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ABSTRACT

The second British Columbia (B.C.) Reading Assessment was conducted in the spring of 1980 to evaluate the reading skills of students in grades 4, 8, and 12. The four areas of reading achievement measured were word attack, word meaning, passage comprehension, and applied reading/study skills. A panel of evaluators included educators and representatives of the lay public. Student background information was gathered, and student attitude toward reading was measured via the Estes Reading Attitude Scale. Information was also gathered from teachers on their backgrounds and instructional practices associated with reading instruction. Major findings of the assessment are summarized and include the following: (1) the applied reading domain received satisfactory (S) or very satisfactory (VS) ratings; (2) the comprehension domain was rated S in all grades; (3) the structural analysis objective was rated marginal (M) at all grade levels; and (4) many background variables related to achievement in reading including sex, place of birth, T.V., reading habits, kindergarten attendance and attitude toward reading. (RI)

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THE B.C. READING ASSESSMENT

SUMMARY REPORT

Submitted to the

Learning Assessment Branch
Ministry of Education
Province of British Columbia

Jaap Tuinman
Janet Ross Kendall

September 1980

JAN 19 1981

PREFACE

This Summary Report presents the major findings and recommendations from the 1980 British Columbia Reading Assessment. A considerably more detailed account is contained in the General Report. Both reports may be obtained from the Learning Assessment Branch, Ministry of Education.

An assessment of this scope depends for success upon the skill, energy and professionalism of many individuals. We are grateful to all who worked with us during the last year. It would take an appendix to this report to properly recognize all contributors. Hence, we included such an addition. Many people essential to this assessment we never met. They are the pupils, the teachers, the district personnel who made the collection of the data possible. We thank you, anonymously.

Bureaucrats are not universally appreciated. We therefore want especially to mention the contribution of three individuals working for the Provincial government: Les Dickason, Nancy Greer and Robert Wilson. Though it is their job to mount assessments such as this, they pursued their responsibilities with extraordinary expertise, vigour, understanding and good humour.

B.C. Research was responsible for the collection and analysis of the data. We are particularly indebted to two individuals on the staff of this organization: Mary Cooper and Tom O'Shea.

We gratefully thank Hazel Boettcher and Ruby Cram, members of the Contract Team, for all they did to make easier the task of assessing the reading skills of nearly 100,000 B.C. pupils.

And finally, Liz Kamstra and Mary-Ann Moysiuk deserve heartfelt kudos for their support throughout the project.

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The British Columbia Reading Assessment

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HIGHLIGHTS

The second B.C. Reading Assessment is one of the regularly scheduled province-wide assessments of major curriculum areas. The fundamental principle underlying these assessments is that decisions affecting education are best made when based on accurate and current information about how and what students are presently learning. This information can then provide the basis for sound educational decision-making in curriculum development, resource allocation, teacher education, and educational research.

Specifically, this Assessment took place to evaluate the reading skills of B.C.'s students, to provide information relevant to instructional decision making and to establish base-line data in the first year of the introduction of new reading programs.

The Reading Assessment was conducted in the spring of 1980. Students in grades 4, 8 and 12 responded to test items designed to measure reading achievement in four areas: Word Attack, Word Meaning, Passage Comprehension, Applied Reading/Study Skills. The province-wide performance was evaluated by interpretation panels which included educators and representatives of the lay public. Student background information was gathered so that test results could be examined in relation to factors which may be associated with differences in reading performance. Students also completed the Estes Reading Attitude Scale. A sample of elementary teachers and secondary teachers of English in the province as well as school administrators received questionnaires designed to gather information on their backgrounds and instructional practices associated with reading instruction.

The General Report provides a complete description of the assessment and all results, conclusions and recommendations. This Summary Report presents the highlights of the General Report.

Among the major findings of the Assessment are the following:

Student Performance

- Four domains were assessed in each of the three grades. In ten of the twelve resultant evaluations, the interpretation panels rated achievement as Satisfactory or Very Satisfactory.
- No Weak ratings were assigned to performance on any objective or domain at any grade level.
- In the 1976 and 1977 assessments, the Applied Reading domain was rated as less than Satisfactory in all grades. In the 1980 assessment this domain received Satisfactory or Very Satisfactory ratings from the panels.

- The Comprehension domain was rated as Satisfactory in all grades in this assessment. Considering the importance of this domain, the authors suggest that improving performance in this area should be a goal for all educators.
- Performance at all grade levels was rated as Marginal for the Structural Analysis objective.

Grade 4

- A direct comparison of items from the first and second assessments shows a distinct improvement in grade 4 performance in 1980, especially in the Comprehension domain.
- Interpretation panel ratings of the grade 4 performance in 1980 were higher than those of 1976.
- Students in 1980 outperformed their age peers of 1973 on selected Comprehension items.

Grade 8

- A direct comparison of items from the first and second assessments shows an improvement in 1980 performance on two out of three domains.
- Interpretation panel ratings of grade 8 performance in 1980 were comparable to those of 1977.

Grade 12

- A direct comparison of items from the first and second assessments shows a genuinely disturbing decline from 1977 to 1980 in performance on the Comprehension domain, despite Satisfactory ratings from both the 1977 and 1980 interpretation panels.
- Performance on the Word Attack and Word Meaning domains received Satisfactory and Very Satisfactory ratings in 1977, but was rated as Marginal by interpretation panels in 1980.

Student Background, Achievement and Attitude

- Many background variables are related to achievement in reading. For example, girls tend to perform better than boys, those born in Canada outperform recent immigrants, students who do not watch T.V. excessively outscore those who watch T.V. a lot, students who read most perform at a higher level than those who read little.
- The performance of grade 4 students who had attended kindergarten is consistently higher than that of the students who did not attend kindergarten.

- In the three grades, the majority of students have positive attitudes towards reading.
- While less than 6% of students in grades 4 and 12 reported very negative attitudes towards reading, more than 10% of grade 8 students indicate such very negative attitudes.
- Girls have more positive attitudes towards reading than do boys, especially in grades 8 and 12.
- Students with positive attitudes towards reading exhibit higher achievement levels in reading than those with negative attitudes.

Instructional Practices and Curriculum Implementation

- A substantial number of elementary and secondary teachers indicated that in their schools no one in particular, including principals, had assumed leadership in the reading program. In the case of elementary principals this is somewhat surprising as over 75% of them reported that they have taken at least one course in the teaching of reading.
- Elementary teachers are better prepared to teach reading than are secondary teachers of English in terms of relevant courses and workshops taken. Only half of the secondary teachers of English have taken a course or workshop in the teaching of Reading.
- The majority of the secondary teachers of English stated that they did not feel well-prepared to teach reading.
- Although over 45% of secondary teachers of English indicated that the majority of their students should receive developmental reading programs, these teachers reported that 10% or fewer of their students are receiving such instruction.
- Approximately three of every four secondary English teachers reported spending less than 25% of the time in English classes on reading instruction.
- More instructional time is provided in reading at the lower elementary grades than at the higher ones. Time provided is directly related to reading ability: low ability students receive the greatest amount of direct instruction while the high ability students receive less.
- At every elementary grade, high ability students are given more class time for independent reading than the low ability students. In the light of the strong relationship between amount of reading and reading achievement, this lack of class time for reading for low ability students is a cause for concern.

- Teachers reported that curriculum guides and resource books made available by the Ministry of Education are frequently consulted, but have had little impact on their teaching.
- While between 17% and 44% of teachers report reading previous assessment publications, over 70% of school administrators have read these reports. Teachers and administrators have different perceptions of the direction and magnitude of the impact of previous assessments, with the principals perceiving them to have more impact.

Conclusions and Recommendations

The final chapter of this report contains conclusions and recommendations. The twenty-one recommendations may be summarized as follows:

- That teachers adopt suggestions concerning instructional emphasis, class time devoted to independent reading, and development of student attitudes towards reading.
- That measures be taken to support and encourage the teaching of reading through improved in-service, resource materials and leadership.
- That through a cooperative effort of the Ministry of Education and school districts, ways be found to ensure that all children have learned to read in the first two grades of schooling.
- That a concerted effort be mounted to improve the reading skills of secondary students.
- That reading resource materials, curriculum guides, and resource books currently available to secondary teachers be evaluated.
- That teacher training institutions and school districts adopt suggestions in the areas of the preparation and hiring of teachers and administrators.
- That current legislation and policies concerning provision of kindergarten be examined.
- That subject to empirical analyses present procedures used in provincial assessments be continued.

CHAPTER 1

ANATOMY OF AN ASSESSMENT: BACKGROUND AND PROCEDURES

1.1 Purposes of the 1980 B.C. Reading Assessment

British Columbia's program of province-wide assessments has been designed to provide decision-makers with a broad base of accurate and current information about what and how students are learning in major curriculum areas on a regular, cyclical basis. The 1980 Reading Assessment is unique in that it is the first in the second cycle of provincial assessments, allowing for an examination of changes in student performance and instructional practices in the years since the first assessments of reading. As well, this assessment was scheduled to coincide with the introduction of new reading programs at the elementary level so that baseline data on student performance and instructional practices could be established.

Specifically, this assessment was designed to address the following questions:

- To what extent are students in grade 4 (end of Primary), grade 8 (end of Intermediate) and grade 12 (end of Secondary) achieving the objectives measured in previous assessments. (Language B.C. 1976 and the B.C. Reading Assessment 1977)?
- To what extent has the province-wide achievement of students in grades 4, 8 and 12 changed when compared to the achievement reported in the previous reading assessments?
- What is the level of student performance in grades 4, 8 and 12 on the objectives of reading education as specified in the new Elementary Language Arts Curriculum Guide and the Secondary English Guide 8-12? This data will serve as baseline performance against which subsequent assessments will be compared.
- What is the context within which reading programs are being offered in B.C. schools, including the present and future needs for instructional practices, resources and professional development?
- What recommendations can be made, based on the information collected, to
 - classroom teachers and district personnel
 - curriculum developers at the provincial and local levels
 - teacher educators, both pre-service and in-service
 - those responsible for the allocation of resources
 - educational researchers
 - the Learning Assessment Branch for future assessments?

To accomplish these purposes, a variety of procedures were undertaken, involving many individuals, and some issues fundamental to reading education and its assessment were thoroughly examined. It is the opinion of the authors that this assessment cannot be fully understood without first examining a number of these issues.

1.2 Large Scale Assessment of Reading Skills: Background and Rationale

1.2.1 How many skills are there?

One of the most elaborately debated questions in reading education is: How many skills are there? The answer to this question depends on who is asking the question and why.

A psychologist interested in the number of reading skills most likely wants to know the number of independent, psychologically separate skills that go into reading. In the mature reader that number is very limited. A long tradition of research (Davis, 1944; Davis, 1968; Farr 1969), narrows it down to as few as one major skill (verbal reasoning) or perhaps to as many as two important skills: verbal reasoning and knowledge of word meanings.

The teacher who asks "How many skills are there?" looks at the questions somewhat differently, however. In effect he is asking: How can I break the task (becoming a better reader) into smaller but meaningful bits that both the pupil and I can handle? How many of these meaningful pieces are there? That is an instructional rather than a psychological perspective.

There are numerous large scale assessment programs of reading achievement in North America (Pipho, 1978). These programs vary greatly in the skills assessed and in the methods used. To illustrate the variation, the California Assessment Program (1975) includes 45 objectives (or separate skills) in the primary assessment; in Language B. C. (1976), 15 objectives were assessed at the primary level. The most massive reading assessment recently completed (NAEP, 1976) used 15 objectives grouped into five major classifications.

Personal preferences and tradition rather than scientific dictum circumscribe most taxonomies of reading skills. Nevertheless, a reasonable argument can be made for the fourfold global breakdown underlying many of these taxonomies. Whatever the names of these macro-categories, they typically relate to decoding, to word meaning, to comprehension and to application of reading skills.

A few general principles governing decisions regarding inclusion or exclusion of specific skills/objectives in a large scale assessment must be mentioned.

First, the purpose of the assessment is important. An assessment aimed at measuring minimal competencies has different requirements than an assessment whose primary focus is to guide curriculum implementation.

Second, the curricular context must be taken into consideration. In a province or state where the reading curriculum is highly decentralized the selection of skills or objectives to be assessed may be different from environments with a highly structured and centralized curriculum.

Third, historical context plays, or should play, an important role. A rational view of large scale assessment implies a longitudinal perspective. Hence, to a degree prior assessments dictate the form and content of later ones.

Finally, congruence with dominant professional views of the audience of the assessment must be taken into consideration. Large scale assessments are sensitive to public opinion. Whereas their conceptualization and execution must be governed by the state-of-the-art knowledge, arbitrary novelty and faddism should be avoided.

Later in this chapter the skills measured in this assessment are outlined in detail. They were selected in accordance with the guidelines described above. The resulting format, though sharing features with other large scale assessments, has a number of unique characteristics. Unlike men, reading assessments are not all created equal. Though designed to cover a broad range of every day reading materials, the tests are broader in scope than the typical functional literacy test. Though specific enough to provide pointed instructional information, the tests avoid fragmentation of reading by an emphasis on general comprehension skills.

1.2.2 What is acceptable performance?

Another issue which cannot be overlooked in large-scale assessments such as this one is the procedures for judging the acceptability of the assessment results. The procedures described later in this chapter reflect the true complexity of arriving at satisfactory standards for an interpretation of performance. What does it mean to have strong, satisfactory or weak performance in grade 8? Many large scale assessments avoid the problem of interpretation by relegating the task to the individual user of the test results.

By contrast, the assessment model adopted in British Columbia includes this interpretation phase in the belief that the measurements taken only reach their maximum benefit and utility to decision-makers when presented in the context of informed judgements as to the degree of program strength or weakness they indicate.

1.2.3 Can a large scale assessment measure functional literacy?

Large scale reading assessments frequently fly the flags of basic, or minimal or functional literacy. Conceptual problems inherent to these terms have been well documented by Sticht (1975), and Resnick and Resnick (1977). Overly simplistic views both of the reading process and of the relationship between reading skills and life skills have rendered the intrinsically valid concept of functional literacy vacuous. The large scale assessment reported here does not disregard the importance of application of reading skills. Nevertheless, it should not be viewed as an unarticulated attempt to measure the functional literacy of B.C.'s youth.

