REPORT ON THE THREE YEAR RESEARCH
PROGRAM ON LANGUAGE INSTRUCTION IN
THE MARITIME INDIAN SCHOOLS
1959 - 1962

Miss R.C. Colliou

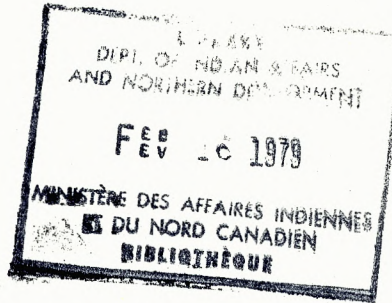Department of Citizenship and Immigration
Indian Affairs Branch
EDUCATION DIVISION

REPORT

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Written by

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INTRODUCTION

This report is a summation of the findings of the three year reading research program conducted in the Indian schools of the Maritimes from the fall of 1959 to the spring of 1962. The schools participating in this research program were located in New Brunswick, Nova Scotia, and Prince Edward Island. All Indian schools of the Region were included and came under one of the following classifications:

(1) Large School Units:

Five day schools and one residential school made up this group which included from 70 to 80 per cent of the pupils tested. Classroom grade division in these schools had one or two grades to a teacher with an average classroom enrollment of twenty-five to thirty-five pupils.

(2) Two-room School Units:

There were eleven schools in this group which included from twenty to thirty per cent of the pupils tested. School room division generally consisted of grade beginner to grade three inclusively in the primary room, and grades four to eight in the elementary room.

(3) One-room Schools:

Only one school came under this classification. The teacher has a grade enrollment from beginners to grade eight.

Testing was administered to all pupils from grades one to six. The average number of pupils tested by grade over the three year research program is as follows:

	3 yr. Av.	1961-62
Beginners	200	229
Grade I	215	216
Grade II	210	219
Grade III	200	202
Grade IV	175	187
Grade V	150	162
Grade VI	110	114

These can be regarded as representative samplings. This is a valid grade population sample of Indian pupil achievement of the schools participating in this research.

Need for the Reading Research Program

The need for a reading research program is best understood in the background of general observations made in the field of Indian education through the years with particular reference to the English language handicap of Indian pupils and the limited supportive research available on this problem as well as on pupil achievement levels in general. With respect to the latter, a major testing research in Indian schools across Canada was conducted by the Indian Affairs Education Division of Ottawa in the Spring of 1958. This testing research dealt with achievement scores of grade four Indian pupils in reading skills, vocabulary, and arithmetic fundamentals by administrative regions. Subsequent to this initial testing program, this survey was planned to study the language-reading relationship for a diagnostic evaluation of _How_ and _Why_ it affects the grade achievement progress of Indian pupils.

With reference to pupil achievement, most schools of the Maritimes are a cross-representation of Indian schools in other parts of the country. Some have the language problem of beginners coming from non-English speaking homes and others have not. In addition, there is also a traditional absenteeism factor particular to this area. Every fall, families leave the reserve to go potato picking in the State of Maine and as a result a minimum of one school month is lost every fall term. It was felt, therefore, that both English language difficulties and absenteeism could be studied within the context of the reading research program and yield valuable information for other regions where similar problems exist.

Another reason for making the survey in the Maritimes is the current cumulative grade testing research being conducted jointly by the three Provincial Departments of Education of the Maritime Provinces. In the light of the provincial testing program and the active promotion of Indian pupil integration through attendance of non-Indian schools, testing in Indian schools of the Maritime Region was a timely move and offered comparative studies of Indian school pupil achievement with pupils of non-Indian schools.

Objectives of the Research Program

The specific objectives of the Reading Research Program were:

(1) to raise the reading achievement scores of Indian pupils.

(2) to find progress patterns from grade to grade.

(3) to study the relationship between English language difficulties of Indian pupils and their reading achievement.

(4) to study the relationship between absenteeism and reading achievement.

In addition to these specific objectives, broad objectives included teacher guidance through classroom supervision; in-service training through teacher institutes and conventions; boosting classroom library organization and its use; preparing a course in basic English for beginners and grade one; and suggesting general remedial help and assistance relevant to the particular and local needs of individual schools. During the third year of the Research Program, intelligence test norms were also devised for the Goodenough Intelligence Test on the Indian population of the Primary Grades and temporary norms on the Raven Matrices were also developed for the elementary grade pupil population.

This report begins with a description of the Indian school-age child and his environment as background information relative to the applicability of some of the research results in other Indian schools across Canada. Testing results are then presented and discussed by sections as follows:

(a) Beginners and Grade One.

(b) Primary Division Results of Grades One to Three inclusively.

(c) Elementary Division Results of Grades Three to Six inclusively.

The broad objectives and their implications as they pertained to the Maritime Reading Research Program are discussed within each section. Recommendations and conclusions derived from the Reading Research Program are briefly summarized by sections.

BACKGROUND INFORMATION ON THE INDIAN CHILD

Information on the Indian child who participated in the testing program is deemed as essential in this report as the statistical data of his achievement scores. In no wise do we consider statistical data of much value unless it is interpreted with a view to improve the lot of the population from which it was obtained.

Physical Appearance

In physical appearance, the Indian child of the Maritime Region has lost some of the prominant facial characteristics of the Indian race, so markedly distinguishable in Indian children living in more isolated regions of the country. Historically speaking, the Maritime Region is one of the oldest settled areas of Canada and accounts for longer contact between the Indian and the non-Indian. This accounts for a certain amount of interracial breeding reflected in the facial features of the Micmac or Maliseet child.

In stature, Indian children, grade by grade, appear and are older by a year than a similar grade group in non-Indian schools. This is mainly due to the initial one-year retardation on grade one entrance from having spent their first year of school in learning basic English.

Physiological handicaps related to mixed-dominance and mirror-vision are next to non-existent in the Indian school population who took part in this reading research.

Health Care

From time to time, malnutrition is introduced as a factor in consideration of the Indian pupil's performance. This, however, applies to a limited number of individual cases. Nurses regularly visit the schools and check on individual health problems. Vitamin biscuits and milk are available to all pupils as a diet supplement every day of the school year. In brief, the Indian child benefits from a regular health supervision program.

Pupil grooming is generally neat. The girls' dresses offer as much variety in style and colour as any of non-Indian girls in rural areas. There is also evidence of a time-routine in the home since most of the pupils generally come to school on time both in the morning and in the afternoon.

Social Traits and Home Life

The characteristic trait of the Indian's avoidance of open social conflict is also prevalent in the classroom. The Indian pupil is inclined to be co-operative rather than rebellious and stubborn. This pattern is generally observed in the classroom atmosphere of the Maritime Indian schools and is supported by the fact that most teachers' references to Indian pupils are related to specific learning difficulties. Discipline problems linked to negative behaviour effect on learning are seldom referred to.

The home conditions are far from the primitive conditions which even some of the non-Indians of the area imagine them to be. A number of families have television sets, modern electrical appliances, washroom facilities, and a limited number own cars and trucks.

The homes may not compare favorably with those of the teachers and sometimes one senses an undue concern over this. On the other hand, if home is viewed as security and affection or respect existing amongst the members of the family, there is no doubt that the Indian home has less tension and fewer emotionally disturbed children than in a proportionate

non-Indian population. Generally speaking, the Indian child is a relaxed and happy child in his own way. He grows up in an environment where material needs are not as crucial to social status as in other ethnic groups and suffers fewer frustrations and tensions generated in the home environment of many non-Indian children.

Economic Status

The economic life of the Maritime Indian is rather unstable. A small number of Indians are permanently employed in nearby towns, but the majority depend on seasonal work, such as fishing, lumbering, and crop picking. One important seasonal job that attracts the Indian family is potato picking in the State of Maine. However, whereas in the past, the fall migration was general throughout the Indian communities of the region, in recent years migration from the more distant communities living in Nova Scotia as compared with the New Brunswick proximity to Maine is on the decrease.

There is no legal way of preventing this migratory stream. Families, parents and children, may be away from the reserve from ten to thirty days. Although children are not hired as child labour, the nature of the agreement between employer and the family head is such that parents are eager to have the help of their children. As a result, children who should begin the school year in early September will begin as late as the last week in October. As a result the four month first term is reduced to a two to three month period, a ten month school year to an eight to nine month year. Through the years, the general implication of this annual absenteeism has been interpreted as a cause of retardation in school grade achievement.

Language Learning Patterns

The native language, Maliseet or Micmac is the spoken language of the home. In view of the difficulties which school beginners experience due to their lack of basic English, it certainly would be desirable that children come to school with a spoken knowledge of basic English. But, the use of the native language is a basic pattern of family life. A mother naturally speaks to her child in the language which is most intimate to her thinking. It would be most difficult and most unnatural to expect the mother-child communication to be otherwise. Moreover, it is generally recognized that children develop better language concepts when they are exposed to only one language during the language growth process. Since the child-mother bond is intimately linked to the use of the mother-tongue, even if the mother should wish to have her child learn English before he starts to school, she is bound to avoid the problem of establishing other relationship patterns with her child which would call for a stricter discipline on her own thinking and limit her spontaneity with her child.

In homes where parents have as much facility in the use of the English tongue, one and the other language is often used interchangeably. Children coming from these homes have a decided advantage in their first contact with school life.

A number of children in grades three to six were asked individually which language they used at home. In the majority of cases, Indian and English were mentioned, but it was interesting to note that when further queried as to when English or Indian was used in the home, the answers were: (1) Indian in speaking with parents; (2) English when non-Indians visited the home; (3) English, especially with the girls, when they played school; (4) and, in the case of both boys and girls, when speaking with older brothers and sisters.

In a number of schools children will use English or Indian interchangeably at recess whereas in other schools, only the Indian native language is heard at play. The latter pattern is an indication that these children are not familiar enough with English to use it spontaneously. For, inasmuch as recess is a physical relaxation for the children, similarly, the return to the native language is also a mental relaxation for them. The fact that some children revert to the Indian language while others use English or Indian interchangeably leads to interesting assumptions related to learning English at school.

Television in Indian homes seems to have contributed considerably in bringing more "heard" English into the home, especially of the dialogue or conversational form as opposed to the lecture or interview radio presentations. But even at its best, television-English invites a passive audience and cannot be considered as a source of active English for the Indian or the non-Indian for that matter. Television, however, has broadened the vicarous experiences of the Indian child and these have strengthened instruction in the classroom subjects of general background knowledge and current topics of interest.

In informal sessions of oral English with grades two and three during classroom visits, children were invited to ask any questions they had on their mind. These ranged from curiosity or interest in the adult's personal life to current news items of Glenn's orbital flight, desirability of seat belts, travel itineraries, office management, educational background, interest in other languages, curtailing of television viewing if detrimental to school, car insurance, etc. Such informal discussions reveal that the Indian child is as much a child of our present day and age as the non-Indian child.

SELECTION AND ADMINISTRATION OF TESTS

In view of the diagnostic nature of the Reading Research Program and its three year cumulative data of reading achievement scores, the Gates Test Series was selected in favour of other reading test series. The Gates Series met with all the basic requirements of the testing research. These were:

(1) availability of a graded series from the beginner grade to the elementary level and above;

(2) reading grade standard norms;

(3) diagnostic tests for the various basic skills in reading;

(4) simple procedure of administration;

(5) availability in at least three forms.

Testing was done semi-annually over a period of three years. The fall battery was administered in November and the spring battery in May. This allowed for a six-month interval between the test sessions. The expected grade norm was established at .2 of each grade year for the fall, or 2 months of a ten month school year and .8 of each grade for the spring, or eight months of a ten month school year. Summarily, the expected grade norms read as follows for each fall and spring testing sessions, respectively:

Fall Grade Norms -- 1.2, 2.2, 3.2, 4.2, 5.2, 6.2
Spring Grade Norms- 1.8, 2.8, 3.8, 4.8, 5.8, 6.8

The respective fall and spring batteries consisted of the following selections:

Fall Test Battery --- Gates Series

Grade I --- Reading Readiness Test

II --- Primary Word Recognition
Primary Paragraph Reading

III --- Advanced Word Recognition
Advanced Paragraph Reading

IV-V--- Noting Detail
-VI Understanding Directions
General Significance

Spring Test Battery --- Gates Series

Beginners --- Reading Readiness Test

Grade I --- Primary Word Recognition
Primary Paragraph Reading

II --- Advanced Word Recognition
Advanced Paragraph Reading

III to VI--- Gates Reading Survey

(a) Speed and Accuracy
(b) Vocabulary
(c) Comprehension

Test selection of the primary division offered diagnostic comparisons of word recognition skill with language understanding of paragraph content in both fall and spring batteries. The fall test battery of the elementary division provided information on word recognition skills and the ability to locate factual answers from the printed text while the spring battery from grades three to six was chiefly based on vocabulary and deductive reasoning of an implied solution not directly stated in the printed text. The fall battery tested reading ability as a technical skill; the spring battery dealt with reading as a reasoning or thinking tool.

The tests were administered in accordance with standard test procedures. In the primary grades, except for a few teachers who had had testing experience, most tests were administered by the reading specialist with the assistance of the classroom teacher during the first half of the program.

Initially, and particularly in primary grade classrooms, teachers had a tendency to view testing as a teaching rather than a testing situation. This teacher attitude was partly called for on the part of the pupils who also showed a tendency to rely on the teacher's assistance as they came to the more difficult test items. Grades four to six pupils and their teachers generally met test controls efficiently from the first.

All test papers were hand scored with the assistance of the respective classroom teachers. This proved a most effective means of developing and sustaining interest and insight in test results from year to year. Cumulative pupil achievement scores were made available to the respective classroom teachers and entered in pupil cumulative record cards.

Statistical Treatment of the Test Data

An interval range of five was used throughout. Mean scores and standard deviations apply to total grade population achievement scores. With reference to the individual schools, scores are reported in terms of aggregate average. In both mean score and aggregate average calculations, fractions of school month were rounded off to a full month above or below decimal five. Similarly for square root, tables were used and the nearest root was accepted. Where minor differences arise in comparing means, they are due to the above-mentioned statistical disregard for fractional accuracy which are insignificant in the overall assessment of the statistical data.

BEGINNERS AND GRADE ONE TEST RESULTS

Language Readiness of Beginners

The Gates Reading Readiness Test was selected to evaluate the beginner's language readiness ability versus perceptional maturities basic to reading readiness skills. The percentile scores of the PICTURE DIRECTIONS sub-test which requires ability to understand what is said were compared with the total average of the remaining three subtests, namely:

> (a) word matching
> (b) word card matching
> (c) rhyming

Language readiness percentile scores were also compared with the total average of the four subtests mentioned above.

Sample Population Tested

The individual school results of the larger school units appear in Table 1. Pupil population from these schools averaged 100 pupils or about 50 per cent of the total grade one population tested over a three year period in the Maritime Indian Schools. Results of grade one pupils in the small school units are entered for fall 1959 and 1960 testings only.

In schools A and B, beginners start school with a fair grasp of basic English but are subject to errors of pronunciation and of grammar with reference to the correct use of verb tenses. In schools C, D, and E, beginners start school with little or no English at all. In schools C, D, and E the beginners' lack of basic English invalidated the beginner testing results of the fall of each year. Thus, grade one results in Table 1 actually represent the amount of basic English learnt during the previous beginner year.

Interpretation of Table 1 Percentile Scores

The general interpretation of the Readiness percentile scores are:[1] 80-100 - Pupils have the ability to learn rapidly with minimum study.

> 61-79 - Pupils should find a typical reading program easy and enjoyable and should be able to read fairly widely without help by the end of the year.

> 40-59 - Progress will be average in most cases.

> 20-39 - Pupils may keep pace with the average by working a little longer or harder or by receiving more help from the teacher than pupils in the preceding score ranges.

1. Gates, Arthur I. Manual of Directions for Gates Readiness Tests, Bureau of Publication, Columbia University, New York, 1942, pp. 31.

Table 1 A Comparison of Percentile Scores of Grade One Pupils on Gates
Reading Readiness Sub-Tests from the Fall of 1959 to the Fall
of 1961.

School	Year	Population Ratio by Schools Tested	Picture Directions (a)	Mean-Percentile Scores of Three Sub-Tests (b)	Average Percentile Scores of Four Sub-Tests (c)
School A	Fall 1959		64	80	76
	1960		65	87	76
	1961		70	83	80
		30%			
School B	Fall 1959		73	90	86
	1960		65	83	79
	1961		82	73	75
School C	Fall 1959		44	90	86
	1960		31	83	79
	1961		56	73	75
School D	Fall 1959		32	79	70
	1960	70%	48	87	78
	1961		73	84	83
School E	Fall 1959		33	92	77
	1960		33	91	76
	1961		62	81	74
Small Schools	Fall 1959		49	79	79
	1960		48	82	85

From test results recorded in Table 1, column (b), and the above
test interpretation of percentile scores, it is evident that Grade One
entrants are mature enough with regards to perceptional skills, visual and
auditory, to follow a grade one reading program with ease and facility. This
is compatible with the physical maturity and the chronological age of the pupils
tested who on the average were 7 years old. The total average percentile
scores of column (c), by schools, on the four sub-tests also indicate good
reading readiness ability since their scores range from the 75th to the 85th
percentile. The normal prognosis, therefore, would be that the Grade One
entrants could cover the Grade One reading program with ease and facility.

With reference to the PICTURE DIRECTION scores in column (a), which reflect the language handicap of the Indian pupils, on the other hand, we find rather low scores, particularly in Schools C, D, and E, for the Fall results of 1959 and 1960, respectively. Therefore, since there is an intimate relationship between language ability and reading achievement, we come to the conclusion that Indian pupils who enter grade one in Schools C, D, and E would experience severe difficulties in following the grade one reading course due to their language handicap since low percentile scores in language, should consequently restrict the rather favourable prognostication derived from the total average scores of column (c).

Relationship Between Language Scores and Reading Grade Achievement

In spite of the low scores in language ability reported for Schools C, D, and E on the fall tests, we observe in Table 2 which follows, that the average grade reading spring scores of Grade One pupils from schools C, D, and E compared favourably with and showed results consistent with those of Grade One pupils from Schools A and B whose language percentile scores of the fall were superior.

Table 2. A Comparison by Schools of Language Percentile Scores and Reading Grade Achievement Scores of Grade One Pupils on Fall and Spring Tests from 1959 to 1962.

Year and Reading Test Results	Schools				
	A	B	C	D	E
Fall 59 Language	64% tile	73% tile	44% tile	32% tile	33% tile
Spring 60	2.5	2.3	2.3	2.2	2.6
Grade I Norm Expectancy	1.8	1.8	1.8	1.8	1.8
Fall 60 Language	65% tile	65% tile	31% tile	48% tile	33% tile
Spring 61	2.4	2.2	2.6	2.6	2.2
Grade I Norm Expectancy	1.8	1.8	1.8	1.8	1.8
Fall 61 Language	70% tile	82% tile	56% tile	73% tile	52% tile
Spring 62	2.6	2.2	2.6	2.8	2.3
Grade I Norm Expectancy	1.8	1.8	1.8	1.8	1.8

From the above scores we might conclude that the language handicap does not affect reading achievement scores since pupils with low language scores achieved as well in reading as those with original high language scores. Such a hasty interpretation would be misleading and inaccurate. A more cautious interpretation of the consistent grade average reading scores of all schools reported in Table 2 seems related in part to the controlled reading vocabulary of the reader texts of the primary grades.

When Table 2 is compared with Table 3, we notice that whereas reading grade progress is fairly close to the expected grade norm from grade one spring results to grade three fall results, yet, there is a serious retardation showing up in the spring test results of grade three for schools C, D, and E. Schools A and B scores on the other hand are within grade norm expectations. Thus, latent weakness inherent in the reading skill mastery, was more pronounced in pupils who started school with an initial English language handicap.

