date Birth	Age end June 1957.
1.	J.A.	18. 2.45.	12.33
2.	G.C.	26. 7.45.	11.92
3.	B.D.	5. 6.45.	12.08
4.	K.A.	8. 7.44.	13.00
5.	J.F.	21. 7.45.	11.92
6.	M.F.	16. 9.44.	12.75
7.	H.J.	21. 3.45.	12.25
8.	L.L.	6.11.44.	12.67
9.	C.M.	23. 9.44.	12.75
10.	L.M.	12. 8.44.	12.92

TABLE II (a)

CONTROL GROUP.

GOOD READERS.

GROUP I - 8 years 10 months - 9 years 9 months.

BOYS:

No.	Subjects.	Date Birth	Age end June 1957.
1.	P.G.	13. 1.48.	9.50
2.	T.H.	11. 9.48.	8.83
3.	K.H.	1. 2.48.	9.42
4.	A.J.	17. 2.48.	9.33
5.	K.K.	- . 4.48.	9.25
6.	J.S.	6. 6.48.	9.08
7.	N.J.	3. 9.48.	8.83
8.	R.G.	12. 2.48.	9.42
9.	B.E.	28. 9.47.	9.75
10.	M.R.	29. 5.48.	9.08

GIRLS.

No.	Subjects.	Date Birth	Age end June 1957.
1.	J.E.	30. 5.48.	9.08
2.	E.A.	16. 4.48.	9.17
3.	E.A.	19. 1.48.	9.42
4.	J.G.	27. 3.48.	9.25
5.	M.A.	21. 3.48.	9.25
6.	R.S.	2. 7.48.	9.00
7.	W.S.	29. 9.47.	9.75
8.	D.V.	14.10.47.	9.75
9.	R.C.	23. 3.48.	9.25
10.	P.S.	7. 9.47.	9.83

TABLE II (b)

CONTROL GROUP.

GOOD READERS.

GROUP II - 9 years 10 months - 10 years 9 months.

BOYS:

No.	Subjects	Date Birth	Age end June 1957.
1.	M.F.	7. 3.47.	10.33
2.	P.S.	14. 4.47.	10.25
3.	R.F.	28.12.46.	10.50
4.	G.P.	25. 2.47.	10.33
5.	P.G.	3. 5.47.	10.17
6.	D.J.	24. 3.47.	10.25
7.	A.S.	1. 4.47.	10.25
8.	A.T.	29. 8.46.	10.83
9.	L.T.	7. 6.47.	10.08
10.	J.M.	13.10.46.	10.75

GIRLS.

No.	Subjects	Date Birth	Age end June 1957.
1.	M.L.	10. 1.47.	10.50
2.	V.M.	9.10.46.	10.75
3.	S.K.	11.12.46.	10.58
4.	S.L.	24. 9.46.	10.75
5.	N.M.	12.11.46.	10.67
6.	L.O.	7.10.47.	9.75
7.	D.S.	8.11.46.	10.67
8.	E.L.	18. 3.47.	10.25
9.	J.A.	30. 9.47.	9.75
10.	P.H.	8. 6.47.	10.08

TABLE II (c)

CONTROL GROUP.

GOOD READERS.

GROUP III - 10 years 10 months - 11 years 9 months.

BOYS :

No.	Subjects	Date Birth	Age end June 1957.
1.	P.A.	3. 3.46.	11.33
2.	P.E.	17. 4.46.	11.17
3.	N.D.	14.12.45.	11.58
4.	G.D.	2. 5.46.	11.17
5.	D.J.	28. 3.46.	11.25
6.	O.R.	16. 3.46.	11.25
7.	P.H.	7. 4.46.	11.25
8.	J.V.	6.5. 46.	11.17
9.	D.F.	13. 1.46.	11.42
10.	I.W.	20. 2.46.	11.33

GIRLS:

No.	Subjects	Date Birth	Age end June 1957.
1.	S.A.	2. 5.46.	11.17
2.	J.M.	13.12.45.	11.58
3.	E.E.	29. 6.46.	11.00
4.	L.G.	8. 1.46.	11.50
5.	Y.K.	3.10.45.	11.75
6.	E.H.	12. 4.46.	11.25
7.	C.C.	19.12.45.	11.50
8.	L.S.	6. 5.46.	11.17
9.	M.J.	19. 7.46.	10.92
10.	L.W.	2. 6.46.	11.08

TABLE II (d)

CONTROL GROUP.

GOOD READERS.

GROUP IV - 11 years 10 months - 12 years 9 months.

BOYS :

No.	Subjects	Date Birth	Age end June 1957
1.	D.A.	11. 8.45.	11.92
2.	A.C.	3. 6.45.	12.08
3.	E.F.	21. 9.45.	11.75
4.	J.K.	22.12.44.	12.50
5.	V.L.	25.10.44.	12.67
6.	L.J.	5. 7.45.	12.00
7.	E.A.	8. 1.45.	12.50
8.	R.P.	2. 6.45.	12.08
9.	G.L.	29. 8.45.	11.83
10.	A.J.	7. 9.45.	11.83

GIRLS .

No.	Subjects	Date Birth	Age end June 1957.
1.	J.M.	6. 8.44.	12.92
2.	L.B.	10. 9.45.	11.83
3.	B.A.	9. 8.44.	12.92
4.	J.C.	27. 9.44.	12.75
5.	A.E.	12.11.44.	12.67
6.	D.J.	15. 6.45.	12.00
7.	P.H.	4.10.44.	12.75
8.	S.A.	23. 9.44.	12.75
9.	I.G.	18. 2.45.	12.33
10.	M.S.	11. 7.45.	12.00

CHAPTER III

M E T H O D .

Scores were derived from the New South African Group Scale of Intelligence, the Holborn Reading Scale and an attitude scale designed to measure attitude towards reading. Each of these is described separately below:

(a) THE NEW SOUTH AFRICAN GROUP SCALE OF INTELLIGENCE.

The New S.A. Group Test was devised with the intention of being used for classification, for screening and for educational guidance. It was meant to give an indication of the level of an individual's intelligence in general, and also in different abilities. The test includes verbal, numerical and pictorial matter, mainly of the reasoning type, but excludes form perception. It consists of different sub-tests containing homogeneous material.

Separate tests have been standardised for Afrikaans and English speaking individuals, and provision has been made for three age series, viz. Junior (8 - 11 years), Intermediate (10 - 14 years) and senior (13 - 18 years). For each series there are three alternative forms, A, B and C. Thus there

are/.....

are 9 tests for each language group, making 18 tests altogether. Each test consists of 6 sub-tests each of which contains 25 items. Three sub-tests are combined to give a non-verbal score and the other three to give a verbal score. The sum of the two scores gives the total score.

Five practice examples are given at the beginning of each sub-test. The questions are all of the multiple-choice type, in which the testee is required to indicate the correct one of five possible answers.

Provision has been made for the conversion of raw scores into I.Q.'s and percentile ranks. It can also be determined with which age group an individual compares, i.e. for what age the score he obtained is the average. This I.Q. does not make use of mental age, nor is it calculated by Binet's method. The norm provided is a standardised score on a normalised distribution, with an average of 100 and a standard deviation of 15 for each age group.

In the present study the I.Q. derived from this test was not itself employed. Instead, as described above, the age group for which the individual's scale was average was established, this being regarded as the child's "Mental Age" (M.A.)

* * * * *

(b) THE HOLBORN READING SCALE.

(Watts, 1948)

In this test progress in reading is shown in the ability to derive meaning from increasingly difficult passages of prose and poetry.

The ability to derive meaning from a printed passage can be discovered, according to the stage reached, by asking the reader to point out in an accompanying picture objects and actions named by the words read, or, by asking the reader to answer questions on the subject matter, or to reproduce the meaning of it.

In order to obtain objective data, recourse must be had to standardized reading scales.

The best known reading scales in England are those of Burt (1921), Ballard (1920), Vernon (1940) and Schonell (1942), and the more ambitious American reading scales include, among others, the Pressey Diagnostic Reading Tests, the Gates Primary Reading Tests, the Haggerty Reading Examination, the Detroit Word-recognition Test, and the Gray Standardized Oral Reading Check Test.

With the experience of so many others to draw upon, the imperfections in the pioneer work of the Burt and Ballard scales could be eliminated.

The Holborn Reading Scale is a more recent tool,
enabling/.....

enabling the measurement of both recognition and comprehension by the use of a single series of sentences, and gives as fine a grading of each of these abilities as is at present possible.

INSTRUCTIONS FOR THE WORD-RECOGNITION TEST.

The child to be examined is asked to read as many of the sentences as he can on the paper given to him. He is prompted, by telling him the words he is unable to name, until he fail to name four in succession. The figures corresponding to the sentence in which he register his fourth failure indicate his reading age (R.A.) The figures show the age in years and months; thus, 1009 means 10 years 9 months, 803 means 8 years 3 months, and so on.

To convert reading age into Reading Quotient the former is expressed as a percentage of the chronological age. Thus a child with a reading age of 9 years 9 months and a chronological age of 9 years 3 months, has a reading quotient of $\frac{117}{111} \times 100$ i.e. 105.4. A child with a reading age of 6 years 6 months and a chronological age of 7 years 4 months, has a reading quotient of $\frac{78}{88} \times 100$ i.e. 88.6.

The scale consists of 33 sentences arranged in order of difficulty, both as regards their mechanical elements and their comprehensibility. The test has been standardized with children of varying ages from/.....

from five and a half to eleven years. The final form of the scale is as follows :-

- | | | |
|------|---|-----|
| (1) | The dog got wet, and Tom had to rub him dry. | 508 |
| (2) | He was a very good boy to give you some of his sweets. | 600 |
| (3) | My sister likes me to open my book and read to her. | 603 |
| (4) | Go away and hide behind that door where we found you just now. | 606 |
| (5) | Please don't let anyone spoil these nice fresh flowers. | 609 |
| (6) | The string had eight knots in it which I had to untie. | 700 |
| (7) | Wine is made from the juice of grapes which grow in warm countries. | 703 |
| (8) | Mary went to the grocers and bought some sugar and some syrup. | 706 |
| (9) | Quench your thirst by drinking a glass of our sparkling ginger ale. | 709 |
| (10) | The people could scarcely obtain enough food to remain healthy. | 800 |
| (11) | Elizabeth had her hair thoroughly combed and her fringe cut. | 803 |
| (12) | By stretching up, George just managed to touch the garage ceiling. | 806 |
| (13) | Father had a brief telephone conversation with my cousin Philip. | 809 |
| (14) | This coupon entitles you to a specimen piece of our delicious toffee. | 900 |
| (15) | The chemist could not suggest a satisfactory remedy for my headache. | 903 |

- (16) Nobody recognized Roger in his disguise as a police official. 906
- (17) Leonard was engaged by the Irish Linen Association to act as their London agent. 909
- (18) Judged by his photographs your nephew is certainly a peculiar character. 1000
- (19) The examiner was impatient when I hesitated over a difficult phrase in my reading. 1003
- (20) Delicate individuals should gradually be accustomed to gentle physical exercise. 1006
- (21) The musician whose violin was interfered with has our sincere sympathy. 1009
- (22) The soloist was not in a convenient position for seeing every one in his audience. 1100
- (23) Christopher omitted to acknowledge the receipt of Michael's annual subscription. 1103
- (24) The secretary said there had been an substantial increase in the Society's expenditure. 1106
- (25) The Borough Council decided to celebrate the occasion by organizing a gigantic sports festival. 1109
- (26) It is essential that engineering apprentices should acquire some good technical qualification. 1200
- (27) Particulars of the careers of eminent men will be found in any good encyclopaedia or biographical dictionary. 1203
- (28) Certificates of insurance will be issued to all policy-holders paying the necessary premium. 1206

- (29) The ceremony ended, appropriately enough, with the choir and orchestra joining in the National Anthem. 1209
- (30) It is both a newspaper which chronicles events and a magazine with the usual miscellaneous features. 1300
- (31) The necessity for accelerating the work of the Economic Conference was repeatedly emphasized. 1303
- (32) These documents constitute an authoritative record of a unique colonial enterprise. 1306
- (33) Psychology is a science which seems to fascinate both the adult and the adolescent student. 1309

The score employed in the present investigation was not the Reading Quotient, but the Reading Age (R.A.) alluded to above.