1.2.4 What measurement procedures should be used?

Finally, large scale assessments of reading can be positioned on a continuum of specific to global. An example of the first is the California State Assessment Program. The cloze tests used by New York State (O'Reilly and Streeter, 1977) exemplify the other end of the continuum. The degree of specificity sought is a reflection of the purpose of the test as well as the theoretical views held by those making design decisions. If the dominant purpose for an assessment is to monitor, over time, the level of reading achievement of the graduating high school class, a global measure may be quite suitable. If, however, the assessment is also to result in guidance for instructional decisions at the provincial and local level, a focus on specific instructionally defined reading skills will be required.

B.C.'s reading assessment is subordinated to the larger goal of rational decision making in the area of reading curriculum. Hence, the tests used in the present assessment feature a variety of objectives grouped in four domains.

1.3 General Procedures

Reports of past assessments document in detail the procedures followed in the conduct of B.C.'s learning assessments. This assessment was conducted by a Contract Team, aided by an Advisory Committee which oversaw all the work of the team and by a technical agency responsible for the data collection and analysis.

1.3.1 Specific steps

In order to achieve the purposes of this assessment the following distinct activities were undertaken:

- development of description of domains and objectives
- development of pupil tests
- development of pupil questionnaires
- development of teacher and administrator questionnaires
- review of tests by review panels
- collection of all data
- evaluation of test results by interpretation panels
- analysis of all data

1.3.2 Development of description of domains and objectives

The Elementary Language Arts Guide and the Secondary English Curriculum Guide formed the basis for specifying learning outcomes to be tested. The Contract Team organized the outcomes into four domains or general skills categories. Each domain contained a number of objectives representing the learning outcomes derived from the curriculum guides and placed in priority by Ministry curriculum committees. Each objective was measured by a minimum of six items. A brief description of each objective is provided on the following pages.

DOMAIN 1: WORD ATTACK

By whatever means people have learned to read, there is little question that in the normal course of reading, a) words are recognized before they are understood and b) such recognition can be accomplished by a variety of means.

It is interesting to note that much professional debate in recent years has centered on the question of how much understanding of connected prose is dependent on understanding of individual words. Some argue that even accomplished readers take words in letter by letter. At the other extreme are those who hold that the reader merely samples visual information. The argument, though of interest, in the final analysis is not pertinent here. It is inconceivable to think of an ideal reader who cannot decode a word when he wants or needs to. Hence, word attack is a separate domain of interest.

The breakdown of skills within the word attack domain reflects the reality of past and current reading curricula. It is perhaps possible (though probably not effective) to teach reading without reference to phonics skills or structural analysis. However, the reading series in use in this province employ these instructional strategies. Hence, these skills are measured.

Phonics means many things to many people. In its simplest, and instructionally most relevant meaning, phonics refers to instructional efforts to directly link the sound and the shape of a letter or of letter groups. The emphasis is on the child's functional grasp of these relations, and decidedly not in his command of the jargon associated with the teaching of phonics.

Many children have "mild" reading problems in the intermediate grades because they can't deal with long words. Obviously, many long words cannot be sounded out letter by letter. The structure of many words in the English language, however, is often very simple. Hence, teachers teach structural analysis as an aid in both word attack and in understanding word meaning.

This test did not focus on the children's knowledge of terminology (e.g., suffix, prefix, root word) but on their ability to use information about word structure in decoding or understanding it.

Two relatively minor skills under Word Attack appear in the Elementary Curriculum Guide: the ability to recognize contractions and the understanding of compound words. In a sense these are two special cases of structural analysis. Because of the emphasis awarded them, they are tested separately.

Measuring Domain 1

- Phonics for Word Attack: pupils match a word with one that rhymes; the rhyming sounds are spelled differently (grade 4, ten items).
- Structural Analysis: pupils mark the definition of an affixed word. A correct answer is always possible provided the meaning of the affix is known (six items in each grade).
- Meaning of Contractions in Sentences: pupils identify the paraphrase of a sentence which contains a contraction (grade 4, six items).
- Compound Words: the first part of a compound word is presented in a sentence. The pupils complete the compound word by selecting the contextually appropriate ending (six items in grades 4 and 8).

DOMAIN 2: WORD MEANING

Linguistics per se has almost become obscured by a preponderance of pre-fixed branches: psycholinguistics, sociolinguistics, pragmatic linguistics. Much of the activity in these fields deals with that most elusive of all linguistic concepts: meaning. As to the meaning of words, popular linguistic opinion holds that words have no meaning, but only potential for meaning. This is a strong way of expressing the belief that words can mean most anything, depending upon the circumstance of their usage.

From a pragmatic educational point of view, it is important that pupils demonstrate a knowledge of the meaning of a limited number of high frequency words. Their mastery guarantees that the pupil can deal with proportionally large amounts of reading material.

Mastery of high frequency words is important too, because it enhances the probability that the pupil can derive the yet unknown meaning of many familiar words from context, and the meaning of many unknown words. Perhaps no skill is more crucial than this one: the ability to use context clues both for word recognition and for determining meaning.

Measuring Domain 2

- Understanding High Frequency Words: pupils identify the synonym of a word presented in a sentence which provides minimal context (six items in grades 4 and 8).
- Context Clues: pupils identify definitions for low frequency words embedded in sentences which provide maximum context (six items in each grade).
- Idiomatic Expressions: pupils identify paraphrases for sentences containing idioms (six items in grades 4 and 8).
- Multiple Meaning: pupils use context to identify the appropriate synonym for a word having multiple meanings (six items in grades 8 and 12).

DOMAIN 3: COMPREHENSION

Two events have precipitated a flurry of professional energy directed to the study of comprehension processes. First, linguists have directed their attention once more to an analysis of meaning. Secondly, post-Skinnerian psychology turned to cognitive processes, among which understanding and processing of incoming information is central. One immediate consequence for teaching has been the renewed realization that understanding of written material is tied very intimately to prior knowledge. Hence, it is important to measure comprehension across a broad range of informational content. Decidedly, children differ in their grasp of the vocabulary and thought structures of the various school disciplines. The ability to comprehend, it seems, is not just a set of abstract reasoning skills. It is also very much related to having mastered general concepts and specific information in the area read about.

The provincial curriculum guides specify three subskills under comprehension: literal, inferential and critical. Both the terminology and the level of partitioning are familiar and traditional. So is, incidentally, the difficulty of arriving at satisfactory formal definitions of each.

Literal comprehension refers to grasping of explicitly stated information. A minimum of thought is required; the understanding is immediate and involves little analysis, translation, or evaluation.

Inferential comprehension, by contrast, does require mental operations beyond immediate recognition of meaning. It might involve, for instance, the realization that one concept mentioned is a subordinate concept to another. This would be the case, for instance, if a question about cars required the realization that a car is a mode of transportation. In another instance, inferential comprehension might require drawing a generalization from a number of atomic facts provided in the story. Yet another instance of inferential comprehension is illustrated when the reader must follow a path of references (e.g., to "her", "them", "that" etc.) through a story in order to answer a question. The fact is that it is easier to decide on the status of an individual question than to formulate an airtight definition. Such a definition would amount to a definition of thought.

One other issue needs to be mentioned here. A question which requires deep and imaginative thinking by one pupil may be answered from rote knowledge by another. Hence, whether an item is inferential or literal is somewhat relative to the reader.

Critical comprehension is defined in various places in the provincial curriculum guides. In essence three types of cognitive activities seem to fall under this label: understanding the purpose of a passage, discrimination between fact and opinion and between reality and fantasy, and the detection of logical incongruity.

Measuring Domain 3

- Literal Comprehension: pupils answer literal comprehension questions after reading a narrative or expository passage (grade 4, 15 items; grade 8, 17 items; grade 12, 22 items).
- Inferential Comprehension: pupils answer inferential comprehension questions after reading a narrative or expository passage (grade 4, 18 items; grade 8, 14 items; grade 12, 10 items).
- Critical Comprehension: pupils identify a word in a story that is incongruous with the rest of the text (grade 4, seven items).
- Critical Comprehension: pupils answer critical comprehension questions after reading a narrative or expository passage (grade 8, 5 items; grade 12, 10 items).

DOMAIN 4: APPLIED READING/STUDY SKILLS

The objectives measured in this domain are most likely related to the skills commonly referred to as functional literacy. The general emphasis is on access and retrieval of information: understanding classified advertisements, using references, reading graphic materials, etc. The traditional reading curriculum encompasses these and similar tasks under the general rubric of "study skills".

The fact that, for instance, "reading classified advertisements" is included as a separate task does not imply that a special and unique reading skill underlying successful reading of advertisements is proposed. Current theories of verbal comprehension (Tuinman, 1980) emphasize the importance for the reader of familiarity with the structure of a specific type of message. Hence, though one can admit to the existence of but a few generic reading skills, it still makes sense to assess these across a wide spectrum of different types of writing.

Measuring Domain 4

- Alphabetizing - Dictionary: pupils identify a word to fit alphabetical order (grade 4, six items).
- Reading Graphic Materials: pupils answer questions based on information displayed in graphic form (six items in grades 4 and 8; seven items in grade 12).
- Dictionary - Guide Words: pupils identify a word which could be on a dictionary page, given the page's guide words (grade 8, six items).
- Dictionary - Pronunciation Key: given a pronunciation key pupils identify a word which rhymes with a word spelled phonetically (grade 8, six items).
- Locating Information - Classified Ads: pupils answer questions based on information contained in classified ads (ten items in grades 8 and 12).

- Locating Information - Card Catalogue: pupils identify the entry for finding information on a specified topic in a card catalogue (grade 12, six items).
- Using Special References: pupils identify a reference source to find information on a specified topic (grade 12, six items).
- Organizing Information - Headings: pupils identify the most appropriate heading for a series of informational statements (grade 12, six items).
- Organizing Information - Outlines: pupils identify the appropriate statement to complete an outline of information (grade 12, six items).

1.3.3 Development of materials

Item specifications for the pupil tests were written, and items were developed and reviewed by panels of experienced educators across the province. (See appendix for listing of panel members). Subsequently items were piloted on samples of 400 fourth, eighth and twelfth grade students. The final test versions consisted of two booklets for each grade. Each grade 4 booklet contained 55 items, and each for grade 8 had 58 items. Booklet 12 A had 64 items and Booklet 12 B, 70. All items had four choices plus an "I don't know" option. In addition to newly developed items the booklets contained a number of repeat items from the 1976 and 1977 Assessments. As well, some historical items for which provincial item statistics were available were included at each grade level.

The actual items in each booklet were preceded by the 15 item Estes Reading Attitude Scale and a set of questionnaire items aimed at gathering pupil background information relevant to a description of the reading performance of B.C.'s students.

One of the purposes of the provincial assessments is to provide educators with periodic information regarding instructional practices. Hence, questionnaires were constructed for elementary and secondary teachers and principals. The questions focused on the respondent's background, the utilization of Ministry curriculum documents, reading programs, instructional practices, and curriculum leadership. The information gathered via these instruments was felt to be of particular importance since this is the first year of the implementation of new reading programs throughout the province. Hence, an attempt was made to obtain sufficient baseline data for future evaluations of the impact of these new programs.

1.3.4 The Collection of the Data

In March 1980, test booklets were sent to each B.C. school district to be administered to all students enrolled in grades 4, 8 and 12. Testing took place in one sitting, 45 minutes for grade 4 students, 60 minutes for grade 8 and 12 students, according to local arrangements.

Questionnaire data were obtained from administrators and from a sample of elementary teachers and secondary English teachers in early April.

1.3.5 The Interpretation

Three interpretation panels, one for each grade level, were formed to interpret the data from the Reading Assessment. Each panel was composed of teachers at the elementary, secondary, and post-secondary levels; district staff; trustees; and informed lay persons from throughout the province.

The procedures followed by the interpretation panels are described in detail in previous assessment reports and in the General Report for this assessment. In essence, panel members are asked to set a priori standards for the province's performance on each test item and then, upon being informed of the actual provincial results, to rate performance as Weak, Marginal, Satisfactory, Very Satisfactory or Strong.

CHAPTER 2

THE PUPILS

2.1 General Background Variables

The purpose of this chapter is to describe briefly some of the characteristics of the pupils who participated in the assessment. The questionnaire items included in the test booklets are the source of the information related here. The questions cover aspects of the pupil's background which, on the basis of an analysis of the professional literature, were felt to be potentially related to achievement. An analysis of these relationships is provided in Chapter 6.

The numbers of students writing the tests in grades 4, 8, and 12 are, respectively, 37 797, 35 727 and 26 571. This means that 95%, 90% and 80% of the pupils enrolled participated. For grades 4 and 8 these figures are comparable to those of previous assessments. The rate for grade 12 is substantially higher than that for the 1977 Reading Assessment.

Who are these pupils? Table 1 summarizes some of the highlights of the information gleaned from the questionnaires for the questions shared by all three grades.* Depending on the grade, between 83% and 86% of the pupils were born in Canada. It is, therefore, no surprise to learn that over 10% of the pupils did not usually speak English before grade one and, furthermore, that in the homes of nearly 10% even now English is not the language usually spoken.

It should not be assumed that the relationship between place of birth and language spoken is simple. Of the pupils born in Canada nearly 8% did not speak English as their usual language before grade 1; this is true for all three grades. Conversely, close to 60% of the pupils not born in Canada reported English as the usual early home language. Equally interesting is the fact that in many homes English remains a secondary means of communicating. About half of the pupils for whom English was not the first language said it still is not the dominant home language. That figure drops only slightly from 56% in grade 4 to 46% in grade 12.

Not surprisingly, the number of pupils who can read a second language increases with grade (Table 1). Of special interest is the fact that some 10% of the pupils in grade 4 responded positively to this question. The relationship between language background and the ability to read a second language is substantial. Of those pupils who reported that English was their first language, a much smaller proportion reads another language than do those for whom English was not the dominant pre-school language. The latter group's advantage is maintained throughout the years of schooling. By grade 12, for instance, nearly 60% of these pupils read a second language versus only 20% of those who are native English speakers.

If one defines a highly stable school population as one in which grade four pupils have attended one school, grade eight pupils, two, and grade twelve pupils, three, B.C. pupils appear to be a very transient group. Continuity of instruction may become a matter of concern under these conditions.

*The information on age is discussed in Chapter 6.