The scores of Table 3 represent primary grade reading achievement patterns prior to the Testing Program. Moreover, we observe that the latent weaknesses appeared mostly at the terminal stage of the primary division achievement scores. This late appearance of cumulative primary grade reading achievement difficulties, therefore, tended to remain undetected by the primary grade teachers and also allowed for grade promotion from primary division to elementary division entrance of pupils who were poorly prepared to meet grade four entrance requirements. This, therefore, resulted in serious pupil difficulty in coping with the elementary grade curriculum and likely had repercussions on subsequent grade achievement of the Indian schools concerned and drop-out problems at grades five and six.

Accordingly, we deduce from Table 3 that the language retardation pattern was most evident at the beginner year, seemingly receded into the background during grades one and two, and reappeared as a serious reading-language dilemma at the end of grade three.

Table 3. A Comparison of Grade One Results with Grade Three Test Results. Year 1959-60.

Grade	Tests	Expected Gr. Norm	Schools				
			A	B	C	D	E
I	Fall 59 Language Percentile		64	73	44	32	33 % tiles
	Spring 60 Read. Grade	1.8	2.5	2.3	2.3	2.2	2.6
II	Fall 59 Read. Grade	2.2	2.4	2.7	2.5	2.6	2.5
	Spring 60 Read. Grade	2.8	2.4	3.0	2.9	2.8	2.6
III	Fall 59 Read. Grade	3.2	3.1	3.4	2.8	3.2	3.0
	Spring 60 Read. Grade	3.8	3.6	3.8	3.1	3.3	2.7
	Retardation in mth.		-2	0	-7	-5	-11 (mth.)

Reference is made to Table 3 regarding the negative long-range effect of poor language readiness of beginners on the grade three Spring Test Results of 1959 when vocabulary control is abandoned. Scores are not available to confirm the hypothesis we hold that increased language proficiency at Beginner's level will be reflected positively at the grade three spring terminal testing. Reading grade results would have to be cumulative for the group of Beginners tested in the spring of 1960 and tested again at the grade three level in the spring of 1963. However, inasmuch as greater proficiency in reading likely promotes language development and vice versa, we believe that if the two are kept up to desirable standards, it would be rather difficult to define the relationship of one to the other.

On the other hand, if we look at the relationship between language and reading from the point of view that a language weakness negatively affects the school progress of pupils and similarly that reading deficiencies also are detrimental to language progress, the possibility of a combination of both language and reading weaknesses in Indian pupils cannot but be viewed with deep concern.

Primary Grades Reading-Language Trends

The fact that the reading-language handicap may remain undetected through the primary grade achievement scores is partly linked to the controlled vocabulary of the grade curriculum readers as it affected classroom teaching emphasis on reading rather than on language learning. From classroom observation it was evident that although teachers referred to the pupil's language handicap, yet, the language teaching was derived mostly from reader text mastery. As a result, language learning of these grades was derived from the reading vocabulary program and necessarily limited to the controlled vocabulary of the grades texts instead of an emphasis on language as a subject in itself that would not only include vocabulary of the graded text but which would also extend beyond it.

This English language-learning pattern took form from the child's early experiences in learning to read. As a result, the child's concepts of the new language were limited to one-word vocabulary meanings derived from the reader texts word lists instead of basic conversational English practice based on phrasing and sentence formulation which is a prerequisite of language readiness ability preceding the experience of learning to read as well as providing the basis for extending vocabulary learning and conversational English expresion in subsequent grades.

Introduction of Basic English Language Course

In order to help teachers in Indian Schools to improve the English language instruction of non-English speaking Indian beginners, a Basic English Course was developed and made available to teachers in the fall of 1960. The course was used that year as well as in 1961-62 in all of the schools reported in this study. A comparison of the scores of both spring 1961 and 1962 respectively, as shown in Table 4, indicates that the use of the course yielded favourable results in the schools most in need of language readiness preparation.

Table 4. Language Percentile Scores of Grade One Fall and Spring Testings from 1959 to 1962.

Grade	Year	Schools (Scores reported in percentiles)				
		A	B	C	D	E
Beginners	Spring 1959	(Not Available)				
Grade 1	Fall 1959	64	73	44	32	33 % tiles
Beginners	Spring 1960	(Not Available)				
Grade 1	Fall 1960	65	65	31	48	33 % tiles
Beginners	Spring 1961	67	63	54	76	62 % tiles
Grade 1	Fall 1961	70	82	56	73	52 % tiles
Beginners	Spring 1962	60	75	62	65	59 % tiles

A comparison between Beginner scores of spring 61 and Grade One scores of fall 61, which for the most part consisted of the same group of pupils tested over again after a four month interval spanning the summer vacation, reveals that there is little or no gain in English language learning during the summer holidays. The assumption, therefore, is that Beginner spring scores of 1959 and 1960 respectively would likely be equivalent to those reported in Table 4 for Grade One pupils in the fall of 1959 and 1960.

Referring again to Table 4, a comparison of Grade one fall scores 1959 and 1960, prior to the introduction of the Basic Language Course, with Beginner spring scores of 1961 and 1962, after the introduction of the Language Course, shows greater improvement in Beginner Language Readiness as a result of the introduction of the course.

A percentage comparison of the two year average of fall 1959 and of 1960, with that of spring 1961 and 1962 yields percentage gains which range from 53% to 82% for schools C, D, and E, respectively, as reported in Table 5.

Table 5. Language Percentile Score Average Before and After the Introduction of the Basic English Course

Grade	2-year Average Score	Schools C	D	E	Aggregate Average
Grade 1	Fall 1959 (b) Fall 1960	38	40	33	38 % tile
	Introduction of Course				
Beginners	Spring 1961 (a) Spring 1962	58	70	60	63 % tile
Percentile Score Gain (c) (a-b)		20	30	27	25 % tile
Percentage Gain $\frac{c}{a}$		53%	75%	82%	66% gain

From the percentage gain reported in Table 5, we conclude that the Basic Oral English Course was beneficial and helpful in improving language readiness of Indian school beginners in schools where pupils were in most need of English language instruction.

Schools A and B were not included in the comparisons of Table 5 since the children come to school with a knowledge of basic English. The course, in these schools, was used chiefly for correction of speech pronunciation and grammatical errors in the use of the past tense.

Inasmuch as the foregoing language progress of beginners leads us to anticipate better language readiness progress for grade one entrants, we also wished to access children progress in language learning during their grade one year. Our only statistical data available for this is based on a comparison of Grade One 1961 Fall scores and 1962 Spring scores which follow:

	Year 61-62	Schools A	B	C	D	E	
Grade 1	Fall 1961	70	82	56	73	52	percentile
Grade 1	Spring 1962	72	81	76	98	50	percentile

The fact that individual schools show improvement invites interesting conjectures, but we believe that a two to three year follow-up would be necessary to draw definite conclusions. By the same token we should question

results that show little or no improvement. Learning a second language is like learning any other skill or school subject that requires continuous follow-up and effort from grade to grade or level to level. This fact has been anticipated in the Revised Basic Language Course which now extends to Grade One language instruction, particularly with reference to the use of film-strips. Therefore, we hope and anticipate that all grade one teachers will benefit from using the course as a complementary guide along with the reading program to promote maximum growth in the language learning of Indian pupils learning English as a second language.

Specific Classroom Observations

Referring back to Tables 1 and 2, the language scores of schools A and B would lead us to anticipate that pupils from these schools could do grade one reading during the first year of school although we do have reservations with reference to School A where a number of children are emotionally disturbed. With reference to School B, it is likely that from 60 to 70 per cent of the beginners could follow the grade one reading program successfully as is being done in another classroom of the Maritime Schools where language reading readiness and beginner age group are quite similar. Moreover, from the scores reported in Table 2 for schools A and B where pupil language readiness is also quite similar, we surmise that teacher objectives or pace of teaching or classroom grade standards differ somewhat. This is most evident in the vertical reading of School B scores.

Scores of School C compare favourably with the other schools in spite of the semi-isolation from the non-Indian world of this particular Indian community.

School D scores reflect the attitude of the primary teaching staff who generally advocate grade to grade flexibility inasmuch as next grade readers are usually started in late spring as preparation to the next grade reading program.

In school E, the lower reading scores of 2.2 and 2.3 of 1961 and 1962 can hardly be considered as a loss, but rather as a gain since the lower scores meant two years of schooling compared with the 1959 2.6 scores after two years of pre-grade one school attendance or three years of school attendance due to building construction pressures. Accelerated promotions of abler pupils and classroom grouping no doubt also account in part for the lower scores discussed in the preceding sentence.

The language weakness noted in percentile scores of Schools C, D, and E on picture directions prior to the introduction of the Basic English Course should not cast any doubts on the ability of teachers faced with non-English speaking beginners any more than the scores of Schools A and B for pupils who entered school with a command of basic English would reflect a more efficient language teaching approach. The problem of teaching a second language to primary grade pupils, as we are all aware no doubt, is one that remains an enigma to Provincial Public School authorities across Canada. In this respect, the introduction of a basic English Course for beginners is a major contribution of Indian Schools in coping with the Indian learner's problems in acquiring a second language.

Primary Reading

Beginner and grade one teachers face two of the most difficult tasks in the school life of the Indian pupil. The Beginner teacher has to cope with the pupil's need to start learning a second language and the grade one teacher also bears with the Beginner teacher the brunt of teaching the child to read the newly acquired language.

The introduction to primer reading as outlined in the Basic English Course has been adopted by all teachers using the course in the Maritime Indian Schools and has received their unanimous acceptance. Materials for following the primer reading outline were provided for the first primer book. Materials for the other primers were developed by teachers or placed on order with individual printers at the teachers' own expense.

Grade One Teacher Difficulties

The greatest difficulty experienced by grade one teachers seems to have been related to the introduction of the phonetic approach to word recognition reading. The matter is discussed at length in the next section.

Our personal view on the choice of approach is that we do not reject any method in the teaching of reading but we would like to think that a reading course for teachers should include all methods of teaching reading with reference to the preference of one or the other according to pupil needs and not according to the publisher's decision on the method to be used with the graded texts through the rigid following of the teacher handbook.

Classroom Atmosphere

With the introduction of the Basic English Course, pupils showed a sense of freedom and activity which contrasted with the quiet timid approach of former beginner classes. Today, it is not unusual to see pupils express their needs in conversational sentences instead of the former one word mutterings. Beginners still readily revert to their own native language in playing with their peers but can also revert back to English when approaching the teacher.

Television and Language Growth

Some children develop an ear for English from televiewing and are more receptive to English when they start school. In some instances also teachers have noticed that a number of youngsters had taught some of the activities and vocabulary of the Basic English Course to their younger brothers and sisters at home.

Grade Standards

Teachers in Indian Schools have had to face a number of problems and possibly have allowed some leeway for specific handicaps such as language retardation. Unfortunately, this may also lead to a subjective lowering of grade standards on the part of individual teachers. We maintain that recognition of the language handicap can best be assessed objectively on the basis of degree of retardation by schools and not as a handicap affecting all schools to the same degree of difficulty.

Conclusions and Recommendations

(1) Indian School beginners are sufficiently perceptionally mature to cope with the printed word symbol but are handicapped in following the curriculum reading course if they lack basic English.

We recommend that language instruction for beginners take precedence over other reading skill readiness preparation during the first term of the school year.

(2) Former Beginner years spent on learning English yielded results far below the level expected to cope effectively with reading readiness standards.

We recommend that better English instruction and better mastery of English by beginner classes become an incentive to promote and to accelerate the reading course during the first year of school.

(3) The introduction of a Basic English Course has greatly improved language instruction and pupil progress in learning English as a second language.

We recommend that beginner teachers and grade one teachers in Indian schools refer to the Basic English Course to cope with specific pupil language weaknesses.

(4) Initial and persistent weaknesses in English may result in severe retardation from the primary to elementary grade division transition.

We recommend that language learning follow-up be promoted from grade to grade level over and beyond the graded text vocabulary.

(5) Beginners make little or no progress in learning English over the summer vacation. Language growth during the grade one year varies from school to school.

We recommend frequent classroom review of English learnt during the first year to prevent loss of English language expression. A skill can be lost from disuse or lack of review practice.

(6) Language instruction should extend over and beyond the controlled vocabulary of the grade reader texts.

We recommend oral English practice periods as well as a supportive library reading program in the classroom to extend language concepts beyond those of the graded reader series.

(7) Classroom grade standards may drop as a result of reading-language difficulties.

We recommend that teachers take opportunities at hand to discuss grade standard requirements from time to time and also that they re-assess their grade standards in the light of objective data based on standardized tests and testing research evaluation developed as a school testing program by individual school needs.

(8) Primer reading as outlined in the Basic English Course is yielding good results and is highly commended by teachers.

We recommend that provision of primer reading materials as outlined in the Basic English Course be available through school purchase orders. The Primer approach to reading should be extended to the first half of the grade one reading program to lessen transition conflict for beginners going to a new teacher and a new classroom.

(9) Grade one teachers overcame the initial conflict they experienced in introducing phonetic word recognition.

Teachers in Indian Schools would gain more confidence in coping with reading-language problems of their pupils through a competent knowledge of various reading approaches according to pupil needs as a result of which Teacher Handbook rigid follow-up would be superseded by more personal teacher motivation and direction in classroom instruction. We recommend that method approaches to reading should be given in the initial teacher training course or through summer courses at the university credit level.

PRIMARY DIVISION

GRADES ONE, TWO, AND THREE

The tests used in these grades except those of the grade three spring battery, were similar in structure for all grades, but they differed considerably in grade levels or standard norms from the fall battery to the spring battery. In other words, the spring battery evaluated levels of reading reached during the grade year rather than amount of reading done on a grade entity of minimum reader text requirements. Through the use of the spring battery therefore, we were more concerned with finding out whether the grade reading level had been raised in proportion to the next grade reading level rather than whether the child has been reading without necessarily progressing to more difficult reading skill mastery.

The change of test level from the fall to the spring battery makes it more difficult to evaluate pupil reading grains over the fall norms, but it focuses our attention on progress rate diagnosis and grade level standards. For example, if the same test norms had been used for both fall and spring testings, a grade two pupil might show a progress gain of twelve months during the year but this would only reflect the same difficult level of reading as that of the fall and would not necessarily imply that the pupil was better prepared to cope with higher levels of reading as he should be.

A similar comparison would exist for a grade two pupil who had read thirty easy library books and another one who had read only half that number at a more difficult reading level. The latter is certainly the better reader and is better prepared to progress to the next grade level.

General Statistical Data and Interpretation

Scores achieved on the fall and spring test batteries are recorded in Tables 1, 2, and 3 by grades for each year of the testing program. Mean scores for 1959-60 and 1960-61 are based on the total grade population of that year while those of 1961-62 are based on the large school population which included 70 to 80 per cent of the total grade population.

A comparison of mean scores and average scores of individual schools with the expected grade norm reveals that in Tables 2 and 3 or in other words during the last two years of the testing research program, grades one and two scores were equal to or above the expected grade norm. On the other hand, with respect to grade three scores, the fall scores are also equal to or above the grade norm expectancy, but the spring grade three scores fluctuate from below to above the expected grade norm.

The grade three spring drop might be attributed to the different test batteries used since the fall battery was closely linked to controlled reading vocabulary whereas the spring battery diverged from it as is to be expected with the transition of reading level from the primary to the elementary grades. Therefore, inasmuch as the scores of the aforementioned tables compare favourably with the expected grade norm, except for the spring scores of grade three, we may wish to surmise that the primary grades reading scores are quite satisfactory and view the grade three spring drop with leniency or with the hope that grade three pupils will make up for this loss during the elementary grades.

Yet, it should not be so and is not so. The spring drop is a matter of grave concern for the primary teacher. Indeed, it is on the terminal spring score that primary teachers need to assess the cumulative reading course of the primary grades in so far as spring scores likely reflect reading weaknesses not only of grade three but also of pre-grade

TABLE 1.

Test Results and Grade Progress of Fall to Spring Test Batteries
by Schools for the Year 1959-60, Grades 1 to 3.
(Word Recognition and Paragraph Reading Tests)

Grade	Test Batteries	Expected Grade Norm	Regional Grade Norm	S.D. in Mth.	Grade Average by Schools						
					A	B	C	D	E	F	Multigraded Schools
	Spring 1959										
I	Word Recog.	1.8	2.2	4	2.6	2.4	2.5	2.1	2.5	2.3	2.2
	Par. Read	.	2.4	5	2.4	2.2	2.0	2.2	2.8	2.2	2.4
	Average		2.3	4	2.5	2.3	2.3	2.2	2.7	2.3	2.3
	Fall 1959										
II	Word Recog.	2.2	2.3	4	2.1	2.7	2.5	2.5	2.3	2.3	2.5
	Par. Read.		2.5	2	2.7	2.6	2.4	2.7	2.6	2.3	2.6
	Average		2.4	4	2.4	2.7	2.5	2.6	2.5	2.3	2.6
	Spring 1960										
	Word Recog.	2.8	2.7	4	2.5	3.2	2.9	2.8	2.6	2.8	2.8
	Par. Read		2.9	4	2.2	2.8	2.9	2.7	2.6	2.8	2.9
	Average		2.9	5	2.4	3.0	2.9	2.8	2.6	2.8	2.9
	Fall 1959										
III	Word Recog.	3.2	3.2	7	2.8	3.4	2.9	3.3	3.0	2.4	3.4
	Par. Read.		3.3	7	3.4	3.3	2.7	3.1	3.0	2.9	3.5
	Average		3.2	7	3.1	3.4	2.8	3.2	3.0	2.7	3.5
	Spring 1960										
	Reading Gr. level	3.8	3.2	8	3.6	3.8	3.1	3.4	2.7	2.8	3.3

TABLE 2.   Test Results and Grade Progress of Fall to Spring Test Batteries by Schools for the Year 1960-61, Grades 1 to 3.

Grade	Test Batteries	Expected Grade Norm	Regional Grade Mean	S.D. in Mth.	Grade Average by Schools						Multigraded Schools
					A	B	C	D	E	F	
	Spring 1961										
I	Word Recog.	1.8	2.4	4	2.4	2.2	2.8	2.6	2.3	2.4	2.5
	Par. Read.		2.4	5	2.3	2.2	2.3	2.5	2.0	2.0	2.4
	Read. Gr. Av.		2.4	4	2.4	2.2	2.6	2.6	2.2	2.2	2.5
	Fall 1960										
II	Word Recog.	2.2	2.6	5	2.8	2.5	2.5	2.6	2.5	2.7	2.6
	Par. Read.		2.5	5	2.4	2.2	2.6	2.5	2.4	2.9	2.5
	Read. Gr. Av.		2.6	5	2.6	2.4	2.6	2.6	2.5	2.8	2.6
	Spring 1961										
	Word Recog.	2.8	3.1	5	3.2	3.1	2.8	3.3	3.0	3.3	2.8
	Par. Read.		3.2	6	3.2	3.2	2.3	3.7	3.0	3.3	2.9
	Read. Gr. Av.		3.1	3	3.2	3.2	2.6	3.5	3.0	3.3	2.9
	Fall 1960										
III	Word Recog.	3.2	3.2	6	3.4	3.5	2.6	3.4	3.2	3.6	3.2
	Par. Read.		3.1	5	2.9	3.3	2.8	3.4	3.4	3.8	3.3
	Read. Gr. Av.		3.2	7	3.2	3.4	2.7	3.4	3.3	3.7	3.3
	Spring 1961										
	Read. Gr. Av.	3.8	3.5	7	3.7	3.2	2.8	3.7	3.4	3.5	3.4

TABLE 3. Test Results and Grade Progress of Fall to Spring Test Batteries by Schools for the Year 1961-62, Grades 1 to 3.