* * * * *

(c) THE CONSTRUCTION AND ADMINISTRATION OF THE
ATTITUDE SCALE.

A consideration of various methods of constructing attitude scales (e.g. Thurstone 1928, 1948; Thurstone and Chave, 1929; Likert, 1932; etc.) is beyond the scope of the present dissertation. Basically the Thurstone approach was the one employed.

Bearing in mind that the scale was intended for administration to children aged 8 to 13 years, careful attention was devoted to the selection of simply worded statements for inclusion in the scale. In order to avoid fatigue, and because the scale had to be administered in a group situation to avoid excessive disruption of normal classroom routine, it was decided to restrict the number of items finally selected to approximately 20.

A list of 40 statements about reading was drawn up, relying partially on the work of Jordan (1941) and Wang (1932). Following broadly the method described by Thurstone and Chave (1932), the 40 statements were submitted to 43 judges. The judges were persons with wide knowledge and experience of children and the field of the teaching of reading. They included schoolmasters from both primary and high schools, University lecturers and clinical and research psychologists. Each judge was given a
typewritten/.....

typewritten list of the 40 statements and requested to rate each statement according to its favourability/unfavourability towards reading. A 7 - point scale was chosen for the judges' ratings. They were asked to avoid as far as possible their personal views about reading and to indicate the scale-value of the item as it stood in relation to reading. An extremely favourable statement would thus be assigned the scale value of + 3, an extremely unfavourable statement -3.

Although the judges were all persons of high integrity it was deemed advisable to employ a criterion of consistency in the rankings of statements in order to eliminate to some extent a possible source of experimental error. This might have arisen from a variety of causes such as lack of great interest in the task, carelessness due to the pressure of other work, failure to understand fully the written instructions at the head of the typewritten sheet, etc. Accordingly, where it was found on inspection of the returned sheets that identical rankings had been assigned to statements obviously of opposite meanings, or where a group of two or more replies from persons, known to live and work in association, were identical and suggested a high correlation, such replies were rejected. In the latter type of case, it was possible in a number

of/.....

of instances to show as a result of subsequent interviews that omission had been justified.

After this precaution, 35 sets of ratings remained, 35 rankings of each statement thus being available. A frequency distribution was drawn up for each statement.

As had been expected, certain statements elicited a preponderance of positive rankings and other of negative rankings.

To avoid the use of negative signs in subsequent computation, the scores were transformed to a 1 to 7 scale, equivalent to the -3 to + 3 scale. The scale value for each statement was then taken as the mean of the ratings assigned to it by the judges. The range of scale values was 1.486 to 6.428, from least to most favourable. Statements showing a Q value of greater than unity were regarded as ambiguous and were rejected.

The statements were then plotted on a linear scale (Figure I) revealing a fairly symmetrical distribution. Neutral statements and statements with identical or nearly identical values were then omitted and a final list of 20 statements (Table III) was available for administration.

The scale was administered to groups of the same age level to preserve the classroom situation.

To/.....

To enable valid inter-group comparison, the conditions were rigidly controlled, the writer being the tester on all occasions. The instructions were read to the group by the tester, with examples, and questions were carefully repeated with the group before they were asked to record their attitudes. The younger groups were given more assistance during the administration of the scale, but the experimenter made every effort to maintain the same tone of voice with every group, so as not to affect the children's responses. The "test" was on each occasion introduced by the following words :

"On these sheets are a number of statements about the subject of reading. Read the statements carefully and then : (1) Put a tick (✓) if you fully agree with the statement; (2) Put a cross (x) if you do not agree with the statement."

The completed questionnaires were then scored by summing the scale values of the statements marked with a tick, i.e. those with which the subject agreed.

C.I.	TALLY	TOTAL
6.0 - 6.5	IIII	4
5.5 - 6.0	IIII I	11
5.0 - 5.5	III	3
4.5 - 5.0	I	1
4.0 - 4.5		0
3.5 - 4.0	I	1
3.0 - 3.5		0
2.5 - 3.0	IIII	4
2.0 - 2.5	IIII I	11
1.5 - 2.0	IIII	4
1.0 - 1.5	I	1
		<u>40</u>

Distribution of Values of Statements along Attitude Scale.

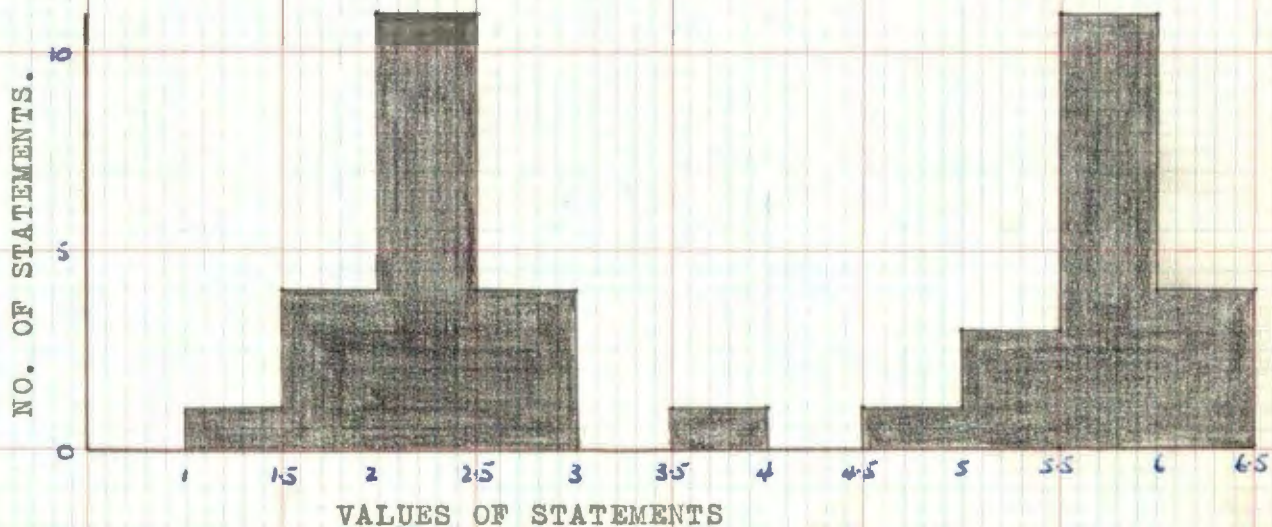


Figure 1.

Distribution of Scale Values on Linear Scale.

Distribution of 40 Scale Values (All Statements).



Distribution of 20 Scale Values (Statements used).



TABLE III.
STATEMENTS.

- Name: Sex: Std:
1. I should never do any reading unless made to
 2. I don't wish to learn to read
 3. I think that reading will be of some use to me when I leave school
 4. I think that many people read because they enjoy doing so
 5. I think that a lot more school time should be given to reading
 6. I think that reading should only be taught to those who want to learn it
 7. When I leave school I should like a job where I would have to read a lot
 8. I think that it takes so long to learn to read that it is not worth while
 9. I think that reading is useful for some people but of no use to me
 10. I like reading so much that I am always finding time to do more
 11. I think that reading is the worst lesson we have in school
 12. I would like to stop reading being taught in schools
 13. I never read at home
 14. I am always pleased when the reading lesson comes
 15. I should like to read so well that I can read any kind of book
 16. I only read because I am made to do so
 17. I seldom borrow books from the school or public library
 18. Sometimes I read in my spare time
 19. I get a lot of happiness from reading
 20. You can manage to live without being able to read ...



CHAPTER IV.

RESULTS.

(a) TABLES.

As indicated in Chapter II, the 160 subjects were sub-divided into an experimental group and a Control group. Each group included 4 age groups containing 20 children each, 10 boys and 10 girls.

The following tables (Experimental group - IV, a, b, c, d; Control group - V, a, b, c, d), now include the results for all the tests, viz.; Verbal and non-Verbal Intelligence quotient, Mental Age, tested Reading Age, Teacher's Estimated Reading Age and Attitude.

(a) T A B L E S.

TABLE IV (a).

EXPERIMENTAL GROUP.

SUBJECTS IN NEED OF REMEDIAL READING.

GROUP I - 8 years 10 months - 9 years 9 months.

BOYS:

No.	Sub-jects	Date Birth	Age end June 1957	I.Q.			M.A.	Tested R.A.	Teach.'s Est. R.A.	Attitudes.
				Ver-bal.	Non. V.	Total				
1.	R.G.	17. 2.48.	9.33	84	89	85	-8.00	8.75	8	5.40
2.	T.J.	2. 5.48.	9.17	112	105	109	9.67	8.75	8.83	5.54
3.	T.F.	6.11.47.	9.67	88	91	89	8.25	6.00	6	4.80
4.	B.F.	30.11.47.	9.58	80	97	91	8.33	6.75	6	2.57
5.	G.J.	14. 3.48.	9.33	75	109	97	8.58	7.25	8	2.63
6.	B.G.	25. 6.48.	9.00	80	97	91	8.33	8.00	7	5.46
7.	G.V.	7. 4.48.	9.25	98	98	97	8.58	8.00	7	2.57
8.	A.W.	24. 8.47.	9.83	96	96	97	9.17	8.75	9	5.17
9.	G.B.	16. 7.48.	8.92	97	99	97	8.33	7.25	6	3.23
10.	G.J.	2. 9.47.	9.83	77	81	76	-8.00	6.75	7.50	3.62

GIRLS:

1.	B.A.	18. 8.48.	8.83	88	101	96	8.08	7.75	7.5	5.29
2.	D.B.	5.11.47.	9.67	93	97	95	8.75	9.25	8.0	5.17
3.	M.B.	31.10.47.	9.67	101	92	96	8.92	9.00	9.0	5.60
4.	G.D.	21.10.47.	9.67	80	101	93	8.50	7.25	8.5	5.46
5.	J.G.	1. 2.48.	9.42	93	85	87	8.00	8.75	9.0	5.29
6.	H.I.	17.12.47.	9.50	98	105	99	9.33	9.25	8.5	5.46
7.	A.M.	14. 2.48.	9.42	88	101	96	8.08	6.75	7.5	4.80
8.	A.R.	7. 5.48.	9.17	107	112	111	9.83	8.50	8.5	5.51
9.	M.W.	5. 5.48.	9.17	65	60	60	-8.00	7.75	9.0	4.16
10.	J.M.	13. 3.48.	9.33	92	109	103	9.25	7.25	8.0	5.51

TABLE IV(b)

EXPERIMENTAL GROUP.

SUBJECTS IN NEED OF REMEDIAL READING.

GROUP II - 9 years 10 months - 10 years 9 months.

BOYS:

No.	Sub- jects	Date Birth	Age end June 1957	Ver- bal.	I.Q.		M.A.	Tested R.A.	Teach.'s Est. R.A.	Atti- tudes.
					Non. V.	Total				
1.	E.B.	15. 9.46.	10.75	81	94	88	8.92	5.00	7	5.46
2.	F.B.	22.11.46.	10.58	89	99	95	9.58	7.50	8	5.46
3.	B.H.	24. 9.46.	10.75	80	101	90	9.33	7.25	8	4.41
4.	T.K.	26. 7.47.	9.92	86	88	86	8.25	7.75	7	5.29
5.	I.H.	13.12.46.	10.58	86	107	98	9.92	7.50	9	5.60
6.	R.H.	20. 2.47.	10.33	92	97	95	9.42	8.75	8	5.57
7.	B.M.	26.10.46.	10.67	75	91	84	8.50	7.75	9	5.34
8.	I.M.	20. 6.47.	10.00	97	96	95	9.17	9.50	9	5.51
9.	N.S.	20. 5.47.	10.08	96	99	98	9.50	8.75	9	5.46
10.	J.R.	2. 2.47.	10.42	89	85	86	8.67	8.75	6	2.63

GIRLS :

1.	E.C.	12.12.46.	10.58	86	88	85	8.58	7.00	-8	5.06
2.	J.D.	24. 5.47.	10.08	88	114	102	10.83	7.75	9	5.46
3.	G.D.	29.11.46.	10.58	79	102	92	9.33	7.75	8	4.80
4.	B.P.	17. 3.47.	10.25	87	101	95	9.33	7.75	8	5.29
5.	R.M.	23. 3.47.	10.25	58	55	55	-8	5.00	5	3.77
6.	B.K.	18.11.47.	10.58	68	74	68	-8	6.75	7	5.17
7.	D.E.	18.11.47.	10.58	67	81	73	-8	6.25	6	3.77
8.	A.L.	16. 1.47.	10.42	76	82	77	8	8.00	9.5	5.51
9.	M.S.	7. 5.47.	10.17	99	101	100	9.83	7.75	9.5	5.69
10.	M.V.	3. 3.47.	10.33	86	86	85	8.42	7.50	9	5.34

TABLE IV(c)

SUBJECTS IN NEED OF REMEDIAL READING.

