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The Delton Silent Reading Test, Forms A and B, was developed as an alternate test for the Schonell Silent Reading Test which is currently used for screening the reading comprehension of special students. The aim of the Delton Silent Reading Test is to achieve greater consistency in mid-year and mid-program assessments for special students who were originally assessed with the Schonell Silent Reading Test. This study reports the development of the Delton Silent Reading Test and the validation process undertaken to determine the equivalence of content, readability levels, comprehension strategies, questioning strategies and student test scores on the Delton and Schonell tests. Results indicate that there is no significant difference between matched test items on the Delton and Schonell Silent Reading Tests for item content, readability levels and reading and questioning strategies. Results from correlations of student test scores indicated that test scores did not differ significantly. ($r=.93, p<.000001$) Results of correlations of teacher ratings of students' reading ability and student achievement on the Schonell Silent Reading Tests were inconsistent. ($r=.76, r=-.09$)

THE DEVELOPMENT OF THE DELTON SILENT READING TESTS: ALTERNATIVE TEST FORMS FOR THE SCHONELL SILENT READING TESTS

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TABLE OF CONTENTS

TABLE OF CONTENTS (continued)

LIST OF TABLES

LIST OF TABLES (continued)

THE DEVELOPMENT OF THE DELTON SILENT READING TESTS:ALTERNATIVE TEST FORMS FOR THE SCHONELL SILENT READING TESTS

CHAPTER 1

INTRODUCTION

In 1982, the National Research Council (NRC) Committee reported on ability testing and special education programs and expressed three serious concerns:

1. that special education classes were often places in which no serious instruction was being offered (Part I, p.162),
2. that children were being taught in a language they could not speak (Part I, p. 158-162 & Part II, p.215-217), and
3. that children placed in particular program tracks, were not able to change tracks because there was no provision for program reversal. (Part I p.14-16 and p. 174-175)

Recent research studies (Bogdan,1983; Stainback, Courtnage & Joben,1985; Kauffman and Hallahan, 1988; Salend, 1990) conclude that schools are failing to facilitate the learning needs of special students and to provide programs which educate special students in the least restrictve environment (PL94-142,1975). These studies point to a need for more comprehensive on-going assessment, for more formal

periodic assessment of student progress relating to program objectives stated in the individual education plans (IEP) and for more accountability at all levels of service delivery for the successes and failures of programs designed for special needs students.

Related to the need for improved assessment and increased accountability at all levels of service delivery, is the need to select appropriate assessment tools (Salvia and Ysseldyke,1988). Tools that provide meaningful assessment information to all members of the service delivery team - those outside of the classroom, the school or even the school district as well as those in the classroom directly involved with the special needs child, tools that provide some consistency as to what is measured, when it is measured and how it is measured. This identification of meaningful assessment tools is one of the foremost challenges facing school boards, administrators and teachers.(Kauffman and Hallahan, 1988; Salvia and Ysseldyke, 1988; Salend, 1990) It is the tools of assessment that are of particular concern to this study.

Over a five year period, staff members in an inner city school in Alberta, with the help of the testing department of their school board attempted to locate an equivalent test form for the Schonell Silent Reading tests to supplement mid-year assessment. The Schonell Silent Reading Tests were part of the test battery used by the assessment team of that school system

to initially assess students referred for special program placements. Assessment reports for referred students are sent to the schools offering special programs. The reports contain the reading age attained by the students on the Schonell tests. To provide some consistency in mid-year and mid-program reading testing at the school level, it is important, therefore to have available an equivalent test form to do follow-up testing mid-year or mid-program at the school level.

The original test manuals for the Schonell tests, Backwardness in the Basic Subjects (1951) and The Psychology of Teaching of Reading (1961), do not provide information on alternate test forms. A survey of Buro's Mental Measurement yearbooks from 1948 to the present do not reveal more recent test development data on the Schonell Silent Reading Tests nor do the yearbooks indicate other tests of reading comprehension that are similarly formatted which could be used as alternate test forms for the Schonell Silent Reading Tests.

In an attempt to gain more consistency in mid-year and mid-program reading assessments, a committee of three teachers - two curriculum coordinators and a resource room/special education teacher - began the development of the Delton Silent Reading Tests as alternate test forms for the Schonell Silent Reading Tests.

Purpose of This Study

The purpose of this study is to document the development of the Delton Silent Reading Tests and to provide evidence of the equivalence of the Delton Silent Reading Tests Forms A and B and the Schonell Silent Reading Tests Forms A and B. The purpose of the Delton Silent Reading Tests Forms A and B is to provide for mid-year or mid-program assessment of reading comprehension where the Schonell Silent Reading test forms are used in the placement or baseline testing of students. The Delton Silent Reading Tests are also intended to provide improved tracking in reading comprehension for mainstreamed children, and to provide an easily administered test instrument that is able to provide evidence of the effectiveness of current classroom reading programs. This evidence could then be used to facilitate program modifications, reversals, and reporting mid-year or mid-program for handicapped children in the mainstream.

As a formative evaluation tool, the Delton Silent Reading Tests are intended to be used in conjunction with teacher observations and other classroom assessment measures to provide evidence of a student's progress through an IEP program.

Assumptions

1. The delphi panel is a process that provides evidence of the equivalence of reading strategies.

2. Reading Specialists on the delphi panel have provided valid answers in responding to questionnaire items.

3. The instructions for the delphi panel questionnaires were uniformily understood by all participating panel members.

4. Test administrators in the correlational study followed test administration instructions.

5. Students who participated in the correlational study did not have visual impairments or physical handicaps which would interfere with the reading or writing tasks required by the test.

6. Students taking the reading tests in the correlational study could read and understand English, the language used in the test instruments.

7. Students who participated in the correlational study were elementary school students and were able to read at least at an upper grade one level.

8. Students took the test under normal testing-taking conditions.

Limitations

1. The Delton and Schonell Silent Reading tests used in this study are screening devices and not intended for diagnostic purposes. They are only useful in that they point out the need for further diagnostic testing in reading comprehension.

2. Subjects in the correlational studies are only a small sample of resource room and special education students. Therefore, inferences about the general population based on the results from this study need to be made with caution.

3. The delphi panel consisted of a larger representation from Alberta than from British Columbia and Saskatchewan. Whether this affected study results or not is not certain, but it does represent an inequity in panel distribution.

4. The Delton and Schonell tests do not contain alternate response formats or time allotments for students in special classes with physical handicaps.

Definition of Terms

Delphi Panel - a group of specialists in a field that examines test or questionnaire forms for appropriateness and effectiveness.

Detecting Sequence - a skill requiring the reader to combine verified facts found in the selection with hypothesized facts from experience to form a final statement or answer a question.

Drama- a literary form designed to be performed by living actors. It includes plays and film scripts which are tragedy, comedy, mysteries or farces.

Drawing Conclusions - a skill requiring the reader to form a final statement or answer a question using verifiable facts from a selection.

Equivalent Forms - two tests identical in every way except for the actual test items included.

IEP -Individualized Education Plan (also IPP or Individualized Program Plan) is a concise plan of action designed to address the student's special needs. (Alberta Education, 1991)

Item Validity - validity is dependent upon the degree to which test items represent the actual measurement in the intended content area.(Gay,1987)

Literary Form - the classification of literature into four categories: narrative fiction, poetry, drama and non-fiction.

Locating Information - a skill requiring the reader to identify or recognize facts presented in a selection.

Mainstreaming - meeting the physical, intellectual, social and emotional needs of students with exceptional needs in regular classes in neighborhood or local schools with non-handicapped, same-aged peers and with appropriate support.(Alberta Education,1993; Speidel, 1989)

Making Inferences - a skill requiring the reader to combine verified facts found in the selection with hypothesized facts from experience to form a final statement or answer a question. (Magnum and Forgun, 1979)

Narrative Fiction - fictional literature in the form of short stories, novels, legends, fables, myths, parables, romances and epics. (Roberts, 1988)

Non-fiction Prose - literature in the form of essays, articles, research reports, biographies and news reports. (Roberts, 1988)

Readability Formulas - formulas which use word length, word frequency, word difficulty, sentence length and syllables per word to predict the readability level of text material.

Tracking or diagnostic evaluation programs - methods used to keep track of programs and progress for special needs children which provide the basis for intervention strategies and program revisions. (Horvath, 1991)

CHAPTER 2

REVIEW OF RELATED LITERATURE

An Alberta Education policy document ("Educational Placement of Students with Exceptional Needs", Document Number 02-02-05) states that:

> "Students with exceptional needs will:
>
> -Receive adequate special education programs
> -Have access to the most enabling setting that will meet their needs
> -Have regular opportunities to interact with their peers, to enjoy the life of the school and to participate in local community activities
> -Have access to specialized classes and services as required. (p.1)

The concern for "adequate special education programs" and adequate evaluation of these programs that is the central focus of this study. Salend (1990) described a continuum of ten different types of special education and resource room programs currently being offered to special needs students. The programs ranged from those which are least restrictive and school-based to those which are most restrictive and hospital-based. Research on the effectiveness of these special programs, in some cases has been encouraging (Caparulo and Zigler,1983; Polloway, 1984; Wang and Birch, 1984) but in other cases (Gottlieb and Budoff, 1976; Gresham, 1982; Arter and Jenkins, 1979; Kauffman and Hallahan, 1988) has indicated difficulties both in program delivery and program evaluation.

Document 02-02-05 from the Alberta Department of Education states that "In 1993, over 90% of Alberta's students with exceptional needs were placed in regular classrooms in their neighborhood or local schools." (p.1) Problems with program delivery and the successful integration of students with special needs into the mainstream is a particular concern.