Grade	Test Batteries	Expected Grade Norm	Regional Grade Mean	S.D. in Mth.	Grade Average by Schools						Multigraded Schools
					A	B	C	D	E	F	
I	**Spring 1962**										
	Word Recog.	1.8	2.6	4	2.6	2.1	2.8	2.5	2.3	2.5	2.6
	Par. Reading	1.8	2.7	5	2.5	2.3	2.3	3.2	2.2	2.4	2.8
	Reading Gr. Av.		2.7	5	2.6	2.2	2.6	2.9	2.3	2.5	2.7
II	**Fall 1961**										
	Word Recog.	2.2	2.8	4	3.2	2.7	2.9	2.7	2.6	2.8	2.8
	Par. Reading	2.2	2.8	6	3.1	2.8	3.2	2.4	2.6	2.7	3.3
	Reading Gr. Av.	2.8	2.8	6	3.2	2.8	3.1	2.6	2.6	2.8	3.1
	Spring 1962										
	Word Recog.	2.8	3.2	5	3.6	3.4	3.2	3.9	3.1	2.9	3.3
	Par. Reading	2.8	3.2	6	3.4	2.9	3.3	3.3	3.1	2.9	3.5
	Reading Gr. Av.		3.2	6	3.5	3.2	3.3	3.3	3.1	2.9	3.4
III	**Fall 1961**										
	Word Recog.	3.2	3.5	9	4.0	3.4	3.5	3.0	3.5	3.4	3.7
	Par. Reading	3.2	3.6	4	4.5	3.5	3.1	3.6	3.8	3.6	3.4
	Reading Gr. Av.		3.5	7	4.2	3.5	3.3	3.3	3.7	3.5	3.6
	Spring 1962										
	Reading Gr. Av.	3.8	3.7	5	3.7	3.2	3.4	3.9	3.9	4.1	4.0

three levels. In Table 4, progress gain made from 1959 to 1961 of grade three spring scores to grade four fall testing reveal a slow and steady gain in grade three scores reaching grade four entrance standards.

TABLE 4. Transition Scores from Grade Three Spring Results to Grade Four Fall Results from 1959 to 1962.

Yr.	Grade III Spring Battery			Grade IV Fall Battery		
	Exp. Gr. Norm	Grade Mean Score	Retardation in months	Exp. Gr. Norm	Grade Mean Score	Retardation in months
1959	3.8	(Not available)		4.2	3.6	-6
1960	3.8	3.2	-6 mth	4.2	3.8	-4 mth
1961	3.8	3.5	-3 mth	4.2	4.1	-1 mth
1962	3.8	3.7	-1 mth	4.2	4.3 (predicted)	

In Table 4, scores reported for fall 1959 and spring 1960 are pupil achievement scores at the onset of reading and testing research program. Those of 1961 and 1962 are pupil achievement scores during the reading research program. The general observation derived from Table 4 is that there has been an overall improvement in the primary grades reading achievement to the extent of raising grade four entrance scores near to grade norm expectancy.

We conclude therefore that the Reading Research Program of the primary division has raised the reading grade achievement Scores of pupils and has localized diagnostic implications relative to the transition level standards from the primary to the elementary division.

PROGRESS RATE from GRADE TO GRADE

Raising the achievement scores of the primary to elementary division transition has not come about as a result of sensational gains in any one year. On the contrary, it has come as a result of the steady and sustained endeavours on the part of the individual classroom teacher from grade to grade and from year to year as may be observed from a reading of Table 5 particularly in the comparison of Grade Three Spring scores of 1962 with those of Spring 1959.

A horizontal reading of Table 5 from grade to grade bridging over from spring scores to fall scores reveals that children come back to school in the fall with an increased ability in reading which they did not have in the spring. Moreover, this gain has come about over the holiday span when they did not have school instruction.

TABLE 5.   Cumulative Reading Grade Achievement Scores by
                            Schools from Spring 1960 to Spring 1962

	Grade I 1960	Grade II 1960-61		Grade III 1961-62		Grade III 1959
	Spring	Fall	Spring	Fall	Spring	Spring
Expected Gr. Norm	1.8	2.2	2.8	3.2	3.8	3.8
Reading Gr. Mean	2.4	2.6	3.1	3.5	3.7	3.2
Schools: A	2.5	2.6	3.2	4.2	3.7	3.6
B	2.3	2.4	3.2	2.8	3.2	3.8
C	2.3	2.6	2.6	3.3	3.4	3.1
D	2.2	2.6	3.5	3.3	3.9	3.4
E	2.7	2.5	3.0	3.7	3.9	2.7
F	2.3	2.8	3.3	3.5	4.1	2.8
Multi-graded	2.2	2.6	3.1	3.6	4.0	3.3

The psychological explanation of this fact is that mental growth of the primary grade child is still at the developmental stage. From year to year, the average child in the primary grades develops higher levels of thought processes. Where no progress gain appears does not mean on the other hand that the child's mental growth has been retarded from being away from school during the summer vacation. In such cases lack of progress is generally attributed to the reading method approach followed in the teaching of reading or to the social environment of community life.

The holiday span progress growth holds important implications for the classroom teacher. Most teachers were convinced that through the summer months, children lose much of their reading ability of the previous spring. Consequently, the first months of the fall term were spent reviewing texts of the previous year, a factor which did cut down considerably on teaching time of the new grade year and may also adversely affect pupil motivation at the new grade entrance level.

In our opinion, the above teacher interpretation of the reading loss over the summer months was correct inasmuch as it would apply to pupils who were taught word recognition skills by the sight method. Prior to the emphasis on the phonetic approach to word recognition, pupils achieved in reading through memory retention of words by means of frequent word review during the school year. Exposure to reading and review helps were dropped during the holidays, and consequently children experienced a reading loss over the summer holidays and hence the necessity for the fall reading review of the previous grade texts in most schools, and particularly in schools with pupils from non-English speaking homes.

Through the introduction of word recognition phonetic techniques as outlined for teachers in the Reading Program, pupils no longer experience the former reading loss resulting from the sight approach. The phonetic approval teaches the technique of reading words and is intimately linked to the concept of reading as a learning process. Through it children come back to school in the fall able to read words whose sight recognition they would normally have forgotten over the holidays had they been taught by sight. Moreover, they are involved personally in developing initiative and insight into reading new and unfamiliar words in the reader or in extra-curricular reading. Consequently, teachers who teach word recognition through the phonetic approach should drop their former pattern of fall review reading of the last grade reader text and proceed with the reading of the new grade material.

We have made specific reference to this matter in the last year of the program but on the basis of information contained in Table 5 we strongly urge teachers to take a more positive stand to break away from the former fall review pattern discussed above as long as word recognition is based on the phonetic approach.

Another fact to be observed in Table 5 is that reading is a technical skill with definite abilities required from level to level. Difficulties at one level hamper progress beyond it. In a number of cases slower progress from school to school reflects particular pupil difficulties which to a certain extent must affect the classroom pace of teaching. Where such is the case, even minor gains from year to year speak in favour of a positive classroom approach to reading difficulties.

The grade three drop in spring scores, considered as a terminal achievement score from controlled to uncontrolled reading vocabulary, as well as grade level progression, has been tentatively interpreted in the first section of this report as a hidden weakness of the primary grades. From the grade achievement scores reported in Tables 1, 2, and 3, the reservation might be that primary grade weakness is only apparent during the grade three year and is therefore the responsibility of the grade three teacher. Progress rate by grade as reported in Table 6 would provide further data to that effect since absenteeism factors of Christmas and Easter holidays, snowstorms, hepatitis epidemic and influenza bouts were similar for both grades during the 6 month interval between the fall and spring testings of each school year. Here again, it is evident that the grade two progress rate in months shows up much better than that of grade three.

TABLE 6.   Progress Rate in Months for the Six Month Interval
            Between Fall and Spring Batteries for Grades Two and Three.

Grade	Exp. Prog. in mth.	Actual Grade Progress in Months		
		1959-60	1960-61	1961-62
II	6 mth.	5 mth.	5 mth.	4 mth.
III	6 mth.	0 mth.	3 mth.	2 mth.

In spite of the above observations which localize the low spring scores at the grade three level, we reserve judgement on the matter for the time being and delve further into longitudinal progress patterns of

the ten month school year from:

    (a) grade one to grade two progress in months

    (b) grade two to grade three progress in months

    (c) grade three to grade four progress in months.

    As recorded in Tables 7 and 8.

TABLE 7.   Reading Grade Mean Scores and Progress Rate in Months
From Grade II to Grade IV, from Fall to Fall, 1959-1961.

Fall Year	Actual Reading Grade Mean Grade II to III to IV	Progress Rate in months Grade II - III	III - IV
1959	2.4 to 3.2 to 3.6	8	4
1960	2.6 to 3.2 to 3.8	6	6
1961	2.8 to 3.5 to 4.1	7	6
Expected Rdg. Gr. Norm	2.2 to 3.2 to 4.2	10	10

From Table 7 we observe that there are also fluctuations of progress gain or loss for grade two over a ten month year progress expectancy from fall to fall and similarly from spring to spring mean scores of Table 8.

TABLE 8.   Reading Grade Mean Scores and Progress Rate in Months
From Grade I to Grade III From Spring to Spring of
Each Year, 1960-1962.

Spring Year	Actual Grade Mean Grades I to II to III	Progress in months Grade I - II	II - III
1960	2.3 to 2.9 to 3.2	6	4
1961	2.4 to 3.1 to 3.5	7	4
1962	2.7 to 3.2 to 3.7	5	5
Expected Grade Norm	1.8 to 2.8 to 3.8	10	10

A combined reading of Tables 7 and 8 points to the fact that the actual grade mean is generally satisfactory, insofar as it is above or close to grade norm expectancy and has increased progressively from 1959 to 1962. But, insofar as the progress from grade to grade is concerned we find that in all cases it is below the expected progress rate of 10 months. Moreover, since the progress rate weakness is present in both Table 7 of the fall tests, and Table 8 of the spring tests, this leads to the assumption that not only is this a matter of differences of reading levels inherent to the fall-spring test batteries but it also indicates that classroom grade standards of grade three to four transition weaknesses are specific not only to grade three but are also present in grade two. We now come back to the original

inference and conclude that grade three to four transition weaknesses stem from weaknesses of the primary grade levels, but particularly during the grade two and grade three years.

The Language Handicap and Reading Achievement Relationship

Our discussion so far has led to the observation that Indian pupil reading retardation was seemingly not as apparent on the basis of mean scores or grade aggregate average comparisons as it is in terms of progress rate with reference to yearly progress expectancy in months of the school year. Moreover this progress difficulty has been localized at both the grade two and three levels. Retardation was also partially attributed to test levels with reference to the grade three transition to grade four. Reference was also made to classroom grade level standards.

Furthermore, in the section on Language Reading Readiness and Grade One Reading scores we found that the degree of language retardation differs from school to school for beginners but that generally the reading scores did not seem immediately affected with respect to language readiness discrepancies although the possibility that the language readiness of beginners may have long range negative effects was brought forward in the light of the 1959 grade three scores. But, in Table 10, the grade three 1961 scores are much improved and the question arises as to whether the language handicap or the reading skill weakness accounted for the lower 1959 reading achievement scores.

The Reading Research Program has endeavoured to promote simultaneous language learning growth, for which there is no objective language test per se along with the reading program proper. Evaluation of the reading-language relationship therefore, remains one that has to be studied from the reading tests score data. In fact, as far as language is concerned, information on its relationships to reading can only be obtained indirectly from the reading test scores.

A spring to fall reading of scores in Tables 9 and 10 might lead to a hasty conclusion that there is no actual reading retardation in grades two or three since all scores compare favourably with the expected grade norm. As a corollary to this we could also state: There being no reading retardation, the language handicap does not affect the reading achievement of the pupils concerned.

On the other hand, general consensus of the teacher opinion and weak progress rate of pupil grade achievement mentioned in the foregoing pages, make it imperative that the reading-language or language-reading relationship be delved into at this point.

It became apparent as the program developed that the reading and language relationship could be studied by comparing progress gains of grades two and three against those of grades one and two. This we decided to do. The graphic representation of the delimitation imposed for the comparison is as follows:

$$\frac{\text{Grade II Spring + Grade III Fall Scores}}{\text{Grade I Spring + Grade II Fall Scores}} = \frac{(a)}{(b)} \quad + \text{ or } - \frac{a}{b}$$

The (b) value was accepted as the constant and based on the individual test scores by school reported in Table 9. The (a) represents the variable and is based on the scores of Table 10.

We felt justified in accepting (b) as the constant since grade one pupils entering grade two had rather consistent mean scores and progress gain from Fall 1959 to Spring 1962. The (a) value was accepted

Table 9. Word Recognition and Paragraph Reading Scores on Grade
One Spring to Grade Two Fall Transition from Fall 1959
to Spring 1962. (Constant)

Tests Word Recognition Paragraph Reading Av. Grade Score	1959	1960		1961		1962	
	II Fall	I Spring	II Fall	I Spring	II Fall	I Spring	II Fall
Schools A	2.1 2.7 2.4	2.6 2.1 2.5	2.8 2.4 2.6	2.4 2.3 2.4	3.2 3.1 4.2	2.6 2.5 2.6	Not Available
B	2.7 2.6 2.7	2.4 2.2 2.3	2.5 2.2 2.4	2.2 2.2 2.2	2.7 2.8 2.8	2.1 2.3 2.2	
C	2.5 2.4 2.5	2.5 2.0 2.3	2.5 2.6 2.6	2.8 2.3 2.6	2.9 3.2 3.1	2.8 2.3 2.6	
D	2.5 2.7 2.6	2.1 2.2 2.2	2.6 2.5 2.6	2.6 2.5 2.6	2.7 2.4 2.6	2.5 3.2 2.4	
E	2.3 2.6 2.5	2.5 2.8 2.7	2.5 2.4 2.5	2.3 2.0 2.2	2.6 2.6 2.6	2.3 2.2 2.3	
F	2.3 2.3 2.3	2.3 2.2 2.3	2.3 2.2 2.3	2.4 2.0 2.2	2.7 2.9 2.8	2.5 2.4 2.5	
Multigraded	2.5 2.6 2.6	2.2 2.4 2.3	2.2 2.4 2.3	2.5 2.4 2.5	2.6 2.5 2.6	2.6 2.8 2.7	
Reg. Word Recog. Mean Reg. Par. Reading Mean Reg. Actual Reading Grade Mean	2.3 2.5 2.4	2.2 2.4 2.3	2.6 2.5 2.6	2.4 2.4 2.4	3.2 3.1 3.2	2.6 2.5 2.6	
Expected Grade Norm	2.2	1.8	2.2	1.8	2.2	1.8	

Table 10.   Word recognition and Paragraph Reading Scores on Grade Two to Grade Three Fall Transition from Fall 1959 to Spring 1962. (Variable)

Tests Word Recognition Paragraph Reading Av. Grade Score	1959	1960		1961		1962	
	III Fall	II Spring	III Fall	II Spring	III Fall	II Spring	III Fall
Schools: A	2.8 <u>3.4</u> 3.1	2.5 <u>2.2</u> 2.4	3.4 <u>2.9</u> 3.2	3.2 <u>3.2</u> 3.2	4.0 <u>4.5</u> 4.2	3.6 <u>3.4</u> 3.5	Not available
B	3.4 <u>3.3</u> 3.4	3.2 <u>2.8</u> 3.0	3.5 <u>3.3</u> 3.4	3.1 <u>3.2</u> 3.2	3.4 <u>3.5</u> 3.5	3.4 <u>2.7</u> 3.2	
C	2.9 <u>2.7</u> 2.8	2.9 <u>2.9</u> 2.9	2.6 <u>2.8</u> 2.7	2.8 <u>2.3</u> 2.6	3.5 <u>3.1</u> 3.3	3.2 <u>3.3</u> 3.3	
D	3.3 <u>3.1</u> 3.2	2.8 <u>2.7</u> 2.8	3.4 <u>3.4</u> 3.4	3.3 <u>3.7</u> 3.5	3.4 <u>3.6</u> 3.3	3.9 <u>3.3</u> 3.6	
E	3.0 <u>3.0</u> 3.0	2.6 <u>2.6</u> 2.6	3.2 <u>3.4</u> 3.3	3.0 <u>3.0</u> 3.0	3.5 <u>3.8</u> 3.7	3.1 <u>3.1</u> 3.1	
F	2.4 <u>2.9</u> 2.7	2.8 <u>2.8</u> 2.8	3.6 <u>3.8</u> 3.7	3.3 <u>3.3</u> 3.3	3.4 <u>3.6</u> 3.5	2.9 <u>2.9</u> 2.9	
Multigraded	3.4 <u>3.5</u> 3.5	2.8 <u>2.9</u> 2.9	3.2 <u>3.3</u> 3.3	2.8 <u>2.9</u> 2.9	3.7 <u>3.4</u> 3.6	3.3 <u>3.5</u> 3.4	
Regional Word Recognition Mean	3.2	2.7	3.2	3.1	3.5	3.2	
Reg. Par. Reading Mean	<u>3.3</u>	<u>2.9</u>	<u>3.1</u>	<u>3.2</u>	<u>3.6</u>	<u>3.2</u>	
Reg. Actual Reading Gr. Mean	3.2	2.9	3.2	3.1	3.5	3.2	
Expected Gr. Norm	3.2	2.8	3.2	2.8	3.2	2.8	

as the variable since progress weaknesses have been localized at the grades two and three levels.

In order to evaluate the reading-language relationships and their implications within the boundaries of the statistical data of this research, we decided to oppose the word recognition test to the paragraph reading test. The word recognition test which is <u>strictly concerned with reading skill ability in word recognition</u> was used to represent reading. Paragraph reading being concerned with <u>ability to understand what is read</u>, we considered as language ability. We then compared the progress rate of the one test with that of the other to generate information on the relationship between reading and language or vice versa.

This meant finding the $\frac{a}{b}$ values for each of the tests, namely (i) <u>Word Recognition</u> referred to as Reading from now on, and (ii) <u>Paragraph Reading</u> equated with <u>Language</u> understanding.

We are not aware of any statistical index that would yield diagnostic information on the internal problem of the reading-language relationship with reference to progress rate of pupil reading achievement scores. We did not refer to the coefficient of correlation since it would only yield general direction of a positive or negative relationship and would not give sufficient insight into the internal relations we wished to study.

We, therefore, devised a method we found useful and meaningful to study and evaluate the internal progress relationship between Reading and Language. The first step consisted in finding the algebraic sum of the difference in months between the aggregate average score and the expected grade norm for group (a) values over group (b) values for each of the Reading and Language scores for the respective schools. The positive or negative fraction thus obtained was then converted to its percent value. A plus 100 percent would indicate progress consistent with grade one year progress and minus 100 percent would indicate a year's progress loss over the grade one year progress.

The algebraic difference between the Reading percent and the Language percent was expressed as the range of difference between the two. The actual grade three Spring progress in months of the actual and expected grade norms were also converted to percent figures. In deciding upon the expected grade norm, we conceded a one month fall absenteeism on the grade three norm expressing it at 8 months of the school year or 3.8 instead of 3.9. The results obtained from these calculations appear in Table 11 and are based on the individual school scores reported in the appendix.

One slight deviation was introduced with respect to the grade one spring scores of 1959 which were not available and for which the 1960 spring scores were substituted and consecutively for the years 1961 and 1962. The slight deviation was warranted on the basis that grade one progress scores are quite consistent from school to school as well as from year to year. Before proceeding to an interpretation of scores reported in Table 11, an example of the computation involved is worked out in detail from a vertical score reading of the 1959-60 scores of school **A** given in the appendix.