GROUP III - 10 years 10 months - 11 years 9 months.

BOYS :

No.	Sub-jects	Date Birth	Age end June 1957	Ver-bal	IQ Nov. V.	Total	M.A.	Tested R.A.	Teach.'s Est. R.A.	Attitudes.
1.	L.B.	28. 9.45.	11.75	80	96	88	10.00	8.00	9	5.40
2.	Q.E.	17. 7.46.	10.92	76	94	86	8.92	7.67	9.5	5.51
3.	R.E.	12.12.45.	11.58	111	115	114	12.83	10.50	10	5.51
4.	R.F.	7. 8.46.	10.92	88	98	94	9.75	7.75	8	5.40
5.	L.H.	25. 8.46.	10.83	84	89	86	8.92	8.50	9	5.46
6.	K.R.	28.12.45.	11.50	95	108	101	11.33	11.25	10	5.46
7.	K.M.	5. 4.46.	11.25	96	105	101	11.00	9.50	10.25	5.46
8.	D.M.	26. 2.46.	11.33	91	122	107	11.83	8.25	9.5	5.46
9.	B.T.	11.12.45.	11.58	106	109	109	12.33	11.25	10	5.51
10.	B.S.	14. 2.46.	11.42	98	117	109	12.83	10.50	10	5.69

GERLS :

1.	P.A.	18. 5.46.	11.08	104	106	106	11.50	10.50	10	5.60
2.	B.A.	11. 7.46.	11.00	87	98	93	9.67	8.00	8	5.60
3.	W.F.	22. 5.46.	11.08	98	101	101	10.75	8.50	9.67	5.34
4.	I.H.	18. 6.46.	11.00	96	115	104	11.17	9.50	9.75	5.46
5.	E.M.	13. 5.46.	11.17	98	100	95	10.25	7.75	9	5.51
6.	A.M.	12. 3.46.	11.33	107	113	111	11.33	10.75	10.50	5.51
7.	L.M.	17. 4.46.	11.17	91	92	92	9.83	9.00	10.25	2.69
8.	V.S.	18. 3.46.	11.25	74	96	85	9.17	7.25	8	5.34
9.	S.A.	17. 5.46.	11.08	89	103	97	10.33	8.50	8	5.46
10.	H.Z.	10.12.45.	11.58	71	73	68	8.00	7.00	6	5.60

TABLE I V (d)

EXPERIMENTAL GROUP.

SUBJECTS IN NEED OF REMEDIAL READING.

GROUP IV - 11 years 10 months - 12 years 9 months.

BOYS :

No.	Sub-jects	Date Birth	Age end June 1957	Ver-bal.	I.Q.		M.A.	Tested R.A.	Teach.'s Est. R.A.	Atti-tudes
					Non. V.	Total				
1.	D.C.	18. 9.44.	12.75	79	99	88	10.92	8.00	8	5.06
2.	N.C.	30. 5.45.	12.08	117	108	114	13.75	11.67	11	5.46
3.	J.E.	21. 8.45.	11.83	99	128	114	13.33	10.50	11	5.46
4.	S.E.	5. 3.45.	12.33	73	82	78	10.00	9.25	8	2.46
5.	J.H.	27. 8.44.	12.83	66	78	71	10.00	9.00	10	5.34
6.	K.L.	26. 7.45.	11.92	81	84	81	10.00	9.25	10	5.40
7.	C.L.	3. 4.45.	12.25	101	87	98	12.00	11.50	11	5.57
8.	T.P.	7. 11.44.	12.67	84	80	81	10.00	9.75	9.50	5.69
9.	D.T.	23. 2.45.	12.33	95	109	103	12.33	11.00	10.75	5.51
10.	A.V.	6. 10.44.	12.75	75	73	72	10.00	7.75	9	5.46

GIRLS.

1.	J.A.	18. 2.45.	12.33	93	97	95	11.33	11.25	10.75	5.46
2.	G.C.	26. 7.45.	11.92	96	88	91	10.58	11.25	10.50	4.54
3.	B.D.	5. 6.45.	12.08	86	88	88	10.25	8.50	9.25	5.46
4.	K.A.	8. 7.44.	13.00	71	63	66	10.00	6.50	6.00	5.06
5.	J.F.	21. 7.45.	11.92	75	78	74	10.00	9.00	9.75	5.46
6.	H.F.	16. 9.44.	12.75	84	91	86	10.83	9.75	9.50	5.46
7.	H.J.	21. 3.45.	12.25	75	83	77	10.00	7.75	8.00	5.06
8.	L.L.	6. 11.44.	12.67	95	100	98	12.00	11.00	11.25	5.60
9.	C.M.	23. 9.44.	12.75	93	113	103	12.92	11.00	10.75	5.46
10.	L.M.	12. 8.44.	12.92	73	90	81	10.33	8.75	8.50	5.40

TABLE V (a)

CONTROL GROUP.

GOOD READERS.

GROUP I - 8 years 10 months - 9 years 9 months.

BOYS:

No.	Sub- jects	Date Birth	Age end June 1957	I.Q.			M.A.	Tested R.A.	Teach.'s Est. R.A.	Att.
				Ver- bal.	Non- V.	Total				
1.	P.G.	13. 1.48.	9.50	118	116	118	10.92	11.25	12+	5.46
2.	T.H.	11. 9.48.	8.83	106	105	105	8.83	11.50	9.83	5.46
3.	K.H.	1. 2.48.	9.42	120	127	126	11.25	11.25	9.17	5.69
4.	A.J.	17. 2.48.	9.33	125	115	122	11.25	9.50	10	5.46
5.	K.K.	9. 4.48.	9.25	127	129	129	11.75	10.00	10.50	5.60
6.	J.S.	6. 6.48.	9.08	111	100	104	9.08	9.50	9.42	5.60
7.	N.J.	3. 9.48.	8.83	119	121	121	10.33	9.25	9	5.40
8.	R.G.	12. 2.48.	9.42	109	117	115	10.50	10.00	10	5.40
9.	B.E.	28. 9.47.	9.75	88	98	92	8.58	9.00	10	5.17
10.	M.R.	29. 5.48.	9.08	116	120	121	11.33	11.00	9.50	5.46

GIRLS :

1.	J.E.	30. 5.48.	9.08	126	125	128	11.58	11.50	12	5.46
2.	E.A.	16. 4.48.	9.17	115	119	119	10.67	10.75	10	5.67
3.	E.A.	19. 1.48.	9.42	127	129	129	11.75	10.75	10	5.40
4.	J.G.	27. 3.48.	9.25	123	117	121	10.92	9.50	10	5.51
5.	M.A.	21. 3.48.	9.25	108	101	106	9.50	10.00	11	5.46
6.	R.S.	2. 7.48.	9.00	112	124	119	10.50	11.00	10	5.51
7.	W.S.	29. 9.47.	9.75	102	98	99	9.33	12.75	11	5.60
8.	D.V.	14. 10.47.	9.75	135	125	133	11.92	12.75	11+	5.51
9.	R.C.	23. 3.48.	9.25	105	106	105	9.33	10.25	11.5	5.23
10.	P.S.	7. 9.47.	9.83	112	108	112	10.83	12.50	11	5.40

TABLE V (b)

CONTROL GROUP.

GOOD READERS.

GROUP II - 9 years 10 months - 10 years 9 months.

BOYS:

No.	Sub-jects	Date Birth	Age end June 1957	I.Q.			M.A.	Tested		Teach.'s Est. R.A.	Attitudes.
				Ver-bal.	Non-V.	Total		R.A.	R.A.		
1.	M.F.	7. 3.47.	10.33	125	140	134	11.92	13.00	11.42	5.40	
2.	P.S.	14. 4.47.	10.25	125	133	133	11.92	13.50	12	5.60	
3.	R.F.	28.12.46.	10.50	112	107	109	11.17	12.00	12	5.51	
4.	G.P.	25. 2.47.	10.33	120	122	123	11.92	13.75	12	5.51	
5.	P.G.	3. 5.47.	10.17	116	113	116	11.50	11.75	12	5.46	
6.	D.J.	24. 3.47.	10.25	102	101	101	10.00	12.50	12	5.60	
7.	A.S.	1. 4.47.	10.25	107	93	98	9.75	11.25	11	5.60	
8.	A.T.	29. 8.46.	10.83	116	101	108	11.25	13.50	11.25	5.51	
9.	L.T.	7. 6.47.	10.08	124	135	130	11.92	10.50	11	5.46	
10.	J.M.	13.10.46.	10.75	117	120	119	12.58	12.75	11.50	5.46	

GIRLS.

1.	M.L.	10. 1.47.	10.50	114	120	118	11.92	12.25	12	5.51
2.	V.M.	9.10.46.	10.75	122	113	119	11.92	13.00	13	5.46
3.	S.K.	11.12.46.	10.58	115	110	113	11.58	13.00	12	5.60
4.	S.L.	24. 9.46.	10.75	116	101	108	11.25	12.00	11+	5.51
5.	N.M.	12.11.46.	10.67	111	109	112	11.58	13.00	12	5.51
6.	L.O.	7.10.47.	9.75	110	112	112	10.58	11.00	11	4.80
7.	D.S.	8.11.46.	10.67	120	135	129	13.92	11.25	10.75	5.60
8.	E.L.	18. 3.47.	10.25	109	110	110	11.00	12.50	12	5.51
9.	J.A.	30. 9.47.	9.75	133	120	128	11.92	12.75	12	5.60
10.	P.H.	8. 6.47.	10.08	103	104	105	10.25	10.75	11	5.51

TABLE V (c)

CONTROL GROUP.

GOOD READERS.

GROUP III - 10 years 10 months - 11 years 9 months.

BOYS:

No. Sub- jects	Date Birth	Age end June 1957	I.Q.			M.A.	Tsted R.A.	Teach.'s Est. R.A.	Atti- tudes
			Ver- bal.	Non- V.	Total				
1. P.A.	3. 3.46.	11.33	127	133	133	14.92	13.50	12.42	5.51
2. P.E.	17. 4.46.	11.17	123	134	133	14.92	13.25	12.25	5.46
3. N.D.	14.12.45.	11.58	125	115	120	13.92	11.75	11.50	5.69
4. G.D.	2. 5.46.	11.17	113	104	109	11.83	12.75	12.25	5.51
5. D.J.	28. 3.46.	11.25	109	104	106	11.58	13.25	12.33	5.60
6. O.R.	16. 3.46.	11.25	126	100	114	12.58	12.75	13.17	5.60
7. P.H.	7. 4.46.	11.25	109	100	104	11.33	12.00	12.50	5.51
8. J.V.	6. 5.46.	11.17	105	109	108	11.67	11.50	10.25	5.51
9. D.F.	13. 1.46.	11.42	96	99	98	10.83	13.50	13.33	5.46
10. I.W.	20. 2.46.	11.33	111	115	115	12.83	13.00	12.50	5.46

GIRLS :

1. S.A.	2. 5.46.	11.17	98	103	102	11.00	12.25	12.25	5.40
2. J.M.	13.12.45.	11.58	107 $\frac{1}{2}$	100	104	12.08	12.75	12.25	5.29
3. E.E.	29. 6.46.	11.00	115	108	113	12.25	11.75	12.17	5.51
4. L.G.	8. 1.46.	11.50	125	115	120	13.92	13.25	12.50	5.51
5. Y.K.	3.10.45.	11.75	111	103	107	12.25	12.75	12.00	5.51
6. E.H.	12. 4.46.	11.25	115	108	112	12.25	13.25	11.50	5.40
7. C.C.	19.12.45.	11.50	111	117	114	12.08	13.00	12.50	5.60
8. L.S.	6. 5.46.	11.17	101	105	104	11.17	12.25	11.50	5.40
9. M.J.	19. 7.46.	10.92	118	125	124	13.50	13.00	12.83	5.60
10. L.W.	2. 6.46.	11.08	100	103	103	11.00	12.75	12.50	5.51

TABLE V (a)

CONTROL GROUP

GOOD READERS.