TABLE 1

HIGHLIGHTS OF PUPIL BACKGROUND INFORMATION
(Entries are percentages)*

	Grade 4	Grade 8	Grade 12
Sex			
Male	51	52	48
Female	49	48	51
Born in Canada	84	85	86
Two Years or Less in Canada	2	2	1
More than two years in Canada	9	12	12
English before Grade 1			
Yes	88	87	86
No	11	13	14
English usually spoken at home			
Yes	89	91	92
No	10	9	8
Read language other than English			
Yes	10	20	26
No	89	77	72
Number of Schools Attended since Grade 1			
1	45	4	2
2	28	30	12
3	14	27	31
4+	12	37	55
Bus time per day			
None	88	66	73
Under 30 minutes	13	24	19
Over 30 minutes	4	8	8
Amount of T.V. per day:			
None	3	4	6
<1 hr.	15	10	21
1 hr.	16	13	19
2 hr.	20	23	25
3 hr.	16	23	18
4 hr.+	27	26	11

* Percentages do not always sum to 100% due to the fact that pupils did not always respond to all questions.

The questionnaire included an item on the time spent in bus travel to and from school. Table 1 shows that only a relatively small group of pupils is on the bus for more than a half hour per day. Nevertheless, in grades 8 and 12 nearly 2% of all pupils spend over one hour per day travelling.

Only the pupils in grade 4 were asked whether they had attended kindergarten. Almost 92% had and 8% had not. Subsequent analysis of the data shows that the probability of having attended kindergarten is much lower for those not born in Canada. Some 30% of recent immigrant pupils (2 or less years in Canada) did not attend kindergarten.

2.2 Time Spent Watching Television

A quarter of a century ago Battin (1954) reported that pupils in grades 4, 8 and 12 watched about three hours of T.V. per day. The previous reading assessments (Language B.C., 1976; Reading Assessment, 1977) have established that today, too, children spend many hours in front of their television sets. As Table 1 shows, the results from the present assessment emphasize this fact. Depending on the grade, between 53% and 71% of the pupils watch at least two hours per day. Nevertheless, the figures show a marked, though unexplained, decline from the previous reading assessments. For example, in 1977 45% of the grade 8 pupils watched at least four hours per day versus 26% in 1980. Again, in grade 12 the number of pupils reporting that they watch at least four hours is nearly half of that in 1977. (See General Report for a full comparison).

The responses of the pupils mean, in effect, that pupils in B.C. on the average spend, as a minimum* close to two hours per day watching T.V.

The relationship between sex and T.V. habits is significant ($p < .001$), but weak. Whereas Desjardins (1972) in a study with approximately 200 boys and girls found that females watch more T.V., our data show the reverse.

Finally, though the relationship between T.V. and achievement will be examined in detail in Chapter 6, it is perhaps prudent to state that T.V. can have salutary as well as negative effects on reading. Pupils in a study by Kirsch (1975), when asked about a source of interest in reading, most frequently named T.V.

*In calculating these values the response category "less than one hour" was taken as " $\frac{1}{2}$ hour" and "four hours or more" as "four hours". This results in a conservative estimate. The pupils may, on the average, actually watch more.

2.3 Reading Habits of Secondary Pupils

Table 2 provides a summary of information provided by the secondary pupils regarding their reading habits. Though it is difficult to assess the validity of this type of data, there are various indications that the trends noted reflect reality.

There appears to be a distinct difference in the reading habits of the two grades. Those in grade 8 tend to read slightly fewer magazine articles, fewer newspaper stories, more comic books and more other books than do students in grade 12.

TABLE 2
READING HABITS OF SECONDARY PUPILS
(Entries are percentages)

	Grade 8		Grade 12	
	Males	Females	Males	Females
Reads Magazine Articles				
Hardly ever	21	21	11	9
Once a month	17	20	15	24
1 or 2 times a week	39	42	45	49
3 or 4 times a week	23	17	29	18
Reads Comic Books*				
Once a month	24	34	47	52
1 or 2 times a week	27	31	28	34
3-4 times a week	24	18	13	9
Every day	25	17	12	5
Reads a newspaper				
Once a month or less	8	10	4	5
1 or 2 times a week	30	33	19	27
3-4 times a week	24	22	27	25
Every day	38	34	49	42
Number of books per year				
0 - 2	21	11	32	16
3 - 5	29	23	33	31
6 - 8	28	27	20	26
1 or more per month	23	39	15	28

A closer look at each of the categories reveals some interesting facts. It is somewhat of a surprise that comic books, in grade 8, ranked behind newspapers. At the grade 12 level comic books have become decidedly unpopular.*

The fact that over 14% of the grade 12 pupils reported that they in effect did not read newspapers is disturbing. On the positive side, nearly 75% can be described as reading the newspaper rather frequently.

*These data exclude those pupils who reported that they "hardly ever" read comic books. (46% in grade 8 and 77% in grade 12).

Guthrie (1979) speculates that "normal" growth in reading skill requires "reading about a book every two weeks, one hour a day" (p. 111). How well do B.C.'s pupils compare against that criterion? Making the reasonable assumption that the response "more than one book per week" means at best "two books per week," the best estimate from the responses provided is that, on the average, the grade 8 pupils read no more than 20 books per year. This is just slightly below Guthrie's mark. However, in grade 12, the pupils average a maximum of only 16 books per year.

As can be seen from Table 2, there exist pronounced differences between males and females: Boys tend to read more magazines, comic books and newspapers while girls read more books. This latter difference is by far the largest. Grade 8 boys read at best about seven books per year while girls read over 31. In grade 12, the difference is less startling, but yet not negligible: girls read 21 books annually, compared to just under eleven books for boys.

Cole (1959) presents data from various sources indicating that the differences found in this assessment are in the expected direction. More recently, Robinson (1977) established that even in later life males tend to read more newspapers than females.

2.4 Variables Unique to Grade 12

Pupils in grade 12 answered several background questions unique to their grade. The descriptive results are presented in Table 3.

It is apparent that though a large proportion of the seniors work at a part-time job, for many relatively little time is spent on these jobs. Excluding the 11% of the pupils who work more than 20 hours, the average time on a job for the other pupils who have one is near eleven hours weekly.* This is, in effect, less time than is spent watching T.V. by the typical grade 12 pupil. At any rate, it appears that those who have a job and those who don't have very similar reading habits.

The information on future job plans contains a surprise: the percentage of pupils who have definite plans to go to university is up from 1977, the year of the last reading assessment. Then, about 21% of the students were university bound. Now that figure is up to 27%. There is a significant ($p < .001$) relationship between future plans and sex. Females are more likely to indicate plans to look for a job, attend either business school or a community college (particularly a career training program), or to be unsure of their plans. In contrast, males more frequently indicate plans for vocational schools or universities.

The responses testify to the vital role education plays in all sectors of society: of this graduating class, 64% know that they want further instruction before taking a job; only 16% plan to enter the job market on the strength of their high school education.

*Interval medians were used as averages for pupils making a particular response.

TABLE 3
RESPONSES TO QUESTIONS UNIQUE TO GRADE 12 (1977 and 1980)
(Entries are percentages)

Variable	1977	1980
Part-time job		
No part-time job	46	40
On weekends only	18	20
On weekdays only	5	5
Weekdays and weekends	31	34
Time on part-time job		
None	47	38
Works less than 5 hours	5	7
From 5 - 10 hours	15	17
From 11 - 20 hours	23	26
More than 20 hours	10	11
Future Plans		
Upon graduation: A job	20	15
Non-university schooling	36	24
University	21	27
Other plans or undecided	22	32

Taken as a whole, the data display a wealth of intricate relationships between background variables.* Many of these variables appear to be related to reading habits. To understand the performance of the pupils writing the reading tests we devised for them, one must understand their linguistic and socio-economic context. That is a complex task, and this Summary Report provides no more than a view from the surface.

*More detailed data are presented in the General Report.

CHAPTER 3

HOW WELL DO B.C.'s CHILDREN READ?

In this chapter, a summary of test results and panelists' interpretations for grade 4, 8 and 12 are presented. More detailed data related to test performance are available in the General Report. Those who wish additional information for purposes of further analysis should consult with the Learning Assessment Branch of the Ministry of Education.

3.1 The Grade 4 Results

Table 4 summarizes the Mean Percent Correct scores and the ratings of the interpretation panel. The overall picture is Satisfactory to Very Satisfactory in the judgement of the panel. Notable exceptions are the two objectives rated Marginal: Structural Analysis and Alphabetizing. These two objectives, though representing skills intrinsic to the reading curriculum, are of less importance than the objectives in the Word Meaning and Passage Comprehension Domains.

A closer look at the ratings reveals that a high percentage correct score does not, in itself, guarantee a high rating. For instance, Objective 1.1, Phonics for Word Attack, was rated only as Satisfactory in spite of a Mean Percent Correct score of 80. Panelists viewed the skill underlying this objective as fundamental and had high expectations.

The less than satisfactory performance in Structural Analysis does not necessarily indicate that no instruction in this skill is taking place. We suspect that the test's emphasis on using rather than merely knowing the meaning of the affixes may have resulted in the pupil's difficulties.

In Domain 2, Word Meaning, perhaps the most important Objective is Context Clues. A pupil who has learned to derive meaning from context is well on his way to becoming a truly independent reader. The following item is typical of the skill measured. It was also the most difficult item in the set, with a Mean Percent Correct score of 59.

Our soccer team isn't very good. In fact, until yesterday, they had lost every game. We were really surprised when they triumphed over Lake City last night.

When this team triumphed they

A. lost the game	19
B. got into a fight	3
C. won the game	<u>59</u>
D. tied the score	5
E. I don't know	12

Grade 4
P-values*

*P-values = percent of students responding to the question who selected each option

It is instructive to note that 19% of the pupils chose answer option A, completely ignoring the clues "until yesterday" and "surprised". A very high 12% opted for "I don't know", emphasizing the difficulty of this essentially straight-forward item.

TABLE 4
TEST RESULTS AND PANEL RATINGS, GRADE 4

Domain/ Objective	Number of Items Rated by Panel In Each Category					Mean Percent Correct*	Overall Rating
	W	M	S	VS	ST		
Domain 1: Word Attack							
1.1 Phonics for Word Attack			8	8		80	<div> <div>S</div> <div>M</div> <div>VS</div> <div>S</div> </div> <div> <div>S</div> </div>
1.2 Structural Analysis		4	2			62	
1.3 Meaning of Contractions			1	5		83	
1.4 Compound Words			4	2		77	
						76	
Domain 2: Word Meaning							
2.1 Understanding High Frequency Words			3	3		82	<div> <div>VS</div> <div>S</div> <div>VS</div> </div> <div> <div>VS</div> </div>
2.2 Context Clues		2	2	2		72	
2.3 Idiomatic Expressions			1	5		73	
						75	
Domain 3: Passage Comprehension							
3.1 Literal Comprehension			2	8	5	88	<div> <div>VS</div> <div>VS</div> <div>S</div> </div> <div> <div>VS</div> </div>
3.2 Inferential Comprehension			4	6	8	80	
3.3 Critical Comprehension			4	2	1	80	
						83	
Domain 4: Applied Reading							
4.1 Alphabetizing - Dictionary		4	2			77	<div> <div>M</div> <div>S</div> </div> <div> <div>S</div> </div>
4.2 Reading Graphic Materials			5	1		73	
						75	
Total Items	0	10	38	42	14		
Percent of Items		10%		90%			

W = Weak M = Marginal S = Satisfactory VS = Very Satisfactory ST = Strong

* The average percentage of correct responses to the set of items (e.g., the value "76" for "Domain 1" above indicates that of all the responses to the set of items measuring Domain 1 for grade 4, 76% were correct. Similarly the value "80" indicates that of all responses to the set of items measuring Objective 1.1 for grade 4, 80% were correct). Reliability coefficients for domains ranged from .43 to .88. For the test booklets, coefficients ranged from .90 to .93.

Many view Passage Comprehension as the most direct measure of overall prowess in reading. We concur. The interpretation panel's Very Satisfactory overall rating is reassuring; so is the basis for this rating: on the average, grade 4 students correctly answered better than eight out of ten questions. As Table 4 shows the pupils found it somewhat easier to answer literal comprehension questions than inferential questions. The panel viewed the Mean Percent Correct score of 80 for Critical Comprehension to be only Satisfactory. Indeed, we too expected a higher percentage correct. The items ask for very close reading so that an obvious incongruity can be detected. The example below was answered correctly by 75% of the pupils. Almost 10% believed that "rest" did not belong in the story.

We spent last Saturday fishing. We didn't catch much, only two salmon and a sparrow, but we had a good time and had plenty of rest.	
Which word does <u>NOT</u> belong in the story?	
A. sparrow	75
B. salmon	3
C. time	6
D. rest	9
E. I don't know	5

Also rated Marginal was the Objective Alphabetizing-Dictionary in Domain 4, Applied Reading/Study Skills. Words differed only by the first letter, hence the task seemed relatively simple. Yet, the Mean Percent Correct values ranged from a low 73 to a modest 84.

3.2 The Grade 8 Results*

Table 5 summarizes the results for grade 8, both in terms of absolute scores and the interpretation panel's evaluations. Significant is the fact that performance in all domains was rated at least Satisfactory. Alternatively, the fact that only one Domain, Applied Reading/Study Skills, merited a Very Satisfactory rating is significant as well.

The example of the following page illustrates the kind of Structural Analysis item which troubled pupils in all three grades.

*The administration time provided for the grade 8 and grade 12 students proved to be too short for some students to complete all items. However, subsequent analyses of data on items completed by both "finishers and non-finishers" indicate clearly that there is no significant difference between the two groups of students. Hence all results presented here and those considered by the interpretation panel are the results of students who attempted and completed each test item.

The forest was <u>subalpine</u> .	Grade 8
<u>Subalpine</u> means.	P-values
A. below the mountain peak	44
B. close to the mountain peak	15
C. beyond the mountain peak	8
D. on the mountain peak	7
E. I don't know	25

It is only necessary to know that sub means below in order to answer this item correctly. Yet, only 44% of the grade 8 pupils managed to do so. An unexpected 25% confessed not to know what "subalpine" meant.