(i)

Grade II Progress Rate Bond on Grade I Scores	A Mean Word Recog.	B Expect. Gr. Norm	Alg. (A-B) Diff.	$\frac{a}{b}$	Reading Levels
1959-60 Grade I Spring	2.6	1.8	8	b constant	Gr. I
1960 Grade II Fall	2.1	2.2	1		
1959 Grade II Spring	2.5	2.8	-3	a variable	Gr. II
1960 Grade III Fall	2.8	3.2	-4		

(ii)   Reading Progress   (Word Recognition)   (algebraic sum)

$$\frac{\text{Grade II Spring} + \text{Grade III Fall}}{\text{Grade I Spring} + \text{Grade II Fall}} = \frac{a}{b} = \frac{-7}{7} = -100\%$$

Thus, in progress rate according to grade norm expectancy, this class has a 100 percent reading loss in grade two compared with the progress reported in the previous grade one year.

(iii)   Spring III
        Reading Grade Ave.   3.6 $\frac{6}{8}$ = 75%   of grade progress
        Actual Grade Norm   3.8   expectancy.

The tabulated results were broken down for analysis by years in Table 12.

Table 11. Yearly Grade Two Progress Gain or Loss in Reading and Language Skills from 1959 to 1962 Based on Grade One Progress Achievement and Compared with the Grade Three Spring Progress Achievement Rating.

School and Year	(a) Read. Prog. Grade Two	(b) Lang. Prog. Grade Two	Actual Gr. 3 Prog. on Spring scores	Actual Rdg. Grade 3 Achieve. score	Actual Progress Rate at 3.8 Grade norm expectancy for Grade III
Expected	100%	(100%)	100%	3.8	100%
School A					
1959-60	-100%	-36%	75%	3.6	75%
60-61	37%	14%	87%	3.7	87%
61-62	112%	140%	87%	3.7	87%
School B					
1959-60	140%	12%	100%	3.8	100%
60-61	85%	125%	25%	3.2	25%
61-62	100%	36%	25%	3.2	25%
School C					
1959-60	-20%	-100%	12%	3.1	12%
60-61	-50%	-100%	-100%	2.8	-100%
61-62	41%	25%	50%	3.4	50%
School D					
1959-60	16%	-22%	50%	3.4	50%
60-61	59%	110%	87%	3.7	87%
61-62	75%	60%	112%	3.9	112%
School E					
1959-60	-50%	-28%	-112%	2.7	-112%
60-61	25%	100%	50%	3.4	50%
61-62	66%	112%	112%	3.9	112%
School F					
1959-60	-133%	60%	-100%	2.8	-100%
60-61	82%	82%	62%	3.5	62%
61-62	25%	45%	137%	4.1	137%
Multi-graded					
1959-60	18%	50%	37%	3.3	37%
60-61	0%	22%	50%	3.4	50%
61-62	71%	42%	125%	4.0	125%

Table 12. Breakdown of Table 11 Scores of Reading and Language Progress Gain or Loss of Grade Two Pupils by Schools and Years.

Year	Reading Progress Grade 2	Language Progress Grade 2	Range Diff. between Reading & Language	Actual Grade III Spring Placement	Actual Grade 3 Progress Spring Scores
Expected Progress	100%	(100%)	(0)%	3.8	100%
1959-60 Schools A	-100%	-36%	-64%	3.6	75%
B	140%	12%	128%	3.8	100%
C	-20%	-100%	-80%	3.1	12%
D	16%	-22%	-38%	3.4	50%
E	-50%	-28%	-22%	2.7	-112%
F	-133%	60%	-193%	2.8	-100%
Multi-Graded	18%	50%	32%	3.3	37%
1960-61 A	37%	14%	23%	3.7	87%
B	85%	125%	40%	3.2	25%
C	-50%	-100%	-50%	2.8	-100%
D	59%	110%	51%	3.7	87%
E	25%	100%	75%	3.4	50%
F	82%	82%	0%	3.5	62%
Multi-Graded	0%	22%	22%	3.4	50%
1961-62 A	112%	140%	28%	3.7	87%
B	100%	36%	64%	3.2	25%
C	41%	25%	16%	3.4	50%
D	75%	60%	15%	3.9	112%
E	66%	112%	46%	3.9	112%
F	25%	45%	20%	4.1	137%
Mult-Graded	71%	42%	29%	4.0	125%

General Observations from Tables 11 and 12

Observations from Tables 11 and 12 data on grade two progress rate
are briefly summarized and are discussed in subsequent pages.

(1) Minus scores in Reading Progress and/or Language Progress
indicate major weaknesses affecting actual grade progress rate and
reading achievement scores.

(2) Progress scores for 1959-60 in all schools except two,
show negative scores or a progress loss within a wide range from school
to school.

(3) Scores of 1960-61 and 1961-62 are all positive except in
one school for 1960-61.

(4) As reading scores become positive, the negative language
scores disappear.

(5) There is no evidence of consistent relationship between reading
progress or language progress gain. Variations appear from school to
school and from year to year.

(6) Progress scores of 1961-62 show more consistent gains in
reading progress than in language progress over the two previous years,
1959-60 and 1960-61.

(7) The smaller the positive range difference between language
and reading progress scores, the greater the gain in actual grade three
progress or reading achievement scores for the individual schools.

(8) Multigraded schools show consistent lower range differences
between reading and language progress.

(9) Individual school progress lag suggests specific factors
related to classroom instruction or community problems.

Discussion of Progress Gain or Loss in Tables 11 and 12

One of the main objectives of the Reading Research was to probe
into the reading-language relationship to find out how it affects reading
grade achievement and to what degree it does so. A careful study of
Tables 11 and 12 is basic to this problem. The insights and positive
implications that come out of the Research Study on the reading-language
relationship are discussed in factual detail from various facets as they
shed light and understanding on the complex problem of reading-language
growth and progress in the Indian schools concerned.

Meaning of Negative Scores

The Negative scores reveal reading and/or language difficulties.
The negative reported for the year 1959-60 in Tables 11 and 12, indicate
reading and language progress loss at the grade two year compared with
that of the grade one year progress.

In Table 12, we note that most of the negative scores are found
in the 1959-60 results for both reading and language. The former inter-
pretation of teachers that low reading achievement of primary pupils was
due to the English language handicap would seem valid for lack of
objective research data on the problem. But, from the 1959-60 scores
in Table 12, it is just as plausible that poor reading skills could also

affect or retard language growth. The latter statement is particularly borne out when we realize that having concentrated our efforts on reading, we note positive reading progress scores in 1960-61 and 1961-62 with language scores also showing gains.

If the reading scores had become positive and the language scores remained negative we would conclude that the English language handicap was at the root of the reading difficulty. Since it is not so, one of the first considerations coming out of the progress scores reported in Tables 11 and 12 is that the persistent primary grade reading difficulties of Indian pupils are not primarily and solely due to English language limitations, although there is indubitable evidence that reading skill and language growth are related.

Moreover, with reference to the section on Beginner language readiness, it was pointed out that schools A and B had beginners whose language readiness scores were above those of schools C, D, and E. Yet, by comparison with the latter schools they do not show reading achievement score gains for 1960-61 and 1961-62 as we find in schools C, D, and E whose beginners had severe language retardation. Therefore, in schools A and B it would be difficult to sustain the idea that the language handicap is the cause of the reading retardation.

On the other hand, in school C where the language handicap is recognized as valid in terms of the community's social level, we find it persisting in 1960-61 to show gains in 1961-62. In the light of these observations we are inclined to believe that in the past, too little attention has been given to the reading-language relationship from the point of view that English language growth of Indian pupils could also be retarded as a result of reading weaknesses.

Change from Negative to Positive Progress

The change from negative progress scores to positive progress scores from 1959-60 results to 1960-61 and 1961-62 shown in Table 12 is directly attributed to the recommendation made to teachers to promote a synthetical phonetic word recognition approach in lieu of the sight word recognition approach in current use at the onset of the Reading Program. The recommendation based on the fact that in teaching an English reading program to ethnic groups of school beginners from non-English speaking homes, the experience of bilingual teachers in some areas of the country has led them to favor a phonetic approach to reading.

The main objection of bilingual teachers to the sight teaching approach for pupils of non-English speaking homes arises from the rationale of the sight method itself which relies mainly on sentence context clues and assumes that the pupil speaks the language fluently. Pupils from non-English speaking homes, and in the case of Indian pupils attending school with few or no pupils from English speaking homes attending the school, reading is extremely difficult and trying for these pupils if they are taught to read by the sight method for lack of sentence context clues through fluency in the English language.

It is not the purpose of this report to make a critical analysis of the sight word recognition approach to reading. Criticism of the sight approach comes up in this report only in instances where it elucidates specific reading problems or difficulties encountered by pupils learning English as a second language.

When the phonetic word recognition approach was recommended to teachers at the start of the Reading Program it was outlined step by step for each of the primary grades. The phonetic outline was directly related to the reader text vocabulary.

Basically, the word recognition approach of the Reading Program recognized both phonetic and/or sight approach to recognition of words, with due emphasis on the one or the other from grade to grade according to a word count analysis breakdown of the reader texts which yielded the following percentage proportions of words to be learnt through one or the other approach.

Grade Texts	Phonetic Approach			Sight Approach
	One Syll. Words	Two Syll. Words	Three Syll. Words	
I	65%	----	----	35%
II	50%	25%	----	25%
III	40%	40%	10%	10%

According to the phonetic approach, word recognition difficulty is related to the number of syllables in the word. Since sounds are represented by syllables, and syllables to words themselves, whichever method is recommended in the Teacher Handbook in teaching word recognition, the logical implication remains that the phonetic approach is applicable to most words.

At first, teachers claimed that the structural word analysis of the sight reading approach was similar to the phonetic word analysis. It is a fact that both aim at teaching the child to read at sight, but the structural word analysis differs from the phonetic word approach in that the former requires analytical thought processes whereas the latter calls for a synthetical thought process. The one is deductive, the other inductive. The one proceeds from abstract thought attention to the concrete data, (words); the other proceeds from concreta data, (words) to the abstract thought. Thus, the processes of attention are opposed.

The analytical processes normally come into their own at about nine years of age in the child of average intelligence. Previous to that, it is the synthetical process of thought that predominates in the child's learning pattern. The sight method, therefore, may be more suited to the gifted child who can develop his own phonetic clues, but is not the best one for the child of average mental ability, and is certainly not suited to children whose mental ability is sometimes questioned because of an English language handicap.

With reference to the bilingual learner, the analytical thought processes basic to the structural word attack recognition limits his vocabulary growth and extension. For, instead of progressing from short words to longer words, to develop and extend his vocabulary he has to break up long words into little words. This break-down analysis of the longer word distracts his thought attention from the word in sentence context since the normal child of average mental ability does not yet have enough attention span to control his thought processes over unrelated words to re-integrate them into the sentence context word meaning. To illustrate, in the sentence: "He was hammering a nail" the structural sight approach of finding little words in the big word would give: hammering: ham, hammer, ring. The bilingual learner may relate hammer to hammering but there is no control to prevent his thinking from digressing to ham, or to ring.

On the other hand, the synthetical phonetic word approach leads him to read the word as ham-mer-ing to give the word "hammering" as the word response in the sentence context and to associate the meaning

contexually with little opportunity to digress from it. Moreover, the latter is consistent with the eye-direction of reading from left to right whereas the former calls for eye regressions which are inconsistent with good reading eye-movement training.

In the Reading Program, sight structural word attack was therefore de-emphasized in favour of the synthetical phonetic word building on the basis of:

> (a) the pupil's lack of fluency in English
>
> (b) the average mental ability of pupils in
>   an average classroom population.

We reaffirm, however, that word recognition approach was intimately related to graded reader vocabulary and combined both phonetic and sight approach with due and proportionate emphasis on the phonetic sound or unphonetic sounds of the reading vocabulary words. Teachers followed this method and obtained above-average performance due to the fact that they had at hand and used individual pupil word study cards planned for programming word recognition study.

As a result, in the actual classroom use, most teachers followed the word program study and dropped the structural analysis section of the Teacher Handbook. They did refer to the Handbook freely, however, for interest and motivation in lesson preparation.

With the emphasis on the phonetic word approach, teachers at first referred to the reading program as a phonetic one but in time the general consensus of opinion showed proper evaluation that it was based on a proportionate phonetic or sight techniques of word recognition. Emphasis on the phonetic and synthetical approach to word reading has resulted in positive progress scores in both reading and language growth. Emphasis on the former approach resulted in reading-language weaknesses which generally resulted in low reading grade achievement scores.

The above statements do not claim that the language handicap has been overcome completely. Residual language learning weaknesses tend to persist for years and indeed there is doubt as to whether they ever completely disappear. But, progress scores reported in Table 11 justify the statement that poor reading skill ability can retard the language growth of Indian pupils to a greater degree it would seem than the language handicap retards their reading growth, provided the method of teaching reading be adapted to the pupils' needs.

In conclusion, we refute the notion that low reading achievement scores of the primary grades were directly due to the English language handicap. The latter was indirectly related in the sense that it conflicted with the sight approach to reading as presented in the Teacher Handbook which teachers followed in their reading instruction.

In conclusion, we state that the sight method approach to reading was directly responsible for the negative reading progress and the negative language progress as well as the generally low reading achievement scores of the Indian pupils at the primary to the elementary grade transition. Similarly the sight approach is also mainly responsible for lowering primary grade standards in classroom instruction.

Reading Grade Standards and Classroom Grade Standards

Positive scores of 100% and above in Table 11 for either reading or language progress would indicate that Grade 2 progress standards are comparably as high as the ones set for grade one of the previous year with respect to either reading or language or both as the case may be. Yet, in only a few schools, do we find that it is so in the case of reading. The majority of scores lie between 50 to 85 percent progress gain.

That Grade one pupils have a head start on grade two reading
may lead us to infer that it is this headstart that limits a higher
progress gain in Grade two, but in terms of grade progress, the logical
interpretation would be to extend the initial gain into grade three
just as Grade one extended into Grade two. This raises the question of
classroom grade level standards.

In questioning classroom grade level standards we are inclined to
view the issue as a complex problem. One of the factors mentioned
before is that grade reading levels are set on the prescribed readers
of the grade and consequently word recognition skills and language
growth are seldom extended beyond the levels set by the graded readers.

Another factor is that reading grade standards of Grades two and
three differ very little with respect to word difficulty and language
growth. Possibly grade level requirements in Indian schools are less
well-defined for Grades two and three than they are for Grade one.

That Grade one standards are higher may be due to the fact that
grade one pupils are more involved in <u>learning how to read</u> whereas
grades two and three pupils perhaps are made to <u>continue to read</u>. The
latter emphasizes covering the prescribed grade readers through teacher
assistance rather than on how to read and learn more difficult words.
Thus, if such was the case, graded readers were setting the classroom
grade standards instead of their being according to pupil needs, abilities,
and reading grade readiness. Similarly for language progress, reader
standards in a way also limit the vocabulary growth of primary pupils
because of the controlled reading vocabulary. This would particularly
apply in the case of pupils of non-English speaking home background
taught to read by the sight method.

That low grade progress standards for grades two and three levels
may be particular to the Indian schools listed in Table 12 does not
cast aspersion on the primary teachers concerned. If we compare progress
scores of 1959-60 with progress gain in both reading and language in
1960-61 and 1961-62. Indeed, we view the low progress grade standards
as a general problem rooted in the historical perspective of the academic
evaluation of the Indian learner and the history of the introduction of
sight reading in the schools.

In the past the mental ability of the Indian pupil to follow
regular academic courses has met with a number of erroneous assertions.
Even in recent years, published results of Intelligence Tests on Indian
pupils which yielded low scores because of the unsuitability of the test
selection, have helped to maintain the notion that the Indian child has
lower mental ability to learn academically. The result of this thinking
has led to the desirability of lowering grade standards. Indeed it has
sometimes been advised as a solution to Indian pupil learning difficulties
even though other factors than mental ability were involved. Environmental
factors, including severe English handicap, may affect academic achievement.
But this is not synonymous to lack of innate ability to learn.

In the schools tested, we found that while the mental ability of
Indian pupils was seldom questioned, teachers generally expressed
reassurance when the fact was contested objectively with results proving
contrary to the former general assumptions.

With regards to the introduction of the sight approach to reading,
in most instances the method was introduced in Provincial Schools for all
teachers to follow. Provincial classroom supervision at the time on the
use of the method was generally strict. Sight approach was and is still
taught as the reading approach in Teacher Colleges. Moreover, it is
presented by most publishers as the reading approach in most teacher
handbooks.

The Primary teachers participating in the Research Program sensed grade level weaknesses but needed and welcomed guidance to raise them. This is objectively evident in the progress scores of 1960-61 and 1961-62. The suggestions made at the start of the Reading Program to raise the reading grade standards were:

        (a) Phonetic emphasis approach extended to all primary grades in word recognition.

        (b) Library reading as a daily timetable allotment.

        (c) Frequent oral discussion beyond textbook limitations.

        (d) Grade-year acceleration of readers.

Inconsistency of Reading-Language Score Results

In Table 11 there are considerable variations from school to school as well as from year to year with no indication of a consistent relationship between reading progress and language growth. A more consistent pattern however shows up in Table 12. The scores of the first year 1959-60, in Table 12 reveal that initally each school differed in its progress level in reading and language respectively. Consequently, subsequent progress increase would naturally be affected to varying degrees as we also note in Table 11 from a detailed study of the individual school progress scores from year to year.

Thus, to a certain extent pupil progress is not only limited by the grade instructional level but also by the initial classroom pupil discrepancies between the two skills, reading and language. In fact pupil progress discrepancies between reading and language growth would tend to call for lower grade levels if a teacher does not want to teach above the pupil's head and be faced with a blank response from her class. The teacher attempting to reach the pupil's mind through her instruction while at the same time ensuring higher levels of grade achievement is very difficult to assess and to promote in the teaching of bilingual learners. It requires frequent re-assessment, questioning, teacher initiative, and motivation in order to gain new insights and successful learning experiences in teaching bilingual learners.

A wide range of variability in progress scores of Table 12 indicates that reading and/or language needs vary from school to school, from grade to grade, and from year to year. Comparisons between reading progress scores and language progress scores should provide insights to teachers for flexibility of teacher stress in classroom instruction according to class needs over and beyond the average reader-grade language level standards with regards to both reading and language growth.

Another causal factor linked with the variations in Table 12 is the variation itself of pupil background training in learning to read through the phonetic and synthetical word recognition approach. The grade cross-section of the pupil progress scores reported in Table 11 were as follows:

        Grade 3 of 1959-60 had little or no phonetic training,
        Grade 3 of 1960-61 had one year,
        Grade 3 of 1961-62 had two continuous years.

There is greater variation and fluctuation from year to year for each individual school in the language progress scores than in the

reading scores. Moreover, the general trend is that progress scores, in language are better than in reading. This would indicate that other factors besides reading instruction are present in language growth. It also points to the fact that the reading skill is a technical entity upon which teachers need to concentrate with due attention to grade progress level requirements.

It is impossible to know for lack of objective test data whether the language progress increase is related to passive or active vocabulary; to extra-curricular silent reading or to classroom discussion; or again to both. Since variations appear from school to school it is also worth considering whether it is related to the amount of library reading done during the years, or to classroom grade-grouping.

Table 13 was drawn up to make comparisons that might yield answers to the above suppositions.

TABLE 13.

Various Factors Compared with Pupil-Grade Cumulative Progress Scores of Table 12.

Schools	Read. Prog.	Lang. Prog.	Grade I - Fall Lang. Percentile Scores	Average No. Library Books read per pupils	Classroom Grades
A	112%	140%	64 Percentile	13	2 and 3
B	100%	36%	73	5	2 and 3
C	41%	25%	44	16	2 and 3
D	75%	60%	32	16	2
E	66%	112%	33	16	2
F	25%	45%	60 (approx.)	8	Beg. + 1 + 2

From the condensed data of Table 13, no one factor seems more significant than another.

