THE DEVELOPMENT AND TESTING OF AN EXPERIENCE-BASED INFORMAL READING INVENTORY

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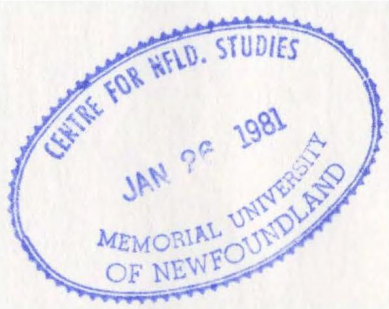
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THE DEVELOPMENT AND TESTING OF AN EXPERIENCE-BASED INFORMAL READING INVENTORY

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ABSTRACT

The purpose of this study was to develop an informal reading inventory based on the experiences of Newfoundland school children and to test the ability of this instrument to accurately measure the instructional reading level of those students to whom it was administered.

Passages for this Experience-based Reading Inventory (ERI) were selected from a collection of language experience stories written by children in Newfoundland and Labrador. All passages were subjected to an analysis of their readability by application of the Spache Readability Formula for materials at the primary levels and with the Harris-Jacobson Formula 2 for those thought to be at or above the grade four level of difficulty.

The sample consisted of twenty-eight students randomly selected from the total grade four population of four schools under the jurisdiction of the Roman Catholic School Board for St. John's. The test battery for each child consisted of the experimental instrument, the Analytical Reading Inventory, the Metropolitan Achievement Test and the Slosson Oral Reading Test. All tests were administered within a three-week period.

The ability of the ERI to accurately assess student instructional reading levels was tested by comparing silent

reading scores obtained with those obtained on the ARI and the MAT. Results were statistically analyzed by means of a t-test to test for significant differences between mean instructional level scores as measured by the informal reading inventories. Results were further analyzed by subjecting data to examination by means of a Pearson product-moment correlation coefficient to test the strength of the relationship between the MAT, the ARI and the ERI.

At the .05 level of confidence, statistical analysis revealed that the difference between the mean instructional level scores of the ERI and the ARI was not significant. It was also found that there was a moderately high correlation between scores obtained on the ARI, the ERI and the MAT. This would appear to suggest that the three tests were measuring the same constructs. Final results appear to indicate that an experience-based reading inventory as constructed for this investigation is capable of accurately assessing student instructional reading level scores.

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CHAPTER I

THE PROBLEM

Background of the Study

Stauffer (1969) confirms the prime importance of reading skill when he states that "basic to the accumulation and utilization of the knowledge demanded of our new age is communication; critical among communication skills is reading" (p. 40).

Hilton (1973) emphasizes that the ability to read reasonably well is a necessity for progress in school, occupational success and mobility, as well as participation in civic affairs. He further hypothesizes that failure to achieve a reasonable level of reading success is to risk the possibility of impinging on personality development and effective living. Betts (1936) states that reading ability is essential to normal progress in all academic subjects. It is clear that the development of reading capabilities in all students is essential for academic progress as well as for general life skills.

Research demonstrates that it is imperative that each child be taught to read to the limit of his capabilities (Bond & Tinker, 1973). Sheldon (1970) contends that if children are to be taught and taught properly they must

be accurately diagnosed. Bond and Tinker (1973) assert that with proper instruction, based on an assessment of individual student needs, many simple reading difficulties can be remediated before they become more complex disabilities. Johnson (1970) asserts that reading needs can be diagnosed only through observation of reading performance.

Research literature abounds with statements emphasizing the need for the accurate diagnostic assessment of individual reading strengths, weaknesses, levels of achievement and interests (Betts, 1936; Bond & Tinker, 1973; Farr, 1970; Johnson & Kress, 1968; Marcus, 1974). With the results of a thorough pupil evaluation indicating present levels of skill attainment and ability, a classroom teacher has at his or her disposal the data necessary to select suitable methods and levels of instruction, the appropriate reading materials, as well as the skill areas needing particular emphasis (Johnson & Kress, 1968).

Placing students in materials which are inappropriate for their present level of skill development has long been seen as a major cause of reading difficulty and frustration, Kelly (1970) has stated. The task of matching pupils and materials has traditionally been and continues to be the province of the classroom teacher (English, 1974). Johnson and Kress (1968) contend that it is therefore essential that each teacher be familiar with the reading levels of every child so as to be able to select reading materials with

which each student can successfully cope.

Jones (1948) found that children placed in materials suited to their reading levels experienced a greater amount of reading growth than students who did not receive such an individualized approach. A careful match of student ability to perform at a given level and consequently the suitability of available materials can only be ascertained through careful and continuous diagnosis of individual student abilities (Powell, 1972).

This concern for accurate diagnosis as a prerequisite to the selection of instructional methods and materials has been expressed by Grace (1976), and in recommendations proposed by the Report of the Royal Commission on Education and Youth (1967). The Commission recognized that if instruction is to provide the maximum opportunity for learning, the methods and materials selected must suit the diagnosed needs of the immediate instructional group rather than those of a hypothetical group. The teacher must have accurate and current information about each pupil's level of reading achievement (Kelly, 1970). Diagnosis which indicates a student's instructional level can offer this information to the teacher.

There are a number of formal and informal methods for appraising reading growth and skill development, namely, standardized tests, teacher-made tests, criterion referenced tests and informal reading inventories (Bond & Tinker, 1973).

A combination of these techniques may be used to verify a teacher's own observational assessment (Lee & Allen, 1963).

Bond and Tinker (1973) state that standardized tests do have a valid and recognized function in an evaluation program. However, other educators, namely, Karlin (1973), McCracken (1962) and Sipay (1964), appear to have some reservations as to the general efficacy of standardized instruments in assessing instructional levels and reading needs.

In a study conducted by McCracken (1962) it was found that standardized test grade levels were approximately two years higher than the instructional levels of pupils as indicated by an informal reading inventory. The spread between grade level scores on the standardized instrument and instructional level scores on the IRI appeared to indicate a potential problem with interpretation if only a standardized test was used for reading placement. Karlin (1973) found that standardized test results sometimes placed students in materials which they were ill-equipped to handle. Sipay (1964) expressed the same reticence as to the validity of using standardized test results for the selection of instructional materials.

Standardized group reading test results are frequently not sufficiently diagnostic to be of practical value in determining individual reading needs, selecting materials or organizing group composition (Daniel, 1962; Livingston,

1972; McCracken, 1962). Livingston (1972) found that the standardized tests he studied "did not measure, and/or measure well, the skills and abilities inherent in the reading process". Nevertheless standardized testing procedures do have an essential role to play in gathering data to serve as a basis for studying the validity of information gathered from more informal sources and as a method of comparing the level of achievement of one group to the norms established for the test (Allen, 1976; Grace, 1976). There are other procedures, however, which provide more of the diagnostic information so essential to the classroom teacher.

Austen and Huebner (1962) contend that evaluation should combine formal and informal appraisal procedures. When functional, diagnostic information is needed in the classroom the teacher's own familiar, informal procedures are often the best (Dobbin, 1974). Sheldon (1970) states that one of the most important diagnostic instruments is an informal reading inventory (IRI). Karlin (1971) contends that the teacher recorded inventory is the most accurate inventory and the most accurate method of estimating a child's instructional level. An IRI is a non-standardized reading instrument designed to evaluate actual pupil reading skill as demonstrated on passages of varying levels of difficulty. It may sample both silent and oral reading skills plus the language and thinking functions of

the child as reflected in his response to comprehension questions (Johnson & Kress, 1965). The strength of an IRI is not simply that of a testing instrument but of a strategy for studying the behavior of the learner in a reading situation and as a basis for instant diagnosis in the teaching environment (Powell, 1971). Morris (1972) points out that no one is in a better position to diagnose difficulties in reading than the classroom teacher.

An IRI embodies elements and materials similar to those in the actual instructional environment (Pikulski, 1974; Ramsey, 1970). Thus it offers potential beyond obtaining instructional levels. It can provide valuable insight into normal reading behavior, the process by which a child goes about the complex task of reading (Powell, 1972).

Misgivings as to the effectiveness of an IRI, particularly as to the amount of expertise needed to formulate, administer, and score the tests, have been noted in research literature (Daniel, 1962; Emans, 1965; Kender, 1968; Lowell, 1970; Pikulski, 1974).

The validity of scoring criteria was a point of contention for Kender (1968) and Lowell (1970). The ability of teachers to perceive the reading needs of students without allowing predetermined personal biases to influence judgment was the subject of research by Emans (1965). His results indicated a need for increased in-service diagnostic

training. Kelly (1970) and Utsey, Wallen and Beldin (1966) found that, with training, prospective teachers were capable of accurately assessing functional reading levels and appropriate reading materials.

Even as they pose questions needing further research and clarification the researchers emphasize the potential of an IRI as a diagnostic testing procedure, provided teachers are cognizant of the procedures involved (Kelly, 1970). Therefore the IRI appears to offer significant potential as an efficient and effective classroom diagnostic instrument (Daniel, 1962).

The content of test materials has been cited as an influence on test results. Lowell (1970) states that the interest or lack of interest of a subject in the content of a test is a strong influence on motivation to read and consequently on the quality of the reading performance. The amount of meaning that a student brings to a reading text will affect the comprehension of the passage. Weiner and Cromer (1967) have stated that in some instances test results indicating non-reading may be attributed to the materials and conditions of testing. In evaluating Title I Reading Programs in the United States Smith (1970) cites the observations of program directors who noted a dearth of tests suited to the language and experience of students being evaluated, thus casting some doubt as to the accuracy of overall assessment. Weiner and Cromer (1967) contend that

comprehension may be lessened if the reader has insufficient experience with passage referents. In a study of standardized tests Livingston (1972) found that "academic subject matter vitiated against reading skill." Livingston (1972) further conjectured that this may be what has prompted minority groups to complain that reading comprehension tests discriminate against them.

In the latter half of the twentieth century there has been increased pressure from researchers and the general reading public for the creation and utilization within our school systems of more culturally related materials (Baratz, 1971; Cheyney, 1976; Lind, 1978). These pressures have increased the production and use of such materials for enrichment purposes in concert with the current basal reader series. Another aspect of the utilization of the backgrounds of students is the "language experience approach" to reading instruction as advocated by educators such as Allen (1976), Hall (1976) and Stauffer (1969). In this approach students produce some of their own reading materials based on personal experiences, interests and ideas.

With the advent of these innovative, experience-based materials for reading instruction it would appear to be essential that the methods and materials utilized in testing and diagnosis should become correspondingly more flexible, creative, and related to the cultural and experiential backgrounds of those being tested.

Regardless of the method of instruction being used diagnostic information is still an integral aspect of organization for instruction. An IRI which utilizes experiences and materials of interest to the students being assessed would appear to be of value in such an educational schema. Therefore, the main objective of this study will be to develop such an experience-based informal reading inventory and to test its efficacy in assessing the instructional reading levels of the students to whom it is administered.

Introduction to the Problem

Sheldon (1970) states that identifying problem readers involves the entire teaching staff in diagnosis from the day pupils enter school until they leave. Such classroom diagnosis is an absolute prerequisite for intelligent and relevant instruction. Marcus (1974) contends that it is essential to the organization of instructional methods and the selection of appropriate reading materials so as to ensure maximum learning. He further states that these are the only legitimate uses of any reading test.

Standardized tests alone cannot perform a sufficiently diagnostic assessment of individual strengths and weaknesses (Daniel, 1962; Masters, 1973; McCracken, 1962).

Livingston (1972) found that many do not accurately or sufficiently evaluate all levels of reading comprehension. McCracken (1962) in his study found that the standardized tests examined did not accurately indicate the level of instructional materials most suited to individual students.

Therefore any standardized test results must be supplemented by the teachers' own informal diagnostic measures and observations (Austen & Huebner, 1962). The informal reading inventory (IRI) appears to offer potential as a procedure suitable for use by classroom teachers. It provides the opportunity to evaluate skill development as the student reads in a situation and manner similar to the way in which the skill is used during normal reading (Beldin, 1970; Johnson & Kress, 1968; Ramsey, 1972). It has the additional strength of being easily constructed by the teacher from materials used in the classroom and on varying levels of difficulty. In this way the many different levels of reading achievement present in any class may be assessed by using one testing device, namely, an IRI.

Educators such as Allen (1976) and Durkin (1976) contend that basal materials are not able to take care of special student needs. Increasingly the language and experience of the child are being used as the basis for developing, integrating and expanding present levels of conceptual, experiential and linguistic abilities (Allen, 1976).

Trends toward the increased use of enrichment materials as in the language experience approach advocated by Allen (1976) and the use of culturally-based materials as described by Lind (1978) have generated the need for greater flexibility and skill in student diagnosis. Smith (1970) states that evaluators have found that many tests presently in use may not be suited to the language and experiences of the child being assessed. Weiner and Cromer (1967) found that poor reading performance may in some instances be the result of inadequacies in the materials being used. Thus research appears to be articulating the need for creative testing materials and procedures which do not discriminate against students of minority cultures (Livingston, 1972; Wittcoff, 1966).

A testing instrument, such as an IRI, which utilizes materials based on the backgrounds of students would appear to be one way of testing functional reading skill rather than knowledge in a particular area. In this way the divergent or different experiences of some students would not impair the accurate assessment of their reading abilities.

Most standardized testing instruments, although insufficiently diagnostic for classroom planning of materials or methods of selection, do have the value of being standardized for large populations. They offer the standard against which to compare the level of reading attainment of a particular group of students.

The present study attempted to examine the questions of whether an informal reading inventory utilizing experiences of Newfoundland students could accurately assess the instructional reading levels of the students to whom it was administered. A standardized reading test and a quasi-standardized informal reading inventory were employed during the investigation as the standards against which to judge the results generated by the experimental instrument.

Statement of the Problem

This study will attempt to examine the following problem:

Can an informal reading inventory which utilizes selections based on the experiences and interests of Newfoundland students provide as accurate an assessment of the instructional reading levels of the students being assessed as does the Analytical Reading Inventory (Woods & Moe, 1977) and the Metropolitan Achievement Test, Form F (Durost, Bixler, Wrightstone, Prescott & Balow, 1970)?

Rationale for the Study

Research states that the subject matter of test materials may impair reading performance and comprehension because of a lack of interest in or experience with the referents of a passage (Lowell, 1970; Weiner & Cromer, 1967).

Smith (1970) contends that some reading tests may be unsuitable to the language and experiences of students. This may discriminate against minority groups being assessed (Livingston, 1972). Eisenberg (1975) reports that some minority groups may perform poorly on standardized tests because they lack the basic verbal skills necessary to successfully handle test material. Livingston (1972) states, in referring to the standardized tests he studied, that some became tests of a student's ability to read poorly written material which was the result of attempts by test constructors to make the sentence structures more complex.

These researchers appear to suggest a need for improved testing materials that do not discriminate against students of different experiential or cultural backgrounds. Rather than trying to ignore the culture and experience of a group of students it would appear more desirable to utilize this background in both the instructional and evaluative material so as to generate increased interest and consequently improved and more accurate performance.

Therefore, this study formulated and tested an informal reading inventory utilizing language experience stories written by students throughout the province. This instrument was used to assess instructional reading levels of students as a prerequisite to the selection of suitable student-need based methods and materials. Equipped with

the information provided by such a diagnostic assessment the classroom teacher may make a more informed selection of reading materials calculated to suit the demonstrated skills and abilities of her students.

The instructional levels as determined by the experience-based informal reading inventory were tested for accuracy by comparison to the standardized levels as determined by administering a standardized reading test, namely, the Metropolitan Achievement Test, Form F (Durost et al., 1970) and the Analytical Reading Inventory (Woods & Moe, 1977).

Significance of the Study

Johnson and Kress (1965) contend that it is highly desirable for each teacher to formulate his own IRI. However, with the continuing high pupil-teacher ratio that exists in many of our Newfoundland schools this may frequently be impractical in terms of the time available. Therefore, a pre-formulated instrument suited to Newfoundland students and their experiential backgrounds could be a valuable educational aid.

A testing instrument containing silent and oral reading passages plus a selection of questions assessing student comprehension at various levels, namely, literal, inferential and critical comprehension, could prove to be a valuable tool for assessing instructional levels and areas

of skill strengths and/or deficiencies. Such an instrument could also become a model for the development of teacher-made IRI's based on any instructional materials in use in the classroom.

Therefore, this study attempted to produce an IRI which was suited to Newfoundland students and one which could become available to educators as a model for reading diagnosis.

General Hypotheses

The following hypotheses were examined during the course of this study:

1. There will be no significant difference between the silent reading instructional level scores of individual students as measured by the Experience-based Reading Inventory (ERI) and those as measured by the Analytical Reading Inventory (ARI).

2. There will be no significant difference in correlation between silent reading level scores of students as measured by the Metropolitan Achievement Test and those as measured by the Analytical Reading Inventory and the Experience-based Reading Inventory.

Definition of Terms

Since the following terms have technical meaning in relation to this study they have been defined to ensure

accuracy of understanding.

Informal Reading Inventory (IRI): an informal, non-standardized reading test consisting of a series of reading passages of known and graded levels of difficulty. The IRI is used to test oral and silent reading comprehension and word recognition.

Language Experience Stories: These are stories written by students utilizing experiences and interests from their personal backgrounds. These may be dictated directly to a teacher or written by the student with some teacher guidance.

Independent Reading Level: This is the level of reading material at which a student can read and function with relative ease and independence. This level is indicated in an IRI by a word recognition rate of approximately 99 percent and a comprehension rate of approximately 90 percent (Johnson & Kress, 1965).

Instructional Reading Level: This is the level of reading materials at which instruction can be most profitable to a student and the level at which he should be taught. This level is indicated in an IRI by a word recognition rate of approximately 95 percent and a comprehension rate of approximately 74 percent (Johnson & Kress, 1965).

Frustration Level: This is the level of reading materials with which a student experiences considerable difficulty and is unable to function successfully. This

level is indicated in an IRI by a word recognition rate of approximately 90 percent or less and a comprehension rate of approximately 50 percent or less (Johnson & Kress, 1965).

Readability: This is the level of comprehensibility of reading materials. In order to read and understand adequately designated written material a reader should have a level of reading skill which corresponds to the readability level of the materials. Readability levels may be determined by subjective assessments of the style, format, vocabulary and conceptual composition of materials by librarians, teachers or publishers. A more objective test of readability levels may be obtained by application of a readability formula such as that advocated by Spache (1974) or Harris-Jacobson (Harris & Sipay, 1975).

Limitations of the Study

The results of this study may not be generalized to the total student population because of the following limiting factors:

1. The test materials used were obtained from a sample population of Newfoundland students. Therefore, results may only be valid for students of similar backgrounds and experiences.

2. The informal reading inventories were administered to students at the fourth grade level and therefore results

may not be similar for students at other grade levels.

3. The experimental informal reading inventory was correlated with the Analytical Reading Inventory and the Metropolitan Achievement Test, Form F. Experimental results may not be applicable to other forms of informal inventories or other standardized tests.

4. The readability formulas applied in this study were the Spache (1974) and the Harris-Jacobson Formula 2 (Harris & Sipay, 1975). Readability formulas as they presently appear do not attempt to measure the conceptual weight of reading materials. Therefore, the readability designations of the proposed Experience-based Reading Inventory story selections do not necessarily reflect the conceptual difficulty of the test passages but rather vocabulary familiarity and sentence length.

5. The passages of the experimental instrument were treated with either the Spache (1974) or the Harris-Jacobson Formula 2 (Harris & Sipay, 1975) readability formulas. Therefore, reading levels may not be strictly equivalent to those produced by treatment with other readability formulas.

6. The silent reading scores of the experimental instrument were compared to the silent reading scores of the Analytical Reading Inventory and the Metropolitan Achievement Test. Therefore findings are limited to silent reading skills only.