Gottlieb, Jones and Gushkin and Yoshida (1980) surmised that difficulties in program delivery and evaluation exist because handicapped children are integrated into regular classrooms without due consideration for the quality of the educational treatment provided in those classrooms. Speidel (1989) found that only 10% of the teachers in her study attended inservices prior to the integration of special needs students into their classrooms. Gottlieb et al. (1980) noted that regular classroom teachers were not always willing or able to modify instructional practices to accommodate the learning style or the ability of the handicapped child. Ysseldyke et al. (1987) found that few differences existed between the time allotted for teaching regular class students in the various subject areas and the time allotted for instructing students with varying labels of handicap. From their studies of mainstreaming practices, Ysseldyke et al. concluded that the main problem with program delivery was the failure of personnel to plan the integration of special students into the mainstream to specify ahead of time the nature of the educational program the children would need, and

to establish a clear statement of academic goals and objectives for each handicapped child. Ysseldyke et al. (1987) attributed the lack of adequate planning to the difficulty to schedule regular consultations between the regular classroom teacher, the special education teacher and/or other personnel involved in the student placement and program delivery.

Speidel (1989) stated that only a minority (3 out of 30) of the teachers in her study were involved in the development of individualized educational plans for the special needs students who were integrated into their classrooms. Her study found that the principal was the professional most often involved in the decision to mainstream and only a minority (14 out of 30) of the regular classroom teachers were consulted on the integration prior to the integration occurring. In the conclusion of her study she states: "...a collaborative process is needed for successful mainstreaming...This requires open and constant communication between professionals involved." (p.202)

Besides a communication problem among professionals involved in the integration of specal needs students, there is another teacher concern that interferes with sucessful integration and successful program delivery. Gickling and Theobold (1975) found that 85% of regular classroom teachers felt they lacked the necessary skills and training to teach exceptional children. These perceptions negatively impacted

instruction in the classroom and the willingness of teachers to modify their programs to accommodate the special needs of exceptional children. These insecurities were further enhanced by negative experiences with student integration. Some integration of special needs students were unsuccessful because of the insufficient readiness of special needs children for the integration. Others were unsuccessful due to the lack of support services available to assist regular classroom programs once the integration had taken place. Speidel (1989) found that support services were only available to fifty-six percent of the regular classroom teachers in her study.

The lack of availabiliy of support services is also related to another problem associated with program delivery - the misuse of teacher resources. Ysseldyke et al. (1987) found that special education instruction offered in the school-based environments often replaced rather than supplemented the general services offered by the regular school programs. Students needing special instruction were removed from the regular classroom to attend special class programs which worked on skills and materials in isolation from the regular classroom learning. Because these special services remained separate from the regular classroom program, the effectiveness of both programs and the effective use of teacher resources were reduced.

Concern has also been expressed about the manner in which programs for special needs children are evaluated. At the school board level, Lipsky and Gartner (1989) found that school boards had limited expectations for student learning in special education programs. Only seven out of thirty-one citations in Lipsky and Gartner's study reported evaluation practices which evaluated student achievement and/or outcomes, and only three of thirty-one citations studied involved a longitudinal design. Despite the fact that PL94-142 clearly requires the annual development and review of appropriate public education, there is mounting evidence that this, in fact, is not regularly occurring.

In Alberta, Document 02-02-05 states that:

> "School boards shall make decisions regarding the programs for students with exceptional needs by:
> -identifying, assessing and placing students with exceptional needs
> -developing and implementing Individualized Program Plans
> -Evaluating the individual progress of students with exceptional needs."
> (Procedure 1, p.3)

Document 02-02-05 requires school boards to develop and implement written policies consistent with the provincial policy on educational placement and evaluation of special needs children. Horvath (1991) discusses the three major provincially legislated assessment programs in Alberta: Diploma Examinations Program, the Achievement Testing Program,

and the diagnostic evaluation program. Of these assessment programs, the diagnostic evaluation programs best address the assessment needs of special students and form the basis of the statements in Individualized Program Plans. As in the case of PL94-142, there is mounting evidence that these provincial policies are not always being adhered to by personnel involved in the delivery of programs to special needs children. Speidel (1989) stated that in her study...

> "IEPs were divised for only 17 of the 52 children who were mainstreamed for part of each school day...(and)...There is evidence from previous studies that even special educators do not make extensive use of IEPs..."(p.175)

Though not evident from the above discussion, there is a growing "concern among teachers, related specialists and administrators to provide more appropriate services that focused attention on planning and evaluation for developing and monitoring the quality of education programs." (Ysseldyke, 1984, p.3)

The need for more appropriate, consistent testing and evaluation practices, prompted three inner city elementary school staff members in an urban Alberta school district to begin examining assessment tools used by their school system for children in special programs and to attempt to locate materials for mid-year and mid-program assessments that would be consistent with instruments used by the school board for initial student placements. The search for materials that

would provide greater consistency in mid-year and mid-program assessments, led this group of teachers to develop the Delton Silent Reading Tests as alternate test forms for the Schonell Silent Reading Tests.

Schonell Silent Reading Tests

The Schonell Silent Reading Tests were developed by Fred J. Schonell between the years 1942 and 1951 as part of a remedial reading program. They were published originally by Oliver and Boyd Ltd. Edinburgh, Scotland in 1942 in a book called, Backwardness in the Basic Subjects. Later in 1950, a second book, Diagnostic and Attainment Testing: Including a Manual of Tests, Their Nature, Use, Recording and Interpretation, was published. The second book contained not only the test but also revised norms. These two books served as test manuals giving data on technical development, administration and scoring instructions, interpretations of test results and suggestions for remedial programs. Buros' Fifth Mental Measurements Yearbook noted that "the tests form an integral part of the books mentioned...This makes it clear that the author designed the tests for teachers and specialists who intended to use them in conjunction with actual reading programs..." (p.652)

The Schonell Silent Reading Tests, referred to as Test R3 and Test R4, contain a number of paragraphs followed by questions, instructions or multiple choice problems. Student

responses are placed on separate answer sheets. Test R3 (Schonell Silent Reading Test A) is intended for ages 7 to 11 years; while R4 (Schonell Silent Reading Test B) is intended for ages 9 to 13. The manuals indicate that the silent reading tests may be used as individual or group tests.

The test manual, Backwardness in the Basic Subjects, reported that the norming population consisted of 1,865 subjects between the ages of 7 and 11 years. However, no information was given on the racial, cultural or gender content of that population, nor is there any indication of ability levels. The manual, however, does indicate some correlations between the coefficients of the number of correct responses and IQ scores on the Simplex Junior Group Intelligence Scale ranging from .67 to .86 for 210 subjects ages 8 to 11. In his review of these figures, Buros' in his Third Mental Measurement Yearbook, notes that the number of cases at any age group is never above 63 - a small sample from which to make any broad generalizations. A more serious problems with the norms for the Schonell Reading tests is the discrepancy between the two manuals. Prewar norms given in Backwardness in the Basic Subjects do not agree with postwar norms given in Diagnostic and Attainment Testing. The test manuals give no explanation for this difference. Added to the inconsistencies in the norm table data was the method of obtaining validity data. As noted above, groups of subjects used to obtain the estimates of correlation coefficients

between silent reading test scores and intelligence test scores, were very small ranging from 40 to 63 subjects, making the value of the correlation coefficients questionable. The reliability data provided is also extremely limited. The manual gives a reliability coefficient for the Schonell Silent Reading Test B (.92) but not for the Schonell Silent Reading Test A.

Though lacking much of the necessary psychometric data, Buros does point out that the Schonell Silent Reading Tests have in their favor a long hisory of successful application in remedial programs in Great Britain and Canada giving them some validity as a diagnostic and screening instruments. "For the purpose for which they were designed, however, the Schonell Reading Tests - despite their shortcomings - are the most comprehensive so far available in England." (Fourth Mental Measurement Yearbook, p.553)

In a large urban central Alberta school district, the Schonell Silent Reading Tests have been in use since the 1960's as one of the screening devices for the assessment of special needs children. In the school district's testing program the Schonell tests have the advantage of being easy to administer and equally easy to score with high interrater reliability. For children with reading problems or attention deficit disorders these tests have been especially valuable because of their short administration time. The Schonell

tests do, however, have the disadvantage of being constructed to indicate only the superficial defects in acquired reading skills rather than the underlying causes of reading difficulties, and they do not have alternate test forms for follow-up testing mid-year or mid-program.

Readability Scales

The Fry Graph for Estimating Readability (1977) used in this study was developed by Edward Fry, Rutgers University Reading Center. The graph uses three 100-word passages randomly selected from the beginning, middle and end of an article or book. The average number of syllables and the average number of words per sentence are plotted on the graph, the average number of syllables per 100 words forming one coordinate and the average number of sentences per word forming the other coordinate. The intersection of the two coordinates gives the readability level of the text material. Correlations with other readability scales are given as .98 for SRA, .78 for Botel, .94 for Dale-Chall and .96 for Flesch. There is no correlation coefficient given for Gunning-Fog or Spache Readability Scales. "The problem of validity is difficult. First of all, there are no rigorous standards of just what is 4th grade difficulty as opposed to 5th grade difficulty...Grade level designations were determined by simply plotting lots of books which publishers said were 3rd grade readers, 5th grade readers etc. ..then looking for

clusters...After some use and correlational studies the grade level areas were adjusted." (p.515) The Fry Readability Graph ranges from grade one to grade twelve, and can be used to check readability levels of material in this range. The Fry Readability Graph has been included in Appendix I.

Gunning's Fog Index (1968) was developed by Robert Gunning. Though it is the readability scale most freqently cited in business writing textbooks (Bogert, 1985) it is intended for use on other prose materials ranging from grade one to adult reading levels as well. Readability levels of prose materials using the Gunning's Fog Index are computed by adding the average sentence length and the percent of words three or more syllables in length in the prose passages. This sum is then multiplied by 0.4. The product obtained is the estimate of the reading grade level of the prose material. Because the Fog Index considers only two variables (sentence length and syllable count) it is not the most accurate of the readability scales, however its ease of application makes it more popular than some of the other readability scales. For the purposes of this study the fact that Gunning's Fog Index covers all grades from one to adult and is generally accurate to within one grade level for all grades up to 13 (Bogert, 1985) that made it an instrument of choice for the readability study.