TABLE 5

TEST RESULTS AND PANEL RATINGS, GRADE 8

Domain/ Objective	Number of Items Rated by Panel In Each Category					Mean Percent Correct	Overall Rating
	W	M	S	VS	ST		
Domain 1: Word Attack							
1.1 Structural Analysis	1	2	1	2		61	} 69
1.2 Compound Words			2	3	1	76	
Domain 2: Word Meaning							
2.1 Understanding High Frequency Words			3	3		73	} 70
2.2 Context Clues		1	5			65	
2.3 Idiomatic Expressions			1	5		76	
2.4 Multiple Meaning		1	1	4		66	
Domain 3: Passage Comprehension							
3.1 Literal Comprehension	1	2	7	4	3	71	} 65
3.2 Inferential Comprehension	1	1	9	3		61	
3.3 Critical Comprehension		2	2		1	58	
Domain 4: Applied Reading/Study Skills							
4.1 Dictionary-Guide Words			6			73	} 71
4.2 Dictionary-Pronunciation Key		1	4		1	66	
4.3 Reading Graphic Materials		1	2	3		71	
4.4 Locating Information- Classified Ads	1	1	3	3	2	72	
Total Items	4	12	46	30	8		
Percent of Items	16%		84%				

W = Weak M = Marginal S = Satisfactory VS = Very Satisfactory ST = Strong

As demands on the pupils' vocabulary expand, partially as a consequence of exposure to various subject matter areas, words take on more meanings and nuances of meaning. The Very Satisfactory rating for the Multiple Meaning Objective awarded by the panel should, therefore, be taken as a positive sign, in spite of the fact that the Mean Percent Correct score was only 66. In our opinion added instructional emphasis is required on the skill reflected in this objective.

Again, as in grade 4, the pupils in grade 8 found the inferential comprehension questions more difficult than the literal questions, and the critical comprehension items more difficult yet. To what degree this is an artifact of the questions or alternatively of genuine differences in the comprehension processes involved is difficult to determine. Notwithstanding the Satisfactory rating, we find the performance on the inferential and critical items somewhat disappointing.

In the last Reading Assessment (1977), the grade 8 pupils did not perform very well on items in Domain 4, Applied Reading/Study Skills. In the judgement of the interpretation panel the current 8th grader's performance was rated as Very Satisfactory in this domain, most notably so on the objectives Reading Graphic Materials and Locating Information - Classified Ads. The panel rated as Satisfactory the Mean Percent Correct score of 66 for objective Dictionary - Pronunciation Key. The pupils were given a dictionary pronunciation key and then asked to complete items as shown:

		Grade 8 P-values
/fān/ rhymes with		
A.	sign	2
B.	fun	5
C.	train	46
D.	pan	45
E.	I don't know	1

On this item only 46% chose the correct answer; an equally large number of pupils opted for option D. This was the most difficult item in the set. We agree with the panel that, overall, achievement on this objective was at best Satisfactory.

3.3 The Grade 12 Results*

Table 6 presents the summary of test results for Grade 12. The overall results, in terms of the rating of objectives by the interpretation panel, are somewhat lower than those of grades 4 and 8. Two domains were rated Marginal; in the other grades none were. The emphasis in grade 12 in terms of number of items and objectives is on Domain 3 and 4, Passage Comprehension and Applied Reading/Study Skills. Though performance in these domains was rated at least Satisfactory, the Marginal ratings in the other domains assessed less extensively should not be dismissed lightly.

*See footnote, p 29.

TABLE 6

TEST RESULTS AND PANEL RATINGS, GRADE 12

Domain/ Objective	Number of Items Rated by Panel In Each Category					Mean Percent Correct	Overall Rating
	W	M	S	VS	ST		
Domain 1: Word Attack							
1.1 Structural Analysis	3		2	1		61½ 61	M } M
Domain 2: Word Meaning							
2.1 Multiple Meaning	1	2½	½	1	1	62½ 65	M } M
2.2 Context Clues	1		2	1½	1½	68½	S } M
Domain 3: Passage Comprehension							
3.1 Literal Comprehension		5	7	4	6	77½	S } S
3.2 Inferential Comprehension	1	7	7	7	2	66½	S } S
3.3 Critical Comprehension	1	1	4	2	2	71½	S+ } S
Domain 4: Applied Reading/Study Skills							
4.1 Locating Information- Classified Ads			2	4	4	86½	VS-ST }
4.2 Locating Information- Card Catalogues		1	3	1	1	66	S }
4.3 Reading Graphic Materials		1		4	2	81	VS }
4.4 Using Special References		2	1	3		71	S-VS }
4.5 Organizing Information- Headings		3	1	2		69	S }
4.6 Organizing Information- Outlines	1	3	2			53	M-S }
Total Items	8	25½	31½	30½	19½		
Percent of Items	29%		71%				

W = Weak M = Marginal S = Satisfactory VS = Very Satisfactory ST = Strong

We find it particularly troublesome that the pupils in this grade did relatively poorly on the Multiple Meaning Items. The illustrative item below presents a choice of four dictionary descriptions; students were to select the contextually most appropriate definition of the key word. Only 43% of the pupils were able to make the fine distinction necessary for arriving at the correct answer.

After we had exhausted the first topic we moved on to the next. Here <u>exhaust</u> means to		Grade 12 P-values
A. let out or off		2
B. deal with comprehensively		43
C. use up completely		39
D. wear out, tire		15
E. I don't know		1

The low Mean Percent Correct score for this objective (62%) means, in our judgement, that too many graduates of grade 12 are likely to have problems using the dictionary adequately.

Though in all grades the passages used for assessing comprehension ranged from narrative to expository, in grade 12 in particular, attention was paid to coverage of various subject matter areas. Performance tended to vary from passage to passage. The relative ease of literal comprehension was confirmed once more. All three comprehension objectives were rated as Satisfactory. We doubt, however, if much comfort should be taken from this fact. This domain is representative of what the phrase "being able to read" traditionally is understood to mean. Therefore, more than Satisfactory performance remains an instructional desideratum.

From the students' point of view, perhaps, the most interesting items in the test represented objectives in Domain 4, Applied Reading/ Study Skills. Whether this accounts for their relatively strong performance is speculation, however. The panel hesitated between a Satisfactory and Very Satisfactory rating.

The most difficult items proved to be those for Objective 4.6, Organizing Information - Outlines. Only 50% of the pupils chose the correct answer in the example below.

Incomplete Outline: (Physiographic Division of Canada - east to west)		
1. The Appalachian Region		
2. The St. Lawrence Lowlands		
3. The Canadian Shield		
4. The Great Central Plains		
5. ??????		
The best statement to complete the outline is:		Grade 12 P-values
A. The Western Cordillera		50
B. The Maritime Region		14
C. The Interior Continental Plain		22
D. Eastern Quebec		7
E. I don't know.		6

Presumably, answering this item and the others for this objective need not depend on specific knowledge but on interpretation of verbal clues and reasoning. The 14% of the pupils marking choice B either may have neglected the "east to west" clue and/or not have known that the term "Maritimes" is associated with Canada's east coast. The 22% marking choice C may have missed the meaning of "interior" and/or have neglected the "east and west" clue. In either case, we feel that the performance on this and similar items urges elaborate attention to this kind of reading-with-reasoning well before grade 12.

3.4 Conclusion

The General Report contains a more detailed description of the test results than could be presented above. Nevertheless, taken together, Table 4, 5 and 6 summarize the essential information. Across the three grade levels, performance was rated as Satisfactory or better on 10 of 12 domains examined. Further, at the grade 4 and grade 8 levels performance on the vast majority of items (91% and 84% respectively) was rated as Satisfactory or better.

Counterbalancing these areas of promising performance are those where performance was less than Satisfactory. In particular, at the grade 12 level, performance on both the Word Attack and the Word Meaning domains received only Marginal ratings. In addition, grade 12 performance was found to be less than Satisfactory on 29% of the questions asked.

Perhaps a more fundamental question is "Can we, as a province, afford to be satisfied with anything less than truly strong performance on a skill as fundamental as reading?" Can we, for example, accept that on the average, only 83, 65 and 71 percent of students in grades 4, 8 and 12 are answering correctly passage comprehension questions of the kind used in this assessment? It is our opinion that we cannot.

CHAPTER 4

HAS ANYTHING CHANGED?

4.1 The Same Items Used Twice

Popular view, reinforced by intermittent alarms sounded by the press, holds that children now read less well than ever before. Though it is easy to find reports which make that assertion, it is much more difficult to find supportive data.

An analysis of test scores in 12 American school systems and 17 states, led Tuinman, Farr and Rowls (1976) to conclude that between 1920 and 1970 the ability to read in the general population had increased, rather than fallen off. They pointed to many fallacies existing in analyses of incidental test scores which reached the opposite conclusions. More recently Murray (1977) documents common flaws in frequently cited analyses by Canadian universities which have joined the fray.

One way, among others, to assess change is by administering the same test items at different times. There are still many problems of interpretation with this kind of data, but the information yielded by such direct comparisons can nevertheless be invaluable.

The most reliable and elaborate of comparisons is provided by the National Assessment of Educational Progress (NAEP); in this U.S. assessment, national probability samples of over 22 000 pupils in each of three age brackets were administered reading surveys in 1971 and 1975. The result: nine year olds improved slightly; for those 13 and 17 years old there was no significant change (NAEP, 1976).

In the present Assessment an attempt was made to add to the scarce comparative information now available. First, a number of items in the current tests for each grade were taken from the previous Assessment (1976/1977). The number of these common items for grade 4 is 15, and for grades 8 and 12, 25. In addition, a small set of "historical" items was included. These are reading comprehension items administered at some time in the past, for which provincial norms could be found in the Ministry's archives. For grade 4, there are five such items with 1973 grade 4 norms; for both grade 8 and 12 a set of six items was included that had previously been answered by grade 9 students in 1960 and by grade 11 students in 1946.*

It must be emphasized that the comparisons with the common items are easier to interpret and therefore more meaningful than the information yielded by the inclusion of historical items.

Table 7 summarizes the data for the common items. Table 8 presents the information for the historical items.

*For a more detailed description, see the General Report.

TABLE 7

COMPARISON OF PERFORMANCE OVER TIME: 1976/77 and 1980
(Entries are Mean Percent Correct for all items in the
domain/objective specified)

Domain/ Objective	Grade 4		Grade 8		Grade 12	
	1976	1980	1977	1980	1977	1980
Word Attack	70	76	-	-	-	-
Word Meaning	-	-	56	53	81	78
Comprehension	82	84	58	62	67	58
Locating Information (Classified Ads)	-	-	73	74	90	87

Table 7 shows that the performance of grade 4 and 8 students improved on the average since the last assessments. The reverse is true of performance at the grade 12 level. The data for the Comprehension domains are of particular interest. Changes in comprehension are not easily effected. For this reason the large drop in the grade 12 scores (based on ten items) is genuinely disturbing. There is no obvious reason why this result should have occurred. The somewhat higher return rate (approximately 10% more students) in the present assessment might imply the inclusion of test scores from a larger number of unenthusiastic or less able pupils. However, this by itself could not account for the size of the drop in performance.

TABLE 8

COMPARISON OF PERFORMANCE ON "HISTORICAL" COMPREHENSION ITEMS
(Entries are Mean Percent Correct)

Grade 4		Grade 8		Grade 12	
Gr. 4/1973	1980	Gr. 9/1960	1980	Gr. 11/1946	1980
63	70	67	49	64	63

The historical data in Table 8 are interesting, but more difficult to interpret. The scores for grade 4 are encouraging. No evidence of the often proclaimed massive decline is presented here. Indeed the data indicate a substantial improvement in the percent of students who are able to answer these comprehension items correctly.

At the secondary level the meaning of the scores becomes very difficult to determine.

While the 1980 grade 12 students out-performed the 1980 grade 8 students on these six items, neither group performed as well as either grade 9 students in 1960 or grade 11 students in 1946. One factor that must be kept in mind, however, is that in 1960 and especially in 1946, a much smaller part of the population attended grade 8 or grade 12. Murray (1977) calculates that in Ontario, the percentage of the total population in grade 12 in 1955 was three times as small as in 1975 (.45% vs 1.31%). Similarly, whereas in 1954 only 42% of the pupils in grade 9 reached grade 12, that percentage is up in 1974 to 61%. Clearly, the nature and presumably the abilities of the secondary groups have changed over the years. At the same time the negative trend evident in these data cannot be ignored.

4.2 A Relativistic Perspective

It is possible to view change in relative terms rather than absolute, by comparing the evaluations of the interpretation panels in the first and second assessments. The question answered by such a comparison is: How well did the pupils meet expectations in 1976/77 and 1980?

Table 9 shows this comparative information. It should be clearly understood that the domain definitions in the first and second assessment are related, but by no means identical. In fact, the current Domains 1 and 2 were combined in the earlier assessments. Moreover, the panel interpreting the grade 4 performance in 1976 used a three point rating scale: weakness, satisfactory, strength instead of the five point scale employed in 1977 and 1980.

TABLE 9
COMPARISON OF MATCH BETWEEN PUPILS' PERFORMANCE AND
INTERPRETATION PANELISTS' EXPECTATIONS IN TWO ASSESSMENTS

	Grade 4		Grade 8		Grade 12	
	1976	1980	1977	1980	1977	1980
Domain 1	S	S	VS	S	S	M
Domain 2	S	VS	S	S	S	M
Domain 3	S	VS	S	S	S	S
Domain 4	W	S	MS/S	VS	MS/S	S/VS

Nevertheless, Table 9 portrays a reasonable comparison. The grade 4 pupils appear to have met the expectations of their judges in this assessment as well as or better than in 1976.* This is true for every domain. It may be superfluous to point out that this could be the consequence of lower expectations. On the other hand, the data in

*The use of a three-point scale in 1976 precludes a more definitive statement.

Table 9 provide objective support for the interpretation that the 1980 pupils did as well or better than their 1976 peers.

The data for the grade 8 pupils show some interesting changes in the panels' perspective. From Very Satisfactory in 1977 on Domain 1 the rating has dropped to a Satisfactory. In the present assessment, Structural Analysis was measured quite differently than in 1977 and this may explain the incongruity. Whereas the panelists in 1977 were not particularly impressed by the pupils' Applied Reading Skills, the 1980 panel rated the pupils' achievement in this domain at Very Satisfactory. Overall, the impression of relative stability left by the data in Table 7 is corroborated by the analysis presented here in Table 9.

The two sources of information are at variance, however, when it comes to the performance of the grade 12 pupils. The item score data summarized in Table 7 shows a drop in three domains--very sizeable in Comprehension. The 1980 panelists agreed that the Word Meaning scores were Marginal in contrast to the 1977 panels who rated the pupils as Satisfactory. However, the 1980 panel finds the Comprehension Satisfactory, as did their 1977 predecessors. Yet, on the repeat items the performance dropped by nearly 10%. Were these items not representative of all Comprehension items, or did the panel in 1980 have lower expectations for this domain? Analyses undertaken to examine this question lend no support to the former suggestion. That is, performance of grade 12 students on the set of common items is not systematically different from their performance on all other items. Hence, one must conclude that the 1980 panel had lower expectations for the comprehension and applied reading items than did their colleagues on the 1977 panel. Alternatively, performance in 1977 and 1980, although different, fell within the range defined as "Satisfactory" by both panels.