CHAPTER II

REVIEW OF THE LITERATURE

Introduction

This chapter will deal with the research literature representing areas of pertinent concern in relation to this study. The first section will examine the rationale for the selection of appropriate instructional materials suited to the demonstrated needs and abilities of students. The second section will examine the literature concerning the methodology of informal reading inventories. Section three will explore the use of the language experience approach in the development of an informal reading inventory. Section four will examine the question of readability. Section five will study the criteria selected for informal reading inventory level designations. Section six will discuss the problems related to the scoring of an informal reading inventory.

The Selection of Reading Materials

It appears to be a sound educational principle that there be an appropriate relationship between instructional materials and the pupils who must use them. Dale and Chall

(1949) state that books and materials must correspond to the abilities of the students utilizing them if learning is to be accomplished. They further observe that materials suitable for the child who is a skilled reader are not necessarily equally appropriate for the less-skilled reader. In other words, there is no one text suitable for all students in a class.

Fry (1972) states that the selection of the right reading materials for students is one of the most important tasks of any teacher. This philosophy is held by Austen and Huebner (1962), Bond and Tinker (1968), Lee (1966), Marcus (1974) and the Report of the Royal Commission on Education and Youth (1967). The placement of students in materials which are too easy or too difficult has been cited by Bond and Tinker (1973) and Lee (1966) as a major contributing factor in the growth of reading problems.

One of the earliest studies conducted on the need for the selection of appropriate instructional materials was performed by Jones (1948). In her study of two hundred and fifty pupils the instructional materials were adapted to the individual differences of those in the experimental group, while those in the control group continued with the non-individualized materials of the regular curriculum for their grade. Jones' findings indicated that the experimental group demonstrated a greater amount of reading growth than the control group. Another finding was that the differences

in growth as a result of the experimental treatment were greater for the normal and slow children than they were for the superior children. Thus individualization of materials appears to offer increased potential for reading growth for those students most in need of it, i.e., the slower student.

A study conducted by Cooper (1952) appears to confirm the findings of Jones (1948). This investigation showed that children placed in instructional materials according to rather stringent criteria for instructional levels do advance more rapidly than those placed in materials for which they are less suited. Thus it would appear that students who are most carefully and closely matched to their reading materials stand to reap the most benefit from their instruction.

Bradley (1976) comments that if student placement is improper in terms of book difficulty, reading achievement is quite likely to be adversely affected. He further contends that if student placement is in relation to book interest as well as difficulty, optimal achievement gain is possible.

This is also the studied opinion of Lovitt and Hansen (1976) who found in their research that students placed in reading materials suggested by demonstrated pupil performance progressed much more rapidly after the correct placement than they had previously. In this case increased instruction did not appear to be an interfering factor since

the teaching involved was intentionally relaxed and of secondary importance. However, reading improvement for the experimental group was considerable.

Utsey, Wallen and Beldin (1966) state that the critical task is the selection of reading materials at the appropriate instructional levels as demonstrated by pupil performance. Fry (1972) and Strang (1970) both suggest that a thorough evaluation of the child and his reading abilities plus a careful examination of available reading materials would serve as a guide to the wise choice of instructional levels, methodology and materials. Thus, there appears to be a firm basis for the selection of reading materials which correspond to the demonstrated reading abilities of the students for whom they are intended.

The Informal Reading Inventory

Planning for effective reading instruction is difficult without a thorough investigation of each pupil's present level of achievement, his capacity for future attainment and his specific areas of strength and weakness (Johnson & Kress, 1965). Johnson and Kress (1965) and Ramsey (1972) stress that this evaluation should take place in a manner similar to the way in which the skill is used in normal reading. The informal reading inventory (IRI) appears

to be a procedure which satisfies these criteria, according to Bamman (1970) and Johnson and Kress (1965).

IRI procedures should provide ample opportunity to assess other factors vital to reading success, such as oral language skills, breadth and depth of mental content, hearing and vision. Bamman (1970), Johnson (1965) and Marcus (1974) contend that the IRI should be directed toward gaining specific information during a detailed study of the pupil's general performance in the reading area as the pupil deals with materials of increasing difficulty.

Johnson and Kress (1965) stress that it is imperative that the teacher know the levels of material that each child can handle successfully both during instruction and when working independently. Also essential is knowledge of specific pupil strengths and weaknesses.

Karlin (1973) suggests that the application of a properly designed informal reading inventory would lead to the selection of materials that fit the target group and their reading needs more appropriately. He contends that this proper fit is essential to a successful reading program and concomitant to successful reading achievement.

Kelly (1970) states that the IRI has been recognized as being one of the most powerful instruments readily available to the classroom teacher for assessing correct

instructional levels. The study conducted by Cooper (1952) found that placing students in materials suited to their individually assessed instructional levels resulted in significant gains in reading growth.

A study conducted by Daniel (1962) provided evidence relating to the utility of the IRI as a source of diagnostic information needed for effective group placement. Daniel studied several common testing devices, including a standardized test, the Buck's County Reading Test and an IRI. He found that all forms could be equally useful when used purely as devices for group placement. A notable conclusion, however, was that the IRI provided essential diagnostic data which was not forthcoming in the standardized test examined. Austin and Huebner (1962) affirm Daniel's (1962) findings on the value of the IRI for both grouping and diagnosis.

The study conducted by McCracken (1962), although on a small group, found that the IRI gave more easily interpreted instructional levels for students, than did the standardized test which tended to inflate student comprehension and vocabulary results. This may be because the IRI is usually based on the materials of instruction whereas the standardized tests are not. Sipay (1964) in his investigation concluded that standardized test results appeared to be somewhat inadequate as indicators of correct instructional levels for the pupils tested. He felt that

the particular IRI used could also influence indicated levels. This upholds the opinions of Bradley (1976) and Maginnis (1969) who noted that an informal reading inventory using materials selected from basal readers could contain passages which were more or less difficult than the levels they were purporting to test. In his study, Bradley (1976) found that a basal reader for one grade level could contain selections varying over as much as three readability levels. This variance in readability could call into question the accuracy of test results. Pikulski (1974) suggests that there should be some attempts made to locally validate repeatedly used IRI's so as to eliminate such inaccuracies. For an IRI to be an accurate measure of instructional levels it seems necessary to use some measure of readability as a check of content validity.

As with any other testing instrument the IRI has limitations which should be recognized. These mainly concern, according to Lowell (1970), the criteria used to establish the various levels and the level of teacher skill needed to diagnose reading abilities and skill levels accurately. Emans (1965) found that teachers were inadequate at assessing individual pupil needs. Individual biases tended to cloud their judgment. However, Utsey et al. (1966) found that diagnostic abilities and skill at determining functional reading levels improved significantly after three hours of simulated instruction in reading inventory administration.

Kelly (1970) reports equally positive results with a similar study he conducted. Thus the problem of teacher expertise in IRI administration is not completely insurmountable.

The second problem noted by Lowell (1970) exists because of a dearth of research concerning the best criteria to select for the designation of instructional reading levels. Although this calls into question the validity of instructional level designation in general it is not enough to negate the positive benefits of using an IRI, namely, to diagnose strengths and weaknesses in reading skills. Nevertheless, both Powell (1971) and Pikulski (1974) contend that these are areas which must be subjected to further study and verification before the IRI becomes completely acceptable as a testing instrument. In spite of these limitations, the IRI method of reading diagnosis offers much potential for reading assessment in the classroom, where the analysis of pupil skills is an essential prerequisite to intelligent and relevant instruction and for the selection of the most appropriate instructional materials.

Language Experience and the Informal Reading Inventory

Pikulski (1974) states that the central concepts to be considered in relation to any evaluation instrument are validity and reliability. Reliability is the accuracy

or precision of the instrument, and validity the reflection of the extent to which an instrument measures what it purports to measure. Pikulski (1974) further contends that the various forms of validity are difficult to assess without reference to the purpose for which and the population with which the measure is being employed. It is this latter aspect of validity which this section will explore.

Gagne (1972) has stated that instruction is a matter of stimulating the use of capabilities the learner already has at his disposal and of making sure that he has the requisite capabilities for present tasks as well as those to come. It has frequently been noted by teachers in the field that children tend to work harder at deciphering materials that are meaningful and of interest to them. Thornton (1974) says that it is the task of educators to make the child's world more understandable to him, to increase his possibility of making meaning out of the seemingly incomprehensible. Goodman (1965) contends that literacy is built on the base of the child's own language with reading materials and instruction drawing as much as possible on experiences and settings appropriate to the target children. The student expands outward from his own language and experience. Goodman (1965) summarizes this principle by saying that the reader cannot comprehend materials which are based on experiences and concepts outside his background

and beyond his present level of development. This appears to be the basis of the language experience approach to reading as described by Allen (1976) and Hall (1976). In this approach the language, experiences, and interests of the student are used to expand knowledge and skills, particularly the communicative skills. The child and his already-developed linguistic skills and knowledge become an added source of reading and writing instructional materials (Karlin, 1971). This affirms the principle stated by Cheyney (1976) that the materials used to teach reading should contain a background of experiences with which the children are familiar.

Dixon (1977) conducted a study which suggested that language experience stories could be a source of valuable diagnostic information concerning the language of the child and his readiness to begin formal reading instruction. He suggests that such stories could also aid in the selection of appropriate instructional strategies for the individual children producing them.

Baratz (1971) postulates that in the United States the different cultural systems that operate between the mainstream and minority cultures may account in part for the differences observed in test performances. Kress (1972) appears to be making the same point when he says that comprehension is dependent upon individual physiological and

psychological factors operant in the reader. One's understanding of the ideas communicated is related to his experience with those ideas and the objects and events from which they are derived plus the efficiency of his basic sensory system.

Children read with comprehension only to the extent that they possess meaning for the printed words (Janes, 1970). If reading is the process of getting meaning from the printed page, this is contingent upon bringing meaning to the page (Wittcoff, 1966). Every reader can testify to the intellectual blank wall that is encountered when the subject matter, no matter how simply written or expressed, is outside one's experience.

The primary strength of an IRI is the close correspondence between it and normal teaching and reading materials (Pikulski, 1974). Smith (1970) contends that this correspondence is often lacking in the more popular standardized tests which frequently do not suit the language and experiences of a particular population. Lowell (1970) suggests that the interest, or lack of interest, of the subject in the content of the materials of testing, is a strong influence on reading performance and test results.

Weiner and Cromer (1967) contend that there are instances of non-reading which might be more accurately attributed to the less than ideal conditions under which the reading or testing occurs. These authors believe that a reading problem cannot be accurately assessed in such a case until learning has been tried under more ideal conditions with materials of greater significance to the reader.

Smith (1970) reports that in the evaluation of Title I Reading Programs directors complained of the inadequacies of the existing tests used to evaluate their programs. They felt that the tests did not suit the language and/or experiences of their population. Baratz (1971) contends that tests can be developed to assess competencies in the vernacular culture as well as the mainstream one. The notion of ridding intelligence quotient measurement of cultural contamination has been largely abandoned since a child's score may be thought of as an indication of the richness of the milieu in which he functions and the extent to which he has been able to profit from that milieu (Stodolsky & Lesser, 1967). Thus to devise testing instruments and materials without reference to cultural or environmental experiences is to run the risk of arriving at materials which have no relevance or interest to any reader.

Fry (1972) and Livingston (1972) express reticence as to the effectiveness of standardized testing procedures for various reasons, one being the population used to

establish norms. Fry (1972) stresses that the score obtained on a standardized test is only valid if the child is from exactly the same type of group for whom the test was normed. In administering such a test to different populations, Fry (1972) notes that the test items should not contain vocabulary and test items too heavily loaded against students being tested. Farrell (1977) strengthens the contention of Fry (1972) when he states that sample populations are not always representative, in terms of time, place or race, of the communities of students who take the tests. Livingston (1972) postulates that lack of test relevance may be what causes minority groups to complain that they are the objects of discrimination in testing procedures.

The aforementioned writers appear to imply that test items more closely related to the experiential background of students could provide a more realistic assessment of student functional reading abilities. An instrument composed of language experience stories provided by the target student population, if accurately assessed for readability, appears to offer the opportunity for improved reading assessment.

Readability

Dale and Chall (1949) have stated that in the selection of school texts it is important that there should

not be an indiscriminate selection of materials. Kelly (1970) also states that placing pupils in inappropriate materials is one of the major causes of reading difficulties. Therefore it is important to know not only the level of material that a pupil is capable of reading successfully but also the level of difficulty or the readability of any materials which are encountered in the instructional process.

Readability has been defined by Spache (1974) as the degree of comprehensibility of reading materials. The level of readability must in turn be matched to the reading abilities of the students for whom the materials are intended.

Dale and Chall (1949) state that there are three major factors which may affect overall readability. Firstly, the book itself and its style, subject matter, and format constitute one aspect of readability. Secondly, the reader and his individual characteristics such as general reading ability, interest, purpose in reading, general experience, and his specific experience related to the material being read represent another factor. The third factor is the criterion used to estimate readability as well as the method of calculation used in the estimation. Thus the complexities of accurately estimating readability begin to emerge.

In estimating the specific readability level, three immediate aspects of the written material must be considered, namely, the subject matter and its interest or appeal to the reader, the organization or format which makes it easy to

follow the logic of the material with a minimum of effort, and the style of expression which makes it comprehensible and interesting. It is the latter aspect, the style, which the majority of reading formulas attempt to estimate.

Klare (1963) defines a readability formula as an attempt to formulate a method of measurement that will provide a quantitative, objective estimate of the style difficulty of the writing. Spache (1974) states that readability formulas in general estimate readability by the statistical analysis of structural traits present in a representative sample of the reading material being examined.

Spache (1974) further contends that information on the readability level of materials is needed for all school instructional materials, but is particularly important when fine discriminations of the probable reading level of materials is sought. This need would arise when providing reading materials for very young children and for poorer readers. Readability formulas provide a quick estimate during such an evaluation.

The readability formulas presently in use have certain limiting factors which should certainly be noted. Spache (1974) stresses that they do not reflect the content difficulty of the materials nor predict the level of reader interest in any way. It is further noted by Klare (1963) that only one particular aspect of style, namely its difficulty, is measured while other important facets such as format,

organization and imagery are ignored. Neither do readability formulas differentiate between well-written and poorly-written material.

Another problem arises because of a lack of some reliable, external criteria against which a reading formula may realistically be checked. Reader comprehension and teacher or librarian ratings (against which the formulas are usually checked) may to a certain extent be influenced by factors outside of the book itself, such as personal interest, style preference or subject matter. Russell and Merrill (1951) found reason to doubt the consistency and effectiveness of librarians' judgments of the difficulty of children's books. Jongsma (1972) also studied the extent to which librarians could judge readability as compared to the estimates rendered by readability formulas. The librarian ratings correlated substantially with the readability formulas; however, their judgments differed widely in their estimates of given books. These studies demonstrate the need for some uniform objective measure of readability such as is being attempted through utilization of a readability formula.

The formulas provide rough approximations of the grade level difficulty of written material. Fry (1969) states that even the more specific formulas have been found to vary within six months either side of a designated readability level. Spache (1974) summarizes the primary problem with

the readability formulas when he notes the limitations of the research data presently available. Much remains to be learned in this area.

There are a number of readability formulas presently in existence. Selection of the appropriate method should, according to Klare (1963), be based on consideration of three factors, namely, the predictive accuracy of the form, the speed of application, and the special purpose a form may serve.

According to Bormuth (1968), the two variables that tend to be examined in most formulas are some aspect of sentence structure, such as sentence length, plus some aspect of vocabulary difficulty, namely, word frequency or length. Bormuth (1968) also found that these were reasonable aspects of style to study since, according to his findings, regardless of a person's reading ability the same features of language tended to cause problems.

Johnson and Kress (1965) contend that materials used to test reading ability at particular levels should be similar to materials used for instruction at that same grade level. Bradley (1976) emphasizes that decisions related to instructional placement should be based upon a knowledge of the achievement level of the student compared to the difficulty of the reading material. Therefore it appears important that the level of readability of testing materials should be accurate and of increasing levels of difficulty (Harris

& Sipay, 1975). Checking written material with a readability formula appears to be an efficient and objective method for measuring its level of difficulty (Harris & Sipay, 1975).

Bradley (1976) found that books from different basal reader series but with the same grade level designation differed in readability of levels when examined by means of readability formulas. Maginnis (1969) had earlier encountered the same difficulty, noting that the readability of passages selected from the same grade three basal reader could vary from primer to fourth grade level. However, experts suggest that a classroom reading inventory be based on instructional materials (Johnson & Kress, 1965). Therefore, it would appear to be essential that in order to select the most suitable passages for crucial test materials all test passages be checked for grade level accuracy by application of a readability formula. It would thus be possible to designate with some degree of accuracy the readability level of a passage and thereby its suitability for testing student reading ability at a comparable grade level.

All passages in the informal reading inventory prepared for the present study were treated with an appropriate readability formula, namely, the Spache (1974) formula for primary materials and the Harris-Jacobson (1975) Readability Formula 2 for those passages beyond the primary reading level.

Criteria Selection for Level Designation

Throughout the research literature relating to informal reading inventories, a persistently occurring problem is the selection of the most accurate criteria to be used in determining instructional levels. Various investigators have attempted to examine this complex issue. Lowell (1970) was particularly critical of the lack of definitive research in this area. He saw it as being a factor which could invalidate the reliability of results of any reading assessment arrived at through the use of an IRI.

Pikulski (1974) says that one of the main purposes for administration of an IRI is to set functional reading levels. Betts (1936) was one of the earliest to actually formulate criteria to designate these levels. He suggests that a student does not have simply one reading level, but rather three which are of significance to the teacher. The independent level is the level of reading materials with which a child can function successfully without any external assistance, with few word recognition errors and with good comprehension. The instructional level is the highest level at which a student may be successfully instructed. At this level he can read satisfactorily with preparation and supervision; word recognition errors are infrequent and comprehension is satisfactory. The frustration level is the point

at which a student becomes completely unable to handle the reading material, his reading skills falter, the learning process halts and he becomes completely frustrated. His word recognition errors are frequent and comprehension is poor.

Betts (1936) prescribed criteria for measuring word recognition and comprehension abilities pertaining to these levels as follows:

(a) independent level at which the word recognition rate is 99 percent and the comprehension rate is 90 percent.

(b) instruction level at which the word recognition rate is 95 percent and the comprehension rate is 75 percent.

(c) frustration level at which the word recognition rate is 90 percent or less and the comprehension rate is 50 percent or less.

Betts (1936) also distinguished a level which could be used to serve as an indicator of a child's current capacity for reading achievement known as his listening comprehension level. This level is one at which a child can comprehend 75 percent of the material read aloud to him and, according to Johnson and Kress (1965), is the level of materials which the student would be able to understand if he were reading to the maximum of his ability.

These criteria have been used by researchers often without consideration of their validity as measures of any true level of reading ability. Johnson and Kress (1965),

strong and experienced proponents of the IRI method of reading assessment, maintain these original criteria as suggested by Betts (1936). It appears that these are rather stringent criteria which would be difficult for even fluent adult readers to maintain in certain types of written material. However, as Johnson and Kress (1965) maintain, setting the criteria for the instructional level too low may cause the child's performance to be rated as adequate for material which is in actuality well above his capabilities. In such a case, too many areas and skills are left deficient to allow for an adequate and successful measure of reading instruction. Although, as Lowell (1971) states, students may "tolerate" lower criteria, the question to be answered is whether or not this is a legitimate reason to lower the standards of instructional level criteria.