Not listed in the table are two other factors, the pupil-teacher factor which may reflect stimulation of oral English expression between the pupil group and the teacher. Visits to classrooms of pupils who had been involved in three years of the Reading Program follow-up confirm the fact that pupils in these classes were verbally alert, lively, and active learners who could express themselves spontaneously in English. Even if their language growth was due to a combination of factors listed in Table 13 in addition to which there was a supportive oral English program, we are still left with the question of discrepancy between very high language progress scores and lower reading progress scores.

Could it be that the oral English expression while being fostered in the classroom atmosphere is perhaps neglected in relation to incorporating it within the reading course? Or, could it be the reverse that as children show fluency in oral reading, teachers gradually drop word recognition skills and concentrate their attention on the oral discussion of the reading lesson context? Whatever the

case may be, the questions need further consideration from objective data for proper evaluation. But, the implication is that classroom instruction should aim to bridge the gap between reading progress and language progress through supportive word recognition skills at higher levels of reading or through more language discussions integrated with the reading habits of pupils.

The possibility that the discrepancy between the reading skill and language progress may be related to the word recognition skills is perhaps best understood if we consider the "why" and the "how" whereby phonetic emphasis on word recognition skills enhances pupil ability to read fluently and with better understanding.

Prior to the inception of the Reading Program pupils from non-English speaking homes who learnt to read through the sight approach emphasis could hardly rely on the sentence context clues for lack of fluency in English. Because of this, word recognition was largely based on memory-word recall. As more words had to be learnt from year to year, this burdened and taxed the child's memory to a degree which in any normal child, or for that matter any adult learning a foreign language, would create tension or fear of forgetting the word. This was the case in the primary grades tested. Pupil reading patterns at the time revealed tension as they read with a one word staccato beat.

At first, one questioned whether this was due to the rhythm of the native language but it proved to be due to the child's effort at remembering each word. He was so concerned with identifying each word correctly that his mind could not concentrate on what he was reading as a sentence. As a result, the sight method to develop sight reading ability by grasping whole sentence units as thoughts, which is the prime objective of the sight approach to reading, was defeating its purpose with Indian pupils of non-English speaking homes. Because of the word memory recall they were reading word by word and the phrase and sentence meanings escaped them.

The fact is that the phonetic approach to word recognition provides the bilingual learner with a functional technique inherent to the reading skill process. Processes have growth patterns. In the phonetic approach to word recognition, growth habit formation has less chances of congealing as a fixed habit pattern of "attacking" words as in the sight approach which in its fixity results in word omissions or substitutions. Since reading is a developmental skill and implies growth, the phonetic approach of "building" longer words is preferable to that of "attacking" them.

With the shift of emphasis on phonetic approach pupils can now understand what they read. At first they are a bit slow in their oral reading speed but gradually as they become proficient and more independent in sounding words, both speed and flow of sentence reading as well as rhythm and expression improve. The end result is that bilingual pupils gain the ability to read at sight, the objective of reading skill mastery.

Another fact which could account for language progress without necessarily implying neglect of the word recognition skill practice is the time factor in studying new words preparatory to encountering them in the reading lesson of the graded texts.

Prior to the introduction of the reading program and according to the Teacher Handbook new words coming up in the lesson were studied a day or two ahead of the lesson or the very same day and were generally studied for recognition in the sentence context. This short time span is quite a limitation for developing vocabulary concepts of pupils who are learning English as a second language. A class would have to be brilliant or of superior mental ability to acquire new vocabulary words for reading lesson mastery in so short

a time since it involves a number of steps for bilingual learners
of which we mention a few:

      (a)   hearing the word for the first time in most cases,

      (b)   remembering the word orally and visually,

      (c)   understanding it in context,

      (d)   using it in active vocabulary,

      (e)   recognizing it in printed word story context.

      As part of the reading program approach to this problem,
teachers were advised to lengthen the period of time from learning a
word as active vocabulary to reading it in story context. For this
purpose, the pupil individual word cards were planned unit by unit.
Word meaning and word recognition study on the card generally preceded
the reading unit by three weeks or more and were frequently reviewed
throughout the year. To promote active vocabulary use, pupils were
encouraged to develop the word meaning through various ways such as:

      (a)   Using the word in a personal sentence.

      (b)   Associating other related words to it.

      (c)   Finding synonyms for it.

      (d)   Building word families around it, etc.

      (e)   Developing phrase associations related to it.

      With regards to pupils who missed school from time to time, as a
result of using the cards, few suffered from missing out on vocabulary
learning or word recognition preparation for the lesson as they formerly
did when the instruction proceeded from page to page according to the
handbook outline and the sight approach. Use of the cards was a handy
reference tool to learn the words missed at any time through absenteeism
or even through momentary inattention.

      When reading scores increase and language scores lower, we may
sense that teachers of uni-lingual background often take it for granted
that common words are known by most pupils who no longer struggle or
stumble in answering or asking simple questions, or who show ability
to read the graded texts fluently. Where such might be the case, as
could be suspected from some scores in Table 11 and 12, we wish to
caution teachers against it. There is need for consistent and constant
awareness of the need for both reading and language growth. A grade
three that keeps developing word recognition skills and keeps up its
language growth is a better grade three than one where wide
discrepancies show up between the one and the other.

      In conclusion, we consider the reading and language progress of
pupils who started to read through the emphasis on the phonetic word
recognition as conclusive evidence that progress gains in both
reading and language skills are promising, but we caution teachers that
too wide discrepancies between the two should be bridged to favour
better all-around pupil grade achievement scores at the grade three
to four transition level.

Multigraded Schools

      Multigraded or small schools account for 20 to 30 percent of the
primary grades population tested. Multigraded schools do not show any

negative scores. This fact is of interest since these schools also
have non-English speaking beginners. In addition, teachers in these
schools have less teaching time of the day to spend with each grade
due to the fact that the teacher generally has twice as many grades
to cope with as teachers in the larger school units by classroom.

The progress pattern of multigraded schools as it developed
from 1959 to 1961 is of special interest. In multigraded schools,
much attention and effort is spent on getting the child started to
read and less time spent on language teaching or discussion. The time
table pressure of teaching many grades is summarized in:
"Teach the skills and omit the frills". Children, however, do hear
and learn English from pupils in other grades and from day to day
are exposed not only to grade reader vocabulary of their own reading
level but also to that of other grades. Thus, from one year to the
next, pupils in multigraded schools have covered their grade work while
at the same time they have been exposed to the next year's work as well
as the review of the past year.

Transition from grade to grade is never abrupt but quite gradual.
Grade promotion is quite flexible. Generally pupils move on from one
group or grade to the next as they are ready for it. In June they may
have half of another grade level to their credit. In this respect the
multigraded school flexibility is most beneficial to the pupil.

In following the reading program instruction most teachers in
multigraded schools found the change of emphasis of approach to word
recognition quite conflicting. Their difficulties and conflict were
particularly linked to the number of grades taught in view of the
fact that it was more difficult to shift the emphasis with a grade
two or three group then to start grade one with the phonetic emphasis
in word recognition.

The scores of 1960-61 reflect the transition difficulties of both
teacher and pupils in changing from sight emphasis to phonic emphasis
in word recognition approach. In most cases, the conflict has been
resolved through teacher insight and satisfaction in observing
differences in pupil attitude to reading, particularly with the younger
ones as they attempted to read words independently and with the older
pupils who showed more interest and enjoyment in reading library books.

Variations from School to School

With reference to specific schools and progress rate, we make
particular observations to explain specific points of interest to all.

These are briefly summarized by schools.

School A: We have no explanation for the 75% reading grade progress
          in terms of the negative language progress scores of that
          year. Our only supposition would be that the grade cross-
          section reading ability of spring 58 must have been fairly
          high in comparison with the progress rate of 1959-60.

School B: The pattern is indicative of conflict in adapting to the
          Reading Program and the need for more flexibility in
          combining in due proportion both phonic and sight
          approach to reading. It could also very well be related
          to bridging the gap between adult thinking and child
          thinking.

School C: These scores are to be evaluated in the context of a
          severe English language handicap of a near to isolation
          from surrounding non-Indian communities as well as a
          pattern of year-round intermittent attendance. The

progress gain reported from 1960-61 to 61-62 of 6
months is most commendable since in terms of 59-60
and 60-61 negative scores, it registers one of the
highest gains recorded in Table 11.

School D: This school shows the most proportionate consistent
gains. Scores of 61-62, show closer relationship
between reading progress and language understanding.

A cursory inspection of this school's library cards reveals that
the pupils read fewer books but at a more difficult level compared with
the general library reading patterns of other grades two and three who
read easier books. This would be indicative that the pupils in School D
are at ease with more difficult levels of reading extra-curricular
reading and would therefore imply that the classroom instruction on
phonics and sight approach is well proportioned with reference to the
graded reader texts.

School E: Grade Three scores for 61-62 are reported for two
combined classrooms. A breakdown by classroom gives
the following comparisons with 1961-62 of Table 11.

		Reading Progress	Lang. Prog.	Range Diff.	Reading Gr. Achievement	
Grade 3	60-61	25%	100%	75%	50%	3.4
Grade 3 (A+B)	61-62	66%	112%	66%	87%	3.7
Class 3A	61-62	66%	150%	84%	112%	3.9
Class 3B	61-62	56%	87%	31%	25%	3.2

Class 3-A grouped abler pupils while class 3-B grouped pupils
in need of pre-grade three remedial learning attention. In the above
comparison differences between 3A and 3B progress scores, we diagnose
a language weakness affecting the reading grade score of 3B since the
reading progress scores are quite similar.

On the basis of word recognition skill of 3B with regards to
failure or promotion from three to four we see the advantage of
promotion to grade four envisaging the possibility of failure at grade
four, if necessary, instead of repeating grade three since language
level should also be raised. There are more chances of this being
done by two years in grade four rather than two years in grade three.
Whatever promotion policy is followed with regards to this group,
indications for the next teacher are that more attention should be
given to language acquisition without neglecting the word
recognition skill. Ample library reading should also be encouraged.

School F: This is the only school in the group where school beginners
do grade one reading during their first year of school.
The primary pupils are younger and more dependent on
teacher instruction and totally dependent on her for
reading if they are taught to read by the sight approach.
This is what happened in this school as memory of words
failed them when teacher substitution due to prolonged
poor health of the regular teacher allowed reading
instruction to weaken. The result is that the pupils
show a sensational loss in word recognition ability for
the year 1959-60 and conversely a sensational gain for
1960-61 with the return of the regular teacher.

Comparing School F with School B, two schools which at no time rate negatively on language understanding, we observe in this instance a vivid contract between teacher-pupil relationship as it affects pupil reading achievement scores.

We maintain that prognosis to bridge the word recognition and language gap is more promising when there is ready communication between the adult mind and the child's world of thinking. This does not mean condescension or coming down to the child's digressive talk. It means finding out: "What a child thinks about something and why he thinks so," to lead him on to raise his level of reasoning and to organize it along broader concepts. In the case of the Indian child it also means helping him not only to read but also to think and express himself in the English language.

Primary Grade Library Reading

From the onset of the Reading Research Program teachers were encouraged to develop library reading interests and habits to supplement the minimum reader texts reading of each grade.

In this report we briefly wish to mention the salient facts pertaining to the change of emphasis from a structural or sight approach to word recognition as it affected library reading ability of pupils. Keeping in mind the negative scores of 1959 as reported in Table 11, it is hardly conceivable that pupils had much desire for extra-curricular reading. In fact, library use seemed to be the exclusive right of the abler pupils. Average or weak pupils who handled library books either looked at pictures or had to ask someone else for the words or simply skipped them. They were dependent readers and avoided reading that looked new and different from the reader presentation.

With the introduction of the phonetic word approach pupils gained independence in word recognition skills and began to enjoy library reading. From grades two up, pupils kept record cards of the books read from which the average number of books read in grade two and grade three per pupil during 1960-61 is listed below:

Schools	Grade 2	Grade 3
A	13	15
B	5	9
C	16	16
D	16	8
E	16	23
F	8	18

Library reading in schools where pupils formerly read very little speaks not only of pupil ability to read independently but also resulted in teacher motivation to promote extra-curricular reading interests through library use.

Acceleration of Reader Test Reading by Grades

In the second and third years of the Reading Program teachers were advised to accelerate reader text reading by grades. This recommendation was made in an effort to break away from the reading

instruction program planned on reading units divided by months of the school year instead of pupil growth and proficiency in reading. By the latter we mean that pupils are able to read with better speed and comprehension at the end of the school year than at the beginning. Therefore, if at the beginning of the school year one reader story was taken up per reading lesson the same pupils should be expected to read two stories in the same lesson time. In other words the second reader text should take less time to read than the first. Where teachers followed the suggestion, pupils read part or all of the first reader text of the next grade before the end of June. This gave the pupils a headstart into the next grade reading and is commensurate with pupil ability to read at a more difficult level in terms of their readiness for it rather than on the grade-year time limitation.

The recommendation of grade year reader acceleration was also advocated for work book exercise planning. Teachers mentioned that much of their teaching time in reading was being absorbed by work book exercises because the pupils did not seem able to do these independently. To develop pupil initiative and self-confidence in working independently at their work book exercises, teachers were again asked to modify the presentation of work book activities on the basis of timing. This meant doing the work book exercises on completing a reader text as review work instead of lesson preparation. As a result, pupils did these with less assistance from the teacher, had better understanding of the activities they were required to do, and covered the material in less time than they took previously.

In brief, we state that in the case of the bilingual learner learning English as a second language, we did not recommend dilution of the regular curriculum grade program outline, but we did insist on modifications with reference to method approach and time presentation factor based on the learner's needs and potential to promote learning patterns and work habits that inspire a pupil with self-confidence and independent initiative.

Absenteeism and Achievement Scores:

At the beginning of the Reading Research Program we recognized the fact that there is a minimum loss of one month of fall absenteeism in the Maritime Indian Schools. We also adopted the view that teachers should plan the curriculum ten month teaching year in terms of a nine month school year of possible attendance, a view subject to verification or rejection on the basis of test results over a three year follow-up of pupil achievement scores.

We adopted the above point of view for various reasons. Firstly, we considered it a realistic and matter-of-fact recognition and acceptance of a pattern of life traditional to Indian families of the region. Secondly, we deemed it a positive approach to cope with the problem within its limitations, if any. In this case our thinking overlooked the assumption that the absenteeism problem was bound to lower pupil standards of achievement in order to face the issue squarely and to raise pupil school achievement in spite of the traditional problem.

Thirdly, we kept in mind that fall absenteeism does not affect all schools to the same extent or degree of retardation in school grade achievement. We felt that absenteeism would be more prevalent for pupils of the elementary grades level than for primary grade pupils. This assumption was tentatively verified in the interim first year report. The same report referred to intermittent year round attendance as more detrimental to pupil progress than that of the fall due to the potato picking exodus.

Fall absenteeism is studied in this report on the basis of three year comparisons of, fall mean scores with grade standard norms for grades two and three of the individual large school units and multigraded school results as reported in Table 14.

Table 14. Average Grade Fall Scores by Schools and Year - 1959-61

	Grade II Reading Grade Score			Grade III Reading Grade Average Score		
	Fall 1959	Fall 1960	Fall 1961	Fall 1959	Fall 1960	Fall 1961
Gr. Norm	2.2	2.2	2.2	3.2	3.2	3.2
Gr. Mean	2.4	2.6	3.2	3.2	3.3	3.6
Schools: A	2.4	2.6	3.2	2.8	3.2	4.2
B	2.7	2.4	2.8	3.4	3.4	3.5
C	2.5	2.6	3.1	2.9	2.7	3.3
D	2.3	2.5	2.6	3.0	3.3	3.7
E	2.5	2.6	2.7	3.3	3.4	3.3
F	2.3	2.8	2.8	2.8	3.8	3.5
Multi-Graded Schools	2.6	2.6	2.8	3.4	3.3	3.6

Table 14 reports a few grade three scores in 1959-60 results from three to four months below the grade norm expectancy. All scores for years 1960-61 and 1961-62, except for School C 1960-61 are equal to or above the grade standard norms of 2.2 and 3.2 respectively. Therefore, indications are that fall absenteeism is not too significant a factor in primary pupil retardation.

Fall absenteeism is more pronounced in some schools than in others. Yet, this is not reflected in the individual school scores as would be expected if absenteeism were a major pupil retardation factor. The fact that mean scores and aggregate averages for individual schools show progressive gains from the first, to the second, to the third year of the Reading Program, implies that the low 1959-60 scores should not be attributed to fall absenteeism but to other causes discussed in this report. From results reported in Table 14, we, therefore, confirm the initial assumption that the 10 month curriculum grade is being successfully taught during a 9 month school year.

We, therefore, conclude that:

1. With respect to fall absenteeism and pupil retardation, fall absenteeism does not seriously affect mean reading grade achievement scores of the primary grade pupils.

2. The matter-of-fact recognition of the traditional fall absenteeism in the light of the scores reported in Table 14 should lead

teachers to study absenteeism as it is related to other current issues of intermittent attendance and legal school age entrance.

3. Primary grade teachers in Indian Schools show competency in teaching a ten-month school year on a nine-month actual attendance year.

READING RESEARCH PROGRAM GENERAL INFORMATION

Intelligence Scores

The Goodenough Draw-A-Man Intelligence Test was administered to the primary grade population. Norms for the population tested were established. The results led to the conclusion that Indian pupils were neither brighter nor duller than an average non-Indian pupil population. Indian pupils have comparable mental ability to that of a normal population distribution of non-Indian children.

The Indian pupil norms which appear below derived statistically should be substituted for those given in the Goodenough Text.

	I.Q. Scores	Quotient Values
below	55 to 64	mentally deficient
	65 to 74	borderline
	75 to 84	dull
	85 to 94	low average
	95 to 114	average
	115 to 124	high average
	125 to 134	superior
	135 to 144	very superior
	145 to above	brilliant

The present report does not delve into the mental ability factor and reading achievement of Indian pupils. This matter will be discussed in the forthcoming library study with reference to grade achievement scores and library reading.

Accelerated Promotion

Teacher assessment of pupil's mental ability compared favourably with Goodenough intelligence scores of Indian pupils tested. Mental ability assessment of pupils and high reading achievement scores generally resulted in acceleration of grades for the pupils concerned. At first, teachers shied away from accepting the responsibility of accelerated promotion and referred to the accelerated pupils as "The ones you told me to accelerate" but as primary pupils proved they could cover the work of two grades in one year the policy of acceleration of brighter students is now generally accepted.

With regards to accelerated promotion of pupils in schools, the suggested policy is to do the screening during the primary grades particularly at the grades one and two levels and only in unusual

promising pupils did we recommend acceleration from grade three to
four. The reason for recommending accelerated promotion at the primary
grades is because grade curriculum subject matter is at a minimum
compared with the more complex necessary background skills and
information required in the elementary division.

        We anticipate that if schools take the responsibility of testing
the mental ability of beginner and grade one classes and if pupil
school grade achievement and personal work habits warrant it, the
acceleration policy of the school will be a sound and beneficial one
to encourage the brighter individual pupils to pursue higher studies
before over-age factors intervene to make them lose interest in
school and drop out at lower grade levels than they should have
achieved with their mental endowment.

        When we recommend acceleration of brighter pupils we are simply
emphasizing the fact that these pupils need to be challenged in their
thinking and in their work to perform according to their ability.
Most teachers respect the slow learner's need to spend more time on
his grade work. Generally this should not extend beyond two years
at one grade level. By the same token, teachers should also respect
the bright pupil's ability to cover grade requirements in less time
than it takes the average child to do so. All should realize that in
cases where pupils were recommended for acceleration and where such
was not followed up, the pupils concerned showed very little progress
during the year and in some instances their reading grade achievement
scores were lower than they formerly had been. Thus the child who
is not accelerated when he should be, not only loses a year of grade
work but is likely to become bored and disgusted with school.