GROUP IV - 11 years 10 months - 12 years 9 months.

BOYS :

No.	Sub- jects	Date Birth	Age end June 1957	I . Q.			M.A.	Tested R.A.	Teach.'s Est. R.A.	Atti- tudes
				Ver- bal.	Non- V.	Total				
1.	D.A.	11. 8.45.	11.92	112	96	104	12.00	13.50	12.75	5.60
2.	A.C.	3. 6.45.	12.08	86	107	98	11.42	11.50	10.17	5.29
3.	E.F.	21. 9.45.	11.75	122	115	121	14.92	13.75	12.75	5.51
4.	J.K.	22.12.44.	12.50	90	97	93	11.25	13.00	12.75	5.40
5.	V.L.	25.10.44.	12.67	114	122	120	14.92	13.25	11.50	5.76
6.	L.J.	5. 7.45.	12.00	130	133	135½	14.92	13.50	12.50	5.51
7.	E.A.	8. 1.45.	12.50	117½	111	117	14.92	13.75	12.50	5.60
8.	R.P.	2. 6.45.	12.08	102½	117	109	13.50	13.00	12.50	5.34
9.	G.L.	29. 8.45.	11.83	130	132	134	14.92	12.75	11.50	5.51
10.	A.J.	7. 9.45.	11.83	129	132	133	14.92	13.75	12.33	5.51

GIRLS :

1.	J.M.	6. 3.44.	12.92	104	130	116	14.92	13.50	11.17	5.60
2.	L.B.	10. 9.45.	11.83	96	88	92	11.00	13.00	12.50	5.46
3.	B.A.	9. 8.44.	12.92	105	100	104	13.00	13.25	11.50	5.40
4.	J.C.	27. 9.44.	12.75	102½	114	109	14.42	13.25	11.25	5.51
5.	A.E.	12.11.44.	12.67	113	112½	113	14.92	13.25	12.67	5.69
6.	D.J.	15. 6.45.	12.00	115	117	117½	14.92	13.50	11.50	5.60
7.	P.H.	4.10.44.	12.75	114	137	128	14.92	13.50	11.67	5.60
8.	S.A.	23. 9.44.	12.75	118	120	121	14.92	13.75	12.08	5.60
9.	I.G.	18. 2.45.	12.33	99	115	108	13.08	13.00	13.50	5.51
10.	M.S.	11. 7.45.	12.00	104	108	106	12.33	12.00	12.50	5.46

(b) GENERAL REVIEW OF COMBINED RESULTS.

A. MEAN TEST SCORES.

1. COMPARISON OF MEAN TEST SCORES OF THE EXPERIMENTAL AND CONTROL GROUPS.

The mean scores of the 80 Good and the 80 Poor Readers are shown in Table VI. 1. On all their tests the Good Readers obtained significantly higher scores. The mean difference in Mental Age was 2.25 years, in Reading Age 3.72 years, and in Reading Attitude .45. (Good Readers more favourable than Poor Readers).

TABLE VI. 1.

MEAN TEST SCORES GOOD VERSUS POOR READERS.

N = 80

N = 80

Test	Good Readers		Poor Readers		Significance	
	M.	s.d.	M.	s.d.	t.	p.
Mental Age :	12.0511	1.6808	9.7988	1.4398	9.0994	.001, sig.
Reading Age :	12.2250	1.2516	8.5011	1.4873	17.1371	.001, sig.
Reading Att. :	5.4959	0.1269	5.0506	0.8461	4.6434	.001, sig.

A comparison of the male Good Readers with the male Poor Readers (Table VI. 2) also yielded significant mean differences in all three variables.

TABLE VI. 2.
MEAN TEST SCORES OF GOOD MALE READERS VERSUS
POOR MALE READERS.

TEST	Good Males N = 40		Poor Males N = 40		Significance of difference	
	M.	s.d	M	s.d	t	p
Mental Age :	12.0460	1.7847	9.9645	1.5776	5.5271	<.001 sig.
Reading Age:	12.1438	1.4048	8.6398	1.5185	10.7123	<.001 sig.
Reading Att.:	5.5038	0.1054	4.9218	1.0163	3.6015	<.001 sig.

The female Good Readers also scored significantly higher on all tests than the female Poor Readers.

(Table VI. 3.)

Table VI. 3/.....

TABLE VI. 3.

MEAN TEST SCORES OF GOOD FEMALE READERS VERSUS
POOR FEMALE READERS.

TEST	Good Females N = 40		Poor Females N = 40		Significance of difference	
	M	s.d	M	s.d	t	p
Mental Age :	12.0563	1.5693	9.6330	1.2660	7.5989	<.001 sig.
Reading Age :	12.3063	1.0696	8.3625	1.4415	13.8915	<.001 sig.
Reading Att. :	5.4880	0.1446	5.1795	0.6940	3.1480	<.01 sig.

2. COMPARISON OF MEAN TEST SCORES FOR MALES AND
FEMALES.

Combining the scores of the Good and Poor Readers, no significant difference was found in the mean scores on any test between the 80 males and 80 females.

(Table VI. 4.)

Table VI. 4./..... .

TABLE VI. 4.

MEAN TEST SCORES OF ALL MALE VERSUS ALL FEMALE SUBJECTS.

TEST	Males N = 80		Females N = 80		Significance of difference	
	M	s.d	M	s.d	t	p
Mental Age :	11.0053	1.9796	10.8446	1.8716	0.5276	>.05 NS
Reading Age :	10.3918	2.2824	10.3344	2.3451	0.1569	>.05 NS
Reading Att.:	5.2128	0.7789	5.3338	0.4649	1.1921	>.05 NS

Within the experimental group there were also no significant sex differences in mean scales. (Table VI. 5.)

TABLE VI. 5.

MEAN TEST SCORES OF POOR READERS MALES VERSUS FEMALES.

TEST	Males N = 40		Females N = 40		Significance of difference.	
	M	s.d	M	s.d	t	p
Mental Age:	9.9545	1.5776	9.6330	1.2660	1.0366	>.05 NS
Reading Age :	8.6398	1.5185	8.3625	1.4415	0.8375	>.05 NS
Reading Att.:	4.9218	1.0163	5.1795	0.6040	1.3796	>.05 NS

The mean/.....

The mean scores within the control group also failed to reveal any significant differences attributed to sex. (Table VI . 6).

TABLE VI . 6.

MEAN TEST SCORES OF GOOD READERS MALES VERSUS FEMALES.

TEST	Males N = 40		Females N = 40		Significance of difference	
	M	s.d	M	s.d	t	p
Mental Age :	12.0460	1.7847	12.0563	1.5693	0.0274	>.05 NS
Reading Age:	12.1438	1.4048	12.3065	1.0696	0.5822	>.05 NS
Reading Att.:	5.5038	0.1054	5.4880	0.1446	0.5583	>.05 NS

B. INTERRELATIONSHIPS BETWEEN MENTAL AGE, READING AGE AND READING ATTITUDE.

1. COMPARISON OF GOOD AND POOR READERS.

In the experimental group there was a very high positive correlation of .76 between Mental Age and Reading Age. A fairly high positive correlation of .35 was found between Mental Age and Reading Attitude. A somewhat lower positive correlation of .28 was found between Reading Age and Reading Attitude. All these correlations were statistically significant and are shown in Table VI. 7.

The intercorrelations of these scores for the control group/.....

group were very similar to those for the experimental group and are also shown in Table VI. 7.

TABLE VI. 7.

INTERCORRELATIONS.

GOOD READERS VERSUS POOR READERS.

SCORES	Good Readers N = 80		Poor Readers N = 80	
	r.	p.	r.	p.
M.A.-R.A.	0.6372	<.001 sig.	0.7637	<.001 sig.
M.A.-R.Att.	0.3419	<.001 sig.	0.3527	<.01 sig.
R.A.-R.Att.	0.2867	<.02 sig.	0.2824	<.02 sig.

In view of the above high correlations between Mental Age and Reading Age, and between Mental Age and Reading Attitude it was decided to attempt to assess the relative contributions of verbal and non-verbal I.Q. to these relationships. These data were available from the New South African Group Scale already administered. The results for Good Readers as compared with Poor Readers are shown in Table VI. 8.

Table VI. 8/.....

TABLE VI, 8.

VERBAL AND NON-VERBAL I.Q., READING AGE AND READING
ATTITUDE. GOOD READERS
VERSUS POOR READERS.

SCORES	Good Readers N = 80		Poor Readers N = 80	
	r.	p.	r.	p.
R.A.- V. I.Q.	.0141	>.05 not sig.	.6262	<.001 sig.
R.A.- N.V. I.Q.	.0659	>.05 not sig.	.4270	<.001 sig.
R.Att.-V. I.Q.	.3061	>.01 sig.	.2309	<.02 sig.
R.Att.-N.V.I.Q.	.1675	<.05 not sig.	.2385	<.02 sig.

In the experimental group, all four correlations were statistically significant and as had been foreseen, positive. The correlation of Reading Age with verbal I.Q. (.63) was rather higher than with non-verbal I.Q. (.43). However, there appeared to be little difference between the correlations of Reading Attitude with verbal I.Q. and non-verbal I.Q. (.23 and .24 respectively).

In the control group a different picture emerged. The correlations of Reading Age with verbal and non-verbal I.Q. were positive though insignificant. There was a significant positive correlation of Reading Attitude with verbal I.Q. of/.....

of .31. The correlation of Reading Attitude with non-verbal I.Q. was also positive, but too small for statistical significance.

The scores of the experimental and control subjects were then combined and mean test scores for upper and lower quartile subjects on all variables computed. (Tables VI. 9, 10 and 11).

For the upper quartile in Mental Age the mean score for Reading Age was 12.58 and for Reading Attitude 5.53. For the lower quartile, mean score for Reading Age was 7.97 and for Reading Attitude 4.83 (Table VI. 9) The upper quartile subjects in Mental age were thus significantly superior in Reading Age and had significantly more favourable Reading Attitudes. (Table VI. 9)

TABLE VI. 9

MEAN TEST SCORES FOR UPPER AND LOWER QUARTILES :
EXPERIMENTAL AND CONTROL SUBJECTS COMBINED (N = 160)

Mental Age	Upper Q 11.99	Lower Q 9.42	Significance of difference	
			t.	p.
Reading Age	12.58	7.97	6.2568	<.001 sig.
Reading Attitude	5.53	4.83	3.3948	<.001 sig.

For the/.....

For the upper quartile in Reading Age, the mean score for Mental Age was 13.12, and for Reading Attitude 5.52. For the lower quartile in Reading Age these means were 9.04 and 4.90 (Table VI. 10). The upper quartile subjects in Reading Age were thus superior in Mental Age and had more favourable Reading Attitudes.

TABLE VI. 10.

MEAN TEST SCORES FOR UPPER AND LOWER QUANTILES :
EXPERIMENTAL AND CONTROL SUBJECTS COMBINED (N =160)

Reading Age	Upper Q 12.64	Lower Q 8.34	Significance of difference	
			t.	p.
Mental Age	13.12	9.04	4.8153	<.001 sig.
Reading Attitude	5.52	4.90	4.3296	<.001 sig.