Powell (1971) examines three studies which have been conducted in attempts to validate instructional level criteria, namely, those of Cooper (1952), Killgallon (1942) and Powell (1969). The results of the study by Killgallon (1942) have been cited by Kender (1968) as being the investigation upon which part of Betts (1936) criteria were based. Neither of these studies appears to be the definitive answer as to the most suitable criteria. The criteria as summarized by Powell (1969) do not differ greatly in the area of word recognition percentages, varying from 95 to 99 percent for Betts (1936), Killgallon (1942) and Cooper (1952). Powell's

(1969) criteria were differentiated at the primary grades where the word recognition scores were set at 85 to 98 percent. For grades three to five word recognition rates were 91 to 98 percent and above grade six were set at 94 to 98 percent. The criteria held desirable for comprehension were basically from 70 to 90 percent of the answers correct for an instructional level designation. Killgallon (1942), however, considered as acceptable a comprehension score as low as 50 percent. Powell (1971) found that younger children could tolerate more word perception errors than older students and still maintain an acceptable standard of comprehension. He further suggests that the word recognition criteria for the instructional level appear to be a function of the difficulty of the materials and the age-grade level of the child. His study tended to verify his revised criteria as being similar to the criteria suggested by an analysis of allowable errors according to test manuals and tables of norms.

Powell (1971) thus attempted to clarify the issue of criteria. Pikulski (1974) cites studies undertaken to verify the results of Powell (1971). However, the findings were largely inconclusive. Pikulski (1974) cites a study by Bassett and Hutchison in which obtained results corroborated Betts' criteria. Another study conducted by Pikulski (1974) appeared to support the findings of Powell (1971). These studies point out the need for further investigation in this area. The final opinion of Lowell (1970) was that a

standardized test would provide better data for group placement purposes. If this were the only consideration Lowell's (1970) might be a valid argument. However, information leading to the selection of appropriate reading materials and instructional methods, plus essential diagnostic information, is also to be found in an IRI assessment.

Although Spache (1963) and Pikulski (1974) suggest that criteria for independent and instructional levels may be set lower with equally successful results, the present study will utilize the standards proposed by Johnson and Kress (1965) as those being most likely to present the least difficulty to students during the instructional process while providing the maximum opportunity for reading growth and success.

Scoring an Informal Reading Inventory

There are two factors to be studied in setting informal reading inventory reading levels, namely, word recognition and comprehension. As Johnson and Kress (1965) have stated, an IRI is a clinical device used to gain valuable insight into the student's reading processes. The skilled examiner when listening to the student read aloud may detect and isolate areas of particular strength or weakness such as in structural or phonic analysis, level of

basic sight vocabulary, or understanding of the text (Johnson & Kress, 1965). This information, not normally forthcoming during silent reading, can help the examiner to plan a program or select materials calculated to contribute successfully to pupil reading growth.

The word recognition score is found by recording the number of uncorrected errors made during oral reading. What exactly constitutes an error in word recognition is a point which has caused some debate.

Goodman (1974, 1965) and Goodman and Burke (1972) have contributed considerable insight into and knowledge of the nature of reading errors through their analyses of the word recognition "errors" or "miscues" of students. These authors contend that many errors in reading are not true errors but rather "miscues." A miscue is defined as a deviation from the printed text. Goodman (1974) suggests that the type and quality of miscues should be examined as to their legitimacy as errors. He further contends that many miscues are perpetrated as the reader attempts to make the text fit his interpretation of its meaning, his dialect or idiolect, or his personal understanding of semantic and grammatical acceptability. To read "mom" for "mother" is not to alter meaning but rather to insert a synonym for a word whose meaning has been recognized. Therefore, the quality of the word recognition error becomes very important.

Knowledge of the work of these educators is particularly essential for the accurate interpretation and recording of the word recognition errors noted during the administration of an informal reading inventory. Pikulski (1974) advises that users should make interpretive analyses of the types of errors made during an IRI as well as a numerical analysis so as to arrive at an accurate and diagnostic assessment of reading ability. Therefore an examiner should study the type of error made to determine whether or not it changes the intended meaning of a passage. Smith and Weaver (1978) have developed an approach to analyzing a reader's miscues in context that shows considerable promise.

During this study all word recognition errors were recorded. However, only those errors which changed the meaning of a passage were tallied when computing individual word recognition scores. The necessity of examiner skill and knowledge in interpreting and scoring word recognition errors cannot be overemphasized.

Lefevre (1964) states that reading is not reading unless it gives access to meaning. Thus a primary objective of any reading act is to increase comprehension or understanding. Comprehension is, according to Livingston (1972), composed of a hierarchy of skills, namely, on the lowest level, literal comprehension and then, on more interpretive levels, inferential and critical comprehension.

Kingston (1961) states that the efficiency of the reading skills of a student is one factor which may act as

a barrier or bridge to comprehension, depending upon individual circumstances. Lefèvre (1968) appears to agree when he says that the competent, fluent reader will produce implied, personal and evaluative interpretations rather than purely literal, concrete meanings. Thus, the more skilled the reader is, the greater will be his comprehension. He is free to concentrate upon obtaining meaning from the passage rather than merely processing the words (Smith, 1971).

Livingston (1972) contends that many standardized tests presently in use measure only the very basic aspects of comprehension, namely literal understanding, while neglecting the important interpretive skills of inferential and critical comprehension. In the case of the standardized procedures this is partially explained by the need for uniformity of answers if norms are to be utilized. However, literal comprehension is only the first step towards full understanding.

During informal procedures, as in the administration of an IRI, there is opportunity for a closer study of student comprehension skills. This is usually done through the questioning process. In an IRI questions are posed after both silent and oral reading passages with a percentage score being calculated for each. The questions are a means of measuring how much information a student is able to gain from reading a passage (Tuinman, 1971). Johnson and Kress (1965) suggest that the questions asked should cover different

types of understanding, namely, factual recall of information, grasp of vocabulary, and the drawing and supporting of inferences. Woods and Moe (1977) suggest that comprehension questions should examine understanding of the main idea, factual information, terminology, cause and effect, inference, and ability to form conclusions. These basically follow the suggestions of Johnson and Kress (1965), except for the fact they break down the categories into more specific types of questions. This approach to the measuring of comprehension appears more precisely diagnostic than a mere measuring of literal recall since it allows a teacher or examiner to isolate the level of comprehension at which a student begins to experience difficulty.

Tuinman (1971) adds the further suggestion that comprehension questions should be passage-bound as far as is practicable so as to check the reader's ability to understand the written material being presented rather than delving his knowledge or experience in a specific area. This becomes particularly difficult as students progess through the grades and become more knowledgeable in general. Nevertheless, the type of question asked will determine the effectiveness and accuracy of the measure of comprehension in any IRI.

It becomes quite clear that the type of word recognition errors scored and the quality and scope of the comprehension questions posed are important considerations

in the development and administration of an informal reading inventory. They serve to underline the contentions of Emans (1965) and Lowell (1970) that examiner skill is essential for an accurate administration of an informal reading inventory.

This chapter has attempted to review the literature related to areas of research pertinent to the present study. With the information gleaned during research on the topic the investigator has attempted to incorporate the essential principles of good IRI development into the production of the Experience-based Reading Inventory which is at the core of this project.

CHAPTER III

METHODOLOGY

Introduction

The purpose of this study was to develop, administer, and analyze the effectiveness of an informal reading inventory based on the experiences of Newfoundland children. This chapter will present an elaboration of the design of this study and the procedures employed in the implementation of its research. It will be organized under the following main subheadings:

1. Design and Hypotheses
2. The Sample
3. Instrumentation
4. Development and Design of Experimental Instrument
5. Method and Procedures
6. Statistical Procedures

Design and Hypotheses

This study attempted to assess the ability of an experience-based reading inventory as developed by the investigator to accurately assess the instructional reading level of students to whom the inventory was administered.

The accuracy of the instructional reading level scores so obtained was corroborated by comparison with the instructional reading level scores as determined by administration of a non-experience-based informal reading inventory, namely, the Analytical Reading Inventory (ARI) (Woods & Moe, 1977). Both these scores were in turn tested for significant correlation with the grade level scores obtained by administration of the Metropolitan Achievement Test, Form F, Test 2, Reading (Durost, Bixler, Wrightstone, Prescott & Balow, 1971), which is a standardized reading test. The diagnostic aspects of the ERI were excluded from this study as being beyond the expertise and time limits of such a research project.

Hypotheses

The following hypotheses were examined during this study:

1. There will be no significant difference between the silent reading instructional level scores of individual students as measured by the Experience-based Reading Inevntory (ERI) and those as measured by the Analytical Reading Inventory (ARI).

H_o: $\mu_1 = \mu_2$

2. There will be no significant difference in correlation between the silent reading level scores of individual students as measured by the Metropolitan Achievement Test,

and those as measured by the Analytical Reading Inventory and the Experience-based Reading Inventory.

$$H_0: \quad \mu_1 = \mu_2 = \mu_3$$

The Sample

The sample for this study was selected from the total grade four population of four schools under the jurisdiction of the Roman Catholic School Board for St. John's (Appendix E). The schools were selected by the investigator to represent urban, suburban and rural type schools with both co-educational and sexually segregated student enrollments drawn from all socio-economic levels.

The number in the sample, which was randomly selected from the total grade four registration in each school, consisted of seven children per school for a total of twenty-eight students including thirteen males and fifteen females. The principles of randomization allow us to assume that the sample selected was truly representative of the total grade four population. All students selected completed the total test battery involved in the study.

Grade four appears to be the grade in which an informal reading inventory could be most beneficial (Sheldon, 1970). This seems to be the grade of transition from the period of basic skill acquisition of the primary levels to the application and utilization of these skills as practised

in the elementary grades.

Manolakes and Sheldon (1955) in their research found what they refer to as the grade four "hump." This was a condition of failure in reading improportionate, in terms of degree, to the prior and future experience of pupils. This appeared to demonstrate a need for the examination of all students entering fourth grade so as to have readily available essential data concerning individual instructional levels, reading strengths and weaknesses. This information should allow the classroom teacher to select the instructional methods and materials for reading best suited to her present students. Sheldon (1970) therefore states that it is important to administer an informal reading inventory at grade four.

Instrumentation

The instruments used in this study included the Metropolitan Achievement Test, Form F, Reading (Durost et al., 1971), the Slosson Oral Reading Test (Slosson, 1963), the Analytical Reading Inventory (Woods & Moe, 1977), and the Experience-based Reading Inventory, an unpublished instrument designed by the investigator (Appendix B).

The Metropolitan Achievement Test (MAT)

This was administered to all students involved in the present study. This test is designed primarily to

measure the general level of reading achievement of pupils at the elementary level and thus is well suited to the purposes of this study. The main rationale for its use was to provide the standard against which to measure and substantiate the results of the experimental testing instrument, namely, the ERI. Robinson (1968) contends that the Metropolitan Achievement Test is one of the best survey tests of reading achievement and also serves its purpose as a measure of reading achievement for comparative purposes. McCracken (1962) found that the IOWA Test of Basic Skills placed pupils approximately two grades higher than the instructional level indicated by an informal reading inventory. Research has revealed no evidence that MAT grade levels are inaccurate. In the classroom setting the advantage of using an IRI would be the individualized diagnostic information gathered as a by-product of instructional level determination.

Only the silent reading passages of the informal reading inventories were statistically analyzed since the MAT utilizes silent reading skills. The investigator felt it would be unwise to equate silent and oral reading scores of the IRI with the silent reading scores of the MAT.

The MAT, Form F, is primarily intended to test students in grades 3.5 to 4.9. It is divided into two sections, e.g., word knowledge and reading. These sections are to be administered in single sessions of fifteen and twenty-five minutes, respectively. There should be a rest period between test sessions (Durost et al., 1971). The resultant

scores are tabulated so as to give a total reading score.

Test two, Reading, of the MAT, Form F, measures the ability of a student to read and comprehend continuous written material. Comprehension is checked by means of the completion of multiple-choice statements. The test format is similar to that of an informal reading inventory except that being a timed group test no provision has been made for an oral diagnosis. The MAT (1970) is a survey test and does not purport to be a diagnostic instrument (McKim, 1968; Robinson, 1968).

McKim (1968) contends that for the greater part the grade ranges for which these tests are recommended are appropriate. For this study, which examined pupils at the grade four level, this instrument, having been standardized for levels from 3.5 to 4.9, was quite suitable.

Results on the MAT may be presented in various forms, namely, raw scores, standard scores, percentile rank, stanines, or grade equivalents. The type of score being utilized depends upon the purpose for which the test is administered. For the present study a grade equivalent was considered appropriate since the results of the informal reading inventories are reported in terms of the instructional reading grade levels.

The credentials of the MAT (1971) appear to be substantial and well-researched. The Teacher's Handbook (Durost et al., 1971) provides a measure of technical

information concerning content development, item analysis, standardization, validity and reliability. Pre-publication research involved approximately 250,000 students. The standardization sample of 50,000 children was selected so as to be representative of the national population of the United States in terms of geographic region, socio-economic status, size of city, and public versus non-public school (Durost et al., 1971). Although content validity was derived on the basis of the curriculum in use in the United States, for the purposes of the present study the MAT test content appears to be adequate.

Therefore, as a general survey reading test selected to provide a standard score against which to measure and compare the results of the experimental instrument, the Metropolitan Achievement Test (1970) appears to be suitable in this experimental situation. Being a group test its diagnostic limitations are noted.

The Slosson Oral Reading Test (SORT)

The SORT is a graded word list designed to be administered to students individually. It is based on the principle of a student's ability to pronounce words from a graded word list on varying levels of difficulty. The SORT claims a correlation of .96 with the Standardized Oral Reading Paragraphs by William S. Gray (Slosson, 1963).

For this study the SORT was administered as a

standardized word recognition list which could produce a quick grade level designation to serve as an indicator of the most appropriate grade level at which to begin testing students with the alternate forms of the informal reading inventory.

The Analytical Reading Inventory (ARI)

This informal reading inventory was administered to all students in the sample.

The ARI was developed by Woods and Moe (1977) for use by classroom teachers, reading specialists and prospective teachers. It was developed and tested over a two-year period and was subjected to extensive field testing, computer analysis and content revisions (Woods & Moe, 1977). Passages were analyzed for readability by treatment with the revised Spache formula (Spache, 1974) at the primary levels and with the Harris-Jacobson Formula 2 (Harris & Sipay, 1975) for the elementary levels.

The ARI consists of two sections, namely, a graded word list and reading passages with accompanying comprehension questions. Reading passages can be utilized equally effectively for either oral or silent reading testing. Reader comprehension of each passage is tested by using six main types of questions, namely, questions examining knowledge of the main idea and terminology, factual information, cause and effect, and pupil ability to make inferences and

to draw conclusions.

Because of the reported care exercised in the development and validation of the ARI passages as regards content, readability and question suitability (Woods & Moe, 1977) this instrument appears to be an excellent standard against which to compare the effectiveness of the experimental ERI (Appendix B).

The Experience-based Reading Inventory (ERI)

The ERI is an investigator-constructed informal reading inventory based on language experience stories written by Newfoundland students from grades one to eight. Although it consists of both oral and silent reading passages, for the present study only the silent reading passages were subjected to statistical analysis.

All passages of the experimental instrument were tested for readability by application of the Spache (1974) formula for materials at the primary level, and with the Harris-Jacobson Formula 2 (Harris & Sipay, 1975) for materials suspected to be at or higher than grade four level.

Through the use of these formulas the investigator attempted to ensure that test passages designed to test reading ability at a specific level were truly representative of the level of instructional materials used at that grade level. The formulas should also help ensure that passages are of increasing difficulty (Harris & Sipay, 1975). By

treating the ERI with the same formulas that had been used in developing the ARI (Woods and Moe, 1977) the investigator tested students in all treatment groups with the same level of materials. All passages were accompanied by comprehension questions geared to examine the three essential levels of comprehension, namely, literal, inferential and critical comprehension.

All passages and questions were examined for suitability by Dr. Marc Classman, Reading Specialist and Lecturer at Memorial University of Newfoundland.

The Experimental Instrument: Its Development and Design

At the core of the present study was the design of a testing instrument, namely, an experience-based informal reading inventory (Appendix B). This aspect of the study proceeded in the following manner.

Approximately two hundred fifty language experience stories produced by rural and urban students from across Newfoundland and Labrador were reviewed by the investigator. Some, but certainly not all, of the stories appeared to have been subjected to a measure of editing by either the author or the teachers concerned. The investigator edited the original grammar, spelling or punctuation only when it was essential for the understanding of a passage.

The main criterion used for inclusion of a story in the study was readability level. Jongsma (1972) cautions that although readability formulas can provide objective, quantitative estimates of the level of difficulty of a book there are additional factors such as organization, conceptual difficulty and the interests of the potential reader which are not presently considered by any available formula. These factors should be noted in the total estimate of readability. The investigator endeavoured to integrate this judgmental element into the overall estimate of readability by rejecting stories which demonstrated problems of organization or conceptual difficulty. Because the stories were written by students whose ages and backgrounds were similar to the target population, interest was not a problem.

The stories were produced by pupils from grades one to eight. The investigator found when applying the readability formulas that the readability level of the stories was approximately 1.5 to 2.0 years below the stated grade level of the author. Thus stories at or above the seventh level were limited, necessitating the inclusion of one story at the seventh level, silent reading (Appendix B) which was unlikely to be strictly speaking part of the author's own personal experience. The incident could have been experienced vicariously through the media for example.

Both oral and silent reading passages, with the appropriate scoring guides, have been included since these

passages may be used for oral or silent reading at the discretion of the teacher or examiner.

Readability

The two readability formulas chosen for this study were the Spache (1974) formula for material at the primary level (i.e., grades one to three) and the Harris-Jacobson Formula 2 (Harris & Sipay, 1975) for materials suspected to be at or above grade four level (Appendix D).

The Spache (1974) readability formula has been subjected to considerable research concerning its validity as an accurate measure of the grade level of skill necessary to read written material (Spache, 1953, 1974; Staiger, 1955). Staiger (1955) reports a correlation of .70 between the Spache readability formula and actual pupil performance based on demonstrated oral reading errors and comprehension. Spache (1974) reports a standard error of estimate for the revised formula of two months, that is, in 68 percent of the samples the true reading level will be within plus or minus two months of the estimate found (Spache, 1974). This fine level of discrimination makes it highly valuable as an estimate of readability for this study.

The Spache (1974) formula follows a procedure which includes calculating a number of variables for each passage such as the total number of words, the number of sentences, the number of unfamiliar words (those not on the Spache

(1974) revised word list) and the average sentence length. These variables are mathematically manipulated to arrive at an estimate of readability for the passage. The readability data for this study are reported in Table 1.

The Harris-Jacobson Formula 2 (Harris & Sipay, 1975) also considers as variables in the study of each passage the total number of words, the number of sentences and the number of unfamiliar words; that is, those words not on the Harris-Jacobson Short Readability List (Harris & Sipay, 1975). These computations are inserted into the formula to arrive at a predicted score which is converted to a readability level. The variable analyses for stories treated with the Harris-Jacobson Formula 2 are summarized in Table 1. All readability levels correspond to present grade levels.

Table 1 further indicates that there is a gradual increase across the grades in the factors that contribute to readability. Content and comprehensibility ultimately determine readability, nevertheless this data should give some indication of the level of readability in the light of present knowledge of readability formulas.

The Spache (1974) and the Harris-Jacobson Formula 2 (Harris & Sipay, 1975) were used in this study because of their use in the development and analyses of the Analytical Reading Inventory (Woods & Moe, 1977). It was felt that by having the ERI passages treated with the same readability formulas as those of the ARI the reading

TABLE 1

Total Number of Words, Number of Sentences, Number of Unfamiliar Words, Average Sentence Length--ERI

Level	Total No. of Words	No. of Sentences	No. of Unfamiliar Words	Average Sentence Length
Primer	48	8	1	6
One	108	14	3	7.7
Two	120	14	10	8.57
Three	150	11	10	13.64
Four	150	10	24	15.0
Five	179	10	21	18.4
Six	184	11	30	16.72
Seven	240	14	49	17.14

materials used in the investigation would be comparable. Comparative readability results for the ERI and the ARI are reported in Tables 2 and 3. These data appear to indicate that reading materials used in this study were at the stated readability levels as determined by the readability formulas employed.