Language Arts Program and Introduction of New Speller Text

        The language arts program of the primary grades covers rudimen-
tary knowledge of facts and ideas on social living, health care, and
nature study. Most of this rudimentary information is taken in the
classroom through informal class discussions.

        Written English and spelling on the other hand require a more
formal lesson approach. In keeping with the emphasis on phonetic
word recognition and pupil language expression of the Reading
Research Program, a new speller text was introduced that correlated
with the Reading Program instruction.

        The study of spelling words correlated with that used in the
reading approach to word recognition. Also, in terms of pupil
written expression pupils were encouraged to use the words in short
paragraphs related to the illustration in the text instead of other
speller approaches where the new words are presented with a written
story prepared for the class to study. Samples of pupil stories in
our opinion showed progress in written expression from month to month
as stipulated in the use of the new text.

        At first many teachers felt the new speller was too easy but
on comparing its word list with those of other speller texts, word
choice and word difficulty were in close agreement in all texts.
The new speller appeared simpler because the directions for the
exercises in the text were expressed in clear simple direct
statements and the method did not conflict with reading instruction.

        There is a prevalent notion amongst teachers that formal
vocabulary learning is done through the spelling word list. The
idea is a good one inasmuch as it shows teachers awareness of the need
to develop formal vocabulary which is also essential to pupils
learning a second language. But, the fact is that spelling word lists
are generally one year lower in vocabulary level compared with the

grade reading vocabulary. Thus, formal vocabulary learning through spelling word lists does not promote growth level of vocabulary learning unless it is done through spelling word extension. An example of spelling word extension would mean that from the spelling word--TEA--other words such as:

> Teacup
> teaspoon
> tealeaf
> teabag
> teaset
> tearoom
> teacup reading
> tea party
> tea towel

should be grouped around the original word to stimulate:

(a) meaning of various derivatives

(b) accuracy of description inherent to compound words

(c) initiative in learning new words

(d) ease of remembering the correct word for each thing.

> (not the spoon for the tea instead of teaspoon)

(e) discussion and learning of social situations to which words refer, etc.

(f) extension and correlation through active discussion with other related classroom subjects on health, nature study, and social studies, etc.

Reader Series

One provincial reader series was adopted for all Indian Schools of the Maritimes. The main reason for this change from using three different series as in former years was to exert better research control in the interpretation of the statistical data. For lack of this, the research program would have been jeopardized on the basis of inconclusive reservations due to different reader text used from school to school. Another reason was to facilitate the preparation and availability of the pupil phonetic programming cards distributed to all schools as mentioned in a previous section of this report.

A third reason anticipated teacher participation and discussions at institute meetings and conventions. Due to the fact that the teaching of reading was formerly centered on the Teacher Handbook approach, discussions on classroom reading problems were bound to deteriorate to refer mainly to different series used in the individual schools with little time left for positive action in joint teacher effort in finding solutions to the reading-language problems due to the fact that different series of texts implied different problems.

That new texts could be introduced speaks not only of a cooperative teacher group but also of its basic resources for flexibility and initiative. In the future, with respect to reader series we believe that greater insights and valuable suggestions can come out of primary teacher discussions if the primary teachers of the Maritime Indian schools continue to use a common series of reader texts. In brief, a series may be substituted for another one, but there should

be common adoption of it in the schools of the region.

Oral Language Program

Oral language expression is difficult to evaluate objectively. We encouraged a trend towards discussion of a topic to which every child could contribute either through speaking or through interest listening. In schools where oral expression meant that each child had an opportunity to say something, there was a tendency for the pupil to say it for the teacher with little opportunity for the other children to participate in the pupil-teacher dialogue. This made the oral-English lesson teacher centred instead of pupil centred.

When a topic of general interest is chosen for discussion, even if this topic is at the picture study level, pupils can silently or verbally compare other pupil remarks with their own appreciation or that of others. This approach breaks away from the teacher-pupil dialogue restrictions and introduces a conversational pattern of comments with a group of listeners contributing in turn as their interest is aroused in the course of the exchange of remarks.

A good conversationalist generally arouses and sustains conversational exchange among the members of a group. In the classroom, the teacher replaces the conversationalist to offer leading cues and keep the discussion or topic alive. A topical discussion introduces the WHAT to be discussed but reaches out to develop ideas around it such as:

> What do you think about it?
> What do others think about it?
> Why is it so?
> How is it so?
> If it were so, what would happen?
> When is it so?
> Imagine that....
> Others....

The habit of closing the discussion with a summary of the salient facts which came out of the discussion should also be developed.

The traditional classroom rows of desks is not conducive to group conversation. Mobile desks should fan out to a horseshoe arrangement to promote group togetherness and interest in each other's comments. The teacher's position should be part of the circular desk arrangement and not pivotal to it if pupils are to value each other's comments as much as those of the teacher.

Oral expression of pupils taking part in the Reading Program revealed two major weaknesses. The one was related to prepositional phrases, 'I go store'; the other, to question formulation.

The prepositional phrases were generally carried over from the pupil's first experience with learning English at a time when it consisted mostly of word lists instead of conversational practice. With respect to question formulation, we are aware that this area of English language learning is generally neglected. This is possibly due to the fact that pupils expect the teacher to ask the question and as a result they impose the classroom teaching pattern on the teacher and they themselves are only concerned with formulating statement answers. Yet, unless pupils are taught to formulate questions, the teacher dependency is necessarily reinforced to the detriment of active pupil participation in classroom discussions. Later, these pupils are looked upon as passive and uninterested pupils in grades where pupil evaluation of subject matter is called for.

Primary grade children are curious by nature. If they are given the opportunity and the means of asking questions, as is needed in the case of the bilingual learner, a new pattern of question and answer exchange between pupils and teacher can develop. The teacher who arrives at this point in pupil-teacher communication not only benefits from pupil contribution of ideas, but also experiences a genuine sense of enjoyment and satisfaction in discussions with her class, even at the primary grade level.

Reading Disability Cases

A small number of pupils who participated in the Reading Program had extreme difficulty in reading. Some of these were due to mental retardation and others to miscellaneous causes. The present research did not have the facilities nor the time to include clinical studies of these reading disability cases.

A review of individual pupil failures by grade, with respect to their reading pattern, showed an abrupt gain in paragraph reading and a lowering of word recognition scores. In subsequent testings, little progress was noted in the paragraph reading scores with a continued loss in word recognition scores. In such cases, early detection of the need for individual attention seems to be the most important remedial measure in helping pupils to overcome what is too often interpreted as a lull or a lag in school learning interest. Unfailingly, remedial assistance that stressed word recognition techniques and skill mastery showed improvement in due course.

CONCLUSIONS AND RECOMMENDATIONS

Major Conclusions:

1. The sight method in teaching reading to primary grade Indian pupils from non-English speaking homes was at the root of low progress achievement in reading and English language learning.

   We recommend a synthetical phonetic word recognition approach to reading for bilingual learners of the primary grades to promote both reading and language progress.

2. Fall absenteeism does not affect reading grade achievement in terms of grade norm comparisons. Teachers in Indian schools do commendable work in teaching a ten month curriculum school year in a nine month actual school year.

   We recommend that teachers tacitly accept the fall exodus of pupils to Maine and devote their attention to the problem of intermittent absenteeism and school age entrance during the actual school year.

Secondary Conclusions:

1. Improved reading ability also results in improved English learning growth.

2. Improved reading ability also promotes library reading interests in pupils.

   We recommend that continued emphasis on phonetic levels of word recognition be taught from grade to grade level.

3. A phonetic emphasis on the word recognition skill is most effective when directly linked to the word vocabulary study of the reader series.

4. Timing in preparation to learning new vocabulary words and expressions of the reading lesson is important as a learning need of the bilingual pupil learning English.

We recommend that teachers re-assess this factor periodically to meet the vocabulary growth needs of a class and to meet them at the most propitious time.

5. Grade level standards may lower or increase from grade to grade, from year to year, and from school to school.

   We recommend that a regular program of standardized testing be carried out at least each fall and/or spring to provide teachers with an objective tool to evaluate their grade standard levels, particularly with respect to primary division progress rate in preparation to elementary grade entrance requirements.

6. The smaller the discrepancy between reading progress and language progress rate, the larger the gain in grade achievement scores.

   We recommend that teachers develop astuteness in promoting both reading and language growth progress so that in raising the standard of one they also make it an objective of raising the standards of the other.

7. Pupils taught to recognize words through a phonetic approach emphasis generally show fall score gains over spring score results of the previous grade.

   We recommend that teachers avoid reverting to former necessary patterns of fall review which become unnecessary with a phonetic emphasis approach to word recognition.

8. Grade texts spell the minimum amount of reading to be covered in a school year. A reading program based on grade texts only can limit language growth levels of pupils.

   We recommend flexibility in accelerating graded text reading on the basis of pupil readiness and reading ability rather than by rigid adherence to grade curriculum minimum reading requirements.

9. Variations of progress rate in reading and in language seem to involve a variety of factors such as oral English instruction; library reading; initial beginner language readiness; level of word recognition mastery; teacher-pupil inter-reaction.

   We recommend positive development of all above factors commensurate with the needs of the particular schools and individual classroom groups.

10. Multigraded school primary pupils can benefit from a broader language background training from grade to grade level.

    We recommend that advantages of flexibility in pupil grouping be extended into graded schools from grade classroom to grade classroom through a sound policy of grade acceleration based on the child's mental ability and above average performance in his grade allied with good work habits.

11. Use of a common reader series offers more joint teacher effort in coping with regional school problems in reading, particularly when a small number of teachers are involved compared with the number of provincial teacher institute groups.

We recommend that teachers of Indian schools in the Maritime Region adopt a common reader series. This does not restrict optioning for other series as long as the new series is adopted as the Maritime Indian school series.

12. There is a small percentage of reading disability cases in the schools who participated in this study.

We recommend early individual remedial reading attention to cases that develop unexpectedly and seem linked to temporary learning difficulties.

13. Language progress was evaluated indirectly from the reading tests. There is need for more research directed at a study of the internal patterns of language growth of bilingual learners at the grades 3-4 transition level.

We recommend that further research be focused on developmental language growth of the bilingual learner in learning a second language, namely English.

14. The Reading Research Program has been successful in isolating reading-language problems and absenteeism factors as it pertains to the grade achievement scores of Indian pupils through the supportive and unstinting cooperation of the teaching staff.

We recommend that a resource person be available for consultation to teachers of the area to coordinate and direct their efforts to maximum results.

ELEMENTARY DIVISION

General Background

The Reading Program at the elementary division level was limited to test administration and test interpretation with very little classroom supervision follow-up during the school year.

Test Batteries and Statistical Data

Before presenting the statistical data and its interpretation, we review the Fall Test Battery and the Spring Test Battery with a brief explanation of each and the code abbreviations used in the statistical data.

Fall Battery: Noting Details (N.D.)

Understanding Directions (U.D.)

General Significance (G.S.)

In this series of tests, the one-word answer could be directly located in the printed text. It really meant identifying the word answer with the direct text wording.

The Spring Battery consisted of the following tests:

Speed and Accuracy (Sp. Ac.)

Vocabulary (Voc.)

Comprehension (Compreh.)

The tests of this series called for inference thinking. The judgment called for did not appear directly in the printed content,

but had to be derived from content understanding and content analysis.

The difference between the Fall Battery and the Spring Battery was that in the former, pupils directed their thinking within the text limits, whereas in the latter, they had to direct it beyond the text limits. Graphically represented the thinking direction was reversed as follows:

Fall Battery Responses: ——————————⟶ Content ⟵—————————

Spring Battery Responses ⟵————————— Content ————————————⟶

In the former, a pupil's dependency on printed text in forming judgment is evident; in the latter, pupil independence of text content comes to the fore. The spring battery also relied on broad vocabulary concepts which we cannot dissociate from the English language-thinking ability of the pupils concerned.

General Interpretation

The reading problems of the elementary grades are mainly related to broad vocabulary development, general comprehension and general significance. It is rather difficult to offer specific guidance to develop these skills since they are inherent to a broad teaching approach in cultivating thinking habits in pupils and less subject to specific controls than most other reading skills. Generally too close an interpretation of the printed text at the elementary level results in curtailing pupil evaluation and judgment of the subject matter. In other words, too close an emphasis on the printed text may lead to one-fact knowledge learning instead of relatedness of facts requiring synthetical or analytical thought processes to integrate and correlate facts into broader thought concepts, commensurate with elementary grade-pupil development reasoning processes.

Interpretation of facts beyond the printed context limitations in the elementary grades can best be developed if pupils are no longer struggling with word recognition difficulties and have facility of oral expression in the language.

At the beginning of the reading program it was evident that much of the reading lesson was spent on helping pupils overcome word recognition difficulties of getting mixed up with the little words or stumbling over the longer and more difficult words, carry-overs from the primary sight approach to reading. In fact, emphasis on oral reading instead of on silent reading was still necessary for the elementary grade pupils. The reading lesson to a great extent seemed to be an extension of primary division word recognition reading practice with little opportunity or time left for oral content-context interpretation and discussion to stimulate pupils to express the thought content in their own words. Accordingly, we felt that long range benefits of the Reading Program for the elementary division level would indirectly come about as a result of promoting word recognition skills at the primary division level.

It should be stated, however, that on each occasion when we had occasion to address teacher groups, we repeatedly advised and tried to impress upon the teaching staff the need to develop judgment evaluation or critical thinking in pupils of the elementary grades.

Specific Interpretations

That pupils of the elementary division find it easier to think within factual printed context information and lack ability or habits of thinking away from it, is revealed in the comparison of fall test results with those of spring test results on comprehensive results by schools in Tables 1, 2, 3, 4, and reading grade mean results of Table 5.

In Table 1, on grade three spring results, we observe that the general trend is for comprehension scores to be in close agreement with the speed and accuracy scores, particularly for schools that were 6 months or more below grade norm expectancy. The best scores are recorded in the spring of 1962.

It is most encouraging to note that in the schools concerned the trend in grade three transition scores to grade four for 1962 show well-rounded reading achievement in all three skills of speed and accuracy, vocabulary and comprehension. Grade Three of 1962 definitely indicate comprehension gains over those of the previous year, and that this gain seems directly related to word recognition mastery emphasized through the primary grade supervision of the reading program. Consequently, this confirms the initial assumption that long range effects from word recognition skill mastery and enhanced oral English expression at the primary grades level would carry over into the elementary grades.

GRADE FOUR

Fall Scores 1959-61

Noting Details
Understanding Directions
General Significance

The grade four fall scores of Table 2 show progressive gains in grade mean achievement scores. In all three years 1959-61 highest scores appear in word reading skill mastery of finding the answer in the printed text. Weaknesses in pupil ability to understand directions reflecting teacher dependency and inability to make inference judgments derived from printed context, or lack of English mastery and/or lack of pupil stimulation to think and discuss beyond the book content is apparent in the 1959-60 general significance scores.

The 1962 fall results, on the other hand reveal proportionate ability in both thinking within the printed context and away from it. The interpretation of this proportionate improvement is that it is mainly due to teacher orientation in stimulating pupils to think out solutions and discuss the pros and cons for themselves rather than having it directly explained to them by the teacher.

Greater fluctuations appear in scores of understanding directions in 1961. It is interesting to note that on this test, the highest marks were recorded by pupils in multigraded schools. Inasmuch as this test is related to pupil dependency on the adult in his work habits, it seems logical to interpret these higher scores of the multigraded schools pupils in grade four in the context of the classroom atmosphere where pupils are expected and made to work on their own as the teacher moves on to one of the other three grades. If such is the case, we suspect that teachers with only one or two grades spend too much time helping pupils with their seat work assignments instead of teaching them methods to rely on their own initiative and develop work habits of their own.

Spring Scores 1960-62

Speed and Accuracy
Vocabulary
Comprehension

In Table 2, the most notable gains from 1960 to 1962 of the spring battery are registered in speed and accuracy with a grade

Table 1.   Comprehensive Results of Grade III Spring Tests from 1960 to 1962 by Schools.

Grade III Tests	Grade Norm	Reading Grade Mean	SCHOOLS						
			A	B	C	D	E	F	Multigraded
Spring 1960									
Speed & Accuracy		3.2	3.7	4.4	3.0	3.2	2.8	3.0	3.6
Vocabulary		3.3	3.6	3.6	3.1	3.4	2.7	2.9	3.4
Comprehension		3.3	3.5	3.4	3.1	3.4	2.7	2.6	3.3
	3.8	3.3	3.6	3.8	3.1	3.3	2.7	2.8	3.3
Spring 1961									
Speed & Accuracy		3.5	3.5	3.1	2.9	4.1	3.4	3.1	3.8
Vocabulary		3.5	3.9	3.4	2.7	3.4	3.4	3.8	3.8
Comprehension		3.4	3.6	3.0	2.8	3.5	3.3	3.6	3.4
	3.8	3.5	3.7	3.2	2.8	3.7	3.4	3.5	3.7
Spring, 1962									
Speed & Accuracy		4.0	4.5	3.2	3.5	3.9	4.0	4.3	3.8
Vocabulary		3.9	3.4	3.1	3.5	4.0	4.0	4.2	4.1
Comprehension		3.6	3.3	3.3	3.3	3.8	3.8	3.7	4.0
	3.8	3.8	3.7	3.2	3.4	3.9	3.9	4.1	4.0

mean of one month below or above the expected grade norm. The lowest scores appear in comprehension showing very little progress by individual schools from year to year and registering a one year retardation compared with the grade norm expectancy. Vocabulary scores fall between the other two test scores. Moreover, in the 1960 and 1961 scores, the mid-position of the vocabulary scores are generally below the comprehension scores while in the 1962 spring results, we observe schools B, C and D having vocabulary scores below those of comprehension while schools A, E, F, and the multigraded schools have vocabulary scores above it.

That grade four pupils show a history of English language weakness in vocabulary is indupitable, but that the English language vocabulary handicap is the sole factor in lowering the comprehension scores is also questionable in the light of the 1962 score results for schools A, E, F, and multigraded schools as reported in the previous paragraph.

The comprehension test required pupils to hold in mind two facts, the choice of the second word being dependent on that of the first in order to get a valid statement answer. A diagnostic study of the test papers revealed that in most instances the choice of the first word was correct with most errors occurring on the choice of the second word. Thus, on the simple statement clause or simple sentence attention grasp and understanding, pupils did well but failed on the subordinate clause control to integrate it in the sentence as a complete thought unit.

This would point to language expression weaknesses or difficulty of thinking in English. The fluctuations in vocabulary and comprehension scores of 1962 from school to school read horizontally and longitudinally seems to imply classroom teaching difficulties in promoting language expression and reading comprehension at the elementary grade level.

That some emphasis was given to vocabulary growth and has resulted in comprehension gains is also evident, but nevertheless we are aware that in assuming that weaknesses in language expression are basic to the lower comprehension scores, we are inclined to interpret the language weakness as one similar to that of the beginners prior to the introduction of the basic oral English course when pupils knew a list of words but lacked mastery of sentence structure patterns. It seems, therefore, that the weakness is related to the need of pupils to express themselves by means of more complex sentence pattern as opposed to the simple sentence statement. This inability to manipulate longer sentence thought units would therefore tend to lower comprehension of the reading material which makes extensive use of compound and complex sentence units. Moreover, in Table 3 we observe that scores in comprehension from year to year tend to cluster around the 1959 score of each grade with respect to most schools. Thus, comprehension scores compared with the other reading skills yearly gains of Tables 2, 4, and 5 would seem to confirm that the grade four weakness in language expression extends throughout the elementary grade division.

From the study of grade four comprehension spring scores, we conclude that low reading comprehension scores stem from a language expression weakness of pupils in progressing from simple sentence units to more complex patterns of sentence expression through which pupils can better express their thoughts and understand the reading material of the elementary grade division.