For the upper quartile in Reading Attitude, the means for Mental Age and Reading Age were 12.20 and 11.87, and for the lower quartile 9.22 and 8.28 (Table VI. 11). Thus the 25% of subjects with most favourable Reading Attitudes were superior ⁱⁿ and both Mental Age and Reading Age. (Table VI. 11).

Table VI. 11/.....

TABLE VI. 11.

MEAN TEST SCORES FOR UPPER AND LOWER QUANTILES :
EXPERIMENTAL AND CONTROL SUBJECTS COMBINED (N = 160).

Reading Attitude	Upper Q 5.70	Lower Q 5.14	Significance of difference	
			t.	p.
Mental Age	12.20	9.22	7.6765	<.001 sig.
Reading Age	11.87	8.28	8.7947	<.001 sig.

2. THE INFLUENCE OF AGE:

Intercorrelations of Mental Age, Reading Age and Reading Attitude were computed for each of the age subgroups of the experimental and control groups. These correlations are shown in Tables VI 12 a - d.

TABLE VI. 12 (a)

GOOD READERS VERSUS BAD READERS GROUP I.

SCORES	Good Readers N = 20		Poor Readers N = 20	
	r.	p.	r.	p.
M.A. - R.A.	.2502	.05 NS	.4614	.05 sig.
M.A.-R.Att.	.3143	.04 NS	.2598	.04 NS.
R.A.-R.Att.	.2992	.05 NS	.4558	.05 sig.

Table VI. 12 (b)/.....

TABLE VI. 12 (b)

GROUP II.

SCORES	Good Readers N = 20		Poor Readers N = 20	
	r.	p.	r.	p.
M.A. - R.A.	.2189	>.05 NS.	.3557	>.05 NS.
M.A. -R.Att.	.1859	>.05 NS.	.3878	>.05 NS.
R.A. -R.Att.	.3019	>.05 NS	.2027	>.05 NS.

TABLE VI. 12 (c)

GROUP III

SCORES	Good Readers N = 20		Poor Readers N = 20	
	r.	p.	r.	p.
M.A. - R.A.	.2865	>.05 NS	.8114	<.001 sig
M.A. -R.Att.	.2515	>.05 NS	.1604	>.05 NS
R.A. -R.Att.	.1118	>.05 NS	.0411	>.05 NS

TABLE VI. 12 (d)

GROUP IV.

SCORES	Good Readers N = 20		Poor Readers N = 20	
	r.	p.	r.	p.
M.A. - R.A.	.6382	<.01 sig.	.7221	<.001 sig.
M.A. -R.Att.	.6709	<.01 sig.	.2757	>.05 NS.
R.A. -R.Att.	.5799	<.01 sig.	.1420	<.05 NS.

In group I (the youngest age level, Table VI 12 a) of the experimental group, all three correlations were positive, but only those between Mental Age and Reading Age (.46) and Reading Age and Reading Attitude (.46) attained significance. For the control group, all correlations were positive but none were statistically significant.

In group II (Table VI. 12 b) in the experimental group, all correlations were positive but none were significant. The same applies to the control group.

In Group III (Table VI. 12 c) in the experimental group, all correlations were positive but only that between Mental age and Reading age (.51) was significant. In the control group, two correlations were positive but not significant. The remaining coefficient, between Reading Age and Reading Attitude was negative, but insignificant.

In Group IV (the eldest group, Table VI. 12 d) in the experimental group all correlations were positive, but only that between Mental Age and Reading Age was significant (.72). In the control group, all the correlations were positive and significant, (.64, .67 and .58).

Table VI. 12 contains a number of inconsistencies the only general trend being toward positive relationships between the variables at each age level. The sub-groups were rather too small (N = 20) for reliable statistical treatment and this is no doubt a contributing factor to these/.....

these inconsistencies. Further discussion is given in the following chapter.

3. THE INFLUENCE OF SEX.

Comparison of the intercorrelations of the variables for all 80 males and all 80 females showed very little difference. These figures are given in Table VI. 13.

TABLE VI. 13.

INTERCORRELATIONS.

MALES VERSUS FEMALES.

SCORES	Males N = 80		Females N = 80	
	r.	p.	r.	p.
M.A. - R.A.	0.7870	<.001 sig.	0.8222	<.001 sig.
M.A. -R.Att.	0.4327	<.001 sig.	0.3982	<.001 sig.
R.A. -R.Att.	0.4411	<.001 sig.	0.4113	<.001 sig.

This was also true within the Good Readers (Table VI. 14) and within the Poor Readers (Table VI. 15).

Table VI. 14/.....

TABLE VI. 14

INTERCORRELATIONS.

GOOD READERS MALES VERSUS FEMALES.

SCORES	Males N = 40		Females N = 40	
	r.	p.	r.	p.
M.A. - R.A.	0.6388	.001 sig.	0.6416	.001 sig.
M.A. -R.Att.	0.2910	.1 not sig.	0.4007	.01 sig.
R.A. -R.Att.	0.2823	.1 not sig.	0.3244	.05 sig.

TABLE VI. 15.

INTERCORRELATIONS.

POOR READERS MALES VERSUS FEMALES.

SCORES	Males N = 40		Females N = 40	
	r.	p.	r.	p.
M.A. - R.A.	0.7781	.001 sig.	0.7453	.001 sig.
M.A. -R.Att.	0.4199	.01 sig.	0.2992	.1 not sig.
R.A. -R.Att.	0.3283	.05 sig.	0.2750	.1 not sig.

CHAPTER V.

D I S C U S S I O N.

The most unequivocal findings of this investigation related to the differences between the test scores of the experimental and control groups.

The children referred for remedial reading had a significantly lower mean mental age, lower mean reading age and less favourable mean attitude scale than the non-referred children.

The validity of the Holborn Reading Scale is thus demonstrated insofar as it discriminated successfully between children referred because of reading difficulties and those not referred. The implications of the differences in mental age and reading attitude are discussed below.

No difference in mean scores on any of the variables could be attributed to sex. The findings of Fitt (1956) that the attitude towards school of girls was more favourable than boys, was not sub-stantiated.

The initial hypothesis of a positive relationship between reading achievement and attitude to reading is to a considerable extent supported by the results of this study. Insofar as the attitude of the child towards reading must, as all attitudes, be a resultant
partially/.....

partially of social forces, it is reasonable to suspect that the home background exerts an important effect on the child's achievement. To some extent then the attitude of the child to reading may be a measure of his specific motivation in this area. This effect is typified in the instance of Case History, Case K, where the home contained no literature whatever beyond an occasional newspaper.

However, the results equally clearly show ^a all strong relationship of reading attitude and achievement with mental age, and this is represented by a higher correlation coefficient between mental age and reading age than between mental age and reading attitude. Also the correlation of reading age with reading attitude is the lowest of the three. A consideration of the results shown in Table VI. 7, can only suggest the inference that, as a means of prediction of reading achievement, mental age is superior to the score derived from the attitude questionnaire. The position is the same for "normal" readers as for children referred for remedial reading. This finding is in support of the work of French (1953), Burks and Bruce (1955), described in Chapter I.

That there should be a positive relationship between intelligence and school achievement is almost axiomatic, given constant motivation. But intelligence as the basic fund of ability available actually and potentially/.....

potentially
/to the individual is not measured perfectly by intelligence tests. Notwithstanding the fact that the New South African Scale was specifically designed to rely minimally on verbal material, there is a verbal content. In addition, as in the case of all intelligence tests yet devised, language in a more general sense is involved in the appreciation of instructions given to the testee. Particularly if the standpoint of Vermoere (See Chapter I) is accepted, viz. that reading difficulties are difficulties in the learning of language, then it must be agreed that performance on the I.Q. test employed must be a partial measure of experience. It is likely then that the relationship found between mental age and reading age is at least to some extent a reciprocal one. Thus a low reading achievement, stemming from any one of the possible causes mentioned in Chapter I will tend to militate against a high score on the intelligence test. This was the aspect of the problem investigated by Monolakes and Sheldon (1955) briefly described in Chapter I.

As suggested earlier in this discussion the validity of the Holborn Reading Scale seems to be established by reason of its agreement with the criterion of the distinguishing between "good" and "poor readers."

The relationships between mental age and reading age on the one hand and attitude towards reading on the other, whilst less clear than those between mental

age/.....

age and reading age, are nevertheless positive and significant. Here again one might suspect a reciprocal relationship. The correlation of mental age with attitude towards reading is rather higher than that of reading age with attitude. This might be due to the increase of interest in school work, in other words a more favourable attitude, coming with success. On the other hand, a higher intelligence will be more likely to make for an insight into the purpose of the questionnaire and even into the hypothetical relationships between the questionnaire score and reading. This would tend to reinforce the natural tendency of the school child to attempt to give the answers he believes will be most favourably received.

Nevertheless, it seems unlikely that the attitude scale does not at least to some extent measure the real attitude towards reading. But it is possible that the attitude reflected might be more closely related to general mental ability than to specific proficiency in the field of reading.

The tendency for high mental age and reading age to go together with a favourable attitude is shown even more clearly by the mean scores of the upper lower quartile populations on the other two variables in each case, as shown in Tables VI 9 - 11 in Chapter IV.

The investigation of Triggs et al (1954) described in Chapter I revealed that, in a wide age-range of school children/.....

children, verbal intelligence was more closely correlated with reading achievement than was non-verbal intelligence. The results of the present study (Table VI 8) confirm the findings of Triggs et al, but only in the case of the Poor Readers. The correlations for the Good Readers were extremely low and quite insignificant.

As discussed above, it would seem that the Good and Poor Readers belong to quite distinct populations. It is suggested that the differences between them is the relationships between verbal and non-verbal I.Q. on the one hand, and reading age on the other, might be ascribed to factors peculiar to one of the groups. One might speculate that the interests of the Good Readers are relationely wider, more highly developed, and have come to exert an effect on their reading achievement, causing this to vary within the normal range. The findings of Meyer (1954), given in Chapter I, come to mind here. He found in a Rorschach study that retarded readers were not able to differentiate beyond "rather inaccurate, vague and mediocre perceptions" and it is perhaps because the Poor Readers are on the borderline of combining letters to form "word-meanings" (French, 1953) that in their case the relationship with intelligence is simpler.

It has been maintained earlier in this discussion that both attitudes and intelligence on test are influenced by experience. In the very young child

experience/.....

experience of the social environment and of a subject such as reading might be viewed as relatively restricted, so that the scores of the younger subjects on the three tests might be expected to reveal tendencies that are less complicated by these experimental factors. Judging from the figures in Table VI. 12, the opposite appears to be the case and the highest correlations seem to occur in the older groups, particularly between mental age and reading age. Whilst significant relationships were found between Mental age and reading age and between reading age and reading attitude in the youngest age group of the Poor Readers this does not occur in the next older group. In the Good Readers the only significant correlations were found at the oldest age level. An explanation on the lines of that put forward in the preceding paragraph suggests itself again, but the age sub-groups were too small that the general significance of these particular data is probably negligible.

No indication is given in the results of any difference in the relationships amongst the three variables which can be attributed to sex. This tends to diminish slightly ^{the} significance of an explanatory hypothesis based on environmental influences because the home environment of boys and girls even at this age ^{reveal} ~~several~~ differences of parental interest attitude and training.

Regarding indications for therapy which might be made apparent by the results of this study, it is necessary to consider more closely the significance

of/.....

of an unfavourable attitude towards reading in the school situation. It has been clearly shown that the attitudes of the Poor Readers were significantly less favourable to reading than those of the Good Readers. Also clearly established is a relationship between lower mental age, lower reading age and more unfavourable attitude to reading. These three characteristics in a child suggest, in the absence of severe mental handicap, a personality that is bound to be in poor rapport with the environment, in particular, the school environment. In a study described in Chapter I, Meyer (1954) found that this was a distinguishing feature of retarded readers shown in Rorschach responses. His summary that, in these cases, both the adequacy of personality adaption and intellectual level are relatively low, seems to be applicable to the findings of the present investigation. Clearly then, therapy should be directed along the lines of readjustment through increased rapport with the school environment. Attitudes such as those towards reading seem to represent a tangible starting point for the therapist. The experiences of Mursell (1948), Murfin (1952) and Fitt (1956) all suggest that personal security, adjustment and school achievement are improved by the improvement of the child's attitude.