Comprehension Questions

Lefevre (1964) has stated that reading is not to

TABLE 2

Readability Results: Spache (Primary)

Grade Level	ARI	ERI
Primer	1.5	1.5
One	1.7	1.8
Two	2.5	2.5
Three	3.1	3.1

TABLE 3

Readability Results: Harris-Jacobson (Elementary)

	ARI		ERI	
Grade Level	Predicted Score	Readability Level	Predicted Score	Readability Level
Four	4.78	4	4.5	4
Five	4.85	5	5.02	5
Six	6.07	7	5.4	6
Seven	5.58	6	5.98	7

be considered reading unless it gives access to meaning. Therefore, one of the primary objectives of any IRI must be to assess the amount of understanding a student has gained during the reading act. The method presently used to gain insight into this aspect of reading is the comprehension questions posed at the completion of each oral or silent reading passage (Tuinman, 1971).

Livingston (1972) contends that comprehension is composed of a hierarchy of skills designated as literal, inferential and critical comprehension. According to Lefevre (1968) the competent, fluent reader will produce implied personal interpretations of what has been read rather than the purely literal meanings of the less fluent reader. Thus the more skilled the reader the greater his comprehension.

Johnson and Kress (1965) state that comprehension questions should cover the different types of understanding such as the factual recall of information, vocabulary knowledge, and the drawing of inferences. Woods and Moe (1977) have divided these broader areas into specific questions which assess student understanding of the main idea, factual information, terminology, cause and effect, and inference and student ability to form conclusions. By noting the type of comprehension questions that present little difficulty to a student, for example, terminology, the examiner may be able to isolate areas already mastered while

indicating other areas still in need of instruction. This should save valuable instructional time while increasing opportunity for successful learning.

Tuinman (1971) has noted that for a truly accurate assessment of understanding the questions posed should be passage-bound, i.e., dependent upon the material being read for their solution. Therefore, the present study has attempted to assess the comprehension skills of students with questions covering all aspects of the three levels of comprehension. Six to eight questions were devised for each passage. As far as was possible these questions were passage-bound and phrased so as to assess understanding at each of the levels of comprehension as indicated by Johnson and Kress (1965) and Woods and Moe (1977).

Method and Procedures

Testing Procedures

The sample of twenty-eight pupils was randomly selected from the total grade four population of four schools in the St. John's Metropolitan area. Seven children were chosen from each school. All subjects were treated with the same test materials and as far as possible at corresponding times of the day, namely, during the morning sessions (Appendix E). Sessions were arranged so as not to interfere with regularly scheduled periods such as gym, art, music or skating.

During the first session at each school the MAT was administered to the sample students in a group. At the second meeting students were treated individually, first with the SORT and then with the informal reading inventories in a randomly selected alternating order. Thus the order of testing should not be an interfering factor. All tests were administered by the investigator.

The informal reading inventories used were similar in format and calibration allowing for a minimum of investigator interference. All testing was completed within a three-week period extending from October 19th to November 10th, 1978. Testing with the MAT was completed in October. This was particularly important because the MAT is normed for either October or April. Thus if resulting student scores were to be accurately interpreted this test had to be administered within this time frame. If the MAT were administered at other times of the year the resultant scores could be artificially inflated or deflated (Durost et al., 1971). It was also felt that all testing should be completed within as short a time span as possible so that the passage of time would not falsely influence study results.

Criteria

For teachers of reading, knowledge of a pupil's instructional reading level is essential (Johnson & Kress, 1965). It is the level at which instruction is most likely

to be successful. Providing an examiner with this information is one of the main objectives in the administration of an informal reading inventory (Johnson & Kress, 1965).

The criteria used to isolate the instructional level are of prime importance. For the present study, as with the ARI (Woods & Moe, 1977), the criteria used to measure word recognition and comprehension abilities pertaining to the instructional level were those specified by Johnson and Kress (1965) from their study of the criteria devised originally by Betts (1936). These criteria, which are to be met without the aid of the examiner, are as follows:

1. A word recognition score of 95 percent or no more than five uncorrected errors in a one hundred word sample.

2. A comprehension score of 75 percent or no more than two comprehension errors in six questions or three comprehension errors in eight questions.

It is a generally accepted principle in IRI administration that a lower than 95 percent word recognition score may be acceptable if the comprehension rate is high. However, Johnson and Kress (1965) encourage the maintaining of high criteria levels.

Error Designation

For the purposes of the present investigation an error in word recognition was considered to have occurred in the following instances:

1. When there was an uncorrected mispronunciation which changed the meaning of the text.

2. When a word was omitted or not pronounced.

3. When pronunciation aid was requested from the examiner.

The exception to this rule was if the word requested was a proper noun which would not be expected to be part of a student's normal reading vocabulary.

All deviations from a text may not be true errors but rather miscues (Goodman, 1965), as in the case of a reader who replaces the word "mother" with "mom." An error occurs when the reader changes the meaning of a passage, for example, by inserting "motor" for "mother."

During an IRI administration all errors should be recorded for later analysis. These should include mispronunciations of any sort, additions, omissions, substitutions, reversals, repetitions, or phrasing and punctuation errors. All such data upon examination by a knowledgeable investigator should provide valuable diagnostic information.

These procedures were followed in the present study so as to produce as accurate an assessment of student reading abilities and instructional reading levels as was possible.

Statistical Procedures

The primary objective of this study was to examine

the ability of the investigator-developed ERI to accurately determine the instructional reading level of the students examined. All students involved in the study were treated with the same test materials, namely, the Metropolitan Achievement Test, Form F (Reading), the Analytical Reading Inventory and the Experience-based Reading Inventory. Only the silent reading passages of the ARI and the ERI and Test 2 (Reading) of the MAT were compared and correlated in the statistical analysis since these test sections appear to be testing the same skills, namely, silent reading skill as demonstrated in the student's ability to answer comprehension questions. Oral reading scores on the ARI and the ERI could not be statistically compared with scores on the MAT, a group test which assesses silent reading skill. We cannot assume that silent reading scores and oral reading scores are equivalent.

The resultant scores were tabulated and the data analyzed for statistical significance at the .05 level of confidence according to the following procedural steps:

1. The ARI and the ERI silent reading scores were examined by application of a t-test to test the null hypothesis that states: There will be no significant difference between the reading level scores of individual students as measured by the ERI and those as measured by the ARI. The t-test is used to test for significant differences between the means for correlated samples.

$$\underline{t} = \frac{\Sigma D}{\sqrt{[N\Sigma D^2 - (\Sigma D)^2]/(N-1)}}$$

2. Raw scores on the MAT, Form F, Test 2 and the silent reading passages on the ARI and the ERI were tested for significant correlation by applying a Pearson product-moment correlation coefficient to test the null hypothesis that states: There will be no significant difference in correlation between the instructional reading level scores of students as measured by the Metropolitan Achievement Test and those as measured by the Analytical Reading Inventory and the Experience-based Reading Inventory.

$$r = \frac{N\Sigma XY - \Sigma X\Sigma Y}{\sqrt{[N\Sigma X^2 - (\Sigma X)^2][N\Sigma Y^2 - (\Sigma Y)^2}}$$

CHAPTER IV

RESULTS OF THE STUDY

Introduction

The purpose of this chapter is to report the results of the procedures used to test the hypotheses of the study as stated in Chapters I and III. Data are presented on pupil grade level scores for the Metropolitan Achievement Test, Form F (Reading) and on the instructional level scores in the two informal reading inventories administered, namely, the Analytical Reading Inventory (ARI) and the Experience-based Reading Inventory (ERI).

Data were analyzed by use of two main statistical procedures. A t-test was performed to test for significant differences between the mean instructional level scores as measured by the informal reading inventories. Data were further subjected to analysis by means of a Pearson product-moment correlation coefficient to test the strength of the relationship between the MAT, the ARI and the ERI. The .05 level of confidence was designated as that point at which the hypotheses of this study would be either accepted or rejected.

The specific hypotheses are as follows:

1. There will be no significant difference between

the silent reading instructional level scores of individual students as measured by the Experience-based Reading Inventory and those as measured by the Analytical Reading Inventory.

H_o: $\mu_1 = \mu_2$

2. There will be no significant difference in correlation between the silent reading level scores of individual students as measured by the Metropolitan Achievement Test and those as measured by the Analytical Reading Inventory and the Experience-based Reading Inventory:

H_o: $\mu_1 = \mu_2 = \mu_3$

Analyses of the Data

Hypothesis One: There will be no significant difference between the instructional reading level scores of individual students as measured by the Experience-based Reading Inventory and those as measured by the Analytical Reading Inventory.

Findings: On the ERI the mean score was 3.29 and the standard deviation was 1.24. For the ARI the mean score was 3.36 and the standard deviation was 1.22.

A *t*-test (Table 4) performed on these two scores revealed that at the .05 level of confidence the difference between the mean scores was not significant ($t = .493$; $df = 27$; $p < .05$). A *t*-value of 2.052 would have been necessary to reject the null hypothesis. A *t*-value of .493 is considerably less than 2.052, therefore the null hypothesis

TABLE 4

A Comparison Between the Means and Variances for the Analytical Reading Inventory and the Experience-based Reading Inventory

Group	n	SS	df	M	t*
ARI	28	40.44	27	3.36	.493
ERI	28	41.60	27	3.29	

*$p < .05$

may reasonably be accepted.

Hypothesis Two: There will be no significant difference in correlation between the scores of individual students as measured by the Metropolitan Achievement Test and those as measured by the Analytical Reading Inventory and the Experience-based Reading Inventory.

Findings: The silent reading instructional level scores (Table 5) of the ARI and the ERI and the grade level scores of the MAT (Reading) (Table 5) were subjected to statistical analysis by means of a Pearson product-moment correlation coefficient. These results are summarized in Table 6. For the MAT and the ARI, $r = .795$; for the MAT and the ERI,

TABLE 5

Comparative Listing of Pupil Scores for the MAT (Reading) and the ARI and the ERI (Silent Reading)

Test		MAT (Grade Equivalent)	ARI (Instructional Level)	ERI (Instructional Level)
Pupil	1	2.2	1	1
	2	5.4	4	5
	3	3.5	4	4
	4	4.7	5	5
	5	3.5	2	2
	6	3.9	4	4
	7	3.2	3	3
	8	6.5	6	6
	9	6.1	5	5
	10	5.4	5	4
	11	3.7	3	3
	12	3.9	3	3
	13	4.1	3	3
	14	3.9	4	3
	15	2.6	2	1
	16	2.8	2	3
	17	3.4	2	3
	18	4.2	5	5
	19	2.6	2	3
	20	3.4	4	2
	21	3.3	2	1
	22	3.3	4	3
	23	3.3	3	3
	24	2.9	4	3
	25	3.4	3	4
	26	4.3	4	4
	27	2.8	3	3
	28	3.2	2	3

TABLE 6

Pearson Product-Moment Correlation Coefficient--*r**

Test	MAT	ARI	ERI
MAT		.795	.787
ARI	.795		.807
ERI	.787	.807	

*$p < .05$

r = .787; and for the ARI and the ERI, r = .807.

These data would appear to suggest that there is a moderately high correlation between the three tests. In addition the data appear to indicate that all three tests are measuring the same constructs. A perfect positive correlation would be measured at approximately +1, therefore correlation figures of .795, .787, and .807 would appear to suggest that the null hypothesis should be accepted.

Summary

A t-test was used to test for statistical differences between the mean instructional level scores for the ARI and the ERI. A Pearson product-moment correlation coefficient

was employed to test the strength of the relationship between the Metropolitan Achievement Test, the Experience-based Reading Inventory and the Analytical Reading Inventory. The .05 level of confidence was designated as the criterion level at which to accept or reject the null hypothesis. From the results of the analysis of the accumulated data, the following findings may be reported and summarized:

1. There was no significant difference between the silent reading instructional level scores of individual students as measured by the ERI and those as measured by the ARI.

2. There was a significant correlation between silent reading level scores of individual students as measured by the Metropolitan Achievement Test and those as measured by the Analytical Reading Inventory and the Experience-based Reading Inventory.

CHAPTER V

SUMMARY, CONCLUSIONS AND IMPLICATIONS

This chapter summarizes the purposes of this study, draws conclusions based on the analyses of the accumulated data, states implications related to these findings and makes recommendations concerning potential areas of study for future research.

Summary

The objective of this study was to devise an informal reading inventory based on the experiences of Newfoundland children, and to test the efficacy of this inventory to accurately assess individual instructional reading levels of students to whom it was administered. The Experience-based Reading Inventory (ERI) produced by the investigator was compiled from stories selected after the review of a number of language experience stories written by students from across the province.

Passages for the ERI were selected on the basis of compatible readability with passages of the ARI. All selections of the ERI were subjected to detailed analysis by application of established readability formulas (Appendix

D). The Spache (1974) readability formula was used to assess material at the primary levels while the Harris-Jacobson Formula 2 (Harris & Sipay, 1975) was applied to material thought to be at or above grade four level.

A standardized test and a published informal reading inventory were selected as the appropriate measures with which to compare the ability of the experimental instrument to accurately assess student instructional reading levels. Test scores from the Metropolitan Achievement Test, Form F, the Analytical Reading Inventory and the Experience-based Reading Inventory were the measures collected and analyzed for statistically significant differences.

The following hypotheses were formulated to examine the efficacy of the experimental reading inventory:

1. There will be no significant difference between the instructional reading level scores of individual students as measured by the Experience-based Reading Inventory and those of the Analytical Reading Inventory.

2. There will be no significant difference in correlation between the scores on the Metropolitan Achievement Test and those of the Analytical Reading Inventory and the Experience-based Reading Inventory.

The sample of twenty-eight students was selected from four schools under the jurisdiction of the Roman Catholic School Board for St. John's. Students were chosen by means of a random table from the total grade four population in the

schools with seven pupils being selected per school. All tests were administered within a three-week period in October and November, 1978.

Students in each school were administered the MAT as a group during the first session. In subsequent sessions the remaining tests were given to students individually in a randomly selected, alternating order.

For the purposes of this study only the silent reading scores of each IRI and Test 2 (Reading) of the MAT were subjected to statistical analysis since these instruments appeared to be testing similar skills. Data were analyzed for statistical significance at the .05 level of confidence by applying a t-test to the silent reading scores of the ARI and the ERI, and a Pearson product-moment correlation coefficient to test the strength of the relationship between the ARI, the MAT and the ERI.

Summary of Findings

This study found that at the .05 level of confidence there were no significant differences to be found for the hypotheses.

Hypothesis 1:

Application of a t-test on scores of the ARI (M = 3.36) and the ERI (M = 3.29) revealed no significant difference between the mean scores (t = .403; df = 27) of

these two tests. Therefore, the null hypothesis may be accepted.

Hypothesis 2:

Application of a Pearson product-moment correlation coefficient indicated a moderately strong correlation between individual reading scores on the MAT, the ARI and the ERI (for the MAT and the ARI, r = .795; for the MAT and the ERI, r = .787; and for the ERI and the ARI, r = .807). The data appear to suggest additionally that all three tests are measuring the same constructs. The null hypothesis was accepted.

Conclusions

The data of this study provided information upon which the following conclusions were based:

1. There is no significant difference in the instructional reading level scores of individual students as measured by the ERI and those as measured by the ARI.

The comparative listing provided in Table 7 shows no significant difference in individual student scores. Statistical analysis by means of a t-test (summarized in Table 4) confirmed these findings at the .05 level of confidence.

It may be tentatively concluded, therefore, that the Experience-based Reading Inventory is capable of

TABLE 7

Comparative Listing of Pupil Scores for the ARI (Silent Reading) and the ERI (Silent Reading)

Test	ARI	ERI
Pupil 1	1	1
2	4	5
3	4	4
4	5	5
5	2	2
6	4	4
7	3	3
8	6	6
9	5	5
10	5	4
11	3	3
12	3	3
13	3	3
14	4	3
15	2	1
16	2	3
17	2	3
18	5	5
19	2	3
20	4	2
21	2	1
22	4	3
23	3	3
24	4	3
25	3	4
26	4	4
27	3	3
28	2	3

providing as accurate an estimate of the instructional reading level of individual students as is the Analytical Reading Inventory (Woods & Moe, 1977).

2. There is a moderately strong correlation between individual scores on the three tests administered. A comparative listing of individual raw scores is presented in Table 5. The apparent correlation of the table is confirmed through statistical analysis. Therefore, a student scoring high on the MAT could reasonably be expected to score high on the ARI and the ERI. However, the correlation between the ARI and the ERI was higher (r = .807) than between the MAT and the ARI (r = .795) or the MAT and the ERI (r = .787) as indicated in Table 6. A perfect positive correlation would be +1. Thus the data appear to confirm the suggestion that the ERI is capable of making an accurate assessment of the instructional reading level of individual students.

There was no significant difference in scores on either the ARI compared to the MAT (r = .795) or the ERI compared to the MAT (r = .787). Therefore, the data appear to suggest that all three tests are testing the same constructs.

3. The main asset of the informal reading inventory is its value as an individual diagnostic instrument (Bamman, 1970; Johnson, 1965; Marcus, 1974). This particular usage became increasingly obvious during the testing procedures for the study.

It should be noted that the silent reading passages of an IRI would not necessarily reveal more diagnostic information than a group, standardized test. It is during the individual's reading of the oral passages of the IRI that most diagnostic information is forthcoming. By observing the student's word attack strategies, pronunciation skills, rate of reading, phrasing, expression and extent of sight word knowledge, for example, the teacher or examiner can gain valuable insight into areas of strength or weakness.

The investigator administered both oral and silent IRI passages so as to provide the schools with an assessment of the reading skills of the students involved in the study. The individualized oral reading sessions proved invaluable in isolating exact areas of difficulty. It was at this point that students demonstrated their individual approach to phonetic and structural analysis, the extent of their use of context, their confidence in their ability to perform. Knowledge such as this could save valuable educational time for both the teacher and student by focusing instruction where it is needed.

General Conclusions and Implications

McCracken (1962) in his research found that the standardized tests that he studied did not accurately indicate the level of instructional materials most suited to individual students. Austen and Huebner (1962) contend that any standardized test results must be supplemented by informal diagnostic measures and observations. Johnson and Kress (1965) suggest that the informal reading inventory format offers the opportunity to evaluate student skill development in a situation and manner similar to the way in which these skills are normally used during reading.

According to Allen (1976) and Durkin (1976) basal materials are not able to take care of special student needs. Weiner and Cromer (1967) found that some instances of poor reading performance may be the result of inadequacies in test material. This suggestion has been advanced by Smith (1970) as well. Therefore, one objective of this study was to produce a reading test modeled on the informal reading inventory format utilizing materials more suited to Newfoundland students than are usually available. This was accomplished by availing of language experience stories produced by a cross-section of the province's students as the basis for the reading passages.

A second objective of the study was to test the ability of the investigator produced experience-based reading

inventory to accurately assess individual student instructional reading levels. This was determined by comparing student scores on the ERI with those scored on a recently published informal reading inventory, namely, the ARI (Woods & Moe, 1977), as well as a standardized reading test, namely, the Metropolitan Achievement Test (Durost et al., 1971).

Statistical analysis of accumulated data indicated that there was no significant difference in individual student scores on either of the informal reading inventories. Further analysis indicated a moderately high correlation between individual student scores on all three tests. Therefore, it may reasonably be concluded that an informal reading inventory related more closely to experiences of the target population, as produced for this study, is at least as accurate as the more traditional IRI format or the standardized test. This moderately high correlation would also appear to suggest that the adverse effect of cultural bias was not operating in this experiment. Therefore, it may be concluded that statistical results do not support the initial premise that ERI scores would be positively influenced, or that scores of the MAT and the ARI would be negatively influenced, because of the action of culturally fair or biased reading passages.