Delphi Process

The delphi technique is a communication process for achieving a structured anonymous interaction between a group of experts in order to reach a consensus in the solution of a complex problem. (Jones and Twiss, 1978)

> "The use of the Delphi may be warranted if any or all of the following conditions exist:
>
> a. the resolution of a problem can be facilitated by the collective judgments of one or more groups;
> b. those groups providing judgments are not likely to communicate adequately without an intervening process;
> c. the solution is more likely to be accepted if more people are involved in its development than would be possible in a face-to-face meeting;
> d. frequent group meetings are not practical because of time, distance etc,; and
> e. one or more groups of participants are more dominant than another." (Jones and Twiss, 1978, p.1345)

The delphi process reduces the shortcomings of face-to-face meetings particularly where there are large numbers of participants or where time and distance are factors. This technique uses a questionnaire approach with controlled feedback. A series of questions is circulated to a group of experts who are asked to make individual forecasts for each question. The responses are analyzed, then resubmitted to the experts for comments or reasons for responses. Subsequent rounds of the questionnaire permit further information to be elicited from the panel of experts leading to revisions or modifications of the original forecasts. The rounds in the

delphi process continue until the delphi panel reaches a problem solution or a consensus on the issue or forecast presented in the questionnaire. (Jones and Twiss, 1978)

The selection of the panel of experts is critical to the success of the delphi process. Because the panel is to be made up of experts, the area of their expertise has to be carefully defined, and once the panel has been selected (Jones and Twiss, 1978, suggest 10 to 50 experts), consent to serve has to be obtained from each panel member. The Delphi process generally involves three or four rounds, which means a fairly lengthy commitment from panel members. This is one of the disadvantages of the delphi process.

The preparation of the questionnaire to be used in a delphi process is another critical area. Items or questions in the questionnaire must pinpoint the issue to be examined. They need to be unambiguous, unconditional, confined to the area being examined and limited in number (Jones and Twiss, 1978, suggest 20 -25 items). The difficulty involved in preparing an effective questionnaire is a second disadvantage of the delphi process.

The delphi process does however, have four advantages which are important: 1. responses are anonymous, so that the process avoids the possibility of identifying a particular person with a particular opinion, and members can change their opinions without a public admission that they have done so,

2. feedback is controlled so that the researcher can extract from the questionnaires only those pieces of information that are relevant to the issue being examined, permitting the group to concentrate on its original objectives without being distracted by self-chosen goals of individuals in the panel, 3. statistical group responses represent the majority viewpoint stating simply the issues on which the majority of the group were able to agree. Generally no indication of the degree of difference of opinion within the group is stated, hence no individual response is viewed as better or worse than the others, and 4. more experts can be involved in the study than would be possible in face-to-face meetings. (Martino, 1972)

It was these four advantages which made the delphi process the instrument of choice for collecting evidence on the equivalence of reading strategies in matched test items on the Delton and Schonell Silent Reading Tests.

Statement of Hypothesis

It is the intent of this study to document the development of an equivalent test form for the Schonell Silent Reading Tests Forms A and B. Evidence of equivalence will be provided in four areas:

1. content, as it relates to literary form, themes, questioning format and item format,
2. readability levels of test items,

3. reading strategies tested in test items,
4. correlations of test scores on the two instruments.

The null hypotheses are:

1. There is no significant difference between the content of test items on the Delton and Schonell Silent Reading Tests,
2. There is no significant difference between the readability levels of test items on the Delton and Schonell Silent Reading Tests,
3. There is not significant difference between reading strategies tested in the test items of the Delton and Schonell Silent Reading Tests,
4. There is no significant difference between student scores on the Delton and Schonell Silent Reading Tests.

CHAPTER 3

METHODS AND PROCEDURES

Struggling with the problem of mid-year assessment and improved consistency in reporting special needs students' progress to parents and teachers, the researcher as a member of a committee consisting of one special education/resource room teacher and two curriculum coordinators from an elementary school in a large urban Alberta school district, met to evaluate the problem of assessment of special needs students in programs in the school and to propose possible solutions at the school level. Areas targeted on the students' IEP's were spelling, reading comprehension and mathematics. Equivalent test forms were available in spelling for beginning, middle and end of year testing; math test-retest could be accomplished with the same test instrument, but the Schonell Silent Reading Tests, Form A and B, were a problem because a memory factor made mid-year test results invalid. A memory factor occurs when the same reading test is given after a short interval. It is difficult to determine what part of the reading score in the post-test is due to instruction and what part is due to what the child remembers from the pre-test. Therefore test results cannot be used to accurately evaluate what learning has taken place.(Campbell,1963)

One solution to the retest problem in reading is to use an alternate test form. However, since alternate test forms for the Schonell Silent Reading Tests were not available, the committee decided to attempt to develop an equivalent test form (the Delton Silent Reading Tests) to use as an alternate test form in the mid-year assessment.

Evidence of the equivalence of the Schonell Silent Reading Tests and Delton Silent Reading Tests has been gathered from four areas: content of test items, readability levels of test items, reading and questioning strategies in test items and correlations of student test scores for matched test items. The methods and procedures used to gather evidence of equivalence in each of these four areas will be discussed in the next sections.

Content

In preparation for the writing of test items for the Delton Silent Reading Tests, item stem analysis was carried out on the test items of the Schonell Silent Reading Tests Forms A and B, and general criteria were laid out for question design. The general criteria outlined the development of test questions which matched the test content, item stem format and question format of the Schonell Reading Tests. Tables 1 and 2 contain the item criteria and the comparisons of test items from the two test instruments.

Table 1: Item Analysis for Schonell/Delton Reading Tests A

Item	Literary Form	Theme	Question Format		Item Format					
			Schonell	Delton	# Words		#Sentences		Sentence Type	
					S*	D**	S*	D**	S*	D**
1.	Narrative Fiction	Animals	Where is the bird's home?	Where is the dog's home?	23	23	4	4	si	si
2.	Narrative Fiction	Family	How many teeth has the baby?	How many children are in the family?	27	26	4	4	si	si
3.	Narrative Fiction	Visits To Parks	What was the monkeys' cage made of?	What was the bridge made of?	33	35	3	3	1-si 2-c	1-si 2-c
4.	Narrative Fiction	Common Events	Do you think the sun was shining?	Do you think that June slept in?	36	36	4	4	2-si 2-c	2-si 1-c 1-cp
5.	Narrative Fiction	Feelings	Was Hans happy or unhappy?	Was Kim Lee happy or sad?	40	36	1	2	1-cpc	1-si 1-cpc
6.	Non-Fiction	Traffic Signals	What light is used for "Get Ready?"	What light tells you to get ready?	31	34	2	2	1-c 1-cp	1-c 1-cp
7.	Narrative Fiction	Fairy-tales	Choose the word below ...	Choose the word below...	42	41	1	1	1-cpc	1-cpc
8.	Non-Fiction	Action Sequences	Choose the word below that....	Choose the word below...	28	32	1	1	1-cpc	1-cpc
9.	Narrative Fiction	Riddles	What am I?	What am I?	18	20	4	4	4-si	3-si 1-c
10.	Narrative Fiction	Fairy-tales	Write the word YAINA on a paper. If you think that ...	Write the old man's name on the blank. If you..	25	25	1	2	1-c	1-c
11.	Poem	Sunset	Do these lines tell about evening or morning?	What time of day does the poem describe?	17	23	4	3	---	---
12.	Poem	Animals	How many water rats altogether lived in the reeds?	How many bees altogether buzzed around the hive?	18	18	4	4	---	---
13.	Non-Fiction	Seasons	Choose the word below...	Choose the . word below...	27	29	2	2	1-cp 1-si	1-cp 1-si
14.	Narrative Fiction	Fairy-tales	Write the word that has been left out.	Write the word that has been left out.	51	55	5	5	3-si 2-c	3-si 2-c
15.	Non-Fiction	Action Sequences	Choose the word below...	Chose the word below...	38	33	2	2	2-C	2-C
16.	Narrative Fiction	Trees	Was the stone wall in front, behind, or at the side of the house?	Were the pine trees before, or after the birch trees as you went into the forest?	34	36	2	3	1-si 1-c	2-si 1-c
17.	Narrative Fiction	Fairy-tales	Where did they dine?	Where did the master's cat eat?	39	38	2	2	2-c	1-si 1-cp
18.	Poem	Feelings	Which seemed to sing a song?	What touched the child?	28	26	4	5	---	---

*S - Schonell Test
**D - Delton Test
si - simple sentence
c- complex sentence
cp - compound sentence
cpc - compound-complex sentence