In conclusion, vocabulary and comprehension weaknesses of elementary grade pupils would seem to be related to an English language handicap factor. As long as pupils can refer to printed word vocabulary and meaning in context they are close to or above grade achievement norm expectancy, but when they must rely on their own active vocabulary and formulate inference judgments they fall below grade norm standards.

Table 2. Comprehensive Results of Grade Four Fall and Spring Tests from 1959 to 1962 by Schools.

Grade IV and Tests	Grade Norm	Grade Mean	Schools						
			A	B	C	D	E	F	Multigraded
Fall 1959									
Noting Details		3.9	4.3	3.9	4.2	2.8	3.7	4.0	4.0
Und. Directions		3.5	3.5	4.3	3.4	3.7	3.0	3.4	3.5
Gen. Signif.		3.6	3.1	4.4	3.4	3.3	3.2	3.5	3.7
	4.2	3.6	3.6	4.2	3.7	3.3	3.3	3.6	3.7
Fall 1960									
Noting Details		4.1	4.6	3.0	4.7	3.5	3.3	4.6	4.2
Und. Directions		3.7	3.7	3.2	3.6	3.7	3.5	3.6	4.4
Gen. Signif.		4.0	4.3	3.4	3.6	4.0	3.1	4.0	4.0
	4.2	3.8	4.2	3.2	4.0	3.7	3.3	4.1	4.2
Fall 1961									
Noting Details		4.3	4.6	3.5	3.6	4.4	4.6	4.4	4.5
Und. Directions		4.0	4.2	3.7	3.2	4.1	3.9	3.9	4.9
Gen. Signif.		4.0	4.6	3.7	3.7	4.3	4.2	3.8	4.6
	4.2	4.1	4.5	3.6	3.5	4.3	4.2	4.0	4.7
Spring 1960									
Speed & Acc.		4.1	4.8	4.5	3.8	3.8	3.8	4.1	4.6
Vocabulary		3.9	4.0	4.1	2.7	3.9	3.7	3.9	4.1
Comprehension		3.8	3.9	4.6	3.1	3.7	3.7	4.3	4.1
	4.8	3.9	4.2	4.4	3.2	3.8	3.7	4.1	4.3
Spring 1961									
Speed & Acc.		4.3	4.8	4.5	3.7	3.8	3.8	4.1	5.2
Vocabulary		3.9	4.0	4.1	2.7	3.9	3.7	3.9	4.9
Comprehension		3.9	3.9	4.6	3.1	3.7	3.7	4.2	4.3
	4.8	4.1	4.2	4.4	3.2	3.8	3.7	4.1	4.8
Spring 1962									
Speed & Acc.		4.7	5.4	3.3	4.0	4.5	4.5	5.3	5.1
Vocabulary		4.4	4.1	3.6	3.5	4.0	4.9	5.5	4.9
Comprehension		3.9	3.6	3.2	3.2	4.2	4.4	4.6	4.3
	4.8	4.3	4.4	3.4	3.6	4.2	4.5	5.1	4.7

Table 3.   Teacher Turn-Over from 1959 to 1962

Year	Reading Grade Norm	Reading Grade Mean	Schools						
			A	B	C	D	E	F	Mult.
Spring IV-1960	4.8	3.8	3.9	4.6	3.1	3.7	3.7	4.3*	4.1
61		3.9	3.9	4.6	3.1*	3.7	3.7	4.2	4.3
62		3.9	3.6*	3.2*	3.2*	4.2	4.4	4.6	4.2
Spring V-1960	5.8	4.8	5.0	5.3	4.7	5.1	4.4*	3.4	4.3
61		5.3	6.3	5.8	5.4*	5.1*	5.1	5.3	4.4
62		4.6	4.8*	4.0*	4.7	4.5*	5.1	5.2	4.3
Spring VI 60	6.8	5.2	5.0	5.5	4.7	5.7	5.0	5.2	5.8
61		5.8	5.5	5.0	4.2	4.8	5.0	5.9	5.9
62		5.4	6.1	7.1	4.8	5.6	6.2	5.4	5.3

* Teacher Turnover of previous fall term

Another factor in our appreciation of pupil reading comprehension scores is the teacher factor in terms of teacher-turn-over as indicated in Table 3.

By teacher turn-over we refer to: (a) teachers new to Indian schools; and (b) teachers new to the grade level. We might prefer not to allude to this fact for fear of discouraging prospective and promising teacher personnel in Indian schools. Yet, we do so to emphasize a number of basic facts. First, the experience gained in teaching in Indian schools should become a valuable asset to pupil progress gains. Second, there is a certain amount of unexpected teaching difficulty to be encountered on entering the Indian school system. Third, there is need for new teachers to consult permanent school staff in coping with their new problems. Fourth, there is need for staff meetings of teachers to outline grade need requirements of the school particularly with reference to teachers new to Indian schools in relation to elementary grade pupils language expression need. Fifth, there is need for more teacher-subject rotation even at the elementary grade division to forestall classroom standards from slipping back to lower grade standards where particular problems may arise. Lastly, in terms of the Reading Program, elementary grade teachers need objective reference information on language-reading needs of pupils at the elementary grade levels. It is our thinking that to be informed of needs or difficulties is to be in a position to take positive steps towards remedying them.

The tendency for teachers new to Indian education as they encounter new problems is to rate Indian students with non-Indian students they have been teaching, prior to teaching Indian pupils. A sympathetic staff that remembers its own initial difficulties may agree too readily with these comparisons. However, to remain at the initial comparison is to belittle Indian pupil potential. In giving a sympathetic ear to the staff comparison of Indian pupils with non-Indian pupils are we failing to go a little further to bring out the fact that teachers also may need to adapt to Indian pupil needs and understanding to bring them to learn to their ability potential and achieve high curriculum grade standard requirements? Teacher approach and insight into new problems that call for pupil cooperation and understanding through teacher-pupil potentialities are essential to achieve grade achievement requirements.

We hasten to opine that the above information points to weaknesses in language expression and pupil thinking ability in English within their reading grade requirements. In brief, pupils show a one-year grade retardation in this area. We know that it is already present in grade four and carries through to grade five and six. We also realize that teachers have no teacher reference text to remedy this problem in Indian pupils from non-English speaking homes. Therefore, we judge that measures to remedy the need discussed in the foregoing pages should be centred on English language expression particularly at the grades three and four levels.

GRADE FIVE AND SIX RESULTS

- Fall Scores

In Table 4, we observe that grade five scores of 1961 are quite homogeneous with respect to individual school achievement scores in all three skills tested. In Table 5, commendable information appears also in the grade six 1961 fall scores. There are, however, variations from school to school with lowest scores appearing on General Significance Scores. Improvement of grade six pupils over grade five pupils is evident in test scores of Understanding Directions.

Table 4.   Comprehensive Results of Grade Five Fall and Spring Tests form 1959 to 1962 by Schools.

Grade V	Grade Norm	Grade Mean	Schools						
			A	B	C	D	E	F	Multigraded
Fall 1959									
Noting Detail		5.2	5.5	4.6	4.8	4.5	4.9	4.8	4.4
Und. Dir.		4.4	5.0	5.3	4.7	5.3	3.7	5.2	4.1
Gen. Signif.		4.3	5.4	4.6	4.3	4.3	4.1	4.1	4.2
	5.2	4.5	5.3	4.8	4.6	4.7	4.2	4.7	4.2
Fall 1960									
Noting Detail		4.9	4.5	4.2	4.8	4.3	4.6	5.6	5.2
Und. Dir.		4.3	4.4	6.1	3.7	3.6	3.9	4.1	4.9
Gen. Signif.		4.5	5.8	4.7	4.5	4.6	4.0	4.5	4.3
	5.2	4.7	4.9	5.0	4.3	4.2	4.2	4.7	4.8
Fall 1961									
Noting Detail		5.3	5.7	4.6	5.5	4.8	5.6	5.5	5.1
Und. Dir.		4.6	5.8	4.5	5.4	4.9	4.1	5.1	6.5
Gen. Signif.		4.9	5.7	5.2	4.9	4.6	5.1	5.0	4.3
	5.2	4.9	5.7	4.8	5.3	4.8	4.9	5.2	5.3
Spring 1960									
Speed & Acc.		5.2	6.3	5.7	5.4	5.1	5.1	5.3	5.0
Vocabulary		4.2	4.7	4.8	3.7	4.4	4.3	3.5	4.1
Comprehension		4.8	5.0	5.3	4.7	5.1	4.4	3.4	4.3
	5.8	4.8	5.3	5.3	4.6	4.9	4.6	4.1	4.5
Spring 1961									
Speed & Acc.		5.1	5.0	5.3	4.7	5.1	4.5	4.4	4.9
Vocabulary		4.3	4.7	4.8	3.7	4.4	4.3	3.5	4.8
Comprehension		5.3	6.3	5.8	5.4	5.1	5.1	5.3	4.4
	5.8	4.9	5.3	5.3	4.6	4.9	4.6	4.4	4.7
Spring 1962									
Speed & Acc.		5.5	5.7	4.4	5.4	4.5	6.3	5.6	5.8
Vocabulary		5.0	5.0	4.2	4.8	4.8	5.2	5.8	5.0
Comprehension		4.6	4.8	4.0	4.7	4.5	5.1	5.2	4.3
	5.8	5.0	5.2	4.2	5.0	4.6	5.5	5.5	5.0

Table 5. Comprehensive Results of Grade Six Fall and Spring Tests from 1959 to 1962 by Schools.

Grade VI	Grade Norm	Grade Mean	Schools						
			A	B	C	D	E	F	Multigraded
Fall 1959									
Noting Detail		5.8	6.2	5.2	5.5	6.4	6.5	6.1	5.5
Und. Direc.		6.0	7.2	6.0	4.6	5.4	5.2	6.0	5.3
Gen. Signif.	6.2	5.1	8.8	4.9	4.0	4.6	4.9	5.2	5.0
		5.6	7.4	5.4	4.7	5.5	5.5	5.8	5.3
Fall 1960									
Noting Detail		5.8	6.2	5.9	5.6	5.6	5.7	6.3	5.7
Und. Direc.		5.5	7.2	5.1	4.9	4.8	5.0	5.4	5.3
Gen. Signif.	6.2	5.5	6.6	5.1	4.3	5.4	5.3	6.7	5.0
		5.6	6.7	5.4	4.9	5.3	5.3	6.1	5.3
Fall 1961									
Noting Detail		6.0	6.2	6.9	5.3	6.6	6.4	5.8	6.5
Und. Direc.		7.1	8.9	8.1	7.0	6.9	5.9	5.6	8.5
Gen. Signif.	6.2	6.3	7.3	6.9	5.9	5.5	5.4	5.4	6.7
		6.5	7.5	7.3	6.1	6.3	5.9	5.6	7.2
Spring 1960									
Speed & Acc.		6.7	7.4	5.9	5.2	6.9	7.6	6.3	6.3
Vocabulary		5.6	5.8	5.7	4.2	4.8	5.4	5.2	5.2
Comprehension	6.8	5.2	5.0	5.5	4.7	5.7	5.0	5.2	5.8
		5.8	6.1	5.7	4.7	5.8	6.0	5.8	5.8
Spring 1961									
Speed & Acc.		6.8	7.1	5.9	5.2	7.0	7.6	7.6	6.6
Vocabulary		5.6	5.8	5.0	4.7	5.7	5.8	5.4	5.6
Comprehension	6.8	5.8	5.5	5.0	4.2	4.8	5.8	5.9	5.9
		6.1	6.2	5.3	4.7	5.8	6.4	6.3	5.9
Spring 1962									
Speed & Acc.		6.9	9.1	8.5	6.8	7.4	7.2	6.9	6.7
Vocabulary		6.0	7.2	6.8	5.0	6.0	6.2	6.2	5.8
Comprehension		5.4	6.1	7.1	4.8	5.6	6.2	5.4	5.3
	6.8	6.1	7.5	7.5	5.5	6.3	6.5	6.2	5.9

Grade Five and Six

- Spring Scores -

In Table 4, grade five pupils are below mean grade expectancy in all tests from 1960-62 except for two score results reported for speed and accuracy in Schools A and E. The lowest scores appear in Vocabulary.

In Table 5, grade six pupils show consistent high scores in Speed and Accuracy from 1960 to 1962. The 1962 Vocabulary scores have also improved over those of the two previous years, but like the Comprehension scores they are generally below the grade norm expectancy.

The scores of Grades five and six pupils reflect the pattern of scores discussed with respect to grade four.

Table 6.   A Comparison of Reading Grade Mean Score with Mean Scores
            of Individual Tests of the Fall Battery.

Noting Detail   - N.D.
Understanding Directions   - U.D.
General Significance   - G.S.

Grade	Fall and Year	Grade Norm	N.D.	Reading Grade Mean	U.D.	G.S.
IV	1959	4.2	3.9	3.6	3.5	3.6
	1960	4.2	4.1	3.8	3.7	4.0
	1961	4.2	4.3	4.1	4.0	4.0
V	1959	5.2	5.2	4.5	4.4	4.3
	1960	5.2	4.9	4.7	4.3	4.5
	1961	5.2	5.3	4.9	4.6	4.9
VI	1959	6.2	5.8	5.6	6.0	5.1
	1960	6.2	5.8	5.6	5.5	5.5
	1961	6.2	6.0	6.5	7.1	6.3

Table 6 bears out the following facts:

(a) Text reading ability in Noting Details show scores within a few months, below or above grade norm expectancy from grade to grade and year to year.

(b) The highest score gains are in Understanding Directions and General Significance at the grade six level.

(c) Grades four and five show pupil dependency in following directions.

(d) Best all-round grade scores appear in the fall of 1961 for grades four and six.

(e) Understanding Directions and General Significance scores were
     generally low in 1959 for all grades. A combination of these two
     scores seems due to language handicap difficulties and teacher
     dependency.

Table 7.   A Comparison of Reading Grade Mean Scores with Mean
                      Scores of Individual Tests of the Spring Battery

                      (a) Speed and Accuracy   Sp. Ac.
                      (b) Vocabulary   Voc.
                      (c) Comprehension   Comp.

Grade	Spring Year	Grade Norm	Speed Acc.	Reading Grade Mean	Voc.	Comp.
III	1960	3.8	3.2	3.2	3.3	3.3
	1961	3.8	3.5	3.5	3.5	3.4
	1962	3.8	4.0	3.7	3.9	3.3
IV	1960	4.8	4.1	3.9	3.9	3.8
	1961	4.8	4.9	4.7	4.3	4.5
	1962	4.8	4.7	4.3	4.4	3.9
V	1960	5.8	5.2	4.8	4.2	4.8
	1961	5.8	5.1	4.6	4.8	4.3
	1962	5.8	5.5	5.0	5.0	4.6
VI	1960	6.8	6.7	5.8	5.6	5.2
	1961	6.8	6.8	6.1	5.6	5.8
	1962	6.8	6.9	6.1	6.0	5.4

        If we keep in mind the reading grade mean improvement reported in
Table 6 for fall scores and compare them with spring test results as
reported in Table 7, we observe that grade transition difficulties seem
related to vocabulary weaknesses and comprehension. Weaknesses in
vocabulary and general comprehension, therefore, point to general cumulative
English language handicap.

        Table 7 reveals that:

(a) Grade 3 was half a year retardation in all skills in 1959, improvement
     shown in speed and vocabulary, but comprehension remains low.

(b) Grade 4-5-6 comprehension scores remains 6 months to a school year
     below grade norm expectancy.

(c) Grades 3-4-5-6 show slight gains in vocabulary.

(d) In grades 3-4-5-6 speed and accuracy compare favourably with grade
     norm expectancy in 1962.

(e) In grade 3-4-5-6 Reading Grade Mean scores are brought down by low
     scores in Vocabulary and Comprehension.

If the grade mean scores should be equal to or above grade norm expectancy because of high scores in either Noting Details in the Fall Battery or Speed and Accuracy in the Spring Battery while general significance or vocabulary and comprehension scores were much lower, this could yield a mean average commensurate with the expected grade norm which would give the impression that pupils had good reading achievement. But, in the context of this study it would indicate that teaching instruction emphasizes some skills to the detriment of others. Such is not the case.

We are aware that teachers have endeavoured to stress vocabulary and comprehension at the elementary grades. Yet, the results are not too encouraging. There is need for objective study of language needs of pupils at this level and the dissemination of information that could be derived from such a study.

Pupil Personality Growth

Referring to Table 8 with respect to teacher difficulties encountered in Indian Schools at the elementary grade levels, we wish to note an interesting observation on the grades five and six populations. This is the age-grade level at which the Indian pupil is going through the stage of puberty development.

Progress gain of grade six in all tests of Table 8 are above the year progress expectancy of 10 months. This we attribute in part to the psychological growth of the Indian child who is changing from teacher acceptance needs to self-acceptance. Prior to this stage, pupils may be more inclined to achieve well in school to please the teacher, but from puberty on the Indian pupil will be motivated in terms of what school grades mean to him. Much of the difficulty of motivating over-age pupils stems from this fact and is not necessarily always related to weaknesses in one or another skill. Therefore teacher-pupil relationship would seem a major factor in pupil progress at grade four, five and six.

Teaching results in terms of age-grade levels are most promising when the puperty psychological growth of the child is understood and respected. Too strict a discipline or too diluted a grade level instruction may result in pupil loss of interest in school. Preparatory to, during, and after the puberty phase of pupils, elementary classroom teaching should stimulate instruction through discussions; promote pupil planning of classroom instruction program; initiate project and team work requiring pupil cooperation; cultivate interest in news events of the day; foster interest in library reference; verification of facts; cultivate insights into creativity and appreciation not only of the pupil self but also in world personalities and their contributions to mankind.

In relation to the psychological growth of the pupil, there is need to recognize the fact that pupils want to be more independent from teacher compliance and need the opportunity to get involved in learning situations through self-motivating activities. Puberty growth, however, is not uniform and what may appeal to one five grader may not appeal to another. The variability of pupil motivation and interest-enjoying problems are greater at the elementary grade levels as may be seen from Table 9 of standard deviation range on the individual tests of the spring battery and consequently call for more adaptation and flexibility on the part of the elementary grade teacher.

Standard deviation range in grade three is below the 10 months range and is also quite consistent within each year's results. Amongst other things it points to pupil progress learning dependency on the teacher. The variations of grades four, five, and six reflect a more independent age group particularly in the case of high standard deviations. On the other hand, we note that standard deviations in vocabulary and comprehension are closer to those of grade three. This fact is most significant in identifying the language difficulties related to vocabulary growth and comprehension which leave the elementary pupil dependent on

Table 8.   A Comparison of Cumulative Grade Scores and Progress
Rate in Months from Grade to Grade on Spring Battery
Tests from 1960 to 1962.

Grades Spring	Year Prog. Expectancy	Rdg. Grade Mean	Speed Accuracy	Voc.	Comprehension
III – IV 1960-61 Progress	10 mth.	3.2 – 4.7 15 mth.	3.2 – 4.9 17 mth.	3.3 – 4.3 10 mth.	3.3 – 4.5 12 mth.
1961-62* Progress	10 mth.	3.5 – 4.3 8 mth.	3.5 – 4.7 12 mth.	3.5 – 4.4 9 mth.	3.4 – 3.9 5 mth.
IV – V 1960-61* Progress	10 mth.	3.9 – 4.6 7 mth.	4.1 – 5.1 10 mth.	3.9 – 4.8 9 mth.	3.8 – 4.3 5 mth.
1961-62* Progress	10 mth.	4.7 – 5.0 3 mth.	4.9 – 5.5 6 mth.	4.3 – 5.0 7 mth.	4.5 – 4.6 1 mth.
V – VI 1960-61 Progress	10 mth.	4.5 – 5.8 13 mth.	5.2 – 6.8 16 mth.	4.4 – 5.6 12 mth.	4.3 – 5.8 15 mth.
1961-62 Progress	10 mth.	4.6 – 6.1 15 mth.	5.1 – 6.9 18 mth.	4.8 – 6.0 12 mth.	4.3 – 5.4 11 mth.