This seemingly neutral effect may be due to a number of factors, for example, the population studied. The tests may produce different results if administered to a student

population from a more isolated, rural region. Ready access to the media of the twentieth century may be lessening the differences between cultures particularly for the youth of urban centres. Additionally, the types of passages chosen for inclusion in both the ARI and the ERI could have influenced resultant scores in either a positive or negative direction.

It was apparent during test administration that words, phrases or topics may form blocks to student performance. The word "county" as used in the ARI was read frequently as "country". Although this error may be interpreted in terms of graphic or phonetic similarity it may also be attributable to the fact that Newfoundland children are not familiar with this term. This isolated incident serves to illustrate how a passage can be culturally biased particularly if there is a great diversity between the culture producing the test and the target population. However, cultural bias did not appear to be a significant factor in this study.

As a corollary to this study, the investigator found that the process of selecting the most suitable reading materials for the ERI and devising comprehension questions which would examine understanding adequately at each grade level in as statistically accurate a manner as possible proved extremely time-consuming. This factor would appear to render a similar process beyond the sphere of most teachers in the field. However, the potential of the IRI

format as a diagnostic instrument, suggests the need for more study in this area as an avenue to increased diagnosis and knowledge of student problems.

Recommendations

The following recommendations are proposed as a result of the present study:

1. The question of the value of the standardized testing instrument versus an informal reading inventory is an area in need of study.

The results of this study appear to suggest that all three instruments used were capable of indicating fairly accurately the general level of student reading development. However, the investigator would suggest that there is much more to be gained during the administration of an informal reading test. An example of this would be the gathering of knowledge concerning student or group reading strengths and weaknesses in areas such as the ability to use context, the level of word recognition skill or depth of comprehension.

Standardized tests appear capable of supplying important diagnostic information. However, the fact that many standardized instruments are group tests and therefore capable of sampling only silent reading skills mitigates against the collection of in-depth information on individual student reading strategies.

Slosson Oral Reading Test (SORT). Richard L. Slosson, Slosson Educational Publications, Inc., New York, 1963.

also appear to have some significance. Would reserving a short period at the commencement of each academic year for an individualized examination of students be of significant value in the accumulation of data to help in the intelligent selection of both group and individual reading needs and objectives?

This question would appear to suggest that the timing of student diagnosis in relation to the selection and organization of curriculum needs and objectives, and the consequent selection of student-based instructional strategies and materials is an area in need of further research.

3. A study to determine whether there is a need for local language experience materials as an instructional aid and supplement to the basal reading materials already in existence in the classroom would appear to have some merit.

The present investigator found considerable interest among educators at all levels in the fact that the test passages would utilize local Newfoundland experiences. Although it was impossible to accommodate all types of backgrounds and experiences in one instrument, it was the intent of this study to use referents that were not alien to Newfoundland school children. The interest generated would appear to intimate that there may be a need for more varied, culturally-based materials to supplement present basal materials. Bond and Tinker (1973) have stated that a combination of instructional methods including such components

as language experience, basal readers and phonetic and linguistic training is more desirable than the exclusive use of any one methodology. To this end there would appear to be some merit to research in experience-based materials with a view to disseminating to local educators the principles and procedures of the language experience approach to reading as an additional aid to improved reading and writing skill.

4. Study of the feasibility of producing a more formalized reading inventory or similar testing instrument thoroughly checked for readability, with comprehension questions that accurately assess literal, inferential and critical understanding, appears to have some potential.

The experience of this investigator suggests that the production by each teacher of a unique informal reading inventory could be extremely time-consuming and therefore not likely to be undertaken in spite of the advantages of such an instrument in the classroom. Before utilizing even basal reading materials in an IRI, a readability check would be essential since research has found that not all basal materials are at their designated readability levels. The compilation of suitably effective comprehension questions can also be quite an involved process. Each step in the IRI procedure can be lengthy if performed in a scientifically exact manner. Therefore, as an aid to the increased efficiency of the reading teacher, the production of some form of culturally fair testing instrument capable of assessing

reading levels and providing diagnostic information concerning student skill development, would appear to merit further investigation.

BIBLIOGRAPHY

Allen, Roach Van. Language Experience in Communication. Houghton, Mifflin Company, Boston, 1976.

Austin, Mary C. and Huebner, Mildred H. "Evaluating progress in reading through informal procedures." Reading Teacher 15: March 1962, 338-343.

Bamman, Henry A. "Assessing Progress in reading." Measurement and Evaluation of Reading, ed. Roger Farr. Harcourt Brace and World, Inc., New York, 1970.

Baratz, Joan C. A Culturally Based Education System for the Disadvantaged: Final Report. Education Study Centre, Washington, D.C., 1971.

Beldin, H.O. "Informal reading testing: Historical review and review of research." Reading Difficulties: Diagnosis, Correction and Remediation, ed. Wm. K. Durr. International Reading Association, Newark, Delaware, 1970, 67-84.

Betts, Emmett Albert. The Prevention and Correction of Reading Difficulties. Row, Peterson and Company, New York, 1936.

Bond, Guy L. and Tinker, Miles A. Reading Difficulties: Their Diagnosis and Correction. Prentice-Hall of Canada, Toronto, 1973.

Booker, Ivan A. "Metropolitan Achievement Tests, A Review." Reading Tests and Reviews, ed. Buros, O.K. The Gryphon Press, New Jersey, 1975.

Bormuth, John R. Readability in 1968. National Council of Teachers of English, Champaign, 1968.

Bradley, John Michael. "Using readability to improve content validity of informal placement tests." Reading Improvement, 13: Fall, 1976, 182-191.

Carter, H.L.J. and McGinnis, D. Diagnosis and Treatment of the Disabled Reader. The Macmillan Company, Toronto, 1970.

Cheyney, Arnold B. Teaching Children of Different Cultures in the Classroom. Charles E. Merrill Publishing Company, Columbus, Ohio, 1976.

Cooper, I.L. "The Effect of Adjustment of Basal Reading Materials on Reading Achievement." Unpublished doctoral dissertation, Boston University, 1952.

Dale, Edgar and Chall, Jeanne S. "The concept of readability," Elementary English 26: January 1949, 19-26.

Daniel, John Emerson. "The effectiveness of various procedures in reading level placement." Elementary English 39: October 1962, 594-600.

Dixon, Carl N. "Language experience stories as a diagnostic tool." Language Arts 54:5, May 1977, 501-505.

Dobbin, Sr. Teresita. "Reading problems: Diagnosis and prescription." New Horizons 5, February 1974, 7, 10, 11.

Durost, W.N., Bixler, H.H., Wrightstone, J.W., Prescott, G.A. and Balow, I.H. Metropolitan Achievement Tests: Teachers Handbook. Harcourt Brace Jovanovich, New York, 1971.

Durkin, Delores. Teaching Young Children to Read, 2nd edition. Allyn and Bacon, Inc., Boston, 1976.

Eisenberg, Marjorie S. "Standardized Test Performance as a Function of General Reading Ability." Master's thesis, October 1975, ERIC ED 116 168.

Emans, Robert. "Teacher evaluations of reading skills and individualized reading." Elementary English, 42:3, March 1965, 258-260.

English, Ida P. "A Readability Study of Social Studies and Science Textbooks." Unpublished master's thesis, Memorial University of Newfoundland, St. John's, 1974.

Farr, Roger. Measurement and Evaluation of Reading. Harcourt, Brace and World, Inc., New York, 1970.

Farrell, Edmund. "The vice-vise of standardized testing: National depreciation by quantification." Language Arts 54:5, May 1977, 486-490.

Ferguson, George A. Statistical Analysis in Psychology and Education, 3rd edition. McGraw-Hill Book Company, New York, 1971.

Fry, Edward B. "The readability graph validated at primary levels." Reading Teacher, 22:6, March 1969, 534-538.

Fry, Edward B. Reading Instruction for Classroom and Clinic. McGraw-Hill Book Company, New York, 1972.

Gagne, Robert M. "Some new views of learning and instruction." Readings for Diagnostic and Remedial Reading, (ed.) Wilson and Geyer, Charles E. Merrill Publishing Company, Columbus, Ohio, 1972, 13-24.

Goodman, Kenneth. "Cues and miscues in reading: A linguistic study." Elementary English 42: 1965, 640.

Goodman, Kenneth S. The Psycholinguistic Nature of the Reading Process. Wayne State University Press, Detroit, 1967.

Goodman, Kenneth S. "Linguistic insights which teachers may apply." Education 88:4, 1968, 313-316.

Goodman, K.S. "Effective teachers of reading know language and children." Elementary English 51:6, September 1974, 823-828.

Goodman, Yetta N. and Burke, Carolyn. Reading Miscue Inventory. Macmillan Pub. Co. Inc., New York, 1972.

Grace, Thomas. "An Inservice Program for Teachers in the Evaluation of Measures of Reading and Reading Related Measures." Unpublished master's thesis, Memorial University of Newfoundland, St. John's, 1976.

Hall, Mary Anne. Teaching Reading as a Language Experience. 2nd edition. Charles E. Merrill Publishing Company, Columbus, Ohio, 1976.

Harris, Albert J. and Sipay, Edward R. How to Increase Reading Ability. David McKay Company, Inc., New York, 1975.

Hilton, Ernest. "Some notes on strategy and content for elementary reading programs in the '70's." Perspectives on Elementary Reading, ed. Robert Karlin. Harcourt Brace Jovanovich, Inc., New York, 1973, 62-69.

Janes, Ethel M. "A Bulletin on Problems in the Teaching of Beginning Reading for Teachers in Newfoundland: Proposed Procedures and Preparation." Unpublished dissertation, Columbia University, 1970.

Johnson, Marjorie Seddon. "Reading inventories for classroom use." Measurement and Evaluation of Reading, ed. Roger Farr. Harcourt Brace and World, Inc., New York, 1970.

Johnson, Marjorie S. and Kress, Roy A. Informal Reading Inventories. International Reading Association, Newark, Delaware, 1965.

Johnson, Marjorie S. and Kress, Roy A. "Individual Reading Inventories." In Remedial Reading: An Anthology of Sources, ed. Schell and Burns. Allyn and Bacon, Inc., Boston, 1968, 142-159.

Jones, Daisey M. "An experiment in adaptation to individual differences." Journal of Educational Psychology 39: May 1948, 257-272.

Jongsma, Eugene. "The difficulty of children's books: Librarians' judgments versus formula estimates." Elementary English 49: January 1972, 20-26.

Karlin, Robert. Teaching Elementary Reading: Principles and Strategies. Harcourt Brace Jovanovich, Inc., New York, 1971.

Karlin, Robert. Perspectives on Elementary Reading: Principles and Strategies of Teaching. Harcourt Brace Jovanovich, Inc., New York, 1973.

Kelly, Dean. "Using an informal reading inventory to place children in instructional materials." In Reading Difficulties: Diagnosis, Correction and Remediation. International Reading Association, Newark, Delaware, 1970, 111-119.

Kender, J. "How useful are informal reading tests?" Journal of Reading 11:5, February 1968, 337-342.

Killgallon, P.A. "A study of relationships among certain pupil adjustments in language situations." Unpublished dissertation, Pennsylvania State University, 1942.

Kingston, A.J. Jr. "A conceptual model of reading comprehension." Phases of College and Other Adult Reading Programs. The National Reading Conference, Milwaukee, 1961, 100-107.

Klare, George. The Measurement of Readability. Iowa State University, Iowa, 1963.

Kress, Roy A. "Classroom diagnosis of comprehension abilities." In Remedial Reading: Classroom and Clinic. Allyn and Bacon, Inc., Boston, 1972, 175-184.

Lee, Dorris M. Diagnostic Teaching. Department of Elementary-Kindergarten-Nursery Education, National Education Association, Washington, D.C., 1966.

Lee, Dorris M. and Allen, R.V. Learning to Read Through Experience. Appleton-Century-Crofts, New York, 1963.

Lefevre, C.A. Linguistics and the Teaching of Reading. McGraw-Hill, New York, 1964.

Lind, Loren. "After school." Quill and Quire 44:2, February 1978, 16.

Livingston, Howard F. "What the reading test doesn't test - reading." Journal of Reading 15:6, March 1972, 402-410.

Lovitt, Thomas C. and Hansen, Cheryl L. "Round one - placing the child in the right reader." Journal of Reading Disabilities 9, June 1976, 18-24.

Lowell, Robert E. "Problems in identifying reading levels with IRI." Reading Difficulties: Diagnosis, Correction and Remediation. International Reading Association, Newark, Delaware, 1970, 120-126.

Maginnis, George H. "The readability graph and informal inventories." Reading Teacher 22:6, March 1969, 516-518, 559.

Manolakes, George and Sheldon, William D. "The relation between reading test scores and language-factors intelligence quotient." The Elementary School Journal 55: February 1955, 346-350.

Marcus, Marie. Handbook for Individualizing Reading Instruction. Pelican Publishing Company, Gretna, 1974.

Masters, George D. "Reading tests don't really tell it like it is." Reading Horizons 13:2, Winter 1973, 59-63.

McCracken, Robert A. "Standardized reading tests and informal reading inventories." Education 82:5, January 1962, 366-369.

McKim, Margaret G. "Test review - Metropolitan Achievement Tests." In Reading Tests and Reviews, ed. Oscar K. Buros. The Gryphon Press, New York, 1968, 174.

Morris, Gregory. "Classroom diagnosis of reading problems." In Remedial Reading: Classroom and Clinic, ed. Schell and Burns. Allyn and Bacon, Inc., Boston, 1972.

Pikulski, John. "A critical review: Informal reading inventories." The Reading Teacher 28:2, November 1974, 141-151.

Powell, William R. "Reappraising the criteria for interpreting informal reading inventories." In Reading

Diagnosis and Evaluation, ed. Dorothy Deboer. International Reading Association, Newark, Delaware, 1969, 100-109.

Powell, William R. "Validity of the IRI reading levels." Elementary English 48, October 1971, 637-642.

Powell, William R. "The validity of the instructional reading level." In Readings for Diagnostic and Remedial Reading, ed. Wilson, Robert and Geyer, James. Charles E. Merrill Publishing Company, Ohio, 1972, 13-24.

Ramsey, Wallace. "The values and limitations of diagnostic reading tests for evaluation in the classroom." In Remedial Reading: Classroom and Clinic, ed. Schell, Leo and Burns, Paul. Allyn and Bacon, Inc., Boston, 1972, p. 207-222.

Report of the Royal Commission on Education and Youth. Province of Newfoundland and Labrador, Vol. 1, 1967.

Robinson, H. Alan. "Metropolitan Achievement Test - A review." In Reading Tests and Reviews, ed. Buros, Oscar K. The Gryphon Press, New Jersey, 1968, 311-312.

Russell, David H. and Merrill, Anne F. "Children's librarians rate the difficulty of well-known juvenile books." Elementary English 28, 1951, 263-268.

Sheldon, William D. "Identifying problem readers in the classroom." In Reading Difficulties: Classroom and Clinic, ed. Johnson, Marjorie and Kress, Roy A. Temple University, 1970.

Sipay, Edward R. "A comparison of standardized Reading Scores and functional reading levels." The Reading Teacher 17: January 1964, 265-268.

Smith, Carl B. "Evaluating Title I and Innovative Reading Programs." In Measurement and Evaluation of Reading, ed. Farr, Roger. Harcourt Brace and World, Inc., New York, 1970, 60-79.

Spache, George. Reading in the Elementary School. Allyn and Bacon, Boston, 1963.

Spache, George D. Good Reading for Poor Readers. Garrard Publishing Company, Illinois, 1974.

Staiger, Ralph. "Certain language factors in the readability of primary reading textbooks." Journal of Educational Research 48, April 1955, 589-596.

Stauffer, Russell G. "Certain convictions about reading instruction." Elementary English 46:1, January 1969, 85-89.

Stodolsky, Susan S. and Lesser, Gerald. "Learning patterns in the disadvantaged." Harvard Educational Review 37: 1967, 546-593.

Strang, Ruth. "Evaluation of development in and through reading." In Measurement and Evaluation of Reading, ed. Farr, Roger. Harcourt Brace and World, Inc., New York, 1970, 35-48.

Taba, Hilda. Curriculum Development - Theory and Practice. Harcourt, Brace and World, Inc., New York, 1962.

Thornton, Geoffrey. Language Experience and School. Edward Arnold (pub.) Ltd., London, 1974.

Tuinman, J. Japp. "Asking reading dependent questions." Journal of Reading 14:5, February 1971, 289-292, 336.

Utsey, Jordan, Wallen, Carl and Beldin, H.D. "Simulation: A breakthrough in the education of reading teachers." Phi Delta Kappan 47:10, June 1966, 572-574.

Weiner, M. and Cromer, Ward. "Reading and reading difficulty: A conceptual analysis." Harvard Educational Review 37:3, 1967, 620-643.

Wittcoff, Harold. "A report of a study by the Curriculum Committee of the Minneapolis Citizens Committee on Public Education." June 1966, ERIC ED 012 228.

Woods, Mary Lynn and Moe, Alden J. Analytical Reading Inventory. Charles E. Merrill Publishing Company, Toronto, 1977.

TESTS

Analytical Reading Inventory. Woods, Mary Lynn and Moe, Alden J. Charles E. Merrill Publishing Company, Toronto, 1977.

Metropolitan Achievement Tests. Elementary Form F, Reading Test. Durost, W.N., Bixler, H.H., Wrightstone, J.W., Prescott, G.A., Balow, I.H. Harcourt Brace Jovanovich, New York, 1970.

Slosson Oral Reading Test (SORT). Richard L. Slosson, Slosson Educational Publications, Inc., New York, 1963.