Table 2: Item Analysis for Schonell/Delton Reading Tests B

Item	Literary Form	Theme	Question Format		Item Format					
			Schonell	Delton	# Words		# Sentences		Sentence Ty	
					S*	D**	S*	D**	S*	D**
1.	Narrative Fiction	Pets	You will notice there are spaces marked with the letters "A" and "B". Write on your answer paper the one from Row A that will make the best sense when put into space A, and the one from Row B that will make the best sense when put into space B. (Number of choices and part of speech were matched for each question.)		41	41	4	4	2-si 2-c	1-si 3-c
2.	Narrative Fiction	Adventure			61	64	5	4	3-si 1-cp 1-cpc	2-si 1-c 1-cp
3.	Narrative Fiction	Fairytales			47	49	4	5	3-si 1-c	3-si 1-c
4.	Narrative Fiction	Fairytales			69	64	4	5	2-si 1-cp 1-cpc	2-si 2-c 1-cp
5.	Narrative Fiction	Fairytales			60	67	5	5	1-cpc 3-si 1-c 1-cpc	1-cp 3-si 1-c 1-cp
6.	Narrative Fiction	Riddles			30	30	1	1	1-cpc	1-cp
7.	Narrative Fiction	Recreation			81	75	5	6	2-c 1-cp 1-cpc	2-si 2-c 1-cp
8.	Narrative Fiction	Fables			41	38	2	2	1-c 1-cp	1-si 1-c
9.	Narrative Fiction	Animal Homes			58	63	2	3	1-si 1-cpc	1-si 1-cp
10.	Non-Fiction	Lifestyles			57	66	2	2	1-si 1-c	1-si 1-c
11.	Non-Fiction	Customs			88	82	4	5	1-si 2-c 1-cpc	1-si 3-c 1-cp
12.	Narrative Fiction	Adventure			70	80	5	4	1-si 2-c 1-cp	1-si 2-c 1-cp
13.	Non-Fiction	Understanding Nature			60	65	3	3	2-si 1-cpc	2-c 1-cp
14.	Narrative Fiction	Friendship			95	92	4	5	1-si 1-c 2-cpc	2-si 2-c 1-cp
15.	Narrative Fiction	Friendship			74	76	2	4	2-cpc	1-si 1-c 2-cp
16.	Non-Fiction	Customs			46	49	2	3	1-c 1-cpc	1-si 1-c 1-cp
17.	Non-Fiction	Icebergs			87	77	3	4	1-si 2-c	2-si 2-c
18.	Non-Fiction	Plants			87	81	5	6	3-si 2-c	3-si 2-c
19.	Non-Fiction	Cloth Making			63	71	5	5	2-si 3-c	3-si 1-c 1-cp
20.	Narrative Fiction	Adventure			81	77	3	3	2-c 1-cpc	1-c 2-cp

*S - Schonell Tests
**D - Delton Tests

si - simple sentence
c - complex sentence
cp - compound sentence
cpc - compound-complex sentence

The content of each test item on the Delton Silent Reading Test was matched with the literary form and the literary theme of each corresponding test item on the Schonell Silent Reading Test.

Literary form involved the classification of data into one of four categories: narrative fiction, poetry, drama or non-fiction.(Roberts, 1988) Narrative fiction included fictional literature in the form of short stories, novels, legends, fables, myths, parables, or romances; poetry included sonnets, lyrics, pastorals, balads, songs, odes, epics, mock epics and dramatic monologue; drama included literature designed to be performed by living actors such as plays and film scripts which are tragedy, comedy, mysteries or farces; and, non-fiction included literature in the form of essays, articles, research reports, biographies and news reports.

The literary theme recorded on Tables 1 and 2 is the central idea expressed by the item data. (Roberts, 1988; Perrine, 1981) The classification of the content of test items of the Schonell tests into themes was kept quite general - "Animals", "Feelings", "Seasons", "Sunsets" - to facilitate the selection of material with the same or similar themes for the Delton test items.

Item format and question format involved the use of the patterning found in the Schonell test questions. The item stems were controlled for length, difficulty level, and number

and types of sentences to correspond with the pattern of the Schonell test items. The question type used in the Schonell was also used in the Delton test questions. Generally the question itself was retained changing only key words to match the new item data. A copy of the original draft of the Delton Silent Reading Tests completed in the spring and summer of 1989 is included in Appendix A and B. Charts used in matching item and question formats are included in Table 1 and 2.

The Delton tests were also checked for cultural and racial biases in the item stems, by using criteria developed by Mah (1987).

A field test which used subjects from a resource room in a local school, was conducted by the researcher to determine if the scores on the test items of the Delton Silent Reading Tests correlated with the scores on the test items of the Schonell Silent Reading Tests. Pearson Product Moment Correlations and regression analysis were carried out on scores from the two tests. A Pearson r of .72 was found for the A forms of the Schonell and Delton tests, and .86 for the B forms of the Schonell and Delton tests.

Item analysis to determine item difficulty was carried out using the percent of correct responses on the test items of the two instruments. The analysis of item difficulty provides further evidence that the Delton test items function as screening devices in the same way as corresponding items on the Schonell tests. The data are displayed in Appendix D.

Readability

Between January and April, 1990 several test revisions were made based on the findings from readability studies undertaken with the Delton and Schonell tests. The Delton tests items were matched with the Schonell test items to determine the equivalence of the readability level for each matched pair of questions. Tables 3,4 and 5 present the original matching process. Test items were matched on syllable count, word count, sentence count, sentence type (simple, complex etc.) and comprehension strategy. The four reading comprehension strategies used in Tables 3, 4 and 5 are explained below and also defined in Table 6.

Items were classified as "Locating Information" if they required a reader to identify factual information given in the item stem. Test items requiring the reader to identify the order of events or information given in the item stem passage were classified as "Detecting the Sequence". Items classified as "Making Inferences" were items that required the use of information from background knowledge and experience along with the facts in the item stem passage in order to arrive at a final statement or to answer a question. "Drawing conclusions" items required the reader to combine verifiable facts found in the item stem using synthesis or analysis to arrive at a conclusion or to make a final statement. Making inferences requires the use of information beyond the text, while drawing conclusions uses information within the text.

Table 3: Matching of Question Components Schonell/Delton A

Question	Strategy	#Words		#Syllables/Word		#Sentences		Types of Sentences	
		S *	D**	S	D	S	D	S	D
A	Locating Information	28	26	21 one syll	1 two syll 22 one syll	5	5	simple	simple
B	Making Inferences	22	23	13 one syll 8 two syll 1 three syl	15 one syll 8 two syll 1 three syl	1	1	compound	compound
1	Locating Information	23	23	23 one syll	22 one syll 1 two syll	4	4	simple	simple
2	Locating Information	27	26	24 one syll 3 two syll	20 one syll 6 two syll	4	4	3 simple 1 complex	4 simple
3	Locating Information	33	35	30 one syll 3 two syll	32 one syll 3 two syll	3	3	1 simple 2 complex	1 simple 2 complex
4	Making Inferences	36	36	32 one syll 4 two syll	31 one syll 5 two syll	4	4	2 simple 2 complex	2 simple 1 complex 1compound
5	Making Inferences	40	40	36 one syll 3 two syll 1 three syl	35 one syll 4 two syll 1 three syl	1	2	compound-complex	1 simple 1compound
6	Locating Information	31	35	26 one syll 5 two syll	28 one syll 7 two syll	2	2	1 complex 1compound	1 complex 1compound
7	Making Inferences	42	41	34 one syll 7 two syll 1 three syl	32 one syll 8 two syll 2 three syl	1	1	compound-complex	compound-complex
8	Detecting Sequence	28	32	22 one syll 6 two syll	24 one syll 8 two syll	1	1	compound-complex	compound-complex
9	Drawing Conclusions	18	20	16 one syll 2 two syll	19 one syll 1 two syll	4	4	4 simple	3 simple 1 complex
10	Drawing Conclusions	25	25	19 one syll 6 two syll	20 one syll 3 two syll 2 three syl	1	2	1 complex	2 complex
11	Making Inferences	17	23	12 one syll 5 two syll	21 one syll 2 two syll	4-lines	3-lines	POEMS	
12	Drawing Conclusions	18	18	12 one syll 4 two syll 2 three syl	14 one syll 4 two syll	4-lines	4-lines	POEMS	
13	Drawing Conclusions	27	29	19 one syll 4 two syll 3 three syl 1 four syll	14 one syll 8 two syll 3 three syl 2 four syll	2	2	1compound 1 simple	1compound 1 simple
14	Drawing Conclusions	51	55	42 one syll 9 two syll	42 one syll 13 two syll	5	5	3 simple 2 complex	3 simple 2 complex
15	Making Inferences	38	33	33 one syll 5 two syll	25 one syll 7 two syll 1 three syl	2	2	2 complex	2 complex
16	Detecting Sequence	34	36	28 one syll 6 two syll	23 one syll 12 two syll	2	3	1 simple 1 complex	2 simple 1 complex
17	Making Inferences	39	38	39 one syll	34 one syll 4 two syll	2	2	2 complex	1 simple 1compound
18	Making	28	26	22 one syll	19 one syll	4-	5-		

*S - Schonell
**D - Delton

Table 4: Matching of Question Components Schonell/Delton B

Question	Strategy	#Words		#Syllables/Word		#Sentences		Types of Sentences	
		S	D	S	D	S	D	S	D
1	Making Inferences	41	41	39 one syll 2 two syll	34 one syll 7 two syll	4	4	2 simple 2 complex	1 simple 3 complex
2	Making Inferences	61	64	57 one syll 4 two syll	54 one syll 9 two syll 1 three syl	5	3	3 simple 1compound 1compound-complex	1 simple 1 complex
3	Making Inferences	47	49	41 one syll 5 two syll 1 three syl	39 one syll 9 two syll 1 three syl	4	4	3 simple 1 complex	3 simple 1 complex
4	Making Inferences	69	64	60 one syll 9 two syll	45 one syll 12 two syll 7 three syl	4	5	2 simple 1compound 1compound-complex	2 simple 2 complex 1compound-complex
5	Drawing Conclusions	60	67	55 one syll 5 two syll	54 one syll 11 two syll 5 three syl	5	5	3 simple 1 complex 1compound-complex	3 simple 1 complex 1compound-complex
6	Locating Information	30	30	25 one syll 4 two syll 1 three syl	20 one syll 5 two syll 2 three syl	1	1	compound-complex	compound-complex
7	Drawing Conclusions	81	74	72 one syll 9 two syll	64 one syll 10 two syll	5	6	2 complex 1compound 1compound-complex	4 simple 2 complex
8	Drawing Conclusions	41	38	32 one syll 9 two syll	28 one syll 10 two syll	2	2	1 complex 1compound	1 simple 1complex
9	Making Inferences	58	61	47 one syll 10 two syll 1 three syl	50 one syll 10 two syll 1 thre syl	2	4	1 simple 1compound-complex	2 simple 1compound-complex
10	Making Inferences	57	66	41 one syll 15 two syll 1 three syl	43 one syll 20 two syll 3 three syl	2	3	1 simple 1 complex	1 simple 1 complex
11	Making Inferences	88	82	67 one syll 19 two syll 2 three syl	55 one syll 24 two syll 3 three syl	4	5	1 simple 2 complex 1compound-complex	1 simple 3 complex 1compound
12	Drawing Conclusions	70	80	44 one syll 21 one syll 5 three syl	54 one syll 23 two syll 3 three syl	5	4	1 simple 2 complex 1compound	1 simple 2 complex 1compound-complex
13	Making Inferences	60	63	45 one syll 9 two syll 5 three syl 1 four syll	53 one syll 7 two syll 3 three syl	3	4	2 simple 1compound-complex	1 simple 2 complex 1compound-complex
14	Making Inferences	95	92	73 one syll 14 two syll 6 three syl 1 four syll	64 one syll 19 two syll 8 three syl 1 four syll	4	5	1 simple 1 complex 2compound complex	2 simple 2 complex 1compound-complex
15	Making Inferences	74	80	60 one syll 11 two syll 3 three syl	60 one syll 16 two syll 4 three syl	2	4	2compound-complex	1 simple