Thus, the vote on grade 12 is split. In some areas the pupils satisfied their judges as well or better than in 1977 (Domain 3,4), in others they showed less satisfactory performance (Domain 1,2).

4.3 Changes Between Grades

It is of interest to establish the degree of change from grade to grade. For the purpose of intergrade comparisons, four comprehension items were shared by grades 4 and 8 and 33 items distributed across Domains 2, 3 and 4 were shared by grades 8 and 12. Constraints of testing time and of the relatively immature decoding skills in grade 4 prohibited a larger set of items for both grade 4 and 8 students.

4.3.1 Grade 4 and Grade 8

An earlier comparison involving comprehension items (Summary Report, 1977 Reading Assessment) showed that, on the average, only 8% more of the grade 8 pupils than grade 4 pupils could answer the same questions.

The present comparison, limited as it is, shows a more encouraging and perhaps a more realistic, picture. The mean difference in performance for the four questions is 28%; the smallest difference on any item is 21%. All differences favour the 8th grade pupils.

TABLE 10
PERFORMANCE CHANGES BETWEEN GRADES ON
COMMON ITEMS (Mean Percent Correct)

	Word Meaning	Passage Comprehension	Applied Reading
Grade 4	-	49	-
Grade 8	-	77	-
Grade 8	53	63	72
Grade 12	78	74	86

4.3.2 Grade 8 and Grade 12

As the analysis for the differences between grade 8 and grade 12 pupils involves considerably more items, it is more representative. Here the differences are more in line with those obtained in the last Reading Assessment. Then, the grade 12 pupils outperformed those in grade 8 by 20%, 9% and 19%, respectively, in the present Domains 2, 3 and 4. The average difference between the grades was 16%. In the current assessment the difference between grades in the Mean Percent Correct for each domain is 26%, 11% and 19%, for an average of 18.7%. It is, however, difficult to assess whether those differences are "large enough".

The information presented here is intended as a contribution to a data base for a more systematic study of changes in performance levels from grade to grade. They should by no means be seen as an indirect commentary on the effect of schooling. First of all, there currently exists no framework within which to evaluate the differences observed. Secondly, as analyses by Karweit (1976) show, the determination of causes of school achievement is an extraordinarily complex endeavour and outside the scope of the present assessment.

CHAPTER 5

ATTITUDES TOWARDS READING

One of the goals of reading instruction in B.C. is the development of positive attitudes towards reading. Hence an attempt was made to measure the pupils' attitude towards the subject matter assessed. Though many references are made in the professional literature to the relationship between attitude and achievement, empirical information on the issue is scant and ambiguous (Alexander and Filler, 1976).

The measurement of attitudes is fraught with difficulties (Green, 1954; Cattell, 1973; Lemon, 1973). There exist a number of Attitude Towards Reading Scales, but many are of questionable validity (Summers, 1977). After an analysis of potentially suitable scales, the Estes Attitude Scale was selected. It is among the more widely used, its characteristics are relatively well-documented, and its brevity suited the time constraints of the assessment. Moreover, recent evidence (Summers, 1980) supports the validity claims made by the authors. The scale was originally developed for upper elementary and high school pupils. Unpublished data* justify the use of this scale with pupils in grade 4 and up. Post-hoc reliability information in this assessment validate this claim. The Hoyt coefficients for grades 4, 8 and 12 were .82, .82 and .89 respectively.

5.1 The Pupils' Attitude Toward Reading

The Estes Scale consists of fifteen statements, each expressing an attitude towards some aspect of reading. For example:

"Books are a bore"

"There are many books I hope to read"

"Reading is for learning but not for enjoyment"

The pupil expresses agreement or disagreement with each statement on a five point scale ranging from strongly agree to strongly disagree. Table 11 summarizes the results for the students in British Columbia.

TABLE 11

SUMMARY OF ATTITUDES TOWARD READING BY GRADE
(Percent of Students in each attitude category)

	Attitude Category				
	Strongly Negative	Negative	Neutral	Positive	Strongly Positive
Grade 4	1	5	22	45	28
Grade 8	2	8	25	45	20
Grade 12	1	5	19	48	27

Table 11 invites two comments. First, it is apparent that a sizeable group of pupils said they feel decidedly positive towards reading. The percentage of pupils indicating positive or strongly positive attitudes is 73% in grade 4, 65% in grade 8 and 75% in grade 12. By contrast, only 5%, 10% and 6% respectively indicated a negative attitude towards reading.

Second, though the results for the three grades appear close, the grade 8 mean score on this attitude scale is statistically significantly below those of the two other grades ($p < .001$). The lower popularity of reading in grade 8 also is shown in the higher percentage of pupils indicating negative attitudes. Between grade 4 and grade 8 something happens to turn children off reading. That is a matter of key importance.

5.2 Attitude and Reading Achievement

The relationship between attitude towards reading and achievement is ambiguous. Little is known about the conditions under which positive attitudes produce higher achievement and vice versa. Though Groff (1962) found a significant relationship between attitude and achievement for 305 fifth and sixth grade pupils, the correlation coefficients were only modest. By contrast, Kibby (1977) concluded that high achievers tended to have more negative attitudes toward reading than poorer readers. He felt his findings suggested that attitude toward reading reflects classroom status as a reader rather than actual reading ability. That is, capable pupils in a highly achieving class may yet develop negative attitudes.

Whereas Healy (1963, 1965) provides some evidence that experimentally induced improvement in attitude results in higher achievement, Seaton and Aaron (1978) document their failure to change attitudes over a three month period. Moreover, Bernstein (1972) reports a study where achievement improved but attitude did not. The above examples of ambiguity in the literature should suffice to establish sufficient caution in interpreting these data on the relationship between attitude toward reading and actual achievement.

TABLE 12
CORRELATIONS BETWEEN ATTITUDE TOWARDS READING
AND ACHIEVEMENT*

Domain	Grade 4	Grade 8	Grade 12
Word Attack	.37	.29	.24
Word Meaning	.38	.35	.28
Comprehension	.34	.37	.41
Applied Reading	.29	.31	.35
Overall	.41	.41	.42

Table 12 summarizes the salient data. The most striking feature of the relationship is its stability across grades and domains. Clearly, achievement and attitude are related. That is, positive attitudes toward reading are associated with higher reading achievement; lower attitudes with lower achievement. Equally clearly the relationship is modest.

One question, unresolved, is to which degree the correlations are a function of a genuine link between attitude and achievement and to which degree they are a consequence of the fact that attitude is measured by a scale requiring verbal processing. The fact that the statistics are stable across grades would appear to downplay the latter explanation, but that is a somewhat speculative interpretation.

5.3 Reporting Variables Related to Attitude

The relationship between attitude and the reporting variables was examined.* In evaluating the results, it should be emphasized once more that functional, rather than casual relationships are established here.

Far more reporting variables are associated with differences in attitude than are not. Indeed, the association of reporting variables with attitudes is stronger than with achievements. The only variables not consistently associated with attitude are: number of schools attended, whether English was the dominant language before grade 1 or is now, and the time children spend on the bus.

As Table 13 shows, there is a distinct difference between the grades in attitude, but only for the boys. The attitude of girls remains constant or becomes more positive by grade 12. In contrast, by grade 8, the boys are much more negative than they were in grade 4.

The fact that females have a more positive attitude towards reading, conforms to expectation. For one, as shown in Chapter 3, girls tend to read more books than do boys. In addition the finding conforms to the literature. For instance, using the Diehl Reading Attitude Scale in addition to the Estes Scale, Nielsen (1978), also found girls to have a significantly more favourable attitude towards reading than boys. In our data, particularly in grades 8 and 12, the difference is quite pronounced (.4).

TABLE 13
RELATIONSHIP BETWEEN ATTITUDE TOWARD READING
AND SELECTED REPORTING CATEGORIES

Reporting Category	Mean Attitude Toward Reading Score*		
	Grade 4	Grade 8	Grade 12
Sex: Male	3.7	3.4	3.5
Female	3.8	3.8	3.9
Number of Books Read:			
0 - 2 per year	-	2.8	3.0
3 - 5 per year	-	3.2	3.6
6 - 8 per year	-	3.4	3.8
1 per month	-	3.6	4.0
2 per month	-	3.8	4.2
1 per week	-	4.0	4.3
more than 1 per week	-	4.2	4.4
Television Watched Daily:			
None	3.9	3.8	3.9
Less than 1 hour	3.9	3.8	3.9
1 hour	3.8	3.8	3.8
2 hours	3.8	3.7	3.7
3 hours	3.7	3.6	3.6
4 hours or more	3.6	3.3	3.5
*1.0 = Very Negative, 2.0 = Negative, 3.0 = Neutral, 4.0 = Positive, 5.0 = Very Positive			

5.3.1 Attitudes and Reading Patterns

Of particular interest are the relationships between attitudes toward reading and self-reported reading patterns. The pupils in grades 8 and 12 indicated how frequently they read magazines, books, comic books and newspapers. The highest attitude scores are obtained by those who read most books, magazines, newspapers and the fewest comic books. The direction of the differences in all instances conform to expectation.

In grade 8, as well as in grade 12, the relationship is direct and unequivocal: the fewer the number of books read, the lower the attitude score. Those who say they read fewer than three books per year in grade 8 had an average attitude score of 2.8, significantly below the neutral point. The "non-readers" in grade 12 checked in at exactly 3.0. It is pertinent to note here a finding from a recent study by Lampert and Saunders (1976). They studied 67 readers (more than five hours of free reading per week) and 77 non-readers (no free reading of books). According to the authors, readers were distinguished

by an interest in or tolerance for print materials requiring sustained attention; they were most likely to prefer reading a book to watching T.V.; they said they watch more T.V. news and read more news magazines and editorials.

5.3.2 Attitudes and T.V. Watching

Our data confirm the inverse relationship between liking reading and liking T.V., noted by Lampert and Saunders. In all three grades the response to the television time question created six groups, from those who said they watched none, to those who reported they watched four hours or more. The relationship between attitude and T.V. time is perfectly linear, but reversed: the less T.V. watching reported, the higher the score on the Estes Scale. The striking fact is that there are no exceptions to this generalization in any of the grades.

CHAPTER 6

ACHIEVEMENT AND REPORTING VARIABLES

This chapter describes some of the relationships between the pupils' reading performance and the information they provided in the questionnaire items included in the test booklet. The account by necessity is selective, rather than exhaustive.

The information reported in this chapter is based on analyses of the responses of a random sample of 10% of all pupils. Hence, nearly 4 000 grade 4 pupils, just over 3 500 grade 8 pupils and some 2 600 grade 12 pupils constitute the grade samples.

6.1 Sex and Reading Achievement

In grades 4 and 8 the girls read better than the boys. The difference, for all objectives combined in grade 4 is 2.4*; in grade 8 girls average a 3.4% higher score. In grade 12, when presumably many poor readers have dropped out, the sex difference has disappeared.

A more detailed view of the results reveals some interesting deviations from the general trends. In grade 4, for instance, the difference between boys and girls for the literal comprehension items equals 2.6% in the girls' favour; by contrast their scores on the inferential items (Objective 3.2) are virtually identical (80.7% vs 80.8%). Moreover, the difference on critical comprehension (Objective 3.3) is not significant either. An attractive explanation for this phenomenon would be that sex differences may be less pronounced on those school-related skills which are most closely related to general intelligence. However, the results of subsequent analyses do not seem to bear out such an hypothesis.

Though the overall difference between the two sexes in grade 8 is relatively modest, there are two notable exceptions. On the average girls outperform boys by 7.4% on the Guideword items (Objective 4.1) and by an even larger 10.4% on the Pronunciation Key items (Objective 4.2). These are very specific skills, amenable to direct instruction. By contrast, the advantage of girls on the more general comprehension items is a mere 2.6%.

6.2 Language and Reading Achievement

6.2.1 Place of Birth

As indicated in Chapter 2, a sizeable proportion of the pupils was not born in Canada. For many of these pupils English was not their first language. It is therefore not surprising to see those pupils not born in Canada score consistently lower than those native to Canada. As Table 14 shows, the differences are relatively small.

*All differences noted are significant at the $p < .01$ level, unless otherwise indicated.

TABLE 14
MEAN PERCENT CORRECT FOR THOSE BORN
IN AND OUTSIDE OF CANADA

Domain	Grade 4		Grade 8		Grade 12	
	In	Outside	In	Outside	In	Outside
Word Attack	78	73	70	69	60	65
Word Meaning	77	70	69	69	66	62
Comprehension	84	81	66	65	72	71
Applied Reading	77	74	72	69	73	73

It should be recalled, however, that the majority of those not born in Canada have lived here for over three years. The scores of recent immigrants show a much larger discrepancy.

All the differences in Table 14 are in the expected direction with one significant exception. Inexplicably, in grade 12, those born outside of Canada outscore native Canadians by almost 5% on the Structural Analysis Items (Domain 1). Even those who have been in Canada less than one year do better on these items than those born here.

6.2.2 English as a Second Language

The variable "Time in Canada" of course is of interest when considered in conjunction with the language background of the pupils. As expected, pupils for whom English is not their first language do not achieve as well as those who are native English speakers.* Overall, in grade 4 the difference is 6.6%, in grade 8, 5.3% and in grade 12, 3.8%.

In all three grades, the difference between those who spoke English before grade 1 and those who didn't is particularly pronounced for pupils who have been in Canada no more than two years. In grade 4, for instance, the achievement of these recent immigrants is nearly 18% below that of the native English speakers. By contrast, for those who were in Canada three years or more, the difference is a mere 5%. In grade 8 the contrast between pupils who spoke English before grade 1 and those who didn't is 11% for recent immigrants (two years or less in Canada) and only 6% for pupils who have been here at least three years. Comparable figures for grade 12 are 17% and 4.5% respectively.

*We interpret "speaking English before grade 1" to mean "native English speaker."

More important yet than whether the pupils spoke English before grade 1 appears the question whether or not English is the language usually spoken in their home now. Those who answered negatively to this question score lower than those whose dominant language now is English. Statistically significant, the differences for grades 4, 8 and 12, overall, are respectively 7.7%, 6.9% and 6.4%.