APPENDIX A

RAW DATA

RAW SCORES: TEST BATTERY

Test	MAT	ARI (Oral) W.R.*	ARI (Oral) Comp.*	ARI (Silent)	ERI (Oral) W.R.*	ERI (Oral) Comp.*	ERI (Silent)
Pupil 1	2.2	1	1	1	P	2	1
2	5.4	6	5	4	6	6	5
3	3.5	3	3	4	3	4	4
4	4.7	6	7	5	6	6	5
5	3.5	4	3	2	5	3	2
6	3.9	5	5	4	6	6	4
7	3.2	4	3	3	5	3	3
8	6.5	7	7	6	7	6	6
9	6.1	7	7	5	7	7	5
10	5.4	7	6	5	6	4	4
11	3.7	5	5	3	6	5	3
12	3.9	5	5	3	6	5	3
13	4.1	4	3	3	6	4	3
14	3.9	3	4	4	4	5	3
15	2.6	3	2	2	3	2	1
16	2.8	4	3	2	4	3	3
17	3.4	3	3	2	4	4	3
18	4.2	5	5	5	6	6	5
19	2.6	4	2	2	5	2	3
20	3.4	5	4	4	6	5	2
21	3.3	4	2	2	5	2	1
22	3.3	2	4	4	2	3	3
23	3.3	4	3	3	6	4	3
24	2.9	2	3	4	3	4	3
25	3.4	6	5	3	6	6	4
26	4.3	4	5	4	6	5	4
27	2.8	2	3	3	3	4	3
28	3.2	3	2	2	3	4	3

*W.R. = Word Recognition
Comp. = Comprehension

Test	X*	Y_1*	X^2	Y_1^2	XY_1
Pupil 1	2.2	1	4.84	1	2.2
2	5.4	4	29.16	16	21.6
3	3.5	4	12.25	16	14.0
4	4.7	5	22.09	25	23.5
5	3.5	2	12.25	4	7.0
6	3.9	4	15.21	16	15.6
7	3.2	3	10.24	9	9.6
8	6.5	6	42.25	36	39.0
9	6.1	5	37.21	25	30.5
10	5.4	5	29.16	25	27.0
11	3.7	3	13.69	9	11.1
12	3.9	3	15.21	9	11.7
13	4.1	3	16.81	9	12.3
14	3.9	4	15.21	16	15.6
15	2.6	2	6.76	4	5.2
16	2.8	2	7.84	4	5.6
17	3.4	2	11.56	4	6.8
18	4.2	5	17.64	25	21.0
19	2.6	2	6.76	4	5.2
20	3.4	4	11.56	16	13.6
21	3.3	2	10.89	4	6.6
22	3.3	4	10.89	16	13.2
23	3.3	3	10.89	9	9.9
24	2.9	4	8.41	16	11.6
25	3.4	3	11.56	9	10.2
26	4.3	4	18.49	16	17.2
27	2.8	3	7.84	9	8.4
28	3.2	2	10.24	4	6.4
	$\Sigma X=105.5$	$\Sigma Y_1=94$	$\Sigma X_2=426.91$	$\Sigma Y_1^2=356$	$\Sigma XY_1=381.6$

*X = MAT; Y_1 = ARI

Test	X*	Y_2*	X^2	Y_2^2	XY_2
Pupil 1	2.2	1	4.84	1	2.2
2	5.4	5	29.16	25	27.0
3	3.5	4	12.25	16	14.0
4	4.7	5	22.09	25	23.5
5	3.5	2	12.25	4	7.0
6	3.9	4	15.21	16	15.6
7	3.2	3	10.24	9	9.6
8	6.5	6	42.25	36	39.0
9	6.1	5	37.21	25	30.5
10	5.4	4	29.16	16	21.6
11	3.7	3	13.69	9	11.1
12	3.9	3	15.21	9	11.7
13	4.1	3	16.81	9	12.3
14	3.9	3	15.21	9	11.7
15	2.6	1	6.76	1	2.6
16	2.8	3	7.84	9	8.4
17	3.4	3	11.56	9	10.2
18	4.2	5	17.64	25	21.0
19	2.6	3	6.76	9	7.8
20	3.4	2	11.56	4	6.8
21	3.3	1	10.89	1	3.3
22	3.3	3	10.89	9	9.9
23	3.3	3	10.89	9	9.9
24	2.9	3	8.41	9	8.7
25	3.4	4	11.56	16	13.6
26	4.3	4	18.49	16	17.2
27	2.8	3	7.84	9	8.4
28	3.2	3	10.24	9	9.6
	$\Sigma X=105.5$	$\Sigma Y_2=92$	$\Sigma X^2=426.91$	$\Sigma Y_2^2=344$	$\Sigma XY_2=374.2$

*X = MAT; Y_2 = ERI

Test	X*	Y*	X^2	Y^2	X.Y
Pupil 1	1	1	1	1	1
2	4	5	16	25	20
3	4	4	16	16	16
4	5	5	25	25	25
5	2	2	4	4	4
6	4	4	16	16	16
7	3	3	9	9	9
8	6	6	36	36	36
9	5	5	25	25	25
10	5	4	25	16	20
11	3	3	9	9	9
12	3	3	9	9	9
13	3	3	9	9	9
14	4	3	16	9	12
15	2	1	4	1	2
16	2	3	4	9	6
17	2	3	4	9	6
18	5	5	25	25	25
19	2	3	4	9	6
20	4	2	16	4	8
21	2	1	4	1	2
22	4	3	16	9	12
23	3	3	9	9	9
24	4	3	16	9	12
25	3	4	9	16	12
26	4	4	16	16	16
27	3	3	9	9	9
28	2	3	4	9	6
	$\Sigma X=94$	$\Sigma Y=92$	$\Sigma X^2=356$	$\Sigma Y^2=344$	$\Sigma XY=342$

*X = ARI; Y = ERI

Test	X_1*	X_2*	$D=(X_1-X_2)$	D^2
Pupil 1	1	1	0	0
2	4	5	-1	1
3	4	4	0	0
4	5	5	0	0
5	2	2	0	0
6	4	4	0	0
7	3	3	0	0
8	6	6	0	0
9	5	5	0	0
10	5	4	1	1
11	3	3	0	0
12	3	3	0	0
13	3	3	0	0
14	4	3	1	1
15	2	1	1	1
16	2	3	-1	1
17	2	3	-1	1
18	5	5	0	0
19	2	3	-1	1
20	4	2	2	4
21	2	1	1	1
22	4	3	1	1
23	3	3	0	0
24	4	3	1	1
25	3	4	-1	1
26	4	4	0	0
27	3	3	0	0
28	2	3	-1	1
	$\Sigma X_1=94$	$\Sigma X_2=92$	$\Sigma D=2$	$\Sigma D^2=16$
	$\bar{X}_1=3.357$	$\bar{X}_2=3.2857$		

*X_1 = ARI; X_2 = ERI

Test	ARI X*	ARI $(X-\bar{X})$	ARI $(X-\bar{X})^2$	ERI Y*	ERI $(Y-\bar{Y})$	ERI $(Y-\bar{Y})^2$
Pupil 1	1	-2.36	5.57	1	-2.29	5.24
2	4	.64	.41	5	1.71	2.92
3	4	.64	.41	4	.71	.50
4	5	1.64	2.69	5	1.71	2.92
5	2	-1.36	1.85	2	-1.29	1.66
6	4	.64	.41	4	.71	.50
7	3	- .36	.13	3	- .29	.08
8	6	2.64	6.97	6	2.71	7.34
9	5	1.64	2.69	5	1.71	2.92
10	5	1.64	2.69	4	.71	.50
11	3	- .36	.13	3	- .29	.08
12	3	- .36	.13	3	- .29	.08
13	3	- .36	.13	3	- .29	.08
14	4	.64	.41	3	- .29	.08
15	2	-1.36	1.85	1	-2.29	5.24
16	2	-1.36	1.85	3	- .29	.08
17	2	-1.36	1.85	3	- .29	.08
18	5	1.64	2.69	5	1.71	2.92
19	2	-1.36	1.85	3	- .29	.08
20	4	.64	.41	2	-1.29	1.66
21	2	-1.36	1.85	1	-2.29	5.24
22	4	.64	.41	3	- .29	.08
23	3	- .36	.13	3	- .29	.08
24	4	.64	.41	3	- .29	.08
25	3	- .36	.13	4	.71	.50
26	4	.64	.41	4	.71	.50
27	3	- .36	.13	3	- .29	.08
28	2	-1.36	1.85	3	- .29	.08
	$\Sigma X=94$		$\Sigma(X-\bar{X})^2=40.44$	$\Sigma Y=92$		$\Sigma(Y-\bar{Y})^2=41.60$
	$\bar{X}=3.357$; Sx=1.22			$\bar{X}=3.286$; Sy=1.24		

*X = ARI; Y=ERI

APPENDIX B

EXPERIENCE-BASED READING INVENTORY

STUDENT BOOKLET

PRIMER (Oral Reading)

My sister has a new cat.

It is white and grey.

He sleeps on a blanket.

Susan will not let me pet her cat.

"You may hurt him, Joey," she said.

"He is too small to play with."

I wish I had a dog.

I could have lots of fun with him.

PRIMER (Silent Reading)

My father goes fishing in the sea.

Sometimes my mother goes with him.

I went with him only once.

I caught eight fish.

Father did not catch any that day.

Father made a big fire.

He cooked four of my fish.

I like to eat fish cooked outdoors.

LEVEL 1 (Oral Reading)

Near the sea two men were talking. Mr. Canning said, "It's kind of nice out today. I'm going fishing."

"I'm going too," said Mr. Gray.

Mr. Canningnsaid, "Good, let's go."

The two men got out their fishing boats. They were only gone an hour when the fog came in.

Mr. Gray said, "We must go home before the fog gets too thick." They tried to get back but they were lost in the fog.

"I'm getting cold," said Mr. Gray.

"I am too," said Mr. Canning. "Let's try to find a house."

"We won't find one in all this fog," said Mr. Gray.

LEVEL 1 (Silent Reading)

They looked for a house but found none. "I'm worried that we might not get home again," said Mr. Canning.

"Yes, there are whales out here," said Mr. Gray.

"I know," said Mr. Canning. The men rowed the boat to shore. There they made a fire. Suddenly Mr. Canning shouted, "Lights!"

They put out the fire and walked toward the lights. Finally they came to a house. They knocked on the door and a lady answered.

Mr. Gray said, "We are lost and can't find our way in the fog. Can you tell us where we are?"

The lady said, "You are in Newport."

They were almost home.

LEVEL 2 (Oral Reading)

I awoke suddenly one morning in July. This was the day! The sun was up and shining in through my window. I jumped out of bed. The day was just perfect.

I dressed quickly and ran down the stairs. Mother was busy working in the kitchen. Before I ate my breakfast I raced out to the barn. My older brother Tom would not let me go inside.

"It's not time yet, Anne," he said.

Feeling disappointed I went back to the house to eat. Tom had spoiled my day.

As soon as I could I crept back to the barn. Tom wasn't there so I slowly pushed open the door. There lying in the straw was a new baby colt.

LEVEL 2 (Silent Reading)

One weekend we went to visit my grandad. When we arrived he wasn't home. Dad and I walked down to the wharf but his boat was gone.

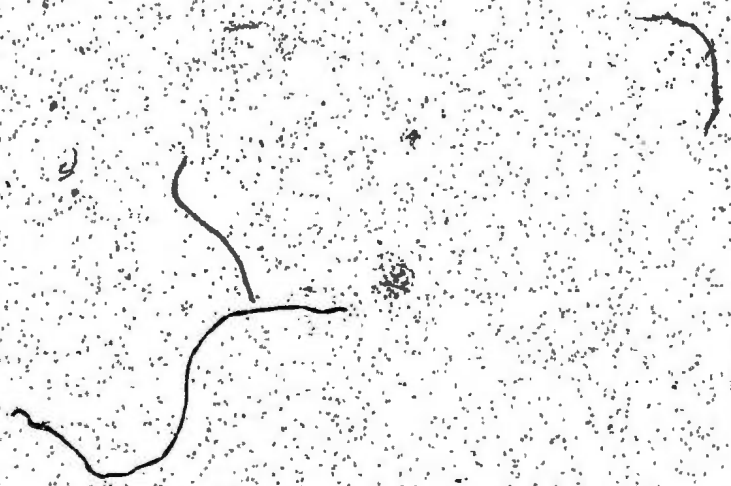
"He must still be out fishing," I said.

Three hours later grandad was still not home. Everyone was getting worried. We were afraid that something had happened to him. Then all of a sudden grandad walked through the door.

"Where in the world were you?" asked dad.

All grandad could say was, "Come and see what I have."

We grabbed our coats and ran. There on the wharf lay the biggest fish I had ever seen in my life. It was seventy inches long and weighed ninety-one pounds. What a fish that was!

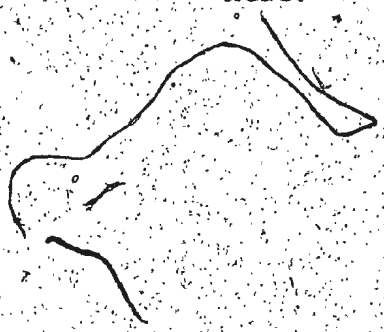


LEVEL 3 (Oral Reading)

I have two homes. My main home in Mary's Harbour is a two-storey, white house trimmed with green. This is where I live during the long, cold months when the snow is piled high over everything. Here the house is made much warmer than our summer home because the weather is much colder. We live under a small hill and are partly surrounded by woods. It is very cozy and comfortable here because we don't feel the cold as much as in the open.

We have electricity in our winter house so we can have lights, enjoy television when we have done our work, as well as other things such as stoves and refrigerators.

We get our mail by plane three times a week if the weather is clear enough. We travel by skidoo most of the time and get about very easily. We are very happy here.



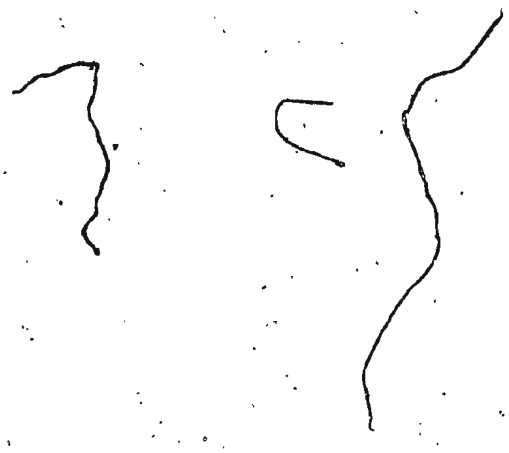
LEVEL 3 (Silent Reading)

My other home is in Henley Harbour. There we live in a one-storey house which is different from our winter home because it is on an island. Our house is smaller too, but we have lots of room to do everything we want.

We live in Henley Harbour because my father has to go fishing there. There are no trees but many different kinds of plants grow there such as bakeapples, blueberries, wild strawberries, and dandelions. My mother has a garden and sometimes we help her in it.

No other children live there but we are never lonely. We have our boat and spend much of our time rowing around the pond which is shallow. Sometimes we go in the motor boat with father if the water is calm. We also go on lots of picnics.

We love to go to Henley Harbour after the winter ends because it is our favourite home.



LEVEL 4 (Oral Reading)

Mom was busy preparing for Christmas Day when she asked me if I would bake a cake for her.

"But I've never baked anything before," I answered.

"It's very simple, John," she said, "since all you have to do is follow the directions."

Feeling worried but brave I found the ingredients and set to work. Later, tired but pleased I placed the sticky mess in the hot oven. After another thirty minutes of impatient waiting I removed the pan, but something didn't look right!

"Well, it's only my first try," I thought, as holding the cake carefully I proudly walked into the dining room. As I bent to serve it I tripped, the cake flew off the plate and landed upside down on the floor.

"What in the world is in it?" said mother as it lay without a crumb missing.

Suddenly a thought struck me. "The butter! It's still in the refrigerator!"

LEVEL 4 (Silent Reading)

One summer while returning home to supper I suddenly noticed a peculiar aroma. Since I was feeling hungry I thought, "Ah, barbecue steak!"

At that moment a strange glow in the window of the old department store that I was passing caught my eye. An unusual smell, that glow, could it be a fire?

Peering through the dusty glass I saw fiery tongues licking around the bottom of the stairs at the back of the store. Searching about wildly for help I noticed curtains hung at upstairs windows. Were there people living up there?

Hammering at the narrow side door I screamed, "Fire, everyone out!" until I felt the door being pulled away from me. "I'll get help," I shouted back to the man and four children as I raced to the nearest telephone.

Minutes later down the street roared the fire trucks, their black-coated men dressed for battle.

LEVEL 5 (Oral Reading)

An important invention for the people of Canada's north has been the skidoo. It has almost replaced the dog sled as the best means of winter transportation and communication.

In larger towns and cities the skidoo is used for entertainment. In places with large distances between them it is much more important.

The main use of the skidoo is to transport people in places where snow, ice, cold and distance make travel by car dangerous or impossible. Now people need not be cut off from the world and each other during the long, cold winter.

Even the sick are helped by the skidoo. When the weather is too poor for flying the patient is placed on a special sled and pulled behind the skidoo. The hunter uses it to visit his traps and hunting grounds, and the postman to bring his mail.

Although used for many chores such as bringing water and wood, shopping, and going to work or school, when all the hard work is done the skidoo is wonderful for having long hours of fun.

LEVEL 5 (Silent Reading)

Many interesting facts about the Beothucks, the first people known to have lived in Newfoundland, are found in a book written by James P. Howley. Howley was born at St. John's in July, 1847. When he grew up he worked as a geologist for the Newfoundland government. He travelled widely in his country and even had a town, the town of Howley, named after him.

One of Howley's greatest hobbies was the study of the Beothuck Indians. In his book called, "The Beothucks or Red Indians" he gives a clear picture of the way these people lived. He also tells of the possible reasons why these people did not survive after the white man came. As proof of what he wrote Howley includes in his book letters and reports from people who met or saw the Indians as well as pictures of their homes, weapons, clothes, and food. A number of words from their language are there for us to see.

The Beothucks have all gone but this book by a great Newfoundlander leaves a great deal to remind us of their way of life.

LEVEL 6 (Oral Reading)

After refueling his plane and having a quick chat, the familiar pilot of the E.P.A. Otter plane from Goose Bay asked his four male passengers to climb aboard. He got in himself, started the motor and let it run quietly for a short while. As the motor warmed up the plane gradually began to gain speed and move slowly along the thick ice that was the runway. The pilot, unaware of the great danger ahead, waved to those left standing together on the ground.

The small plane taxied along the ice for a short distance and then turned carefully around. After a few seconds the engine roared. The plane rushed noisily across the ice and was finally airborne.

Just as its wheels left the safety of the ice its engine sputtered and began to fail. The pilot tried to turn the machine around to land it again, but unfortunately he had not gotten high enough to make it. The little plane's left wing hooked in the rough ice, then it spun sideways and crashed helplessly back onto the ice. The silence was terrible.

LEVEL 6 (Silent Reading)

The people who had just moments before waved to those leaving on the plane, now stood as if turned to stone. Then with a shout to a young boy to get the doctor, they raced for their skidoos. Roaring their engines into action they sped across the ice to the spot where the broken plane lay half in and half out of the water.

The men aboard the aircraft were unbelieving as they saw what was happening. The pilot, trained for such emergencies, unbuckled his seat belt and ordered all to jump clear before the plane could sink beneath the ice. Quickly pushing open the door all unhesitatingly leaped into the icy North Atlantic waters and scrambled onto the main ice to safety. Shivering from the cold they stamped about as the skidoos sped towards them.

Pilot and passengers were taken to the nearest homes, given dry clothes, hot drinks and put by warm fires. The crash was now quickly becoming just a bad dream and a good story.

The plane sat caught by her wings until the next sunny day when it silently slipped through the ice to the ocean bottom.

LEVEL 7 (Oral Reading)

In many communities along coastal Labrador fishing is the main occupation. In this part of the world which is often cut off from fresh food supplies from the south fish is also the staple of everyone's diet.

During early spring while waiting for the ice to break up and drift away the men are busy mending nets and traps, getting new ones ready and making repairs to boats and equipment. They are seldom idle as they prepare for the summer fishing season. This lasts from early June to October or later if the weather conditions are good.

Many kinds of fish are caught such as trout, salmon, cod, herring, caplin and mackerel. Some are kept for home food supplies but most are sold for cash.

Labrador trout which are large and very tasty are caught in nets. The fishermen keep some but most are sold. Salmon fishing is well worth the extra work because of the high price they bring. Cod although less plentiful are still a good source of income. Herring and mackerel are abundant, often causing the men to make several trips to their nets in one day. While not eaten much in Labrador these fish are a main dish in some European countries.

A fisherman's life means long, uncomfortable hours of dangerous work often stretching from dawn until well after dark if the fishing is good. Yet many would never trade it for a safer, easier job ashore.

LEVEL 7 (Silent Reading)

As I splashed into the chilly, blue waters of the Pacific Ocean my clumsy scuba gear suddenly became weightless. I had always felt wonderfully at peace in this silent, shadowy world and today was no exception.

Swimming strongly and smoothly I sank deeper and deeper, my eyes behind their protective lenses gradually adjusting to the gloomy depths. The usual array of colours and shapes flashed past, angel fish especially beautiful with their black and yellow stripes cutting across silvery white bodies. I was pleased I had gotten a day away from my friends to explore these waters.

With one swift movement the many fish suddenly disappeared and all was strangely still. As if out of nowhere a great white shadow slipped silently into view, its belly an arrow of shining white, the rest of its huge body a gray smudge in the water. A shark!