Table 5: Matching of Question Components Schonell/Delton B

Question	Strategy	#Words		#Syllables/Word		#Sentences		Types of Sentences	
		S	D	S	D	S	D	S	D
16	Making Inferemces	46	49	30 one syll 14 two syll 2 three syl	38 one syll 8 two syll 2 three syl 1 four syll	2	3	1 complex 1compound-complex	1 simple 1 complex 1compound-complex
17	Making Inferences	87	77	67 one syll 19 two syll 1 three syl	44 one syll 26 two syll 6 three syl 1 four syll	3	4	1 simple 2 complex	4 simple
18	Locating Information	87	81	75 one syll 11 two syll 1 three syl	60 one syll 15 two syll 5 three syl 1 four syll	5	6	3 simple 2 complex	5 simple 1 complex
19	Making Inferences	63	71	50 one syll 11 two syll 2 three syl	52 one syll 14 two syll 5 three syl	5	5	2 simple 3 complex	3 simple 1 complex 1compound-complex
20	Making Inferences	81	77	67 one syll 9 two syll 4 three syl 1 four syll	63 one syll 10 two syll 3 three syl 1 four syll	3	3	2 complex 1compound-complex	1complex 2compound-complex

*S - Schonell Test **D - Delton Test

Table 6: Questionnaire Strategies and Strategy Definitions

Locating Information	This skill requires the reader to identify or recognize facts presented in a selection.
Detecting Sequence:	This skill requires the reader to identify the order events or infromation are presented in a selection
Making Inferences	This skill requires the reader to combine verified facts found in the selection with hypothesized facts from experience to form a final statement or answer a question.
Drawing Conclusions	This skill requires the reader to form a final statement or answer a question using verifiable facts in a selection.

Readability was checked using the Fry Graph for Estimating Readability (1977) and Gunning's Fog Index (1968). Both readability scales were used on the A and B forms of the Delton and Schonell Silent Reading Tests.

Using a computer scored readability program (Britton,1975), passages of 100 words in length were typed into the computer. Readability scores from the computer print-outs were then compared for each test item. One Way Analysis of Variance and Pearson Product Moment Correlations (Pearson r) were used to compare the readability test scores of the Delton and Schonell tests on these two readability scales to determine the equivalence of readability levels for corresponding test items.

Reading and Questioning Strategies

The delphi process was used to provide evidence of the equivalence of reading strategies in matched test items of the Schonell and Delton tests. Use of a delphi panel offered two important advantages: 1. a larger number of reading specialists (100 to 150) across the three provinces of Alberta, Saskatchewan, and British Columbia could be accessed which would not be possible through face-to-face meetings, and, 2. the problem of time and distance that would be a factor in face-to-face meetings would be eliminated because reading specialists could respond to items on questionnaires

mailed to them at their respective school board designations. Therefore no extra travel and no special meeting times were necessary. Deadlines for the return of questionnaires were established, to provide some time frame for the duration of the delphi process and to facilitate data collection and analysis. (Jones and Twiss, 1978;Martino,1972)

The selection of delphi panel members for the current study was based on their expertise in the field of reading and/or special education. The specialists selected were program coordinators, consultants, principals, resource room teachers and special education teachers with some expertise in reading program development and testing. They were drawn from the three provinces of Alberta, British Columbia and Saskatchewan. In order to locate and select suitable panel members, a cross-section of school boards was contacted for names of possible panel members. The school boards contacted included boards in the southern, central and northern parts of the provinces. Feedback from the school boards yielded a mailing list of one hundred and fifty reading specialists. Each person on the list received a letter of introduction explaining the intent and purpose of the study and the request for participation on the delphi panel. Consent forms attached to the back of the letter of introduction permitted those contacted to respond in favour or opposed to service on the panel. See Appendix F. Consent forms were returned in self-addressed envelopes. The panel resulting consisted of ninety-

five reading specialists. Each panel member was randomly assigned Part A or Part B of the questionnaire. A cover letter which gave a brief explanation of the procedures to complete and return the questionnaire and the questionnaire were mailed to the panel members. See Appendix C,D and E.

One concern about the representation on the panel was that Alberta had a large representation (71 panel members) compared to the small representations from British Columbia (10 panel members) and Saskatchewan (14 panel members).

The Delphi Process

Round One: January, 1991 to July, 1991

The format for the round one questionnaire was developed as follows: nine randomly selected questions from the Delton A and Schonell A were selected for a total of eighteen questions; and, ten randomly selected questions from the Delton B and Schonell B were selected for a total of 20 questions. The combined total for forms A and B equalled thirty-eight randomly selected test items.

The question randomization was accomplished by placing each test item on a slip of paper, which was folded and placed in a box. Items for each test were placed in separate boxes. Three neutral teachers drew nine slips from the Delton A, then from the Schonell A boxes. Similarly questions were drawn from the Schonell B and Delton B boxes. Teachers involved in

the question selection and the order of selection were recorded in the study log book.

It was decided that thirty-eight decision-type questions was too large a number of items for a single questionnaire, so the researcher decided to use two questionnaire forms - Part A and Part B. Part A contained questions from the A forms of the Schonell and Delton tests, and Part B contained questions from the B forms of the two tests. This proved to be a good decision as feedback on the Part B questionnaire especially, indicated that panel members took in some cases, considerably longer than the twenty minutes estimated to complete the questionnaire.

To randomize the order of the questions on the questionnaires, the eighteen Part A questions - the nine drawn from the Delton A test and the nine drawn from the Schonell A test were mixed together and a fourth neutral teacher drew test items from the box. This random drawing became the order of placement for the questions on the questionnaire Part A. The process was repeated for the Part B questionnaire.

Definitions of the four reading strategies used in the question classifications were included in the direction section at the top of the questionnaire forms. The four strategies defined were locating information, detecting sequence, making inferences and drawing conclusions. (See Table 5) Selection of the question strategies and the definitions for them were formulated by the committee using Bloom's

Taxonomy and reading strategy definitions found in Developing Competencies in Teaching Reading: A Modular Program for Preservice and Inservice In Elementary and Middle School (Magnum and Forgun;, 1979) and the Barnell Loft Specific Skills Series (1971).

Table 7: Questionnaire Strategy Definitions

Locating Information:	This skill requires the reader to identify or recognize facts presented in a selection.
Detecting Sequence:	This skill requires the reader to identify or order events or information presented in a selection.
Making Inferences:	This skill requires the reader to combine verified facts found in the selection with hypothesized facts from experience to form a final statement or answer a question.
Drawing Conclusions:	This skill requires the reader to form a final statement or answer a question using verifiable facts in a selection.

On the questionnaire, four classification columns were drawn to the right of the test items and were headed by each of these four strategies. Panel members (the 95 reading specialists selected from school boards in the provinces of Alberta, Saskatchewan and British Columbia) were instructed to classify test items into one of the four strategies by placing a check mark in the appropriate column. The consensus

criteria for each test item was set at 80%. Copies of the questionnaire forms Part A and Part B are included in Appendix D and E.

The questionnaire was pre-tested on a small sample (6) of teachers to determine the time allotment for each questionnaire and the clarity of directions. From the results of the questionnaire pilot a writing time of approximately ten minutes was estimated for Part A questionnaire, and approximately twenty minutes for the Part B questionnaire. What did not come out very strongly in the questionnaire pilot of the Part B questionnaire was the difficulty with test items from the Part B tests that had more than one blank and in which each blank represented a different reading strategy.

Round Two: January, 1992 to November, 1992

The delphi panel, after reviewing the round one results made three recommendations for change. Two recommendations suggested were to redesign the questionnaire to make the comparisons of reading strategies more direct. A third suggestion was to adjust the time frame of the study to avoid the months of May and June when school staff and administration are busy. The round two questionnaire was designed so that question one of the Delton test was compared directly to question one of the Schonell,as indicated in the sample question below.

Sample:

Schonell	Delton
1.I am a wild bird. My home is in a tree. I can fly high in the air. I can sing a song.	1.I am a friendly dog. My home is in John's yard. I like to play with John. I like to run and jump.
Where is the bird's home?	Where is the dog's home?

The delphi panel members were instructed to rate the reading strategies used in the two questions on equivalence by indicating if the "strongly agreed", "agreed", "disagreed" or "strongly disagreed" on their equivalence. Ratings were marked under the appropriate heading in the columns to the right of the question. Also, each blank in the B forms of the two tests was evaluated separately (eg. "See,if had obeyed the___A___ he would not be the lion's___B___) in response to comments made by Round One panel members who felt the two blanks (or in some cases three) in test questions each represented different reading strategies and should be assessed separately. The consensus criteria for reading strategies in matched test items was set at an average Likert Scale score greater than 3. Copies of the cover letter and the questionnaires are included in Appendix G.