* * * * *

CHAPTER VI.

C A S E S T U D I E S.

For detailed clinical analyses 4 readers with typical reading disabilities were selected from the experimental group. Case histories were compiled, comprising early history, physical condition, Psychologist's report, environment, Socio-emotional patterns, attitude towards child, school history, interest, play and social adjustment.

Conclusions and recommendations regarding Remedial and clinical procedure were then made.

CASE STUDY - CASE K.

1. PROBLEM.

K is a girl of well below average intelligence. She is both backward and retarded in Reading and spelling and is also underfunctioning in arithmetic (especially problem arithmetic).

She failed Gr. II and Stad. III and was transferred on age this year.

She finds it extremely difficult to concentrate and is often "difficult" in her behaviour. She is usually anxious to please and constantly seeks attention.

2. EARLY HISTORY.

She was born on 3.7.44. Her father was on Active Service in North Africa at the time and he only saw the baby for the first time after its third birthday. She is the seventh child of eight.

Pregnancy, labour and birth were normal. For a while she was breast-fed but because of the mother's physical condition through bad news and shock, the mother was advised to switch to bottle feeding.

K has always been a very nervous child.

(a) Milestones :

- i. Sat - 7 mths.
- ii. Teethed- 8 mths.
- iii. Stood - 11 mths.
- iv. Walked- 15 mths.
- v. Talked- 19 mths.

(b)/.....

- (b) Sleeping : always slept well
- (c) Toilet training : Early, but later started to wet her bed.
- (d) Illnesses : Measles and mumps.
- (e) Accidents, injuries etc.

She drank turpentine by mistake and was treated in hospital.

3. PHYSICAL CONDITION.

K. is undeveloped and small for her age and at times tires very easily. She has however, picked up lately. Her bed-time was discussed with her mother who stated that she has watched for possible fatigue and she is trying to get her to bed earlier.

She likes active games, especially swimming. Her teeth need attention and are receiving treatment at the Dental Clinic.

4. PSYCHOLOGIST'S REPORT.

(a) Test : New S.A.G.T. Date : June 1957.

I.Q. : Verbal - 71
Non-verbal - 63
Total - 66

C.A. : 13 years.
M.A. : 10.0 years.

(b) Attainments :

Reading Age : 6
(Teachers Estimate)

Reading Age : 6.5
(Holborn Scale)

5/.....

5. THE ENVIRONMENT.

(a) THE HOME:

The house is a small one, poorer than the average of that area. She shares one of the three bedrooms with her 23 year old sister.

Father sometimes brings a newspaper home, but otherwise there is an absence of books and magazines in the house.

(b) The Family Structure:

Father	-	55 yrs.
Mother	-	52 yrs.
L.	-	24 yrs.
G.	-	23 yrs.
W.	-	21 years.
R.	-	19 yrs.
V.	-	16 yrs.
F.	-	15 yrs.
K.	-	13 yrs.
J.	-	9 yrs.

(c) Other members of the Household

Maternal and Paternal grandparents deceased.

6. SOCIO- EMOTIONAL PATTERN

The family is a very closely-knit one and its members get along very well. Father is employed as a clerical assistant with the municipality. He is very strict with the children and is very much the master of the house. Mother is a thin, pale, sickly woman. She suffers from a heart ailment and has had a serious attack lately.

All the children live at home and those working, pay for their board and lodging.

7/.....

7. EMOTIONAL RESPONSES.

See Questionnaire 1
(Emotional Responses)

8. WISHES :

See Questionnaire 2
(Wishes)

9. ATTITUDES TOWARDS CHILD AND PERSONAL IMPRESSIONS.

Mother : She is inclined to be protective. She feels sorry for the girl because K. has not had the same chances as her other children.

Father : He is also inclined to be more lenient since he saw her for the first time when she was three years old, and the family moved about a great deal at her Junior school level.

The family: Shares these sympathies.

The elder sister who shares a room with her is very good to her but feels that the arrangement is really unfair to them both.

10. SCHOOL HISTORY.

K. attended two Junior schools in her first year at school. At the second she had to walk approximately 3 miles to the bus stop, leaving home at 7 a.m. and returning at 4 p.m. At the third, where she was in Std. I she had a daily walk of 5 miles. For Std. II and/.....

and Std. III she also attended two different schools - six schools in all up to date.

11. (a) HEADMASTER'S OPINION.

The Headmaster reported that K. came to his school at the beginning of 1957. She failed Grade II and Std. III, being transferred on age at the end of 1957. She is often difficult in her behaviour but is usually anxious to please and demands attention.

(b) See Questionnaire 3
(Teachers opinion)

12. PRACTICAL INTEREST.

She has few practical interests. She dislikes housework but, although keen on dressmaking, she never finishes a project.

13. PLAY AND SOCIAL ADJUSTMENT.

K. is an active child and fair at games. She is aggressive when teased and takes offence easily. She shows lack of concentration in games too. She gets along well with friends.

14. CONCLUSIONS AND RECOMMENDATIONS.

General intelligence is largely inborn all round mental power. (Vernon, 1940). (Burt, 1940). It is not acquired - although it does develop, it develops only along the lines of pre-determined potentiality.

To/.....

To understand any problem the pupil must be able to read intelligently and must perceive relationships and apply these relationships to new or similar situations.

K's intelligence is well below normal (66) and she must be classified as backward! The test also revealed that her verbal score is higher than her non-verbal score. A reliable individual test (e.g. Terman-Merrill test) should be employed to establish the specific intellect. (Terman & Merrill, 1937).

Yet, the intellectual ability, general or specific, is not the sole determinant of school progress; an extremely important factor in learning is the emotional attitude. (Vernon, 1937).

K. is the seventh child of a family of eight and her first three years of school life constituted a period of emotional strain for mother and the other siblings. Within the first six years she attended six different schools, in some cases under very difficult circumstances. She was probably taught reading through different methods, which to an intelligent child can be a great drawback, let alone one of low intelligence as in her case. Too many changes are equivalent to irregular attendance, and important cause of reading disability and accentuation of weaknesses already present. She was most likely not ready for tasks demanding intelligence and mental or psychological maturity.

The/.....

The importance of the home and school is well known. There are no books or magazines in K's home. The child's conception of reading is connected with home attitudes towards newspapers and books; where the child experiences a stimulating and extensive vocabulary we have an ideal preliminary experience for learning to read. (Wright, 1932). But for all those pupils whose homes offer few of these natural stimulants to the reading situation - the potential backward reader - formal reading lessons should be postponed. (Lee, Clark and Lee, 1934.)

K's disability dare not be neglected any longer. The longer the state continues, the more widespread are its effects. Continuous sense of failure before companions, teachers and parents weighs heavily upon pupils and in time not only undermines self-confidence and self-esteem, but breeds apathy and dissatisfaction that causes the child to seek success elsewhere.

I strongly recommend, and K will greatly benefit by, an intensive remedial programme in the three R's, (especially reading) in an endeavour to conquer the dislike for these subjects. (Gray, 1922).

Detailed information can be obtained from thorough diagnostic tests.

The inhibitions and conflicts that have resulted from failure must be dispersed and the remedial methods must have therapeutic as well as pedagogical value. (Hill, 1939).

The/.....

The principles upon which remedial teaching should be based are, individual attention, correct attitude of the teacher, use of materials related to dominant interests and motives of the child, and selection of the method best suited to the child's difficulties.

The reading method recommended in K's case is Grace Fernald's kinaesthetic method. (Fernald, 1943.) (Fernald & Keller, 1921.) This lays stress on the cues of writing and tracing, and on articulatory impressions from saying words. This is a laborious method but gives initial success, which is vital. Exercises to aid the detecting of visual patterns of words and improve comprehension, can later be adopted.

QUESTIONNAIRE I.

EMOTIONAL RESPONSES.

1. Do you do school work at Home?
Yes . . . sometimes.
2. Who would you like to be?
A shorthand/Typist.
3. Do you like reading?
No.
4. What makes you feel happy?
Parties.
5. What makes you feel unhappy?
When things are going wrong at home or school.
6. What makes you feel angry?
When I cannot get something right.
7. What worries you?
My reading and arithmetic failure.
8. What is the worst thing that ever happened to you?
My dog drowned in a river.
9. What is your good point?
I get along well with others.
10. What is your bad point?
I get too upset over fights and quarrels.

QUESTIONNAIRE 2.

WISHES.

1. If you had three wishes, what would you choose?
 - (a) That mother get well soon (Heart trouble.)
 - (b) Good health.
 - (c) That I be an ideal mother.
2. Who would you like to be and why?

A shorthand/typist . . . I like that type of work and an office.
3. Who would you not like to be and why?

Nurse . . . I don't like to see sick people.
4. If you were King for a day, what would you do?

Do kind things to people.
5. What is a witch?

An ugly woman.
6. If you were a magician, what would you do?

Make mother well.
7. If you had a lot of money, what would you do?

Buy a scooter.
8. What country would you like to visit most?

The U.S.A.
9. Do you often dream? What about?

I very seldom dream! About weddings and funerals.

QUESTIONNAIRE 3.

TEACHER'S OPINION.

1. Has he/she ever failed to be promoted?
Yes.
2. Has he always been backward?
Yes.
3. By what method was reading taught in Infant School?
Look and say.
4. Has any remedial work been done?
No.
5. What do you think is his/her attitude to the disability?
Does not worry her.
6. To what do you ascribe his/her backwardness?
Lack of intelligence.
7. Neatness?
Untidy.
8. Playground behaviour and games?
Fair - mixes fairly well.
9. Has attendance been regular?
Yes.
10. Any comments on improvements in school work?
Slight improvement in Reading since receiving remedial Reading help.

CASE STUDY - CASE A.

1. PROBLEM.

A, a boy with average intelligence, is slightly retarded and backward in Reading. In February, 1955, when he was 8 years old, he contracted polio, and his legs were affected. As a result of this, he was absent from school for six months. His retardation is probably as a result of emotional instability, a shaky start in Grade I and the long absence from school during his illness.

2. EARLY HISTORY.

He was born on 24/8/47, the eldest of three children. The pregnancy and condition at birth was normal. He was breast-fed for the first three months, but, on medical advice, was switched to bottle-feeding.

(a) Milestones:

i.	Sat	- 6 months.
ii.	Teethed	- 7 months.
iii.	Stood	- 9 months.
iv.	Walked	- 15 months.
v.	Talked	- 20 months.

(b) Sleeping: Very bad and restless sleeper.

(c) Toilet training: Late - mother experienced difficulty in training him.

(d) Illnesses: Measles, chickenpox, whooping cough and polio.

(e) Accidents, injuries: None.

3. PHYSICAL CONDITION. . . .

3. PHYSICAL CONDITION.

A is a tall, lanky but well-developed boy. He walks with a slight stoop. His eyesight is good and his teeth are sound.

4. PSYCHOLOGISTS REPORT.

(a) Tests: New S.A.G.T. Date : June 1957.

I.Q. Verbal - 96
 Non-Verbal - 96
 Total - 97.

C.A. - 9.10 years.

M.A. - 9.2 years.

(b) Attainments:

Reading : R.A. (Teacher's Estimate) : 9.0

 R.A. (Holborn Scale) : 8.9

5. THE ENVIRONMENT.

(a) THE HOME:

The house is of an old type, well built and furnished, but rather gloomy and dark. A shares a room with his eight year-old brother.

In a corner in the living room is a well-stocked bookcase with uninteresting-looking reference books.

A was reported to have his own books in his room.

(b) The Family Structure:

Father - 42 yrs.

Mother - 41 yrs.

A. - 10 yrs.

d. - 8 yrs (boy)

J. - 7 yrs (girl)

(c) OTHER MEMBERS /

(c) Other members of the Household. None.