I dropped slowly and carefully toward the ocean floor away from that silently moving menace. It seemed more interested in a dark cave eaten into the huge coral cliff to my right. I thought of the many other dangers that could be hidden in that black cavern, a giant morray eel or a sleeping octopus.

Gradually, so as not to announce my departure, I began to float toward the surface. The huge fish hesitated

LEVEL 7 (Silent Reading) cont'd.

as some careless move caught its eye. With knowing precision it swept around, its jaws locked in a mocking grin. Was I to be its next quick lunch?

APPENDIX C

EXPERIENCE-BASED READING INVENTORY

TEACHER'S RECORD BOOKLET

ERI CODING SYSTEM

The coding system was used during the present investigation is similar to that used in the administration of most forms of an IRI.

Type of Error[1]	Coding Device	
Omissions (O)	O	(circle omission)
Additions (prefix/suffix) (A)	( )	(insert addition, if possible)
Pronunciation aids (P.A.)	P	(over aided word)
Repetitions (REP.)	———	(under the word)
Reversals (REV.)	∼	
Insertion (word) (I)	^	(indicate insertion)
Phrasing (PHR.)	/ / /	
Punctuation (P.)	X	
Mispronunciation (MIS.)[2]	------	(through the word)

[1] Not all "errors" so recorded need be counted in summarizing pupil results.

[2] Abbreviations in brackets correspond to those used in the "error count".

DIAGNOSTIC CHECK LIST

NAME: _____ AGE: _____

PRESENT GRADE _____ INSTRUCTIONAL LEVEL: _____

Skill Area	Type of Error*	Frequency High	Average	Low
Oral Reading	Rate			
	Finger Pointing			
	Phrasing/Punctuation			
	Expression			
	Requests for examiner aid			
	Mispronunciations			
	Omissions			
	Additions (prefixes/ suffixes)			
	Insertions (words)			
	Repetitions			
	Reversals			
	Consonant difficulties (Initial, Medial, Final)			
	Phonetic Analysis skill			
	Structural Analysis skill			
	Basic Sight Vocabulary			
	Use of Context Clues			
	Appears tense and/or nervous			
Silent Reading	Lip movement/vocalization			
	Finger-pointing			
	Requests for examiner aid			
	Rate of Silent Reading			
	Appears tense and/or nervous			

*Not all items need be checked.

(cont'd.)

Diagnostic Check List (cont'd.)

Skill Area	Type of Error*	Frequency High	Average	Low
Comprehension Questions	Literal Comprehension			
	a. Factual Recall (oral)			
	(silent)			
	b. Main Idea (oral)			
	(silent)			
	c. Terminology (oral)			
	(silent)			
	Inferential Comprehension			
	a. Cause and Effect (oral)			
	(silent)			
	b. Conclusions (oral)			
	(silent)			
	Organization of Answers			
Language Skill	Ability to use new words in answers			
	Complexity of Vocabulary			
	Complexity of Sentence Structures			

Examiner's comments (strengths/weaknesses, etc.)

*All items must be noted for each pupil.

PRIMER (Oral Reading ~~<~~ 52 words, 8 sentences)

Examiner's Introduction:

There is something new in this family. Someone is not too happy. Let's read about it.

My sister has a new cat.

It is white and grey.

He sleeps on a blanket.

Susan will not let me pet her cat.

"You may hurt him, Joey," she said. "He is too small to play with."

I wish I had a dog.

I could have lots of fun with him.

Comprehension Questions and Possible Answers:

*(mi) 1. What would be a good title for this story? ("The New Pet" or "My Sister's Pet")

*(t) 2. What does the word "pet" mean in this story? (to smooth or to rub down)

(f) 3. Where does the cat sleep? (on a blanket)

(inf) 4. What is Susan's brother's name? (Joey)

*(f) 5. Why won't Susan let Joey touch her cat? (he may hurt him or the cat is small)

(ce) 6. What would make Joey happy? (to have a dog)

ERROR COUNT:

O____ A____ P.A.____

REP.___ REV.___ I____

PHR.___ P.___ MIS.___

SCORING GUIDE

W.R. Errors		Comp. Errors	
Ind.	0-1	Ind.	0
Inst.	2-3	Inst.	1-2
Frust.	5+	Frust.	3+

*Either answer is acceptable

PRIMER (Silent Reading--48 words, 8 sentences)

Examiner's Introduction:

Let's read about a child who enjoys going somewhere with his Father.

My father goes fishing in the sea.

Sometimes my mother goes with him.

I went with him only once.

I caught eight fish.

Father did not catch any that day.

Father made a big fire.

He cooked four of my fish.

I like to eat fish cooked outdoors.

Comprehension Questions and Possible Answers:

*(mi) 1. What would be a good title for this story? ("Fishing With Father")

(f) 2. How many fish did the child catch? (eight)

(t) 3. What is meant by the word "once" in this story? (one time)

*(con) 4. What other people have gone fishing with the father? (Mother, or the child)

(f) 5. Where does the father go to fish? (the sea)

*(inf) 6. What words make us think that the person telling the story enjoyed his trip? (he caught eight fish, or he liked fish caught outdoors)

ERROR COUNT:

O_____ A____ P.A.____

REP.___ REV.___ I____

PHR.___ P.___ MIS.___

SCORING GUIDE

W.R. Errors		Comp. Errors	
Ind.	0-1	Ind.	0
Inst.	2-3	Inst.	1-2
Frust.	5+	Frust.	3+

*Either answer is acceptable.

LEVEL 1 (Oral Reading--104 words, 13 sentences)

Examiner's Introduction:

In this story two men go out for the day. Let's read and see what happens to them.

Near the sea two men were talking. Mr. Canning said, "It's kind of nice out today. I'm going fishing."

I'm going too," said Mr. Gray.

Mr. Canning said, "Good, let's go." The two men got out their fishing boats. They were only gone an hour when the fog came in.

Mr. Gray said, "We must go home before the fog gets too thick," They tried to get back but they were lost in the fog.

"I'm getting cold," said Mr. Gray.

"I am too," said Mr. Canning. Let's try to find a house."

"We won't find one in all this fog," said Mr. Gray.

ERROR COUNT:

O____ A____ P.A.____

REP.___ REV.___ I____

PHR.___ P.___ MIS.___

*Either answer is acceptable.

Comprehension Questions and Possible Answers:

*(mi) 1. What would be a good name for this story? ("Lost in the Fog" or The Two Fishermen)

(f) 2. Can you tell me the names of the men in this story? (Mr. Gray and Mr. Canning)

(inf) 3. Why were the men getting worried? (They were lost in the fog)

(f) 4. What did the men decide to do on the day of this story? (to go fishing)

(con) 5. Why did they decide to go fishing on that day? (because the weather was nice or fine)

*(t) 6. What does the word "near" mean in this story? (close to, or beside)

SCORING GUIDE

W.R. Errors		Comp. Errors	
Ind.	1	Ind.	0
Inst.	6	Inst.	1-2
Frust.	10+	Frust.	3+

LEVEL 1 (Silent Reading--106 words, 14 sentences)

Examiner's Introduction:

Two men have an adventure. Let's read about what happened to them.

They looked for a house but found none. "I'm worried that we might not get home again," said Mr. Canning.

"Yes, there are whales out here," said Mr. Gray.

"I know," said Mr. Canning.

The men rowed the boat to shore. There they made a fire. Suddenly Mr. Canning shouted, "Lights!"

They put out the fire and walked toward the lights. Finally they came to a house. They knocked on the door and a lady answered.

Mr. Gray said, "We are lost and can't find our way in the fog. Can you tell us where we are?"

The lady said, "You are in Newport."

They were almost home.

ERROR COUNT:

O_____ A____ P.A.____

REP.___ REV.___ I____

PHR.___ P.___ MIS.___

*Either answer is acceptable.

Comprehension Questions and Possible Answers:

(f) 1. Who answered the door when they knocked?
(a lady)

(t) 2. What does the word "finally" mean in this story?
(at last or after a while)

(f) 3. What did the men see as they made their fire?
(lights)

*(con) 4. Why did the men walk towards the lights that they saw?
(they thought that they might get help or that it was their own home)

*(con) 5. What things did the men feel afraid of when they were in their boat?
(the whales, being lost, or not finding their way home)

(inf) 6. How do you think the men felt when the lady told them where they were?
(happy or glad)

SCORING GUIDE

W.R. Errors		Comp. Errors	
Ind.	1	Ind.	0
Inst.	6	Inst.	1-2
Frust.	10+	Frust.	3+

LEVEL 2 (Oral Reading--120 words, 15 sentences)

Examiner's Introduction:

Something special happened one day. Let's read and see what it was.

I awoke suddenly one morning in July. This was the day! The sun was up and shining in through my window. I jumped out of bed. The day was just perfect.

I dressed quickly and ran down the stairs. Mother was busy working in the kitchen. Before I ate my breakfast I raced out to the barn. My older brother Tom would not let me go inside.

"It's not time yet, Anne," he said.

Feeling disappointed I went back to the house to eat. Tom had spoiled my day.

As soon as I could I crept back to the barn. Tom wasn't there so I slowly pushed upon the door. There lying in the straw was a new baby colt.

ERROR COUNT:

O____ A____ P.A.____

REP.___ REV.___ I.___

PHR.___ P.___ MIS.___

*Either answer is acceptable.

Comprehension Questions and Possible Answers.

*(mi) 1. What would be a good title for this story? ("The Surprise",or "The New Colt")

(f) 2. In which month of the year did this story happen? (July)

(f) 3. What was in the barn when the person finally got in? (a new colt)

*(t) 4. What does the word "spoiled" mean in this story? (turned it bad, or ruined it)

(ce) 5. Why did Anne have to creep back to the barn? (so that her brother would not see her and stop her)

*(inf) 6. Why wouldn't Tom let Anne into the barn? (it was not time yet, or the colt had not been born yet)

SCORING GUIDE

W.R. Errors		Comp. Errors	
Ind.	1	Ind.	0
Inst.	6	Inst.	1-2
Frust.	12+	Frust.	3+

LEVEL 2 (Silent Reading--120 words, 14 sentences)

Examiner's Introduction:

Something happens to grandad. Let's read and see what it was.

One weekend we went to visit my grandad. When we arrived he wasn't home. Dad and I walked down to the wharf but his boat was gone.

"He must still be out fishing," I said.

Three hours later grandad was still not home. Everyone was getting worried. We were afraid that something had happened to him. Then all of a sudden grandad walked through the door.

"Where in the world were you?" asked dad.

All grandad could say was, "Come and see what I have."

We grabbed our coats and ran. There on the wharf lay the biggest fish I had ever seen in my life. It was seventy inches long and weighed ninety-one pounds. What a fish that was!

Comprehension Questions and Possible Answers:

(f) 1. When did the family visit their grandad? (on the weekend)

*(t) 2. What is meant by the word "weekend?" (Saturday and Sunday, or the days at the end of the week)

(f) 3. How long was the fish that grandad caught? (seventy inches)

(con) 4. Where was grandad when the family arrived? (still out fishing)

(ce) 5. What makes you think that it was unusual for grandad to be so late? (everyone was worried)

*(inf) 6. How do you think the child telling the story felt when he saw the big fish? (surprised, or astonished, or pleased)

ERROR COUNT:

O_____ A____ P.A.____

REP.___ REV.___ I____

PHR.___ P.___ MIS.___

SCORING GUIDE

W.R. Errors		Comp. Errors	
Ind.	1	Ind.	0
Inst.	6	Inst.	1-2
Frust.	12+	Frust.	3+

*Either answer is acceptable.

LEVEL 3 (Oral Reading--147 words, 10 sentences)

Examiner's Introduction:

This child is telling about his home. Let's read and learn what his home is like.

I have two homes. My main home in Mary's Harbour is a two-storey white house trimmed with green. This is where I live during the long cold months when the snow is piled high over everything. Here the house is made much warmer than our summer home because the weather is much colder. We live under a small hill and are partly surrounded by woods. It is very cozy and comfortable here because we don't feel the cold as much as in the open.

We have electricity in our winter house so we can have lights, enjoy television when we have done our work, as well as other things such as stoves and refrigerators.

We get our mail by plane three times a week if the weather is clear enough. We travel by skidoo most of the time and get about very easily. We are very happy here.

Comprehension Questions and Possible Answers:

*(mi) 1. What is this story mainly about?
(a winter home, or someone's home)

(f) 2. How is the mail delivered to this child's town?
(by plane)

(f) 3. How many houses does this child live in each year?
(two)

*(con) 4. During what time of the year does this child live at Mary's Harbour?
(during the winter, or when the snow is piled high everywhere)

(t) 5. What is meant by the phrase "my main home?"
(the house I live in most of the time)

*(ce) 6. What would cause the mail to be late in this town?
(if the planes could not fly, or if the weather was not clear)

(con) 7. Why is this home made warmer than his other home?
(it is used during the cold winter)

*Either answer is acceptable.

(cont'd.)

(inf) 8. Why do you think that the winter home is made more comfortable than the summer home? (they spend more time in it, or it is their main home, or they live in it during the winter when they spend more time inside)

ERROR COUNT:

O_____ A_____ P.A. _____

REP.___ REV.___ I_____

PHR.___ P.___ MIS.____

SCORING GUIDE

W.R. Errors		Comp. Errors	
Ind.	1-2	Ind.	0
Inst.	7-8	Inst.	2
Frust.	15+	Frust.	4+

LEVEL 3 (Silent Reading--150 words, 11 sentences)

Examiner's Introduction:

This is about another home. Let's read about this one.

My other home is in Henley Harbour. There we live in a one-storey house which is different from our winter home because it is on an island. Our house is smaller too, but we have lots of room to do everything we want.

We live in Henley Harbour because my father has to go fishing there. There are no trees but many different kinds of plants grow there such as bakeapples, blueberries, wild strawberries and dandelions. My mother has a garden and sometimes we help her in it.

No other children live here but we are never lonely. We have our own boat and spend much of our time rowing around the pond which is shallow. Sometimes we go in the motor boat with father if the water is calm. We also go on lots of picnics.

We love to go to Henley Harbour after the winter ends because it is our favourite home.

*Either answer is acceptable.

Comprehension Questions and Possible Answers:

(mi) 1. What is this story about?
(a summer home)

(f) 2. During what time of the year do they live in the house at Henley Harbour?
(the summer)

(f) 3. Are there any other children living near the summer house?
(no)

*(t) 4. What is the meaning of the word "calm"?
(quiet, smooth, or not rough)

*(con) 5. Name two ways in which the summer home is different from the winter home.
(on an island, one-storey, no children near, smaller)

(ce) 6. Why does the family move to Henley Harbour each summer?
(so the father can fish)

*(inf) 7. What do the children do for fun at Henley Harbour?
(help in the garden, row the boat, go on picnics, or go out in their Father's boat)

*(inf) 8. Why do you think that it is fun to live at the summer home?

(cont'd.)

(lots of room to do what they want, or they have their own boat to play in, or they go on lots of picnics).

ERROR COUNT:

O_____ A____ P.A.____

REP.___ REV.___ I.___

PHR.___ P.___ MIS.___

SCORING GUIDE

W.R. Errors		Comp. Errors	
Ind.	1-2	Ind.	0-1
Inst.	7-8	Inst.	2
Frust.	15+	Frust.	4+

LEVEL 4 (Oral Reading--155 words, 10 sentences)

Examiner's Introduction:

Have you ever done any baking? This is about one child's first try. Let's read about it.

Mom was busy preparing for Christmas Day when she asked me if I would bake a cake for her.

"But I've never baked anything before!" I answered.

"It's very simple, John," she said, "since all you have to do is follow the directions."

Feeling worried but brave I found the ingredients and set to work. Later, tired but pleased, I placed the sticky mess in the hot oven. After another thirty minutes of impatient waiting I removed the pan, but something didn't look right!

"Well, it's only my first try," I thought, as holding the cake carefully I proudly walked into the dining room. As I bent to serve it I tripped, the cake flew off the plate and landed upside down on the floor.

"What in the world is in it?" said mother as it lay without a crumb missing.

*Either answer is acceptable.

Comprehension Questions and Possible Answers:

(mi) 1. What happened when the child baked the cake?
(he forgot the butter and the cake turned out wrong)

(f) 2. What is the name of the boy in this story?
(John)

*(t) 3. What is the meaning of the word "impatient"?
(not liking to wait, in a hurry, or restless)

*(con) 4. Why did Mother ask John to bake her a cake?
(she was too busy preparing for Christmas, or she was too busy to do it herself)

*(t) 5. What is the meaning of the word "ingredients"?
(the things that go into a cake, or the things you use to make a cake)

*(inf) 6. Why do you think that John has never baked before?
(he is a boy, or nobody ever asked him before, or he is a child)

(inf) 7. Why did John feel worried as he collected the ingredients?
(he knew that he had never baked before)

*(con) 8. Give one reason why you think that this

(cont'd.)

Suddenly a thought struck me. "The butter! It's still in the refrigerator!"

cake may or may not have been a good cake for a party.
(it didn't turn out right, or it was too hard)

ERROR COUNT:

O____ A____ P.A.____

REP.___ REV.___ I.___

PHR.___ P.___ MIS.___

SCORING GUIDE

W.R. Errors		Comp. Errors	
Ind.	1-2	Ind.	0-1
Inst.	7-8	Inst.	2
Frust.	15+	Frust.	4+

LEVEL 4 (Silent Reading--150 words, 10 sentences)

Examiner's Introduction:

Let's read about the exciting adventure that this boy had.

One summer while returning home to supper I suddenly noticed a peculiar aroma. Since I was feeling hungry I thought, "Ah, barbecue steak!"

At that moment a strange glow in the window of the old department store that I was passing caught my eye. An unusual smell, that glow, could it be a fire?

Peering through the dusty glass I saw fiery tongues licking around the bottom of the stairs at the back of the store. Searching about wildly for help I noticed curtains hung at upstairs windows. Were there people living up there?

Hammering at the narrow side door I screamed, "Fire, everyone out!" until I felt the door being pulled away from me. "I'll get help," I shouted back to the man and four children as I raced to the nearest telephone.

Minutes later down the street roared the fire trucks, their black-coated men dressed for battle.

Comprehension Questions and Possible Answers:

(mi) 1. What do you think is the most important event in this story? (the boy discovers the fire and saves the people)

(f) 2. Where was the person telling the story going when he discovered the fire? (going home to supper)

*(t) 3. What is meant by the words "fiery tongues"? (flames, or the fire)

*(t) 4. What is meant by the phrase "a peculiar aroma" in this story? (a strange small, or a funny smell)

(ce) 5. What told the story teller that there was something wrong in the store? (the strange smell and the glow in the window)

*(f) 6. What did he think was causing the strange smell at first? (steak barbecuing, or barbecue steak)

*(inf) 7. What is said in the story that tells you how the boy felt when he discovered the fire? (searched wildly, or hammering at the door, or screamed "Fire", or shouted)

*Either answer is acceptable

(cont'd.)

(con) 8. What made the story teller think that there were people living in the building? (the curtains on the windows up over the store).

ERROR COUNT:

O_____ A._____ P.A._____

REP._____ REV._____ I._____

PHR._____ P._____ MIS._____

SCORING GUIDE

W.R. Errors		Comp. Errors	
Ind.	1-2	Ind.	0-1
Inst.	7-8	Inst.	2
Frust.	15+	Frust.	4+

LEVEL 5 (Oral Reading--180 words, 10 sentences)

Examiner's Introduction:

Let's read about one of the most important new inventions.

An important invention for the people of Canada's north has been the skidoo. It has almost replaced the dog sled as the best means of winter transportation and communication.

In larger towns and cities the skidoo is used for entertainment. In places with large distances between them it is much more important.

The main use of the skidoo is to transport people in places where snow, ice, cold and distance make travel by car dangerous or impossible. Now people need not be cut off from the world and each other during the long, cold winter.