Members of the round two delphi panel consisted of those members from the round one panel who completed and returned a second consent form, which indicated that they wished to serve on the second round of the panel. Of the ninety-five round one panel members, only sixty-five agreed to continue to serve in round two of the delphi process. The second round questionnaires were mailed to the sixty-five consenting panel members who completed and returned the questionnaires in the self-addressed envelopes provided. The Likert Scale scores for the comparisons of matched test items were totalled and divided by the number of respondents to give an average Likert Scale score. Following the analysis of the data received from the questionnaires mailed to the round two delphi panel, the delphi process was completed.

Correlational Studies

In consultation with the Statistics Department Consulting Services at Oregon State University, a quasi-experimental test-retest design was proposed for the correlational study. In the school district selected for the five school correlational study, five school sites were to be randomly selected and from each school site and ten special education or resource room students were to be tested. Students being tested were to be randomly assigned to one of two groups: the Schonell first/Delton second group or the Delton first/Schonell second group. The students were to be

administered the first test and then after a ten minute rest period the second test. An attempt was made to control for sensitization and fatigue by alternating which test was used first. In addition to the test scores the variable of teacher rating of the student's reading level, was added as an additional control. It was to control for environmental factors that could influence study outcomes and instrumentation errors which might result from the use of the alternate test forms.

Resource room teachers or reading specialists administered the tests. Each school received a record sheet numbered one to ten (see Appendix M), and a referral form (See Appendix N) which required the classroom teacher who referred the child to rate the reading level of the child on the basis of classroom observation and the reading materials used by the child. The teacher estimates of the students' reading levels in the five school correlational study was correlated with the Schonell reading age as indicated on the norm tables for the Schonell Silent Reading Tests. For each child randomly selected for testing in the five school study sample, a flip of a coin determined which test was given first. Teacher ratings, and test scores were recorded on the record sheet along with the age and gender of the child. Because of the confidentiality issue involved with test score data, the name of the child was not required in study data, but teachers doing the testing were asked to keep a record in their school

data. Correlational studies were carried out first in a single school and then in five schools in a single school district.

Correlational Study Within a Single School May to June, 1991

The purpose of the first correlational study was to evaluate the effectiveness of the study design in a single school setting and also to determine the approximate time allotment required for the administration of the test instruments using the counterbalanced test-retest design. The Schonell and Delton tests were administered by the researcher to 36 resource room students, ages 7 to 11, in existing programs in the school. Morning classes were administered the Schonell first, followed by the Delton. The afternoon resource room classes were given the Delton first, followed by the Schonell. Members from each of the test groups (morning and afternoon) were represented in the groups taking the Form A and the Form B forms of the test, but assignment to test groups was not random. Results obtained from testing were used by the teacher as part of the year end student assessment because the Schonell Silent Reading Tests Forms A and B were part of the resource room/special education year end testing program. A record sheet containing only raw scores, the grade and gender but not the names of the students in the resource room groups was kept for the purpose of this study. See Appendix J.

Since correlations in this first correlational study were high, positive and significant at the p=.05 level (Form A r=.88, Form B r=.96) it was decided that a second correlational study which used (1) random assignment of students to test groups, (2) several school sites instead of one and (3) different test administrators would be the next step to see if correlations with the additional test administration variables would produce similar results.

Correlational Study In A Single School District April-June/93

Statement of the Hypothesis:

It is the hypothesis of this study that there will be a high, positive, significant correlation between student scores on the Delton Silent Reading Tests and the Schonell Silent Reading Tests. The criterion measure for the correlation coefficient in the study was set at .75, but it was hypothesized that the correlations for student test scores on matched items on the Schonell and Delton Silent Reading Tests would produce correlation coefficients for the A and B test forms of the two tests that would be greater than .75. .75 is the common baseline on most reading tests.(Farr,1970) On J.P. Guilford's Table Of Suggested Interpretations For Values of r, .75 denotes a high correlation between matched items. See Table 8.

Table 8: Guilford's Suggested Interpretations For Values of r.

r value	Interpretation
Less than .20	Slight; almost negligible relationship
.20 - .40	Low correlation; definite but small relationship
.40 - .70	Moderate correlation; substantial relationship
.70 - .90	High correlation; marked relationship
.90 - 1.00	Very high correlation; very dependable relationship

Method:

The sample subjects for the second correlational study were selected from the elementary resource room and special education populations of a large urban school district in Alberta. Five schools were randomly selected by the research department of that school board and ten students were selected for testing in each school site.(N=50) The selection of subjects depended on parental consent for participation in the testing program. Subjects who particiapted were randomly assigned by the flip of a coin to one of two groups: "the Delton-first-Schonell-second" group or the "Schonell-first-Delton-second" group. The total population successfully completing the testing was 39 students. Although parental consent forms were given to 50 students, only 39 of the students returned parental consent forms by the time of testing and could participate in the testing.

Instruments:

The instruments used in the testing where the Schonell Silent Reading Tests, Forms A and B; and the Delton Silent Tests, Forms A and B. The Schonell Silent Reading Tests are currently in use in the school district. The Delton Silent Reading Tests were developed by a committee of three Delton teachers.

Experimental Design:

A quasi-experimental counterbalanced design of test-retest was used in the second correlational study. All subjects were tested with the Schonell and Delton Silent Reading tests. The order of administration of the two test was decided by a flip of a coin - heads, the Schonell was given first and tails, the Delton was given first. This design was chosen with the assistance of the Statistics Department, Oregon State University because it controls for many sources of invalidity and because it makes possible the random assignment of students to the testing groups. An additional control variable, teacher estimate of grade placement, was also used to help control for instrumentation errors and environmental factors that may affect validity. Analysis of test scores and was carried out using ANOVA and Pearson r calculations.

Procedure for the Five School Correlational Study:

In April and May of 1993, the five schools selected for the correlational study were contacted by the researcher. Test instruments and the study procedures were taken to each of the pilot schools. Personnel involved in the test administration received training on procedures and the recording of required data for the study.

The first step in the study procedure was to mail letters which requested parental consent for resource room or special education children in the school population to participate in the study. Students for whom parental consent was received were then placed into one of the two test groups - Schonell/Delton or Delton/Schonell by the flip of a coin. Five of the ten students selected from each school came from Division 1 (grades 2 or 3) resource room or special education programs and were tested with the A forms of the Delton and Schonell tests. Five came from Division 2 (grades 4 to 6) and were tested with the B forms of the two tests. After the selection of the students, tests were administered to the study subjects in the order determined by the coin flip with a ten minute wait between the administration of the first and second test. Raw scores for the two tests were recorded in the appropriate column on the record sheet and mailed back to the researcher. The scores were used to determine a correlation between student scores on the two tests.

CHAPTER 4

RESULTS

The purpose of this study was to provide evidence of the equivalence of Delton Silent Reading Test items to matched items on the Schonell Silent Reading Test. Four null hypothesis were proposed to demonstrate equivalence in four areas - item content, readability levels of test items, reading strategies in test items and correlations of test scores.

Null Hypothesis 1

Ho, There is no significant difference between the content of test items on the Delton and Schonell Reading Tests.

Matched test items for the Delton and Schonell Silent Reading Tests were compared item by item for literary form, theme, question format, number of words, number of sentences and sentence types. Test items on the two tests which did not exactly match on sentence or word count, specifically items 5, 8, 11, 14, 15 and 16 on Form A, and items 4, 5, 7, 9, 10, 11, 12, 15, 17 and 18 of Form B, were compared further using readability scales because sentence, word or syllable counts are factors which affect the readability level of materials. Items on the Delton Silent Reading Test having different

readability levels than matched items on the Schonell Silent Reading Tests were revised. The revisions ensured that the null hypothesis was supported by the study data.

Null Hypothesis 2

Ho, There is no significant difference between the readability levels of test items on the Delton and Schonell Silent Reading Tests

A One Way Analysis of Variance was used to compare the readability scores for items on the Delton tests with readability scores for items on the Schonell tests. Table 9 contains the ANOVA results for the comparison of the Fry Readability Graph scores for Forms A and B of the Schonell and Delton tests.

Table 9: ANOVA Results for Comparison of the Fry Readability Graph Scores on Schonell and Delton Tests

Source of Variation Form A	Sum of Sq.	d.f.	Mean Sq.	F-ratio	Sig. Level
Between groups	.69444	1	.694444	0.52	.8234
Within groups	454.05556	34	13.354575		
Total (corrected)	454.75000	35			

Confidence level: 95 (Alpha=.05)
Critical t = 2.042
Hypothesis Test for HO: Diff = 0

Table 9 (continued)

Source of Variation Form B	Sum of Sq.	d.f.	Mean Sq.	F-ratio	Sig.Level
Between groups	.10000	1	.1000	.015	.9059
Within groups	261.00000	38	6.8684211		
Total(corrected)	261.10000	39			

Confidence Level: 95 (Alpha=.05)
Critical t = 2.021
Hypothesis Test for H0: Diff = 0

A comparison of the F-ratios in the ANOVA data for the A and B forms of the Delton and Schonell with the value of Critical F found in the statistical table for the distribution of F (Gay,1987, p.537) supports the hypothesis which states that there is no significant difference between student scores on the Schonell and Delton test instruments for p=.05 and df=1,38. (Critical F = 4.17 and 4.08)

Critical F is the value of F required for significance. If the F-ratio is greater than the value of Critical F the difference is significant and the null hypothesis is rejected.

In the study data for readability, the F-ratio is smaller than Critical F so the null hypothesis is retained.

Table 10 contains ANOVA results for the comparison of the readability scores for the Schonell and Delton Silent Reading Tests Forms A and B on the Gunning Fog Index.