Finally, the pupils were asked whether they can read a story in a language other than English. In grade 4, those who can and those who can't perform equally well. Statistically significant achievement differences are associated with the response to this question only in grades 8 and 12. One can only assume that by this time among those who read more than one language many individuals are included who have chosen a language orientation in their academic career.

For our purposes the most interesting findings, nevertheless, are the "non-results" in grade 4. The majority of the pupils in this grade who read in a language other than English do not have English as their predominant home language. It was shown above that a language other than English as the home language is in general associated with lower achievement. Apparently, this is not the case for those pupils in this group who can both speak and read the home language. Further statistical analyses confirm this interpretation. Not usually speaking English at home and not reading in another language (presumably at this age level the native tongue) is associated with the lowest achievement. This group of pupils scores 5.1% lower than pupils in the same position who do read their native language. Tentative explanations for this difference include reference to the relative emphasis placed in the home on literacy and to the possibility that those who read in their first language did so before learning to read in English and had, therefore, fewer problems in learning to read the latter language.

6.3 Kindergarten Attendance and Achievement

Grade 4 pupils were asked to indicate whether they had attended kindergarten. Almost 92% said they had; nearly 8% said they had not. As shown in Table 15, there is a consistent and sizeable difference in performance associated with this variable. For every domain the Mean Percent Correct was higher by 7% or 8% for those who had attended kindergarten than for those who had not. The difference on the combined score equals 7.8%. It is interesting to note that this effect exists regardless of sex, time in Canada, age and linguistic background.

TABLE 15
MEAN PERCENT CORRECT BY KINDERGARTEN
ATTENDANCE AND BY DOMAIN

Test Domain	Attended Kindergarten (92% of Grade 4)	Did Not Attend Kindergarten (8% of Grade 4)
Word Attack	77	69
Word Meaning	76	69
Passage Comprehension	84	76
Applied Reading	76	68

In considering the size of the effect it is important to remember that these pupils are four years removed from kindergarten. Either the learning achieved has a powerful and lasting effect, or the kindergarten variable mediates other factors such as parental priorities and scope of educational opportunities. Of course, the two interpretations are not mutually exclusive and can be valid simultaneously. In a related study Drill, Bradford and Grossett (1975) demonstrated the persistence of pre-school effects in a sample of 728 pupils over a three year time span.

6.4 Student Mobility and Achievement

Generally, the relationship between reading and the number of schools a pupil has attended is not very strong. Moreover, it appears to decrease from grade 4 to grade 12. In grade 4, the only significant difference ($p \leq .05$) in Domains 1, 2 and 3 is between those pupils who attended four or more schools and the others. In Domain 4, pupils who have attended three or more schools perform significantly less well than those with one or two schools. The latter incidentally, achieve virtually identical domain scores.

The absence of a strong relationship between mobility and reading achievement is in accordance with the earlier finding of Black and Bargar (1975). They found that in a sample of 208 grade 6 pupils' performance on the California Comprehensive Reading Test is not related to types of school attended, the number of schools attended and the grade level during which moves took place.

In grade 8, significant differences existed only in Domains 1 and 4. The pupils with six or more schools fell 4.4% and 4.8% below those who were in three to five schools and one or two schools, respectively. In grade 12, no significant differences were associated with this variable.

The information discussed above leads to the hypothesis that the effects of mobility may be strongest in the early school years, specifically in those areas of the reading curriculum characterized

by specific skills rather than general verbal competence.

6.5 Age and School Achievement

Table 16 indicates the performance of four age groupings at each grade level on the Comprehension domain. Identical patterns were found for the other domains.

In grade 4, the relationship between age and achievement is straightforward: the lowest scores were obtained by the youngest pupils, those exactly eight years or younger (approximately 1.2% of all pupils). They scored nearly 15% below the group average across objectives. Domain 2 in particular proved difficult for this group. Their score was a full 19% below the average and nearly 24% below that of the best performing group, the pupils in the last quartile of their ninth year.

TABLE 16
COMPREHENSION SCORES BY AGE AND GRADE GROUP

Age Grouping	Mean Percent Correct Comprehension Domain
<u>Grade 4</u>	
less than 8 years	72
8 to 9 years	83
9 to 10 years	85
more than 10 years	79
<u>Grade 8</u>	
less than 12 years	60
12 to 13 years	72
13 to 14 years	68
more than 14 years	60
<u>Grade 12</u>	
less than 16 years	62
16 to 17 years	79
17 to 18 years	73
more than 18 years	67

The finding that the youngest pupils did perform relatively poorly is in direct conflict with the results of the Language B.C. study where the pupils below nine years of age did the best. The authors of the Summary Report of that study postulated that the youngest pupils "may be the children occasionally ahead of their grade levels." (p. 15). The data obtained in this assessment do not support such an hypothesis. When the scores of pupils below nine are considered, the combined average is still the lowest of all age groups, some 10% below that of the oldest nine years olds.

A second group of relatively low performing pupils is formed by those over ten, a sizeable 26% of the population. Their mean (73.3%) for all objectives, is nearly 6% below the average for all pupils. The results discussed above pertain not only to the overall score, calculated across objectives, but they hold with only minor exceptions for each domain as well.

In grade 8 as well, the lowest scores are obtained by the youngest pupils (those exactly 12 years or younger) and by the oldest (those over 14 years). Whereas the former group is relatively small, 1.7% of the sample, the latter is fairly large, 33.6% of the sample. Across the four domains, the youngest pupils score 9.3% below the sample's average; the oldest pupils are off by 6.3%.

In grade 12, the relationships found in grade 8 are virtually duplicated. The very young pupils, those exactly 16 years or younger (1.6% of the sample) perform worst, scoring 10% below the sample average across domains. The oldest pupils, those over 18, (26.5% of the sample) are off the average by a much smaller 4.5%. The best performance is turned in by those pupils who are in the latter half of their 16th year. The Mean Percent Correct score averages 6.4% above the other pupils.

It should be pointed out that these results are somewhat at variance with those of other investigators. Callaway, Jerrolds and Gwaltney (1974) in a study of 277 tenth graders found no relationship between age at time of school entrance and reading achievement. More directly to the point, in Test Results, one of the final reports of the 1977 precursor to this assessment, the authors state that in grade 12 "an increase in age is associated with a decrease in performance level" (p. 51). Such is decidedly not the case in the present study.

6.6 Television Watching and Achievement

TABLE 17

T.V. AND ACHIEVEMENT IN PASSAGE COMPREHENSION
(Entries are Mean Percent Correct)

T.V. Time	Grade 4		Grade 8		Grade 12	
	M	F	M	F	M	F
None	83	87	62	72	69	75
<1 hour	85	86	67	71	76	76
1 hour	82	84	67	70	75	73
2 hours	84	84	68	68	72	71
3 hours	84	83	66	67	69	68
4+ hours	81	83	59	61	66	64

Table 17, though limited to Domain 3, Passage Comprehension, is illustrative of the relationship between T.V. watching and reading achievement in all domains.

As grade 4 shows a pattern somewhat different from that of grade 8 and 12, the results in this grade will be discussed separately. Language B.C. (1976) found that those watching more than four hours still outperformed pupils who reported not to watch T.V. at all. This finding is not supported in this assessment. In grade 4, the differences among groups are small. Nevertheless, those who watched most, scored overall, significantly below the others. Variations from objective to objective are relatively large and await further analysis.

As a large majority of the grade 8 pupils reported that they were also in this province during the Language B.C. assessment (1976), it is no great surprise that the relationship between T.V. watching and achievement in this grade is more in accordance with the pattern reported then. As the grade 12 results mirror those of grade 8, the following comments pertain to both grades.

As Table 17 shows, in Domain 3, with one exception, more T.V. means a lower Mean Percent Correct. However, the differences only become important in the case of the heavy T.V. watchers. In general, the Domain 3 results are representative of the other domains. Those who watched no T.V. at all do not score highest in the case of these two grades. In fact, when the Mean Percent Correct for all items is considered, the abstentionists do about as well as those who watched three hours. This is a misleading finding, however. Girls in the "no T.V." group do very well. The "no T.V." boys on the other hand turned in very low performances; only the boys who watched four hours or more performed worse. It appears that not watching T.V. may have a different meaning for each of the sexes.

6.7 Reading Habits and Achievement

It is commonly assumed that those who read most read best. In general the literature supports this dictum (cf. Guthrie, 1979). Additional, but not unqualified verification is provided by the results of the 1977 Reading Assessment (Summary Report, p. 30).

The results of this assessment allow no equivocation on the point at all. Table 18 tells the story of a very direct relationship. The entries are ranks. Those who read most frequently (rank 1) also achieve best. There is one exception to this maxim: Those who read comic books most frequently read most poorly. The table tells a tale of near perfect relationships, consistent across all domains in both grades.

The differences are often substantial and largest for variations in frequency of reading books. The Mean Percent Correct for the most avid readers in grade 8 is, for the various domains, between 19% and 25% above that for the pupils who don't seem to touch books voluntarily. In grade 12, the differences are still large, ranging from 14% to 19%.

Whereas it may be difficult to determine to which degree those who read much improve their skills and to which degree those who can read well enjoy doing so, there is no question that frequency

TABLE 18

FREQUENCY OF READING RANKS (FR*) FOR CATEGORIES OF
MATERIALS AND MEAN PERCENT CORRECT (MPC) ON
COMPREHENSION - GRADE 8

Magazines		Books		Comic Books		Newspapers	
FR	MPC	FR	MPC	FR	MPC	FR	MPC
1	69	1	75	1	60	1	68
2	67	2	71	2	63	2	70
3	66	3	69	3	66	3	66
4	59	4	66	4	68	4	63
		5	64	5	67	5	60
		6	62				
		7	54				

*1 = highest frequency

and achievement are strongly related. This is equally true for the positive as well as for the negative relationship between reading comic books and reading achievement. In regard to this relation, it may be defensible to argue that those who don't read well seek the easier appeal of comic books. To maintain that reading comic books has, in itself, a negative influence on achievement would be an over-interpretation of the data.

6.8 Reporting Variables Unique to Grade 12 and Reading Achievement

Though having a job in itself is not significantly related to achievement, the time spent on the job is, but only to a small degree. Only those pupils who work more than 20 hours per week fall by a small but consistent amount below their peers in achievement on all domains.

Far more strongly related to achievement is the future plans variable. Table 19 summarizes the salient data.

TABLE 19
FUTURE PLANS AND ACHIEVEMENT, GRADE 12
Mean Percent Correct

Domain	Job	Non-University Education	University	Other
Word Attack	49	56	75	58
Word Meaning	59	62	72	65
Comprehension	65	68	78	71
Applied Reading	67	70	80	73

Though pattern of performance not ⁵²unexpectedly conforms to that found in the 1977 Reading Assessment (Summary Report, p. 35), the differences are somewhat larger. The performance of the university bound students is between 6% and 14% above the provincial average. Those aspiring to a job rather than to further education generally have the lowest Mean Percent Correct.

CHAPTER 7

INSTRUCTIONAL PRACTICES AND CURRICULUM IMPLEMENTATION

To fully understand a program and assess its success, systematic attempts must be made to identify, examine and document the context within which it operates. It is for this reason that provincial assessments, such as this one, survey those most directly involved: teachers and school administrators. To this end questionnaires were sent to administrators and teachers throughout the province. Administrator questionnaires (AQ) were sent to every public school in the province; 1 272 or 79% were returned. A 12% systematic random sample of elementary teachers* yielded a sample of 1 504 teachers. Of these, 1 029 or 68% returned their questionnaires. Finally, 1 651 questionnaires were mailed to all secondary teachers* teaching two or more classes of English or one or more classes of reading; 1 114 or 68% of the questionnaires were returned.

7.1 Professional Preparation

At the elementary level, 47% of questionnaires were answered by teachers whose major responsibility is for a primary grade, and 53% were answered by those whose main responsibility is for an intermediate grade. Almost half (43%) of these primary and intermediate teachers teach more than one grade level. More than 85% have had four or more years teaching experience, and nearly 42% have taught for eleven or more years. Thus, the respondents are by and large experienced elementary school teachers. In 1976 (Language B.C.) 40% of the elementary teachers reported to have no course work in reading. Now only one-third have taken fewer than one university or college course in the teaching of reading, and more than two-thirds reported taking one or more.

TABLE 20

PERCENTAGE OF RESPONDENTS WITH SPECIFIED
NUMBER OF COURSES AND WORKSHOPS IN READING

	Courses			Workshops		
	less than 1	1-2	three or more	none	1-2	three or more
<u>Teachers</u>						
Elementary	28	53	19	15	46	39
Secondary	51	39	10	44	43	13
<u>Principals</u>						
Elementary	32	58	19	20	41	40
Secondary	69	27	5	69	25	6

*For a complete specification of sampling and selection criteria, see the General Report.

Nearly three-quarters of the primary teachers reported that "a moderate amount" or "a good deal" of time on professional days was devoted to reading while only 55% of intermediate teachers responded to these categories. These latter figures suggest that individuals responsible for planning professional days for intermediate teachers might provide more time for reading-related workshops and activities.

Most of the secondary teachers, comparable in experience to elementary teachers, reported that reading instruction takes place in Language Arts/English classes. When asked what percent of time is spent teaching reading in their English classes, 73% reported spending one-quarter or less of their class time teaching reading, and only 4% said they spend more than 50% of class time teaching reading. In terms of formal coursework these teachers are much less prepared than their elementary colleagues. Fewer than half have taken one or more university or college course in the teaching of reading. Low as this figure may be, it is nearly twice the percentage of secondary teachers in the 1976 Language B.C. study who reported they had university training in reading.* Almost three-quarters said that "none" or "very little" of the time on their professional days was devoted to reading. These responses suggest that more attention must be paid to providing reading-related courses, workshops and activities for secondary teachers of English. Only 20% of the teachers reported that reading instruction also takes place in classes in other subject areas. It is therefore also important that subject matter teachers be made aware of methods for helping their students to read subject matter assignments.

7.2 Impact of Ministry Publications

7.2.1 Elementary Guide

The Ministry has recently published new Curriculum Guides and Scope and Sequence Charts for Language Arts and English. More than 73% of elementary teachers reported that they have their own copy of the Language Arts Curriculum Guide, Grades 1-7. While nearly half the teachers reported they had received no formal orientation toward the content and use of the Guide, almost 83% said they consult it. However, only 17% of teachers reported significant impact of the Guide on their teaching; 83% checked "minimal" or "no" impact.