(P.G.M. (70 yrs.) and P.G.F.(78) live in Cape Province).

6. SOCIO-EMOTIONAL PATTERN.

Father is an auditor and mother a housewife. They are both very home-loving types and only go on outings and holidays when the whole family can go together. The home is a happy and stable one and both parents share the responsibilities of discipline and code of behaviour.

7. EMOTIONAL RESPONSES:

See Questionnaire I

"Emotional Responses".

8. WISHES.

See Questionnaire II

"Wishes".

9. ATTITUDES TOWARDS CHILD, AND PERSONAL IMPRESSIONS.

Mother: She feels that A had a bad start at school and was further handicapped by the long absence from school when he contracted polio. She over-protects the boy since his illness, but feels concerned about his school failure. Feels father is too strict.

Father: Father is very interested in the boy. He encourages him to take part in games such as cricket and tennis. He is very strict with the children and "stands no nonsense".

Siblings: They love their elder brother because he always plays with them.

10. SCHOOL HISTORY/. . . .

10. SCHOOL HISTORY:

He was among the first pupils in a new local Primary School. The school was very crowded and understaffed at the time and mother feels that it was due to these conditions that he had to repeat Grade I. He was in Grade II when he contracted polio.

11. (a) HEADMASTER'S OPINION.

The Headmaster reported that, because of poor adjustment and attainment, he was kept for two years in Grade I, after which his work showed a general improvement. He is described as a very conscientious and well-behaved boy and is actually a better pupil than his marks reveal.

(b) See Questionnaire III
"Teacher's Opinion".

12. PRACTICAL INTERESTS.

He is good at woodwork and drawing and spends a lot of time on these at home.

13. PLAY AND SOCIAL ADJUSTMENT.

A is not good at games and seldom partakes in rough playground games. He likes cricket, is a good mixer and makes friends easily. He is impatient in play with his brother and sister.

14. CONCLUSIONS AND RECOMMENDATIONS.

Reading disability is not always intellectual but often emotional. It is difficult to tell which comes first, the failure or the emotional breakdown. Some fail to learn because they are emotionally unstable, others become emotionally unstable because they fail to learn.

I have/

I have come to the conclusion that A's difficulty is more closely related to emotional attitude than to any specific disability. (Vernon, 1937.) His initial failure in reading may be due partly to emotional attitudes formed during the pre-school period. Failure at Junior school his first large community, can have damning effects.

Conditions within the home and the school are extremely important contributory causes of the child's poor progress in reading. (Wickman, 1932.) The environmental forces are minimised. Often the beginners in the infant departments are not sufficiently mature and "ready to learn." We find then these infants trying to associate the meaning of words with visual forms; a task which is to them meaningless, joyless and purely mechanical, a task in which they are not yet interested. They are not intellectually ready for tasks demanding a six-year-old intelligence. They lose confidence, become confused and begin to dislike reading. (Benjamin, 1937.)

The subject should benefit by remedial help in reading and spelling. Reading matter should be selected from his particular field of interest. Educational and diagnostic tests will reveal any reading or spelling difficulties. (Schonell 1952.) The Polio he contracted impeded normal progress in School. The reaction of

individual/.

individual children after a prolonged illness are most complex. The attitude adopted depends upon the attitude of others and upon the child's general mental and Physical condition. Compensatory conduct is sometimes of a subtle kind so that it takes time to discover the source of the temperamental incongruity or the minor misconduct.

QUESTIONNAIRE I.

EMOTIONAL RESPONSES.

1. Do you do school work at Home?
Yes.
2. Who would you like to be?
Auditor.
3. Do you like reading?
Yes.
4. What makes you feel happy?
Playing games.
5. What makes you feel unhappy?
Selfishness.
6. What makes you feel angry?
When my friends fight.
7. What worries you?
-
8. What is the worst thing that ever happened to you?
When I contracted polio.
9. What is your good point?
Arithmetic.
10. What is your bad point?
I find difficulty with reading.

QUESTIONNAIRE 2.

W I S H E S.

1. If you had three wishes, what would you choose?
 - (a) A nice car.
 - (b) A beautiful home.
 - (c) To be a good sportsman.
2. Who would you like to be and why?

Jackie McGlew. He is a fine Batsman.
3. Who would you not like to be and why?

A rugby player. The game is too rough.
4. If you were King for a day, what would you do?

Help the poor, sick and the blind.
5. What is a witch?

A bad person.
6. If you were a magician, what would you do?

Fool people.
7. If you had a lot of money, what would you do?

I will give lots of money to the poor and my parents.
8. What country would you like to visit most?

Sweden.
9. Do you often dream? What about?

Yes, about nothing in particular, but sometimes it is most upsetting.

QUESTIONNAIRE 3.

TEACHERS OPINION.

1. Has he ever failed to be promoted?
Yes Grade I.
2. Has he always been backward?
No.
3. By what method was reading taught in Infant School?
Phonic method.
4. Has any remedial work been done?
No.
5. What do you think is his attitude to the disability?
He is very conscious of it and tries to overcome it.
6. To what do you ascribe his backwardness?
Emotional problems.
7. Neatness?
Good.
8. Playground behaviour and games?
He likes games and is a good leader.
9. Has attendance been regular?
Fair.
10. Any comments on improvements in school work?
There has been steady progress lately.

CASE STUDY - CASE L.

1. PROBLEM :

L is a boy of below average intelligence. He is both backward and retarded in Reading (4 years and 2 years respectively). His I.Q. might be an underestimation, considering that his non-verbal score is 16 points higher than his verbal score. He was born with the sight of only one eye, which probably has effected his reading and comprehension ability. He dislikes reading intensely - he won't read! He always tries to curry favour. He often dreams. Everything he dreams about becomes small and distant. This scares him and then he won't sleep alone.

2. EARLY HISTORY.

He was born in Holland on 28/9/45 during World War II, a period of great emotional strain for the parents. Mother weighed only 90 lbs. at the time of his birth. The birth was normal but his later development was slower than the elder boy. Because of the mother's condition he was bottle fed.

(a) Milestones :

- i. Sat - 8 mths.
- ii. Teethed- 9 mths.
- iii. Stood - 11 mths.
- iv. Walked - 16 mths.
- v. Talked - 21 mths.

(b)/.....

- (b) Sleeping : Bad, restless sleeper.
Dreant regularly and vomited during
the night.
- (c) Toilet training : Clean at 2½ years.
- (d) Illnesses : Chickenpox and measles. He
always had stomach trouble but
after his tonsils were removed
his health greatly improved.
- (e) Accidents, injuries etc. None.

3. PHYSICAL CONDITION.

L. is a well developed boy and big for his age. He is very active and energetic. Although his mother suspected it, complete blindness of his right eye was only diagnosed at the age of five. This defect has seriously affected his movements and behaviour.

4. PSYCHOLOGIST'S REPORT.

(a) Tests : - New S.A.G.T. Date : June 1957
I.Q. Verbal - 80
 Non-verbal - 96
 Total - 88

C.A. 11.9 years.
M.A. 10.0 years.

(b) Attainments :

Reading R.A. (Teachers Estimate) : 9.0
R.A. (Holborn Scale) : 8.0

5/.....

5. THE ENVIRONMENT.

(a) The Home :

It is a neat well appointed house, tastefully furnished and neatly kept. L. shares a bedroom with his elder brother although he can have his own. The family are keen readers and there are many books and magazines in shelves in the study. The lawn in front and the backyard are available as play-space to the children.

(b) The Family structure.

Father	-	45 yrs.
Mother	-	40 yrs.
H.	-	15 yrs.
L.	-	12 yrs.

(c) Other members of the Household :

M.G.F. - 67 years old.

6. SOCIO- EMOTIONAL PATTERN.

The home is a stable one. Father is the manager of an Art Metal Works and mother a housewife. Father is a strict but fair man and "stands no nonsense from the children". Mother leaves all decisions in father's hands. She seems a contented woman.

7. EMOTIONAL RESPONSES:

See Questionnaire I.
"Emotional Responses"

8/.....

8. WISHES :

See Questionnaire II
"Wishes".

9. ATTITUDES TOWARDS CHILD AND PERSONAL IMPRESSIONS.

Mother : She is very concerned about L's school failure especially over his specific reading disability. She feels that his eye defect is the major cause. She also blames the war conditions, under which he was born, as contributive to his difficulties, and tends to over-protect the boy. She is very anxious for him to get remedial help.

Father: He is a man of few words but gives the impression that he feels that the strap could solve part of the problem. He is, however, aware of the boy's eye handicap but tends to compare him with the more successful elder boy.

The family: The elder brother is very fond of the younger boy and is always ready to protect or take him under his wing where necessary. He does though, in my opinion, find sub-conscious delight in being the better scholar. He has made L very dependent on him.

10. SCHOOL HISTORY

He has been a pupil at a nearby Junior school where he spent 18 months in Grade I. Since then he has attended another nearby Primary school - both excellent schools. He dislikes school, "because I don't seem to make a success of things. This makes me very unhappy."

11. (a) HEADMASTERS OPINION.

The Headmaster reported that L. has had a struggle to pass each year at school; this has largely been bound up with his reading disability. He is a quiet boy and has no behaviour problems.

(b) See Questionnaire III "Teachers opinion."

12. PRACTICAL INTEREST.

He is very keen and good at drawing, and always looks for excuses to draw in class. This is very important to him (often as an escape technique).

He has no other particular interests.

13. PLAY AND SOCIAL ADJUSTMENT.

L. is an active boy. He avoids bigger boys and always seeks the company of smaller boys. He is not keen on competitive games. He will often stand alone in a corner of the playground or seek company and favour of the teacher on duty.

14/.....

14. CONCLUSIONS AND RECOMMENDATIONS.

L. is a boy of below average intelligence. Intellectual characteristics include all activities concerned with the thought processes and are inborn, and only develop "up to inborn capacity". They concern the ability to see, apply and understand relationships. A greater amount of intelligence is required as these relations become more difficult. No matter what the thought process is, the "general factor" (g) enters to some degree into it.

Intelligence tests provide us with fairly accurate means of judging intelligence. These tests however, do not reveal inborn level, except in so far as it has been realised by environmental opportunity in material similar to that used in the tests. More attention should be given to the various emotional attitudes aroused in children by test items, and especially by intelligence tests. (Knight, 1933)

The formation of emotional attitudes is mainly a matter of influence by the environment. The child's behaviour both in and out of school is very much a matter of conditioned attitudes. Undesirable emotional attitudes can and must be broken down and this is the job of the parent and teacher. In early school life, the attitude of a pupil towards his school life is more important than the knowledge he acquires. (Schonell, 1942).

Satisfaction/.....

Satisfaction, progress and interest are the main emotional encouragements which influence success at school.

Abnormal physical variations or defects (usually innate) can also have damaging effects on a child's personality and therefore reinforce educational failure.

L. was born with sight in only one eye. His attitude regarding his affliction and his reading retardation is almost pitiable. Defects of eyesight are a cause of backward reading which result in the reception of wrong impressions of words. The nervous strain imposed, produces inability to concentrate upon visual forms of words.

The boy apparently finds difficulty in perceiving the orientation and letter sequence of words. This is shown in the tendency to reverse small words, to confuse letters which differ only in left to right position of particular parts and to transpose letters and syllables in reading words - a weakness connected with the inability to make consistently correct perceptual attack on words. Instead of a left to right attack he exhibits a right to left perception (e.g. on (no) was (saw)).

Neglect of the disability is very disturbing and depressing. L. should have a very thorough
eye/.....

eye examination. Then scholastic and diagnostic tests should be applied. The first will reveal the nature of his backwardness. As reading depends upon visual and auditory analysis, discrimination and synthesis of word patterns, the diagnostic reading tests provides information on these powers.

I recommend the Gates remedial programme. (Gates, 1935). Its major objective is the correction of visual habits in respect of words.

Remedial help will make him less apathetic in attitude and he needs to see specifically how these subjects are related to his goal.

(Highfield, 1949). (Woolley 1923).

QUESTIONNAIRE 1.

EMOTIONAL RESPONSES.