Table 10: ANOVA Results for Comparison of Gunning's Fog Index Scores on Schonell and Delton Tests

Source of Variation Form A	Sum of Sq.	d.f.	Mean Sq.	F-ratio	Sig.Level
Between groups	.51361	1	.513611	.026	.8747
Within groups Form A	673.26278	34	19.801846		
Total (corrected)	673.77639	35			

Confidence Level: 95 (Alpha=.05)
Critical t = 2.042 Hypothesis Test for H0: Diff = 0

Source of Variation Form B	Sum of Sq.	d.f.	Mean Sq.	F-ratio	Sig.Level
Between groups	3.19225	1	3.192250	.303	.5911
Within groups	400.33550	38	10.535145		
Total (corrected)	403.52775	39			

Confidence Level: 95 (Alpha=.05)
Critical t = 2.021 Hypothesis Test for H0: Diff = 0

A comparison of the F-ratio in the ANOVA data for Forms A and B of the Delton and Schonell Reading Tests with the value of Critical F for df=1,34 and p=.05 shows no significant difference between the readability scores of the two tests. (Critical F = 4.17 and 4.08)

As seen in the ANOVA data, the value of the F-ratio for both tests is much smaller than the value of F required to reject the null hypothesis, so the null hypothesis is supported.

An anlysis of individual test items in the Fry Readability Graph data indicated some significant differences between particular matched items on the Schonell and Delton test forms.

A significant difference is a difference of one grade level on reading materials with readability levels between grade one and four, and a difference of 2.5 years on reading materials with a readability level above grade four. These significant differences are in keeping with criteria used in the reading assessments of special needs children for making placement decisions in the Edmonton Public School System.

Using this as a criterion, questions 5,6, and 13 of the Delton A and Schonell A had significantly different readability levels, and questions 2, 9, 13, 15 and 17 on the Delton B and Schonell B had significantly different readability levels.

An examination of individual test items in the Gunning's Fog Index data also indicated significant differences between items 5 and 13 on the A forms of the two tests and items 2,9,13, 15 and 17 of the B forms of the two tests. Revisions were carried out on these test items.

Pearson Product Moment Correlations correlations for the Schonell A and Delton A on the Fry Readability Graph and Gunning's Fog Index were .78 and .83. Correlations for Schonell B and Delton B on the Fry Readability Graph and Gunning's Fog Index were .72 and .77. A correlation of .75 is

the criterion measure commonly used as the acceptable measure for correlations of reading test scores. (Farr,1970) On Guilford's table for the suggested interpretations of values of r, .70 to .90 is a high correlation showing a marked relationship between the scores on the two tests. This data adds further support for retention of the null hypothesis.

Null Hypothesis 3

Ho, There is no significant difference between reading strategies tested in the test items of the Delton and Schonell Silent Reading Tests.

The delphi process was used to gather data for the support of this hypothesis. Round One questionnaires were sent to the ninety-five reading specialists who had consented to be panel members in round one of the delphi process. Of the ninety-five questionnaires mailed to panel members only eighty-four were completed and returned by the close of the first round. The questionnaires were mailed in May, to be completed and returned in June, which is a very busy month for school board personnel. Some members needed an extension of the June deadline to complete the questionnaires, and four questionnaires were lost in the mail and had to be remailed. Results from round one of the delphi panel are summarized in Table 11 below.

Table 11: Questionnaire Results - Forms A and B

QUESTION FORM A	LOCATING INFORMATION		DETECTING SEQUENCE		MAKING INFERENCES		DRAWING CONCLUSIONS	
	Raw Score	%	Raw Score	%	Raw Score	%	Raw Score	%
1	15/42	36	0/42	0	14/42	33	13/42	31
2	37/41	90	3/41	7	1/41	2	0/41	0
3	36/41	88	2/41	5	1/41	2	2/41	5
4	35/40	88	1/40	3	2/40	5	2/40	5
5	1/41	2	1/41	2	32/41	78	7/41	17
6	5/41	12	1/41	2	23/41	56	12/41	29
7	21/42	50	1/42	2	5/42	12	15/42	36
8	0/41	0	1/42	2	18/41	44	22/41	54
9	19/54	0	0/54	0	27/54	50	8/54	15
10	1/41	2	0/41	0	24/41	59	16/41	39
11	1/41	2	3/41	7	20/41	49	17/41	41
12	38/41	93	0/41	0	3/41	7	0/41	0
13	1/41	2	0/41	0	25/41	61	15/41	37
14	2/43	5	2/43	5	30/43	70	9/43	21
15	0/42	0	0/42	0	19/42	45	23/42	55
16	12/41	29	6/41	15	12/41	30	11/41	27
17	3/41	7	0/41	0	19/41	46	18/41	44
18	1/41	2	0/41	0	25/41	61	15/41	37

QUESTION FORM B	LOCATING INFORMATION		DETECTING SEQUENCE		MAKING INFERENCES		DRAWING CONCLUSION	
	Raw Score	%	Raw Score	%	Raw Score	%	Raw Score	%
1	15/56	27	5/56	9	18/56	32	18/56	32
2	15/53	28	2/53	4	19/53	36	17/53	32
3	3/49	6	4/49	8	30/49	61	12/49	24
4	17/50	34	6/50	12	21/50	42	6/50	12
5	29/48	60	5/48	10	4/48	8	11/48	23
6	7/45	16	2/45	4	19/45	42	17/45	38
7	7/49	14	7/49	14	22/49	45	13/49	27
8	2/45	4	2/45	4	13/45	29	23/45	51
9	5/48	10	0/48	0	30/48	63	13/48	27
10	12/45	27	3/45	7	18/45	40	12/45	27
11	10/43	23	10/43	23	4/43	9	19/43	44
12	4/43	9	2/43	5	27/43	63	10/43	23
13	4/46	9	2/46	4	27/46	59	13/46	28
14	8/51	16	4/51	8	18/51	35	21/51	41
15	23/52	44	8/52	15	9/52	17	12/52	23
16	35/40	88	1/40	3	0/40	0	4/40	10
17	15/42	36	7/42	17	4/42	10	16/41	38
18	13/45	29	2/45	5	17/45	38	13/45	29
19	12/56	21	8/56	14	26/56	46	10/56	18
20	16/50	32	2/50	4	17/50	34	15/50	30

The locating information questions were the only questions in round one data that reached the criteria of 80% consensus - five of the thirty-eight questions.

Round two questionnaires were mailed in March, 1992. Only sixty-five from round one participated in round two of the delphi process. Fifty-five round two questionnaires were completed and returned - 27 Form A's and28 Form B's.

Tables 12 and 13 show the percentage of agreement among panel members and the average Likert Scale score. The asterisks (*) indicate test items or parts of test items that did not meet the consensus criteria of a Likert Score greater than 3 and which had to be revised.

Table 12: Summary of Round Two - Delphi Panel Form A

Question	% Agreement	Average of Likert Scores
1	98	4.9
2	92	4.5
3	93	4.6
4	82	4.1
5	92	4.5
6	--	---
7	93	4.6
8	84	4.2
9	86	4.3
10	71	3.6
11	70	3.5
12	96	4.8
13	82	4.1
14	90	4.5
15	90	4.5
16	69	3.4
*17	*59	*3.0
18	81	4.0

*Test items that did not meet the consensus criteria

Table 13: Summary of Round Two - Delphi Panel Form B

Questions	% Agreement	Average Likert Scale Score
1a	94	4.7
1b	84	4.1
2a	69	3.4
2b	66	3.3
3a	89	4.4
3b	80	4.0
4a	68	3.4
4b	87	4.3
5a	76	3.8
5b	68	3.4
6	--	---
7a	89	4.4
7b	83	4.1
8a	89	4.4
8b	64	3.2
9a	71	3.6
9b	76	3.8
10a	84	4.2
10b	85	4.3
11a	63	3.1
11b	64	3.2
12a	76	3.8
12b	74	3.7
13a	71	3.5
13b	71	3.5
14a	71	3.5
14b	69	3.5
14c	74	3.7
15a	69	3.4
15b	67	3.4
*16a	*59	*2.9
16b	73	3.6
17a	67	3.4
17b	70	3.6
18a	69	3.5
18b	69	3.5
19a	64	3.2
19b	69	3.4
19c	62	3.1
20a	63	3.1
20b	68	3.4

* Test items that did not reach the criterion measure and are in need of further revision.

Only two test items on the Delton Silent Reading Tests were in need of minor revisions. Reading strategy equivalence was consistently established, therefore, the Delphi Process was completed. Feedback from delphi panel members on the two test items in need of revision was reviewed by the researcher and the recommended revisions were completed. Therefore, Null Hypothesis 3 has been supported by the study data.

Null Hypothesis 4

Ho, There is no significant difference between student scores on the Delton and Schonell Silent Reading Tests.

Correlational studies in a single school and in a single school district were carried out to gather evidence to support this null hypothesis. Results for the two correlational studies are presented in the following sections.

Correlational Study in a Single School

Twenty-six grade two and three resource room students (ages 7 and 8) were given the Form A Schonell and Delton Silent Reading Tests, and ten grade four and five resource room students (ages 9 to 12) were given the Form B Schonell and Delton Silent Reading Tests. Tables 14, 15, and 16 give test results and the Pearson Product Moment Correlations for students' raw scores on the Schonell and Delton tests.

Table 14 contains the scores of the grade two and three students who attended morning and afternoon resource room classes. The tests were administered as part of their yearend assessment.

Table 14: Student Scores on Delton A and Schonell A Reading Tests in Correlational Study in a Single School

Student	Schonell Raw Score	Delton Raw Score
1	0	0
2	2	3
3	3	4
4	2	2
5	5	5
6	2	3
7	3	2
8	6	6
9	2	2
10	4	0
11	4	2
12	2	1
13	8	7
14	4	3
15	3	2
16	9	8
17	7	9
18	10	10
19	2	3
20	3	2
21	6	7
22	3	5
23	9	9
24	5	4
25	3	2
26	3	4

Table 15 contains the scores of grade 4, 5 and 6 students who attended morning and afternoon resource room classes. The testing was carried out as part of their yearend assessment.