7.2.2 Secondary Guide

At the secondary level, 76% of teachers have their own copy of the Secondary Guide, English 8-12. More than 45% said they had received no formal orientation to the Guide, but nearly 88% reported consulting it. Again a small percentage, 26% reported that it has had "significant" impact on their teaching; 75% reported little or no impact.

*See the General Report for a full comparison and an analysis of comparability of samples.

7.2.3 Resource Books

The Ministry has also published Resource Books for Teachers for the teaching of English 8 (1977), English 9 (1978), and English 10 (1978). Over 94% of teachers at those grade levels reported access to a Resource Book in their own school, but 63% said they had received no formal orientation to it. When asked about the impact of it on their teaching only 35% said it had had significant impact, and 65% reported minimal or no impact.

The large percentage of elementary and secondary teachers who report no significant impact of the Guides and Resource Books on their teaching may reflect a lack of understanding regarding their use. Orientation sessions should help teachers use the Guides and Resource Books effectively. Although a large percentage of teachers report consulting them, they may use these resources ineffectively; thus their impact would, understandably, be minimal.

7.2.4 Assessment Reports

One reason the Ministry makes available assessment reports is to affect instruction and learning. Of the five publications listed concerning Language B.C. (1976), the most frequently read by elementary teachers was the Goals and Objectives Report, read by a mere 17%. Of the four publications listed concerning the B.C. Reading Assessment (1977), the most frequently read was the Summary Report, read by only 23% of elementary teachers. Perhaps understandably, 61% said the results and recommendations have had no impact on their own teaching.

Responses from secondary teachers concerning the B.C. Reading Assessment (1977) were somewhat different. Of the five publications, the most frequently read was the Summary Report, read by over 44%. Only 40% said that results and recommendations had had no impact on their own teaching.

By contrast a large percentage of administrators reported having read assessment reports. Of the Language B.C. (1976) and B.C. Reading Assessment (1977) publications, the Summary Reports were the most frequently read, by 73% and 84% of principals, respectively.

Teachers and administrators were asked to indicate the impact of previous reading assessments on ten educational practices. Of the practices listed, teachers and administrators disagreed about the impact on five. That is, principals reported a significant impact much more frequently than did elementary or secondary teachers on: provision of in-service, change in curriculum emphasis, change in evaluation practices, provision of supplementary materials, and improvement of instructional practices. The principals most frequently cited impact of the assessment reports on the provision of in-service. However, only one-third acknowledge this impact to be significant.

7.3 Quality of Leadership

Vital to the successful implementation of a curriculum are the quality of leadership provided and the role of the participants in the decision-making process (Gross, Giacuinta, & Bernstein, 1971; Common, 1979).

Table 21 gives responses to the question, "Has anyone in your school assumed leadership in the reading program?"

TABLE 21

TEACHERS' VIEW OF WHO ASSUMES LEADERSHIP IN
READING INSTRUCTION
(Entries are percentages)

	Elementary	Secondary
Principal	18	4
Another Administrator	6	2
Department Head	*	17
Learning Assistance Teacher	12	29
Librarian	1	0
Another Teacher	8	12
No-one in particular	55	37

*Response category not included on questionnaire.

Responses from elementary and secondary teachers varied considerably. At the elementary level, where students' basic reading skills are introduced and developed, over half the teachers responded that "no one in particular" has assumed leadership in reading and only 18% selected the principal as leader. At the secondary level, fewer teachers responded that no one has assumed leadership. In their perception, the principal plays a very minor leadership role; the Learning Assistance Teacher or a Department Head seem to provide most of the curriculum leadership. Of course, it cannot be determined from these data whether the principal specifically asked the Learning Assistance Teacher or a Department Head to be responsible for the reading program.

It is difficult to determine how much knowledge of reading instruction and reading programs a principal needs in order to be an effective curriculum leader in this area. For some, specific knowledge may be indispensable. Others can perhaps provide effective leadership on the strength of more general skills and information.

The data collected on specific preparation of principals in this area shows the familiar and not surprising contrast between elementary and secondary respondents. Elementary principals reported they have taken the most courses and workshops in the teaching of reading. In fact, the majority of secondary principals responded they have taken no courses and attended no workshops. In addition, most elementary principals said they have received formal orientation to the content and use of the new reading programs while most secondary principals said they have not. What is unusual is that these same elementary

principals, in the perception of their teachers, are not providing leadership in reading. In the light of the recent research (Kean, et al, 1979) indicating that the principal's degree of commitment to the school reading program was the most significant factor in predicting the reading performance of elementary pupils, this finding in B.C. is a matter of some concern.

7.4 The Decision-Making Process

In November of 1978, new reading programs were prescribed and authorized for use in B.C. Elementary schools, grades 1-7, by the Ministry of Education. The questionnaires for administrators and elementary teachers examined the way in which the decision was made regarding the new reading program(s) selected for use in each school and administrators' and teachers' satisfaction with this procedure.

Table 22 summarizes the view of both groups of respondents.* Administrators and teachers seem to agree that new reading programs were more often selected by district staff. More principals than teachers felt that teacher participation was moderate or extensive, and fewer felt it was minimal. The agreement in perception, nevertheless, is substantial for both groups' level of satisfaction with the degree of teacher participation. Even so, the fact that one-third of the teachers felt that their input was minimal and insufficient should not escape attention.

TABLE 22
TEACHERS' AND PRINCIPALS' VIEWS ON IMPLEMENTATION
OF NEW READING PROGRAMS
(Entries are percentages)

	Teachers	Principals
Selection made at:		
district level	54	58
school level	43	40
teacher level	3	2
Teacher participation in decision:		
minimal	34	20
moderate	33	39
extensive	34	41
Satisfaction with teacher participation:		
satisfied	55	72
not satisfied	30	22
no opinion	15	6

Taken together, these data suggest that the teachers, those persons most directly involved in the reading programs, are of the opinion that they did not play a sufficiently significant role in the selection of the programs. Whether or not these factors will have an effect on the successful implementation of the new programs remains to be seen. The question merits study.

7.5 Reading Instruction

As mentioned above, many schools across the province introduced new reading programs in the elementary schools in 1980. Hence, one of the purposes of this assessment was to collect baseline data on various aspects of instructional practices. The General Report contains considerable details. Here only some major findings will be related. Moreover, instructional practices at the secondary level in 1980 appear very similar to those reported in the following sources: Kinzer (1976), Language B.C. (1976) and B.C. Reading Assessment, Summary Report (1977). For this reason comments in this Summary Report are mostly restricted to the elementary schools.

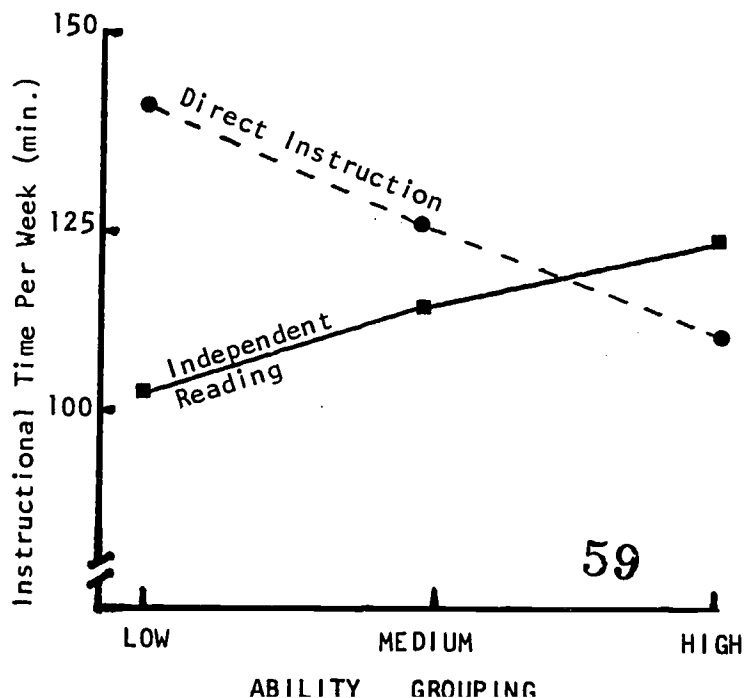
7.5.1 Elementary

Included in the Elementary Questionnaire were several questions about reading programs prescribed and authorized for B.C. elementary schools by the Ministry of Education. Nearly 59% of elementary teachers reported using one of the new prescribed programs. Of these teachers, 78% are using Ginn 720, 13% are using Holt, Language Patterns, and 9% are using Holt, Impressions. Over 80% said they have received formal orientation to their new programs. When asked about the authorized reading programs, only 11% of teachers reported using Nelson, Language Development Reading Program, and only 7% reported using Gage, Strategies for Language Arts.

The Elementary Questionnaire also attempted to evaluate the average amount of time pupils spend on reading-related activities. Three questions focussed specifically on direct instruction from the teacher, independent reading (time scheduled for silent reading as well as other opportunities available for free reading), and other reading-related activities.

FIGURE 1

CLASS TIME SPENT ON READING RELATED ACTIVITIES AS
A FUNCTION OF GRADE 7 STUDENT READING ABILITY



As can be seen from Figure 1, while the low ability students receive more direct instruction, it is the higher ability students who are given more class time for independent reading. This pattern, shown in Figure 1 for grade 7 students is consistently found for all other elementary grades.

When the time reserved specifically for independent reading is considered it is very interesting to note that there is little variation across grade levels. Teachers at all grades appear to set aside, on the average, 15 minutes per day for independent, silent reading. When asked whether this time allocation has changed since 1977, 56% of teachers said "no", 38% said "yes, increased", and 6% said "yes, decreased". Apparently the great majority of teachers recognize the importance of providing a time for students to practise their reading skills in materials of their own choice. However, 15 minutes per day, for instance, is roughly enough time to read 60 pages per week of a typical grade 4 novel. We question whether this is indeed enough reading for those pupils who do not read outside of school.

7.5.2 Secondary

Questions in the Secondary Questionnaire requested information about the use of six different reading texts. The Be a Better Reader series was the most widely used, with 10% of the teachers reporting "extensive" use and 40% reporting "some" use; however, 50% reported no use at all. When asked if they "need" the texts, no more than 36% responded affirmatively to any of the series.

In addition, almost half the teachers believe that 10% or fewer of their students receive developmental reading instruction, but over 40% said that the majority of students should receive such instruction. As indicated at the beginning of this chapter, 73% of the teachers reported spending only 25% or less of their English class time teaching reading; the inference might be drawn from the available data that the teachers believe the majority of developmental reading instruction should take place in a class other than English.

CHAPTER 8

Conclusions and Recommendations

Many positive comments can be made regarding the performance of the pupils on the test items. Four domains were assessed in three grades. In only two of the twelve resultant evaluations was the achievement rated less than Satisfactory. Moreover, all grades were rated higher in Domain 4 (Applied Reading) than in the preceding assessments when performance in this domain was less than satisfactory across the board. Again, the direct comparison on items given in both 1976/77 and 1980 speaks well for the 1980 grade 4 and grade 8 pupils -- particularly for those in grade 4.

However, in contrast to this positive view is an interpretation which is less comforting. There is the obvious fact that the pupils in grade 12 did not do well at all compared to their peers in 1977. There is also the fact that the domains rated Marginal in 1980 were rated Very Satisfactory or Satisfactory in 1977. More disturbing, however, is the final fact: none of the domains, in any of the grades, was rated as Strong. Performance on the large majority of objectives was at best "merely" Satisfactory. This is a sobering realization.

This assessment shows that in the context of current expectations the pupils leaving the primary grades achieve fairly well. Pupil performance to a substantial degree, can be linked to instruction. Therefore, collectively, those involved with reading instruction in the primary grades are to be commended.

As children progress through the intermediate grades, more and more demands are made upon their reading skills. As shown, the grade 8 pupils perform at a level comparable to that of 1977. There is no doubt, again, that the efforts of many educators were influential in securing that level of achievement.

Yet a question persists. What can be done to counteract the gradual drop in relative performance from the early to the later grades?

1. *We recommend that the Ministry of Education re-examine the adequacy of the primary Language Arts Curriculum in preparing children to meet the content area reading demands made in later grades.*
2. *We recommend that the teachers in the primary grades place more emphasis on content area reading materials, and on the specific skills required in understanding such materials.*
3. *We recommend that intermediate teachers continue to promote the development of skills in a systematic instructional program emphasizing the use of Structural Analysis, the development of Multiple Meanings, and higher levels of comprehension combined with ample opportunity and support for independent reading. The lower achievement of boys at this level must be addressed as well.*

These recommendations, however, are not sufficient. They do not address the larger question as to how to raise the students' overall performance.

Fortunately, the data base compiled in this assessment, when interpreted in the context of the professional literature, sheds at least some light on the matter. A serious effort to improve the overall literacy of B.C.'s young people would focus, in policy, in instructional practices and in research upon the following pressure points.

Reading Programs at the Secondary Level

This assessment has revealed cause for concern over the present situation in the secondary grades. Similar findings surface in the first assessment of Reading in 1977.

4. *We recommend that the Ministry of Education and school districts take, as an immediate priority, the actions necessary to ensure improvement of the reading skills of secondary students.*

5. *We recommend that, in carrying out recommendation 4, the Ministry of Education, district and school staffs should*

- clarify the roles and responsibilities required to ensure the provision of reading instruction for all students in secondary grades;*
- increase systematically the proportion of class time spent on improving reading skills;*
- facilitate the transition from the "continuous progress" philosophy of reading instruction of the intermediate grades to the programs in the secondary grades;*
- evaluate the reading resource materials available to secondary teachers and ensure that these meet identified needs.*

The Implementation of Provincial Curricula

It appears that the efforts to prepare teachers for the new reading curricula have been relatively successful at the elementary level. Yet, even here the impact of the provincial Curriculum Guide is minimal. At the secondary level the situation is worse. Here, not only the Guide, but also the Resource Books, appear to have little impact.

6. *We recommend that the Ministry of Education co-operate with school districts in continuing and extending current efforts to ensure that all teachers have the opportunity to participate in orientation sessions designed to increase the understanding and use of curriculum guides, resource books and prescribed and authorized materials.*

7. We recommend that the Ministry of Education routinely evaluate the practical effects of those publications intended to have an impact on the instruction pupils receive.