1. Do you do school work at Home?
Yes.
2. Who would you like to be?
An architect.
3. Do you like reading?
No, I dislike it!
4. What makes you feel happy?
Harmony at home and to play with my brother.
5. What makes you feel unhappy?
When others are in difficulties.
6. What makes you feel angry?
When people break their promises.
7. What worries you?
My reading difficulty.
8. What is the worst thing that ever happened to you?
To have been born with the use of one eye.
9. What is your good point?
Drawing.
10. What is your bad point?
Reading and spelling.

QUESTIONNAIRE 2.

W I S H E S.

1. If you had three wishes, what would you choose?
 - (a) A happy life.
 - (b) No worries.
 - (c) To be able to read.
2. Who would you like to be and why?

A traveller. It is interesting and you get around.
3. Who would you not like to be and why?

A machanic. It is too dirty.
4. If you were King for a day, what would you do?

I would buy everybody nice homes to make them happy.
5. What is a witch?

A woman on a broomstick.
6. If you were a magician, what would you do?

Make lots of money for the poor.
7. If you had a lot of money, what would you do?

I would travel and visit Holland where I was born.
8. What country would you like to visit most?

Holland and Europe.
9. Do you often dream ? What about?

I dream when I am excited. In my dreams everything gets small and distant this worries me!!

QUESTIONNAIRE 3.

TEACHERS OPINION.

1. Has he ever failed to be promoted?
No.
2. Has he always been backward?
Yes.
3. By what method was reading taught in Infant School?
Combination of Look and Say and sentence Method.
4. Has any remedial work been done?
No.
5. What do you think is his attitude to the disability?
Very concerned.
6. To what do you ascribe his backwardness?
Eye difficulties (attack)
7. Neatness?
Untidy.
8. Playground behaviour and games?
Prefers to play with smaller boys. Dislike competitive games.
9. Has attendance been regular?
Fair.
10. Any comments on improvements in school work?
Poor report. Won't be able to proceed to high school unless great improvement.

CASE STUDY - CASE G.

1. PROBLEM.

G. is a well-developed girl with slightly below average intelligence. Since her non-verbal score in the I.Q. group test is 23 points higher than the verbal score, this is possibly not a true reflection of her mental capacity and apparently reflects a specific reading disability. This disability affected the questions with strong verbal bias and she should, if this can be remedied, fall well within the limits of normal intelligence.

She has very poor powers of concentration and is very forgetful and highly strung.

2. EARLY HISTORY.

G. was born on 29.11.46, the youngest of two daughters. She was a premature baby (7 months) and an instrument case. Although she was small and underdeveloped during the first few years, she has improved considerably lately.

(a) Milestones :

- i. Sat - 6 mths.
- ii. Teethed - 9 mths.
- iii. Stood - 8 mths.
- iv. Walked - 10 mths.
- v. Talked - 21 mths.

(b) Sleeping : She has always slept very badly and this is still the case. She never seems to be sound asleep.

(c)/.....

(c) Toilet Training : Very early.

(d) Illnesses : None.

(e) Accident, injuries etc: None.

3. PHYSICAL CONDITION.

G is a well-developed, friendly girl. She is keen, but not good, at games and tires very easily. This may be due to the fact that she is a restless sleeper and often wakes up during the night.

4. PSYCHOLOGIST'S REPORT.

(a) Tests : New S.A.G.T. Date : June 1957.

I.Q. : Verbal - 79
Non-Verbal - 102
Total - 92

C.A. - 10.7

M.A. - 9.4

(b) Attainments :

Reading

R.A. (Teachers Estimate) - 8

R.A. (Holborn Scale) - 7.9

5. THE ENVIRONMENT.

(a) THE HOME :

The house is typical of those of the area. It is neatly furnished and well kept with a well appointed flower garden in front and a vegetable garden at the back.

A/.....

A bookcase in one corner was well filled with novels and encyclopaedias and a few magazines. The two daughters have their own bedrooms.

(b) Family Structure.

Father - 46 yrs.
Mother - 42 yrs.
S. - 19 yrs.
G. - 10 yrs.

(c) Other members of the household.

None.

M.G.F. and M.G.M. : Living in Ireland.

6. SOCIO-EMOTIONAL PATTERN

The family, is a stable closely-knit one. Both parents came to this country from Ireland, but the children were born in South Africa.

Father, a salesman, earns a good salary and is a domestic type. Mother is a housewife and finds pleasure in her home. Both parents are very lenient with the children especially with G., "because she is so much younger and still our baby."

7. EMOTIONAL RESPONSES.

See Questionnaire I
"Emotional Responses."

8. WISHES.

See Questionnaire II
"Wishes."

9/.....

9. ATTITUDES TOWARDS CHILD, AND PERSONAL IMPRESSIONS.

Mother: She takes a keen interest in G's school work and is much concerned about her reading difficulties. She cannot understand why the child is backward in reading. The elder daughter had no reading difficulties. Because of G's age and difficulty, mother admits that she over-protects the girl.

Father: He is also very lenient with G. and discipline is rather slack. He is rather less concerned about her school difficulty and feels it is something she will grow out of.

Sister: G. is critical of her elder sister but the latter accepts it. G's school difficulties do not interest her.

10. SCHOOL HISTORY.

Since October 1952, G. has attended the same nearby Primary school. She has never failed to pass but her marks have gradually dropped, especially since reading ability dominates all subjects in the higher classes.

11. (a) HEADMASTER'S OPINION.

The Headmaster reported that G. was very "shaky" in Grade I, but improved in Grade II, since when her marks have gradually been dropping. She is a quiet reserved girl and has never been a behaviour problem.

(b)/.....

(b) TEACHERS OPINION.

See Questionnaire III.
"Teachers Opinion".

12. PRACTICAL INTERESTS.

G. is not good with her hands and cannot make things. She is keen on needlework but never seems to complete anything. She also likes drawing.

13. PLAY AND SOCIAL ADJUSTMENT.

She is fair at games, but here too, lacks concentration. She makes friends easily.

She likes schoolgirl annuals and picture books. She is a very timid and anxious type.

14. CONCLUSIONS AND RECOMMENDATIONS.

Reading is a very important subject and the relationship between success in reading and general success is so close that poor reading is often mistaken for dullness.

The over-mothered pampered children whose attachment to the mother robs them of initiative and self-reliance are usually difficult cases and need to take the necessary independent steps in reading. (Buhler, 1953).

Lack of concentration is also a notable defect in the mental make-up of pupils who read without
understanding/.....

understanding. This weakness in concentration appears to be an intrinsic part of the child's emotional equipment and in G's case this weakness is associated with a nervous condition resulting in general lack of energy. (Valentine, 1942).

I found that G. is weak in discriminating between visual patterns of words and cannot react accurately to the whole pattern of the word (for example, wet for when, form for from etc.) This is closely related to the tendency to reverse small words and to confuse letters which differ only in left to right position of particular parts. This difficulty goes hand in hand with the pupil's inability to make a consistently correct perceptual attack on words. (Vernon, 1931).

In reading and spelling, the confusion of letters and words of similar structure may be an indication that the older backward reader is still at the perceptual level of the younger beginner who perceives in wholes of structural solidity - a general delay in perceptual development. (Crider, 1934).

A single unit approach is required to assist her in reading. The emphasis is on specific treatment and therefore the approach is a phonic one with a minimum of irregular or "look and say" words in the material.

Miss Monroe's Programme (Monroe, 1932) for backward readers is recommended.

QUESTIONNAIRE 1.

EMOTIONAL RESPONSES.

1. Do you do school work at Home?
Yes.
2. Who would you like to be?
Hairdresser.
3. Do you like reading?
Sometimes.
4. What makes you feel happy?
Dancing.
5. What makes you feel unhappy?
Some subjects I find difficult.
6. What makes you feel angry?
When I cannot get something right.
7. What worries you?
When I cannot do my homework. Especially Afrikaans.
8. What is the worst thing that ever happened to you?
-
9. What is your good point?
Dancing.
10. What is your bad point?
Housework.

QUESTIONNAIRE 2.

W I S H E S.

1. If you had three wishes, what would you choose?
 - (a) To read well.
 - (b) To know Afrikaans better.
 - (c) To be a good Hairdresser.
2. Who would you like to be and why?

Hairdresser. I always like playing with people's hair.
3. Who would you not like to be and why?

A dentist. I don't like to hurt people.
4. If you were King for a day, what would you do?

Give all the poor children a Christmas party.
5. What is a witch?

A bad person.
6. If you were a magician, what would you do?

Make lots of money to give to the poor children.
7. If you had a lot of money, what would you do?

I would help poor people.
8. What country would you like to visit most?

Switzerland. Because I saw so many pretty pictures of mountains.
9. Do you often dream? What about?

Yes! I dream about people that take me away and that scares me.

QUESTIONNAIRE 3.

TEACHERS OPINION.

1. Has she ever failed to be promoted?
No.
2. Has she always been backward?
Yes.
3. By what method was reading taught in Infant School?
Look and say method.
4. Has any remedial work been done?
No.
5. What do you think is her attitude to the disability?
Keen to do better but not really progressing.
6. To what do you ascribe her backwardness?
Specific reading disability.
7. Neatness?
Untidy.
8. Playground behaviour and games?
Fair at games, dislikes aggressive games.
9. Has attendance been regular?
Yes.
10. Any comments on improvements in school work?
Fair improvement lately.

CHAPTER VII.

S U M M A R Y.

1. An investigation is described, designed to assess the relationship between reading achievement, intelligence and attitude towards reading in primary school children. The basic hypothesis was that there is a positive relationship between these variables.

2. A survey of relevant literature is given. Previous studies of internal and external factors influencing reading achievement are described.

3. The subjects were 160 children aged from 8 years 10 months to 12 years 9 months in a government primary school in an average socio-economic area in Johannesburg. The experimental group comprised 80 children, 40 boys and 40 girls, who had been referred for remedial education because of reading disability. This group was divided into four sub-groups according to age. Each sub-group contained 10 boys and 10 girls.

The control group comprised 80 children from the same school, who had not been referred for remedial education. This group was matched for age and sex

with/.....

with the experimental group, and similarly subdivided into four sub-groups.

4. Mental age, verbal I.Q. and non-verbal I.Q. were measured by means of the New South African Group Scale. A description of this test is given. Reading achievement was measured by means of the Holborn Reading Scale, which is described in detail. The scales are expressed in terms of Reading Age. An attitude scale was designed to measure the attitude of these children towards reading. The Thurstone method was adopted as a basis. A detailed account is given of the method of selection the final 20 scale items by means of judges ratings and other criteria. The scale was administered in group situations. A high average scale (maximum 7) on the scale items indicated an extremely favourable attitude towards reading.

5. The experimental group (Poor Readers) were significantly inferior to the Good Readers in both Mental Age and Reading Age. The Poor Readers had significantly less favourable attitudes towards reading than did the good Readers.

6. No differences in test scores could be attributed to sex.

7. For both groups there were significant positive correlations of mental Age with Reading Age. Also in both groups, there were significant, but smaller, positive correlations of Mental Age and Reading Age on the one hand and attitude towards reading on the other.

8. There were no differences in these interrelationships between the boys and girls.

9. Slight differences were found amongst the various age sub-groups in the experimental group. However, these were not regarded as significant due to the small size of the samples (N = 20).

10. The experimental group showed somewhat higher correlations of mental Age and Reading Age on the one hand and attitude towards reading on the other, than did the control group. A tentative explanation is offered in terms of differences in level of development of interests as a result of achievement.

11. The hypothesis that higher Mental Age, higher Reading Age and more favourable attitude towards reading is supported by the results. Assessments of causal relationships are discussed in terms of the influences exerted on reading achievement by environmental and intellectual aspects. It is suggested that the interrelationships of these variables are reciprocal in character.

12. A previous finding that school achievement is better predicted by mental age than by attitude is supported, but suggestions for therapy are put forward based on readjustment of personality and increase of rapport with the school environment by means of improving the child's attitude towards reading.

13. Detailed clinical analysis of four readers with typical reading disabilities were selected from the experimental group and case histories compiled.

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