* Teachers new to Indian schools or Elementary Grade Teaching

Table 9. Standard Deviations in Months on Individual Tests of the
Spring Battery from 1960 to 1962.

Year and Tests	Grade Standard Deviation in months			
	III	IV	V	VI
1960 Speed & Acc.	8	9	9	20
Voc.	8	6	6	14
Comp.	8	8	14	14
1961 Speed & Acc.	6	10	11	11
Voc.	6	11	10	10
Comp.	2	9	8	9
1962 Speed & Acc.	3	14	14	18
Voc.	5	14	7	9
Comp.	6	8	9	14

the teacher at all grade levels, but particularly during grades four and five.
This dependency learning factor is undoubtedly the major problem that teachers
new to Indian schools encounter. It is a difficult one to pinpoint and
difficult to overcome. There is no guide or instruction available to new
teachers in developing these two skills. On the other hand vocabulary growth
and comprehension skills require direct and forceful promotion at a time when
a pupil is apt to resent this approach.

As mentioned in the introduction, pupils rated better on skills
calling for direct reference to the printed wording than on those based on
inferences and broad vocabulary and thought concepts away from the printed
context. The information gained from Table 9 of pupil weaknesses of teacher
dependency related to vocabulary and comprehension skills would seem the
logical interpretation of the fall and spring low scores in general
significance, vocabulary and comprehension.

Thus there is a reversal of the reading-language pattern of the
elementary division as compared with that of the primary division. In
the case of the latter, the reading approach limited the vocabulary and
language growth of pupils of the primary grades whereas in the elementary
grade pupil, language weaknesses would seem to retard the elementary pupil's
achievement in reading and likely also the language arts program.

We regret to state, however, that had we interchanged the spring
battery for the fall and vice versa, the reading program of the elementary
division might have yielded better results inasmuch as teachers may have
emphasized more the fall battery skills and overlooked to a certain extent
those of the previous spring. This would be particularly applicable in
cases where pupils were promoted to new classrooms or in cases where pupils
had teachers new to Indian schools.

Observations:

(a) Elementary grade testing in reading achievement can best be
     evaluated from a diagnostic battery of the various reading
     skills with reading achievement scores reported for the

specific skill tested.

(b) Teaching problems at the elementary grade level in Indian Schools tested, cluster around two major factors, namely,

      1) English language growth and vocabulary development which should be commensurate with grade level language requirements.

      2) Pupil personality development and learning patterns related to the puberty psychological changes in terms of age-grade motivation, interest and oral expression response in the classroom.

Conclusion:

The major conclusion derived from the elementary grade testing research is:

1. Scores in vocabulary and comprehension indicate a 6 to 12 month retardation per grade year and do not show improvement noted in the other four reading tests of: Noting Details, Understanding Directions, General Significance, and Speed and Accuracy. The persistent retardation is indicative of English language difficulties specific to the elementary division language reading requirements.

We recommend an objective study into the patterns of sentence growth structure of elementary pupils to provide remedial measures to assist teachers in overcoming the existing difficulties through classroom motivation and instruction.

Appendix

Primary Grades Reading Achievement Scores of School A

Grade	Test Battery	Tests	1959-60	1960-61	1961-62	Grade Norm Expectancy
I	Spring	(PWR) (PPR)	2.6 <u>2.4</u> 2.5	2.4 <u>2.3</u> 2.4	2.6 <u>2.5</u> 2.6	1.8
II	Fall	(PWR) (PPR)	2.1 <u>2.7</u> 2.4	2.8 <u>2.4</u> 2.6	3.2 <u>3.1</u> 3.2	2.2
II	Spring	(AWR) (APR)	2.5 <u>2.2</u> 2.4	3.2 <u>3.2</u> 3.2	3.6 <u>3.4</u> 3.5	2.8
III	Fall	(AWR) (APR)	2.8 <u>3.4</u> 3.1	3.4 <u>2.9</u> 3.2	4.0 <u>4.5</u> 4.2	3.2
III	Spring	Speed Voc. Gen. Comp	3.7 3.6 <u>3.5</u> 3.6	3.5 3.9 <u>3.6</u> 3.7	4.5 3.4 <u>3.3</u> 3.7	3.8

Reading Achievement Scores of School B

Grade	Test Battery	Tests	1959-60	1960-61	1961-62	Grade Norm Expectancy
I	Spring	(PWR) (PPR)	2.4 <u>2.2</u> 2.3	2.2 <u>2.2</u> 2.2	2.1 <u>2.3</u> 2.2	1.8
II	Fall	(PWR) (PPR)	2.7 <u>2.6</u> 2.7	2.5 <u>2.2</u> 2.4	2.7 <u>2.8</u> 2.8	2.2
II	Spring	(AWR) (APR)	3.2 <u>2.8</u> 3.0	3.1 <u>3.2</u> 3.2	3.4 <u>2.9</u> 3.2	2.8
III	Fall	(AWR) (APR)	3.4 <u>3.3</u> 3.4	3.5 <u>3.3</u> 3.4	3.4 <u>3.5</u> 3.5	3.2
III	Spring	Speed Voc. Comp.	4.4 3.6 <u>3.4</u> 3.8	3.1 3.4 <u>3.0</u> 3.2	3.2 3.1 <u>3.3</u> 3.2	3.8

Reading Achievement Scores of School C

Grade	Test Battery	Tests	1959-60	1960-61	1961-62	Grade Norm Expectancy
I	Spring	(PWR) (PPR)	2.5 2.0 2.3	2.8 2.3 2.6	2.8 2.3 2.6	1.8
II	Fall	(PWR) (PPR)	2.5 2.4 2.5	2.5 2.6 2.6	2.9 3.2 3.1	2.2
II	Spring	(AWR) (APR)	2.9 2.9 2.9	2.8 2.3 2.6	3.2 3.3 3.3	2.8
III	Fall	(AWR) (APR)	2.9 2.7 2.8	2.6 2.8 2.7	3.5 3.1 3.3	3.2
III	Spring	Speed Voc. Comp.	3.0 3.1 3.1 3.1	2.9 2.7 2.9 2.8	3.5 3.5 3.3 3.4	3.8

Reading Achievement Scores of School D

Grade	Test Battery	Tests	1959-60	1960-61	1961-62	Grade Norm Expectancy
I	Spring	(PWR) (PPR)	2.1 2.2 2.2	2.6 2.5 2.6	2.5 3.2 2.9	1.8
II	Fall	(PWR) (PPR)	2.5 2.7 2.6	2.6 2.5 2.6	2.7 2.4 2.6	2.2
II	Spring	(AWR) (APR)	2.8 2.7 2.8	3.3 3.7 3.5	3.9 3.3 3.6	2.8
III	Fall	(AWR) (APR)	3.3 3.1 3.2	3.4 3.4 3.4	3.0 3.6 3.3	3.2
III	Spring	Speed Voc. Comp.	3.2 3.4 3.4 3.4	4.1 3.4 3.5 3.7	3.9 4.0 3.8 3.9	3.8

Reading Achievement Scores of School E

Grade	Test Battery	Tests	1959-60	1960-61	1961-62	Grade Norm Expectancy
I	Spring	(PWR) (PPR)	2.5 2.8 2.7	2.3 2.0 2.2	2.3 2.2 2.3	1.8
II	Fall	(PWR) (PPR)	2.3 2.6 2.5	2.5 2.4 2.5	2.6 2.6 2.6	2.2
II	Spring	(AWR) (APR)	2.6 2.6 2.6	3.0 3.0 3.0	3.1 3.1 3.1	2.8
III	Fall	(AWR) (APR)	3.0 3.0 3.0	3.2 3.4 3.3	3.5 3.8 3.7	Cl. 1 Cl. 2 3.6 3.0 4.1 3.4 3.2
III	Spring	Speed Voc. Comp.	2.8 2.7 2.7 2.7	3.4 3.4 3.3 3.4	4.0 4.0 3.8 3.9	3.8 3.0 3.9 3.3 3.9 3.3 3.9 3.2 3.8

Reading Achievement Scores of School F

Grade	Test Battery	Tests	1959-60	1960-61	1961-62	Grade Norm Expectancy
I	Spring	(PWR) (PPR)	2.3 2.3 2.3	2.4 2.0 2.2	2.5 2.4 2.5	1.8
II	Fall	(PWR) (PPR)	2.3 2.3 2.3	2.7 2.9 2.8	2.8 2.7 2.8	2.2
II	Spring	(AWR) (APR)	2.8 2.8 2.8	3.3 3.3 3.3	2.9 2.9 2.9	2.8
III	Fall	(AWR) (APR)	2.4 2.9 2.7	3.6 3.8 3.7	3.4 3.6 3.5	3.2
III	Spring	Speed Voc. Comp.	3.0 2.9 2.6 2.8	3.1 3.8 3.6 3.5	4.3 4.2 3.7 4.1	3.8

School A Comprehensive Test Results - Elementary Grades

Grade	1959-60		1960-61		1961-62		Grade Norm
	School Grade Average	Regional Reading Grade Mean	School Grade Average	Reg. Reading Grade Mean	School Grade Average	Reg. Reading Grade Mean	
III Spring	3.7	3.2	3.5	3.5	4.5	4.0	
	3.6	3.3	3.9	3.5	3.4	3.9	
	3.5	3.3	3.6	3.4	3.3	3.3	
	3.6	3.3	3.7	3.5	3.7	3.7	3.8
IV Fall	4.3	3.9	4.6	4.1	4.6	4.3	
	3.5	3.5	3.7	3.7	4.2	4.0	
	3.1	3.6	4.3	4.0	4.6	4.0	
	3.6	3.6	4.2	3.8	4.5	4.1	4.2
IV Spring	4.8	4.1	4.8	4.3	5.4	4.7	
	4.0	3.9	4.0	3.9	4.1	4.4	
	3.9	3.8	3.9	3.9	3.6	3.9	
	4.2	3.9	4.2	4.1	4.5	4.3	4.8
V Fall	5.5	5.2	4.5	4.9	5.7	5.3	
	5.0	4.4	4.4	4.3	5.8	4.6	
	5.4	4.3	5.8	4.5	5.7	4.9	
	5.3	4.5	4.9	4.7	5.7	4.9	5.2
V Spring	6.3	5.2	5.0	5.1	5.7	5.5	
	4.7	4.2	4.7	4.8	5.0	5.0	
	5.0	4.8	6.3	4.3	4.8	4.6	
	5.3	4.8	5.3	4.6	5.2	5.0	5.8
VI Fall	6.2	5.8	6.2	5.8	6.2	6.0	
	7.2	6.0	7.2	5.5	8.9	7.1	
	8.8	5.1	6.6	5.5	7.3	6.3	
	7.4	5.4	6.7	5.5	7.5	6.5	6.2
VI Spring	7.4	6.7	7.4	6.8	9.1	6.9	
	5.8	5.6	5.8	5.6	7.2	6.0	
	5.0	5.2	5.5	5.8	6.1	5.4	
	6.1	5.8	6.2	5.8	7.5	6.1	6.8

School B Comprehensive Test Results - Elementary Grades

Grade	1959-60		1960-61		1961-62		Grade Norm
	School Grade Average	Regional Reading Grade Mean	School Grade Average	Regional Reading Grade Mean	School Grade Average	Regional Reading Grade Mean	
III Spring	4.4	3.2	3.1	3.5	3.2	4.0	
	3.6	3.3	3.4	3.5	3.1	3.9	
	3.4	3.3	3.0	3.4	3.3	3.3	
	3.8	3.3	3.2	3.5	3.2	3.7	3.8
IV Fall	3.9	3.9	3.0	4.1	3.5	4.3	
	4.3	3.5	3.2	3.7	3.7	4.0	
	4.4	3.6	3.4	4.0	3.7	4.0	
	4.2	3.6	3.2	3.8	3.6	4.1	4.2
IV Spring	4.5	4.1	4.5	4.3	3.3*	4.7	
	4.1	3.9	4.1	3.9	3.6	4.4	
	4.6	3.8	4.6	3.9	3.2	3.9	
	4.4	3.9	4.4	4.1	3.4	4.3	4.8
V Fall	4.6	5.2	4.2	4.9	4.6	5.3	
	5.3	4.4	6.1	4.3	4.5	4.6	
	4.6	4.3	4.7	4.5	5.2	4.9	
	4.8	4.5	5.0	4.7	4.8	4.9	5.2
V Spring	5.7	5.2	5.3	5.1	4.4	5.5	
	4.8	4.2	4.8	4.8	4.2	5.0	
	5.3	4.8	5.8	4.3	4.0	4.6	
	5.3	4.8	5.3	4.6	4.2	5.0	5.8
VI Fall	5.2	5.8	5.9	5.8	6.9	6.0	
	6.0	6.0	5.1	5.5	8.1	7.1	
	4.9	5.1	5.1	5.5	6.9	6.3	
	5.4	5.4	5.4	5.5	7.3	6.5	6.2
VI Spring	5.9	6.7	5.9	6.8	8.5	6.9	
	5.7	5.6	5.0	5.6	6.8	6.0	
	5.5	5.2	5.0	5.8	7.1	5.4	
	5.7	5.8	5.3	5.8	7.5	6.1	6.8

* Change of Teachers

School C Comprehensive Test Results - Elementary Grades

Grade	1959-60		1960-61		1961-62		Grade Norm
	School Grade Average	Regional Reading Grade Mean	School Grade Average	Regional Reading Grade Mean	School Grade Average	Regional Reading Grade Mean	
III Spring	3.0	3.2	2.9	3.5	3.5	4.0	
	3.1	3.3	2.7	3.5	3.5	3.9	
	3.1	3.3	2.8	3.4	3.3	3.3	
	3.1	3.3	2.8	3.5	3.4	3.7	3.8
IV Fall	4.2	3.9	4.7	4.1	3.6	4.3	
	3.4	3.5	3.6	3.7	3.2	4.0	
	3.4	3.6	3.6	4.0	3.7	4.0	
	3.7	3.6	4.0	3.8	3.5	4.1	4.2
IV Spring	3.8	4.1	3.7	4.3	4.0	4.7	
	2.7	3.9	2.7	3.9	3.5	4.4	
	3.1	3.8	3.1	3.9	3.2	3.9	
	3.2	3.9	3.2	4.1	3.6	4.3	4.8
V Fall	4.8	5.2	4.8	4.9	5.5	5.3	
	4.7	4.4	3.7	4.3	5.4	4.6	
	4.3	4.3	4.5	4.5	4.9	4.9	
	4.6	4.5	4.3	4.7	5.3	4.9	5.2
V Spring	5.4	5.2	4.7	5.1	5.4	5.5	
	3.7	4.2	3.7	4.8	4.8	5.0	
	4.7	4.8	5.4	4.3	4.7	4.6	
	4.6	4.8	4.6	4.6	5.0	5.0	5.8
VI Fall	5.5	5.8	5.6	5.8	5.3	6.0	
	4.6	6.0	4.9	5.5	7.0	7.1	
	4.0	5.1	4.3	5.5	5.9	6.3	
	4.7	5.4	4.9	5.5	6.1	6.5	6.2
VI Spring	5.2	6.7	5.2	6.8	6.8	6.9	
	4.2	5.6	4.7	5.6	5.0	6.0	
	4.7	5.2	4.2	5.8	4.8	5.4	
	4.7	5.8	4.7	5.8	5.5	6.1	6.8

School D Comprehensive Test Results - Elementary Grades

Grade	1959-60		1960-61		1961-62		Grade Norm
	School Grade Average	Regional Reading Grade Mean	School Grade Average	Regional Reading Grade Mean	School Grade Average	Regional Reading Grade Mean	
III Spring	3.2	3.2	4.1	3.5	3.9	4.0	
	3.4	3.3	3.4	3.5	4.0	3.9	
	3.4	3.3	3.5	3.4	3.8	3.3	
	3.3	3.3	3.7	3.5	3.9	3.7	3.8
IV Fall	2.8	3.9	3.5	4.1	4.4	4.3	
	3.7	3.5	3.7	3.7	4.1	4.0	
	3.3	3.6	4.0	4.0	4.3	4.0	
	3.3	3.6	3.7	3.8	4.3	4.1	4.2
IV Spring	3.8	4.1	3.8	4.3	4.5	4.7	
	3.9	3.9	3.9	3.9	4.0	4.4	
	3.7	3.8	3.7	3.9	4.2	3.9	
	3.8	3.8	3.8	4.1	4.2	4.3	4.8
V Fall	4.5	5.2	4.3	4.9	4.8	5.3	
	5.3	4.4	3.6	4.3	4.9	4.6	
	4.3	4.3	4.6	4.5	4.6	4.9	
	4.7	4.5	4.2	4.7	4.8	4.9	5.2
V Spring	5.1	5.2	5.1	5.1	4.5	5.5	
	4.4	4.2	4.4	4.8	4.8	5.0	
	5.1	4.8	5.1	4.3	4.5	4.6	
	4.9	4.8	4.9	4.6	4.6	5.0	5.8
VI Fall	6.4	5.8	5.6	5.8	6.6	6.0	
	5.4	6.0	4.8	5.5	6.9	7.1	
	4.6	5.1	5.4	5.5	5.5	6.3	
	5.5	5.4	5.3	5.5	6.3	6.5	6.2
VI Spring	6.9	6.7	7.0	6.8	7.4	6.9	
	4.8	5.6	5.7	5.6	6.0	6.0	
	5.7	5.2	4.8	5.8	5.6	5.4	
	5.8	5.8	5.8	5.8	6.3	6.1	6.8

School E Comprehensive Test Results – Elementary Grades

Grade	1959-60		1960-61		1961-62		Grade Norm
	School Grade Average	Regional Reading Grade Mean	School Grade Average	Regional Reading Grade Mean	School Grade Average	Regional Reading Grade Mean	
III Spring	2.8	3.2	3.4	3.5	4.0	4.0	
	2.7	3.3	3.4	3.5	4.0	3.9	
	2.7	3.3	3.3	3.4	3.8	3.3	
	2.7	3.3	3.4	3.5	3.9	3.7	3.8
IV Fall	3.7	3.9	3.3	4.1	4.6	4.3	
	3.0	3.5	3.5	3.7	3.9	4.0	
	3.2	3.6	3.1	4.0	4.2	4.0	
	3.3	3.6	3.3	3.8	4.2	4.1	4.2
IV Spring	3.8	4.1	3.8	4.3	4.5	4.7	
	3.7	3.9	3.7	3.9	4.9	4.4	
	3.7	3.8	3.7	3.9	4.4	3.9	
	3.7	3.9	3.7	4.1	4.6	4.3	4.8
V Fall	4.9	5.2	4.6	4.9	5.6	5.3	
	3.7	4.4	3.9	4.3	4.1	4.6	
	4.1	4.3	4.0	4.5	5.1	4.9	
	4.2	4.5	4.2	4.7	4.9	4.9	5.2
V Spring	5.1	5.2	4.5	5.1	6.3	5.5	
	4.3	4.2	4.3	4.8	5.2	5.0	
	4.4	4.8	5.1	4.3	5.1	4.6	
	4.6	4.8	4.6	4.6	5.5	5.0	5.8
VI Fall	6.5	5.8	5.7	5.8	6.4	6.0	
	5.2	6.0	5.0	5.5	5.9	7.1	
	4.9	5.1	5.3	5.5	5.4	6.3	
	5.5	5.4	5.3	5.5	5.9	6.5	6.2
VI Spring	7.6	6.7	5.8	6.8	7.2	6.9	
	5.4	5.6	5.8	5.6	6.2	6.0	
	5.0	5.2	7.6	5.8	6.2	5.4	
	6.0	5.8	6.4	5.8	6.5	6.1	6.8