The Preparation of Teachers for Teaching Reading

The largest need appears to be at the secondary level where the situation is desultory. Yet, there is considerable room for improvement at the elementary level, especially for intermediate teachers. Basic questions regarding the adequacy of preparation must be raised.

8. We recommend that teacher training institutions in B.C. cooperate with the Ministry of Education and the B.C. Teachers' Federation in evaluating the efficiency of present programs of teacher education in the area of reading instruction. This evaluation should lead to the training of teachers with the skills and the confidence to teach reading effectively.

9. We recommend that school district hiring policies require that successful candidates for elementary teaching positions possess training and expertise in the teaching of reading.

10. We recommend that school districts increase the opportunity for reading-related workshops and professional development activities, with particular emphasis at the intermediate level.

11. We recommend that school districts provide, for all secondary teachers, in-service education designed to improve assistance to students in reading their texts effectively.

Instructional Leadership

There appears little question that schools with good reading programs have strong and knowledgeable leadership -- inspiring, unifying and stabilizing the efforts of individual teachers. Nowhere is this more important than at the secondary level where much improvement of developmental or "normal" reading skills can take place only through reading in all areas of the curriculum. In this regard, B.C.'s schools appear weak. Principals, even principals of secondary schools, must be curriculum leaders or else they risk curriculum failure.

12. We recommend that faculties of education in B.C. continue and extend current efforts to provide and require, for school administrators, training in curriculum supervision and implementation.

13. We recommend that school district personnel selection policies give priority to candidates for school administrative positions who possess training and expertise in curriculum supervision and implementation.

14. We recommend that schools designate selected personnel to provide leadership in reading instruction and programs, where this has not already been done.

Reading and Attitudes

There is a consistent theme throughout the information yielded in this assessment: good readers read a lot and they like it. A truism? Perhaps, but there are various discomfoting tendencies in the data that, in the light of this "truism" need urgent attention. Boys read less than girls do. Boys don't read enough. Low ability students have less time to read in class than do high ability students. Grade 12 students may not read enough. Reading comics is not sufficient for normal growth in reading skill. Too many boys in grade 8 and 12 don't like reading. Those that watch T.V. excessively, read little or not at all.

15. We recommend that all teachers provide programs that encourage and require students to engage in independent reading, both in and out of class.

In our view, this recommendation means that suitable materials are at hand; that expectations must be set and maintained; that instruction must focus on independent reading as an outcome. It is important to remember that reading is a tool for gaining information; one essential goal is to produce readers who are independent learners.

There are many pupils in B.C.'s schools who do not like reading. The majority of these are boys in grade 8 and grade 12.

16. We recommend that all teachers take active measures to stimulate interest in reading with the goal of increasing positive attitudes towards reading.

Active dislike often is the outcome of negative experience. Common sense and research evidence indicate that a negative attitude towards reading often follows actual or perceived lack of success in learning to read well. As educators we have a straightforward charge: prolonged failure to learn to read must be avoided at all costs. We mean that literally, and we recommend literal acceptance.

In our view learning to read is, for most pupils, a relatively simple task, and, based on the data from this assessment the majority of primary students are correctly answering appropriate reading test items. However, in the opinion of the authors, the gradual decline in relative performance from the early to the later grades may nevertheless be due to reading failure at the primary level. Research has identified specific and manipulatable causes of failure. Prolonged failure becomes irremediable to a degree far out of proportion to the seriousness of the initial difficult

17. We recommend that the Ministry of Education and school districts investigate all possible avenues to ensure that all children have learned to read in the first two grades of schooling and take appropriate action.

Kindergarten and Reading Achievement

The results of this assessment indicate that by grade 4, students who did not attend kindergarten still perform significantly below those who did attend kindergarten.

18. We recommend that the Ministry of Education examine the appropriateness of existing legislation and current policies dealing with the provision of Kindergarten and attendance requirements.

Educational Research

Many of the background variables described in earlier chapters are closely related to reading achievement and to attitudes towards reading. Some of these relationships are peculiar to one sex, others are more pronounced at a particular age or grade level.

19. We recommend that the Ministry of Education cooperate with educational researchers to extend efforts to understand further the patterns and scope of causality among achievement, attitude and background variables that have been revealed in this assessment.

Future Assessments

Literacy is a priceless commodity, to be cherished by individuals, to be promoted and safeguarded by society. It is more than just the ability to recognize spoken language in print; it is more indeed, than simply the ability to understand written messages. Literacy connotes critical independence of thought in interpreting all those written materials affecting an individual's physical and psychological needs.

This assessment was, as stated, not an assessment of basic or functional literacy in the current use of these terms. Nevertheless, its results must be interpreted in the larger frame of reference of a continued concern for the level of literacy of B.C.'s population. The conclusions drawn from the data provided and the recommendations made find their context in an awareness of broad issues of education toward literacy.

20. We recommend that the Ministry of Education, in its schedule of future assessments, not be restricted to the assessment of reading but address the broader issue of literacy.

In terms of procedures, many positive aspects of this assessment should also be mentioned. The assessments seem to have gained wide acceptance. Solid return rates for tests and questionnaires testify to this. The procedures for refinement of items and interpretation of results involved many individuals from a broad spectrum. Yet, without exception all procedures were executed effectively and with considerable benefit to the entire assessment effort. At the beginning of the second cycle of assessment the Ministry of Education appears to have arrived at a set of satisfactory general procedures.

Yet three procedural aspects of the assessment, as documented in the preceding chapters, merit attention. First, the functioning of the Interpretation panel warrants further study. The question of constancy of panels' expectations from assessment to assessment is of prime importance and concern. Do ratings of achievement change because of changes in panel members' standards or because of factors intrinsic to the test items and responses to them? Secondly, we believe that the Ministry must pay further attention to the implementation of the results. The impact of the assessments at the school and classroom level, though not negligible, is far from strong. Questions as to whether the impact is satisfactory demand serious attention. Thirdly, much information in this and other assessments is gathered by means of questionnaires. Across assessments, questions are frequently duplicated. The information yielded by the questionnaires is essential to the overall effort. We feel, therefore, that it is desirable for the Ministry to invest in a cross-validation of this information by standard alternative data collecting procedures.

21. We recommend that present procedures form the basic structure of future assessments provided that systematic empirical analyses of the various phases are undertaken.

Reading involves the interaction of information, language and thought. A socially fair education system tries to its limits to help all pupils, irrespective of ethnic-linguistic background and educational-social status of parents, to develop reading skills through the focused development of language skills, through making rich structures of information available by many means, and through challenging all children to think.

B.C.'s children fare well when compared to their peers across Canada (Anderson, Taerum and Andersson, 1980). We urge, on the evidence, that every effort be made to improve upon the system that has done that well so far. The demands upon an individual's reading skills are increasing constantly. Now is not the time to be Satisfied.

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READING REVIEW PANELS

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Evelyn Rigby, Teacher, Powell River School District
Lesley Spry, Language Arts Facilitator: Primary, West Vancouver School District
Keith Thibodeau, Principal, North Vancouver School District

Qualicum - Intermediate

Jean Brown, Trustee, Lake Cowichan School District
John Crawford, Teacher, Glenlyon School for Boys, Victoria
A. G. Fry, Teacher, Saanich School District
Olive Guedes, Teacher, Nanaimo School District
Dickey Isenor, Elementary Supervisor, Courtenay School District
Margaret Johnson, Supervisor of Instruction, Vancouver Island North School District
Ethel Rennie, Teacher, Campbell River School District
Diane Robson, Parent, Saanich
Barbara Scaife, Teacher, Qualicum School District
Ronald Smith, Teacher, Alberni School District
Martyn Wilson, Vice-Principal, Vancouver Island West School District

Richmond - Intermediate

Halven Charlten, Teacher, Richmond School District
Ann Christensen, Teacher, Merritt School District
Andy Ellis, Principal, Central Coast School District
Karen Harper, Teacher, Kamloops School District
Patricia Johnson, Teacher, Surrey School District
Brian Juneke, Teacher, West Vancouver School District
Patricia Langley, Teacher, Catholic Public Schools, Vancouver
Diane McKendrick, Trustee, Powell River School District
Gordon Pybus, Principal, Mission School District

Richmond - Secondary

Jean Halcrow, Teacher, Coquitlam School District
Ida Hood, Teacher, Surrey School District
Gerry McCann, Teacher, Vancouver School District
Donald Olsen, Teacher, Langley School District
June Pierson, Teacher, Crofton House School
Jo Anne Ryeburn, Teacher, New Westminster School District
James Skinner, Teacher, Chilliwack School District
Muriel Tanner, Trustee, Delta School District
Diane Whidden, Teacher, Richmond School District

Prince George - Secondary

Adele Beaveridge, Teacher, Prince George School District
Don Chapman, Principal, Quesnel School District
Daniel Domes, Teacher, Peace River South School District
Elaine Johnson, Trustee, Terrace School District
Jill Lebedoff, Teacher, Quesnel School District
Connie Scott, Teacher, Burns Lake School District
Leslie Sookochoff, Teacher, Prince George School District
Bob Strain, Coordinator, Prince George School District
Sister Gonzaga Wheartley, Catholic Public Schools of Prince George Diocese

SCHOOLS OF THE PILOT TESTING

The authors of this report are very grateful to the students, staff and administrators of the following schools who participated in the pilot test process in October and November of 1979.

Primary Pilot (Grade 4 Tests)

Amy Woodland Elementary, Cranbrook School District
Carney Hill Elementary, Prince George School District
Central Elementary, Chilliwack School District
Cleveland Elementary, North Vancouver School District
Comox Elementary, Courtenay School District
Courtenay Elementary, Courtenay School District
Cultus Lake Elementary, Chilliwack School District
Doncaster Elementary, Victoria School District
Durrance Elementary, Saanich School District
Eric Langton Elementary, Maple Ridge School District
Foothills Elementary, Prince George School District
F. W. Howay Elementary, New Westminster School District
Gibson Elementary, Delta School District
Gordon Head Elementary, Victoria School District
Hammond Elementary, Maple Ridge School District
Herbert Spencer Elementary, New Westminster School District
Highlands Elementary, Cranbrook School District
J. Alfred Laird Elementary, Windermere School District
Lindsay Park Elementary, Kimberley School District
Little Mountain Elementary, Chilliwack School District
Lord Kelvin Elementary, New Westminster School District
Quinson Elementary, Prince George School District
Rock City Elementary, Nanaimo School District
Sardis Elementary, Chilliwack School District
Sir Richard McBride, New Westminster School District
Tsolum Elementary, Courtenay School District
Unsworth Elementary, Chilliwack School District
Yennadon Elementary, Maple Ridge School District

Intermediate Pilot (Grade 8 Tests)

A. W. Neill Junior Secondary, Alberni School District
Belmont Secondary, Sooke School District
Booth Memorial Junior Secondary, Prince Rupert School District
Chilliwack Junior Secondary, Chilliwack School District
Crofton House School, Vancouver
David Thompson Secondary, Windermere School District
Eric J. Dunn Junior Secondary, Alberni School District
Hatzic Junior Secondary, Mission School District
Maple Drive Junior Secondary, Quesnel School District
Mission Junior Secondary, Mission School District
Mt. Klitsa Junior Secondary, Alberni School District
Parkland Junior Secondary, Cranbrook School District
Prince George College, Prince George

Intermediate Pilot (Grade 8 Tests) (cont.)

Sir Frederick Banting Junior Secondary, Coquitlam School District
Spencer Junior Secondary, Sooke School District
Wellington Junior Secondary, Nanaimo School District

Secondary Pilot (Grade 12 Tests)

Belmont Secondary, Sooke School District
Burnaby South Secondary, Burnaby School District
Crofton House School, Vancouver
Kelly Road Secondary, Prince George School District
Langley Secondary, Langley School District
Lambrick Park Secondary, Victoria School District
New Westminster Secondary, New Westminster School District
Prince George College, Prince George
Prince George Secondary, Prince George School District
Prince Rupert Secondary, Prince Rupert School District
Richmond Secondary, Richmond School District
Stanley Humphries Secondary, Castlegar School District

READING INTERPRETATION PANELS

Grade 4

Trish Chong, Teacher, Delta School District
Owen P. Corcoran, Principal, Prince George School District
Leslie Dyer, Teacher, Langley School District
Jerome Gibson, Principal, Shuswap School District
Nola Godinovich, Consultant, Central Okanagan School District
Olive Guedes, Teacher, Nanaimo School District
Terry Hull, University of British Columbia
Lester Inman, Trustee, Abbotsford School District
Margaret Johnson, Supervisor of Instruction, Vancouver Island North School District
Susan Elizabeth McBride, Teacher, Richmond School District
Eileen Mallette, Teacher, Surrey School District
Freda Pryce, Parent, Vancouver School District
Florence Roberts, Cranbrook Public Library
Lesley Spry, Language Arts Facilitator, West Vancouver School District

Grade 8

Gary Begin, Trustee, Burnaby School District
Dennis Fawcett, Supervisor of Instruction, Merritt School District
Bill Fletcher, Teacher, Mission School District
Brent Gillies, Teacher, Windermere School District
Brian Junek, Teacher, West Vancouver School District
Constance Kent, Teacher, Arrow Lakes School District
Betty Merrill, Canadian Union of Public Employees, Coquitlam
Sue Murphy, Parent, Vancouver
Joyce Rhind, Coordinator, Burnaby School District
James Skinner, Teacher, Chilliwack School District
Frank Sloat, Trustee, Qualicum School District
Diane Southern, Teacher, Sooke School District
Judith Stubbs, Teacher, North Vancouver School District
Wendy Sutton, University of British Columbia
Lynda Woodhead, Teacher, Prince Rupert School District

Grade 12

Sheilah Allen, University of Victoria
Adele Beaveridge, Teacher, Prince George School District
Neville Cox, Executive Director, Mission Memorial Hospital
Wayne Cruchley, Consultant, Canada Employment & Immigration Commission
Dan Domes, Teacher, Peace River South School District
Lynette Grants, Teacher, North Vancouver School District
James Landy, Principal, Lillooet School District
Gerry McCann, Teacher, Vancouver School District
Malcolm F. McGregor, Parent, Vancouver School District
Diane McKendrick, Trustee, Powell River School District
Bob Overgaard, Consultant, Curriculum Development Branch
Bill Schermbucker, Capilano College, North Vancouver
Anita van Ginkel, Teacher, Coquitlam School District