Even the sick are helped by the skidoo. When the weather is too poor for flying the patient is placed on a special sled and pulled behind the skidoo. The hunter uses it to visit his traps and hunting grounds, and the postman to bring his mail.

Although used for many chores such as bringing water and wood, shopping, and going to work or school, when all the hard work is done the skidoo is wonderful for having long hours of fun.

*Either answer is acceptable.

Comprehension Questions and Possible Answers:

*(mi) 1. What is the main topic of this story? (the uses of the skidoo, or why the skidoo is important in the north)

(f) 2. Where is the skidoo one of the most important inventions? (the Canadian north)

*(t) 3. What is meant by the word "communication" in this story? (to send a message to someone, to talk to someone)

**(con) 4. Why has the skidoo been so important to the north? (it has improved transportation and communication, or it helps the sick, the hunters and the mail delivery)

*(ce) 5. Why is the skidoo so important to transportation in the north? (because travel is hard in the winter; or ice, snow, cold and distance make it hard to use a car)

(ce) 6. How can the skidoo help the sick? (when the weather is too bad for planes to fly the skidoo can bring the sick to the hospital)

(cont'd.)

(f) 7. What is the skidoo used for in the large cities and towns? (mainly for sport or entertainment)

*(inf) 8. How can the skidoo help people keep in contact with each other even in bad weather or over great distances? (it can transport the people for a visit, or it can bring mail)

ERROR COUNT:

O._____ A.____ P:A.___

REP.___ REV.___ I._____

PHR.___ P.____ MIS.___

SCORING GUIDE

W.R. Errors		Comp. Errors	
Ind.	2	Ind.	0-1
Inst.	9	Inst.	2
Frust.	18	Frust.	4+

LEVEL 5 (Silent Reading--184 words, 10 sentences)

Examiner's Introduction:

Many good books have been written by Newfoundlanders. Let's read about one of these.

Many interesting facts about the Beothucks, the first people known to have lived in Newfoundland, are found in a book written by James P. Howley. Howley was born at St. John's in July, 1847. When he grew up he worked as a geologist for the Newfoundland government. He travelled widely in his country and even had a town, the town of Howley, named after him.

One of Howley's greatest hobbies was the study of the Beothuck Indians. In his book called, "The Beothucks or Red Indians" he gives a clear picture of the way these people lived. He also tells of the possible reasons why these people did not survive after the white man came. As proof of what he wrote Howley includes in his book letters and reports from people who met or saw the Indians as well as pictures of their homes, weapons, clothes, and food. A number of words from their language are there for us to see.

The Beothucks have all gone but this book by a great Newfoundlander leaves a great deal to remind us of their way of life.

*Either answer is acceptable.

Comprehension Questions and Possible Answers:

*(mi) 1. What is the main topic of this story? (a book written about the Beothucks, or a book by Howley about the Indians)

(f) 2. Where was James Howley born? (St. John's)

(t) 3. What does the word "ancient" mean? (very old)

*(f) 4. Who were the first people known to have lived in Newfoundland? (the Beothuck Indians, or the Beothucks)

*(t) 5. What is meant by the word "hobbies"? (something done in spare time, or something that you enjoy that is not your job)

*(con) 6. How do we know that much of what Howley wrote is true? (because he includes letters and pictures from people who really met the Indians, or because he spoke to people who had seen or spoken to the Indians themselves)

(cont'd.)

(inf) 7. What words in the story tell us that Howley was a well-liked man in Newfoundland? (there is a town named after him)

*(con) 8. Where would you look if you wanted factual information about the Beothuck Indians? (in the book written by Howley or in the book called "The Beothucks or Red Indians," or in an encyclopedia)

ERROR COUNT:

O_____ A.___ P.A.____

REP.___ REV.___ I.___

PHR.___ P.___ MIS.___

SCORING GUIDE

W.R. Errors		Comp. Errors	
Ind.	2	Ind.	0-1
Inst.	9	Inst.	2
Frust.	18+	Frust.	4+

LEVEL 6 (Oral Reading--189 words, 11 sentences)

Examiner's Introduction:

Flying in the north is sometimes dangerous. This is a story of one pilot's adventure.

After refueling his plane and having a quick chat, the familiar pilot of the E.P.A. Otter plane from Goose Bay asked his four male passengers to climb aboard. He got in himself, started the motor and let it run quietly for a short while. As the motor warmed up the plane gradually began to gain speed and move slowly along the thick ice that was the runway. The pilot, unaware of the great danger ahead, waved to those left standing together on the ground.

The small plane taxied along the ice for a short distance and then turned carefully around. After a few seconds the engine roared. The plane rushed noisily across the ice and was finally airborne.

Just as its wheels left the safety of the ice its engine sputtered and began to fail. The pilot tried to turn the machine around to land it again, but unfortunately he had not gotten it high enough to make it. The little plane's left wing hooked in the rough ice, then it spun sideways and

Comprehension Questions and Possible Answers:

(mi) 1. What is the main event in this story?
(the plane crash)

*(f) 2. What kind of airplane was used in this story?
(an E.P.A. Otter, or a small plane)

*(t) 3. What is meant by the word "familiar" in this story?
(the pilot was known to the people, or someone we know)

(con) 4. How many people were aboard the plane when it left?
(five)

*(ce) 5. What caused the plane to crash?
(the engine failed, or the wing hooked in the ice, or the plane had not gotten high enough when the pilot tried to turn it around to land again)

*(inf) 6. Why was the silence so terrible?
(because perhaps everyone was killed, or there was no sound of the plane flying away)

*(con) 7. What words make you think that the pilot was not afraid of starting his trip?

*Either answer is acceptable

(cont'd.)

and crashed helplessly back onto the ice. The silence was terrible.

(he chatted with those waiting, or he waved as the plane left)

(f) 8. What material was the runway made out of? (ice)

ERROR COUNT:

O_____ A. ____ P.A.___

REP.___ REV.___ I.____

PHR.___ P.___ MIS.___

SCORING GUIDE

W.R. Errors		Comp. Errors	
Ind.	2	Ind.	0-1
Inst.	10	Inst.	2
Frust.	20+	Frust.	4+

LEVEL 6 (Silent Reading--184 words, 11 sentences)

Examiner's Introduction:

A small plane has crashed on takeoff. Let's read and see what happens next.

The people who had just moments before waved to those leaving on the plane, now stood as if turned to stone. Then with a shout to a young boy to get the doctor, they raced for their skidoos. Roaring their engines into action they sped across the ice to the spot where the broken plane lay half in and half out of the water.

The men aboard the aircraft were unbelieving as they saw what was happening. The pilot, trained for such emergencies, unbuckled his seat belt and ordered all to jump clear before the plane could sink beneath the ice. Quickly pushing open the door all unhesitatingly leaped into the icy North Atlantic waters and scrambled onto the main ice to safety. Shivering from the cold they stamped about as the skidoos sped towards them.

Pilot and passengers were taken to the nearest homes, given dry clothes, hot drinks and put by warm fires. The crash was now quickly becoming just a bad dream and a good story.

Comprehension Questions and Possible Answers:

(mi) 1. What is the main topic in this story? (the escape from the wreckage)

(f) 2. In which ocean does this take place? (the north Atlantic Ocean)

(t) 3. What is meant by the phrases "a bad dream and a good story"? (the incident was so awful that it will soon seem like a bad dream rather than something that really happened, and become something to be told to others for their entertainment)

(f) 4. How were the people brought back to the settlement? (they were brought back by skidoos)

(con) 5. What words in the story tell us that the pilot was prepared to deal with such problems as a crash? (he was trained for such emergencies)

*(t) 6. What is meant by the word "unhesitatingly"? (they did not wait, or they did not hesitate)

*Either answer is acceptable.

(cont'd.)

The plane sat caught by her wings until the next sunny day when it silently slipped through the ice to the ocean bottom.

*(inf) 7. Why were there no special vehicles to be used for such emergency rescues present at this runway when the plane crashed? (it was not a big airport, or it was only a small place that did not have the usual equipment found at large airports)

(ce) 8. Why didn't the plane sink into the ocean immediately? (the wing was caught in the ice)

ERROR COUNT:

O____ A.____ P.A.___

REP.___ REV.___ I.___

PHR.___ P.___ MIS.___.

SCORING GUIDE

W.R. Errors		Comp. Errors	
Ind.	2	Ind.	0-1
Inst.	10	Inst.	2
Frust.	20+	Frust.	4+

LEVEL 7 (Oral Reading--240 words, 15 sentences)

Examiner's Introduction:

This is about fishing in Labrador.

In many communities along coastal Labrador fishing is the main occupation. In this part of the world which is often cut off from fresh food supplies from the south fish is also the staple of everyone's diet.

During early spring while waiting for the ice to break up and drift away the men are busy mending nets and traps, getting new ones ready and making repairs to boats or equipment. They are seldom idle as they prepare for the summer fishing season. This lasts from early June to October or later if the weather conditions are good.

Many kinds of fish are caught such as trout, salmon, cod, herring, caplin, and mackerel. Some are kept for home food supplies but most are sold for cash.

Labrador trout which are large and very tasty are caught in nets. The fishermen keep some but most are sold. Salmon fishing is well worth the extra work because of the high price they bring. Cod, although less plentiful, are still a good source of income. Herring and mackerel

*Either answer is acceptable.

Comprehension Questions and Possible Answers:

(mi) 1. What is the main topic being discussed in this passage?
(fishing in Labrador)

*(t) 2. In this passage what is meant by the word "staple"?
(the main or basic food item)

(f) 3. In which way are trout caught in Labrador?
(in nets)

(ce) 4. Why is fish a staple in the diet of many people of the fishing communities of Labrador?
(they are often cut off from fresh food supplies from the south)

*(f) 5. Name the types of fish caught in Labrador that are mentioned in this article.
(trout, salmon, cod, herring, caplin and mackerel)

(t) 6. What is the meaning of the phrase "source of income"?
(a way of earning income or money)

(ce) 7. Why do you think that the men sometimes have to make several trips to their nets?

(cont'd.)

are abundant often causing the men to make several trips to their nets in one day. While not eaten much in Labrador these fish are a main dish in some European countries.

A fisherman's life means long, uncomfortable hours of dangerous work often stretching from dawn until well after dark if the fishing is good. Yet many would never trade it for a safer, easier job ashore.

(the fish are so plentiful that the nets fill quickly and must be emptied)

(con) 8. Why do the men spend their time in early spring mending nets and traps and repairing their boats? (to prepare for the fishing season when they would be too busy to do these jobs)

ERROR COUNT:

O____ A.____ P.A.____

REP.___ REV.___ I.___

PHR.___ P.___ MIS.___

SCORING GUIDE

W.R. Errors		Comp. Errors	
Ind.	2-3	Ind.	0-1
Inst.	13	Inst.	2-3
Frust.	26+	Frust.	4+

LEVEL 7 (Silent Reading--247 words, 12 sentences)

Examiner's Introduction:

This is a story of underwater adventure. Read and discover one of the perils of the deep.

As I splashed into the chilly blue waters of the Pacific Ocean my clumsy scuba gear suddenly became weightless. I had always felt wonderfully at peace in this silent, shadowy world and today was no exception.

Swimming strongly and smoothly I sank deeper and deeper, my eyes behind their protective lenses gradually adjusting to the gloomy depths. The usual array of colours and shapes flashed past, angelfish especially beautiful with their black and yellow stripes cutting across silvery white bodies. I was pleased I had gotten a day away from my friends to explore these waters.

With one swift movement the many fish suddenly disappeared and all was strangely still. As if out of nowhere a great white shadow slipped silently into view, its belly an arrow of shining white, the rest of its huge body a gray smudge in the water. A shark!

*Either answer is acceptable.

Comprehension Questions and Possible Answers:

*(mi) 1. What would be a good title for this story? ("Scuba Diving" or "Deep Sea Adventure")

(f) 2. In what part of the world does this story take place? (the Pacific Ocean)

(t) 3. What is meant by the phrase "to announce my departure"? (to tell someone that I am leaving)

(f) 4. What was the actual danger that the swimmer met? (a shark)

(t) 5. What is meant by the word "menace" in this story? (something that is dangerous or threatening)

(con) 6. How did the swimmer plan to escape? (by dropping down out of sight of the shark and then by drifting slowly to the surface without attracting the attention of the shark)

*(inf) 7. Do you think that the swimmer was expecting to meet such danger? Why?

(cont'd.)

I dropped slowly and carefully toward the ocean floor away from that silently moving menace. It seemed more interested in a dark cave eaten into the huge coral cliff to my right. I thought of the many dangers that could be hidden in that black cavern, a giant morray eel or a sleeping octopus.

Gradually, so as not to announce my departure, I began to float toward the surface. The huge fish hesitated as some careless move caught its eye. With knowing precision it swept around, its jaws locked in a mocking grin. Was I to be its next quick lunch?

(No, because he seems too relaxed in the beginning, or because he felt at peace in the water)

*(inf) 8. What words tell us that the swimmer is an experienced swimmer?
(he swam strongly and smoothly, or he always felt at peace in the water, or he knew the dangers that could be in these waters)

ERROR COUNT:

O_____ A._____ P.A.___

REP.___ REV.___ I.___

PHR.___ P.___ MIS.___

SCORING GUIDE

W.R. Errors		Comp. Errors	
Ind.	2-3	Ind.	0-1
Inst.	13	Inst.	2
Frust.	26+	Frust.	4+

APPENDIX D

THE SPACHE READABILITY FORMULA

THE HARRIS-JACOBSON READABILITY FORMULA

THE SPACHE READABILITY FORMULA

The Spache (1974) Readability Formula was applied to all material at the primary levels. The components of this formula are sentence length and the proportion of hard words to the total number of words in a sample, a hard word being one that is not on the Stone Revised Word List (Spache, 1974).

The Spache (1974) formula selects three to five samples of approximately one hundred words each from the beginning, middle and end of a story or book, completing the count with the end of the sentence in which the one hundredth word occurs. Using a worksheet similar to that suggested by Spache (1974) and reproduced in Figure 1, the following steps should be completed for each passage selected.

1. Calculate the total number of words in the passage.

2. Calculate the total number of sentences in the selection.

3. Calculate the total number of words in the sample which are not on the Revised Word List (Spache, 1974). There are a number of rules suggested by Spache (1974) to clarify the unfamiliar word count, but a good rule of thumb is that most common derived words are considered familiar even when not listed separately. The exception to this rule occurs when there is a change in the spelling of the base word.

4. Calculate the average sentence length by dividing

the total number of words by the total number of sentences in the passage.

5. Multiply the average sentence length, Step 4, by the constant .121.

6. Multiply the number of hard words in the sample, Step 3, by the constant .082.

7. Answers from Steps 5 and 6 are added to the constant .659 to produce the estimate of readability for that sample.

8. Steps 1 to 7 are repeated for each selection chosen from the book or story.

9. The three to five readability estimates so produced are then averaged to give the estimate of readability for the entire story or book under examination.

SPACHE READABILITY WORKSHEET

Book _____ Date _____

Author _____ Publisher _____

	Page___ From___ To___	Page___ From___ To___	Page___ From___ To___	Page___ From___ To___
1. Total number of words	___	___	___	___
2. Number of sentences	___	___	___	___
3. Number of words not on Revised Word List	___	___	___	___
4. Average sentence length (Divide 1 by 2)	___	___	___	___
5. Multiply 4 by .121	___	___	___	___
6. Multiply 3 by .082	___	___	___	___
7. Add constant	.659	.659	.659	.659
8. Estimated grade level (Add 5, 6 and 7)	___	___	___	___

Average of estimate _____

Analyzed by _____

Date _____

Spache (1974)

FIGURE 1. Sample Worksheet for Spache (1974) Readability Formula.

THE HARRIS-JACOBSON READABILITY FORMULA

The Harris-Jacobson Readability Formula 2 (Harris & Sipay, 1975) was applied in this study to material thought to be at or above the grade four level.

As with the Spache (1974) readability formula it was suggested that at least three to five samples, one from each third of a book or selection, should be examined. The authors state that the sample should consist of two hundred consecutive words ending with the last word of the sentence in which the two hundredth word occurs if the estimate of readability is to be reliable (Harris & Sipay, 1975).

There are two variables to be considered in this formula referred to as variable one (V1) and variable two (V2).

Variable One (V1)

V1 is the percent of unique, unfamiliar words. A word is considered unfamiliar if it does not occur on the Harris-Jacobson Short Readability List (Harris & Sipay, 1975). The exception to this rule is made in the case of proper nouns which are considered familiar. Unique simply means that a word is counted as unfamiliar only the first time it appears in a passage regardless of how often it is printed there. To compute V1 divide the total number of words in the sample into the number of unique, unfamiliar words and multiply this by 100.

$$V1 = \frac{\text{the number of unfamiliar words}}{\text{the total number of words}} \times 100$$

Variable Two (V2)

V2 is the average sentence length or the mean number of words per sentence. This is computed by dividing the total number of words in a sample by the total number of sentences to three decimal places:

$$V2 = \frac{\text{the total number of words}}{\text{the number of sentences}}$$

Predicted Score

Predicted Score = .140V1 + .153V2 + .560.

V1 and V2 are inserted into the above formula to obtain the predicted score. This figure is then referred to a table (Table 8). The number as read from the table is the readability level for that sample.

The steps of the Harris-Jacobson readability formula (Harris & Sipay, 1975) which may be entered on a worksheet similar to that of Figure 2 are as follows:

1. Calculate the number of words in the sample.
2. Calculate the number of unfamiliar words.
3. Calculate the number of sentences in the sample.
4. Calculate V1, V1 = 2 ÷ 1 x 100.
5. Calculate V2, V2 = 1 ÷ 3.
6. V1 x .140.
7. V2 x .153.

TABLE 8

Readability Levels Corresponding to Predicted Scores as in the Harris-Jacobson Readability Formula 2

Readability Level	Predicted Score (Formula 2)
Fourth	4.22 - 4.80
Fifth	4.81 - 5.28
Sixth	5.29 - 5.67
Seventh	5.68 - 6.05

8. Step 6 + Step 7 + .560 = Predicted Score, or .140V1 + .153V2 + .560 = Predicted Score.

9. The predicted score is referred to Table 8 which indicates the corresponding readability level. This process is repeated for each of the three to five samples chosen. The estimates of readability so found are then averaged to find the overall estimate of readability for the complete book or story.

HARRIS-JACOBSON READABILITY FORMULA 2 WORKSHEET

Book Title _____ Author _____

Publisher _____ Date of Copyright _____

	Sample 1				
	1	2	3	4	5
1. Number of words in sample					
2. Number of unfamiliar words					
3. Number of sentences					
4. V1 = Step 2 ÷ Step 1 x 100					
5. V2 = Step 1 ÷ Step 3					
6. V1 x .140					
7. V2 x .153					
8. Step 6 + Step 7 + .560 = Predicted score					
9. Readability Level from Table					

Average Estimate of Readability _____

(Harris & Sipay, 1975)

FIGURE 2. Sample Worksheet for the Harris-Jacobson Readability Formula 2.

APPENDIX E

TESTING SCHEDULE--1978

October 19	St. Augustine's (MAT)
October 20	Beaconsfield Elementary (MAT)
October 23	St. Joseph's (MAT)
October 24	Beaconsfield
October 25	St. Kevin's (MAT)
October 26	St. Kevin's
October 30	St. Kevin's
October 31	St. Kevin's
November 1	Beaconsfield
November 2	Beaconsfield
November 3	St. Joseph's
November 6	St. Joseph's
November 7	St. Augustine's
November 8	St. Joseph's
November 9	Beaconsfield
*November 10	St. Augustine's

*All testing sessions were held during the morning except for one instance when it was necessary to complete the testing of one child immediately after lunch.