Table 15: Student Scores on Schonell B and Delton B Reading Tests in Correlational Study in Single School

Student	Schonell Raw Scores	Delton Raw Scores
1	10	12
2	17	19
3	10	7
4	9	11
5	18	17
6	24	26
7	8	6
8	7	2
9	5	6
10	15	15

Correlations of students raw scores on the Delton and Schonnel tests are presented in Table 16, first by each form (A or B) and then in combined scores for the two test forms, A and B, to give the total group comparison.

Table 16: Pearson r Correlations for Correlational Study In a Single School

Test Form	r
Form A	0.88
Form B	0.96
Combined	0.96

Pearson r correlations of student scores on the two tests were significant for this correlational study carried out in a single school. The criterion measure for significance was set at .75, which is in line with other research studies involving correlations of reading tests. (Farr, 1970)

Five School Correlational Study in a Single School District

The raw scores on the Delton and Schonell tests were analyzed using ANOVA and Pearson r correlations. Table 17 and 18 contain the raw scores of the 39 students that completed the testing, 19 from Division 1 and 20 from Division 2. It was interesting to note the range of scores in the grade 2 and 3 (Division 1) subject sample. Scores ranged from 0 to 10 on both the Delton and Schonell tests indicating that the readers in this group range from virtually non-readers to a grade four level. Similar results were found in scores for grade 4, 5 and 6 students.

The tables contain the scores of students who were randomly assigned to test groups - Delton/Schonell or Schonell/Delton, which was the order of administration of the two test instruments. The students in this five school study also represent a resource room or special education sample that was randomly drawn from the school population of a large urban school district, which is in contrast to the single school cluster sampling of the previous study presented.

Table 17: Raw Scores from Division 1 - Form A Tests in the Five School Correlational Study in a Single School District

School	Schonell Score	Delton Score
1	3	3
1	6	6
1	4	6
1	2	2
1	1	1
2	7	7
2	2	1
2	4	2
2	4	2
2	7	6
3	2	0
3	2	1
3	8	6
3	1	0
3	2	1
4	12	11
4	7	6
4	8	7
4	8	7

The mean for the Schonell test scores in Division 1 was 4.7, the standard deviation 3.08. The mean for the Delton test scores was 3.9, the standard deviation 3.13. The range of scores is from 1 to 12 on the Schonell and 0 to 11 on the Delton Silent Reading Test. In the single school study, the range was from 0 to 10 for both the Schonell A and Delton A tests. The mean was 4.23 on the Schonell and 4.04 on the Delton test. As was expected the means for the two tests tended to vary more for scores from the five schools then for scores from the single school. Ranges were quite similar in both studies.

Table 18: Raw Scores from Division 2 - Form B Tests in the Five School Correlational Study in a Single School District

School	Schonell Score	Delton Score
1	14	15
1	16	14
1	13	13
1	10	13
1	16	20
2	12	13
2	16	21
2	18	18
2	10	10
2	16	17
2	22	18
2	15	15
2	12	9
3	11	16
3	20	17
3	8	10
3	4	4
3	15	16
4	6	11
4	13	9

The mean for the Schonell B test scores was 13.35, the standard deviation 4.45. The mean for the Delton B test scores was 13.95, the standard deviation 4.22. The range of scores is from 4 to 22 on the Schonell and 4 to 21 on the Delton tests.

Table 19 presents the correlation coefficients for the ANOVA and Pearson Product Moment Correlation of the scores from the A and B forms of each test and for the total test scores. (Alpha = .05)

Table 19: Correlation Analysis Data Comparing Raw Scores on the Delton and Schonell Silent Reading Tests in the Five School Correlational Study in a Single School District

	Form A	Form B	Total Test
Pearson r*	0.91 (p<.001)	0.78 (p<.001)	0.94 (p<.001)
ANOVA**	0.95 (p<.000001)	0.78 (p=.00004)	0.93 (p<.000001)

*Pearson r: df=17 on Form A, 18 on Form B and 38 on Total Test
**ANOVA: df=18 on Form A, 19 on Form B and 39 on Total Test

The calculated correlation coefficients are all above r = .75 which was the criterion measure for the minimum level of correlation required for non-rejection of the hypothesis statement of this correlational study.

Table 20 contains the correlation of the teacher ratings of the students' reading comprehension grade levels with the the students' grade levels as calculated from the norm tables for the Schonell Silent Reading Tests. For all calculations of Pearson Product Moment Calculations a p value of .05 was used. The degrees of freedom between groups is always 1 because we are comparing only two groups of scores. What is varied is the number of student scores within a group, so that figure is given in the degrees of freedom on the correlation table.

Table 20: Correlations of Schonell Grade Placement and Teacher Ratings for Reading Comprehension in the Five School Correlational Study in a Single School District

	Pearson r	df
Form A	0.76	17
Form B	-0.09	18
Form A and B	0.61	38

Correlations were inconsistent. Inferences that were to be made were not supported by the study data. One inference to be drawn from this study was that teacher ratings would support test findings. However, the correlation of teacher estimations of students' reading ability and the reading ability as indicated by the Schonell test scores, barely reached the study criteria of .75 for the Division 1 students and for Division 2 students there was no correlation at all.

Table 21 compares the number of months difference that existed between teacher ratings of students' reading age and the students' achievement on the Schonell Silent Reading Tests. It further illustrates the inability of this variable to act as a control for environmental factors and instrumentation errors. Teacher ratings were not only inconsistent within schools, they were also inconsistent between schools.

Table 21: Descriptive Statistics Comparing Differences In Months of The Reading Age of Students As Determind By Schonell Testing And By Teacher Rating

School	Range of Diff. (in months)	Mean Diff.	Standard Deviation	Median Difference
1	3 to 11	7	2.45	6
2	1 to 16	5.6	5.44	5
3	0 to 20	11.1	5.8	10
4	2 to 18	9	6.29	10

CHAPTER 5

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary

This study attempted to document the devlopment of the Delton Silent Reading Tests Forms A and B and to provide evidence of the equivalence of the Delton Silent Reading Tests Froms A and B to the Schonell Silent Reading Tests Forms A and B in four areas - content of test items, readability levels of test items, reading and questioning strategies of test items and correlations of student scores on test items.

Evidence on the equivalence of content in test items was provided in table form, using the table data to describe and equate item content on literary form, themes, questioning format and item stem format. A field study was then conducted to examine how test items on the Delton functioned in relation to matched items on the Schonell tests in a sample of 33 resource room and special education children drawn from the target population by cluster sampling.

Analysis of the table data revealed there were some items on the Delton tests which were significantly different from those on the Schonell tests. The differences were chiefly in word and sentence count, factors which mainly affect readability. Readability studies using the Fry Readability Graph and Gunning's Fog Index confirmed the differences.

Though the Delton and Schonell tests were generally matched on readability, particular items on the tests did differ significantly and they did so on more than one readability scale. These particular items were reviewed and revised. There is one specific case in which a revision was not made to the Delton test item. That specific case is question 5 on the A forms of the Delton and Schonell tests. Item 5 on the Schonell A tests consists of a paragraph that is one compound-complex sentence. Considering that the Schonell Silent Reading Test - Form A is intended for upper grade one to grade three where basic reading and comprehension skills are just developing, and considering that this item appears fairly near to the beginning the test, the researcher considered the compound-complex sentence too large a chunk for young children to process at one time. Therefore the question was divided into a simple sentence and a compound sentence to better accommodate the abilities of the children taking the test. A statement of justification for this change may be in order, however, it does not change the fact that the Schonell A and Delton A tests differ significantly on item 5, and that at least on this question, the two tests are not equivalent. Other areas of difference were reviewed again and revisions indicated by the review were carried out. Except for item 5, which is an intentional difference, the data provided on test item content and readability support null hypotheses one and two, which state that there is no significant difference

between the content and readability levels of the test items on the Schonell and Delton Silent Reading Tests.

Reading strategy equivalence was verified using a dephi panel of 95 reading specialists drawn from school boards in the provinces of Alberta, British Columbia and Saskatchewan. Questionnaires were developed by the researcher to examine the reading strategies used in test items. The round one questionnaire asked the delphi panel to classify strategies into one of four categories - locating information, detecting sequence, making inferences, and drawing conclusions. Most of the questions (33 of the 38 round one questionnaire items) were questions which made inferences or drew conclusions. Panel members, even with definitions provided were unable to reach the criterion of 80% consensus on any of the 33 items. The five other items, four locating information and one detecting sequence, reached the consensus criterion.

Responses on the round one questionnaire did not provide much information on the equivalence of reading comprehension strategies used in the test items of the Delton and Schonell tests. The school boards contacted had provided excellent panel members, but the questionnaire really did not direct their expertise to the heart of the problem: Does question 1 on the Schonell A test instrument test the same reading strategy as question 1 on the Delton A test instrument? The comparison between questions was not made direct enough on the questionnaires.

Another problem with the round one questionnaire was the directions on the Part B questionnaire. Most test items had two answers - an "a" blank and a "b" blank. Panel members had to decide how to indicate a difference in their responses when the strategy in blank "a" differed from the strategy in blank "b". Most panel members ticked off two choices of strategies, one for each blank; other members put "a" and "b" to the left of the columns and then ticked off their strategy choices. Data was recorded on the data sheet for all of the choices given for the questions. Hence if locating the answer and drawing conclusions were both ticked off, both were counted for that particular question.

The difficulty with the questionnaire directions and the limited amount of information on the reading strategies this questionnaire was able to gather, led to major revisions of the questionnaire format. Using the excellent feedback and suggestions from panel members, the round one questionnaire was redesigned to more directly compare the reading strategies in test items. The new format more directly addressed the question of strategy equivalence between test items, and included separate response blanks for the blank "a" and blank "b" (and in some cases, blank "c") in the Part B questionnaires.

The revised questionnaires were mailed to panel members from the round one delphi who had agreed to continue to serve in round two of the delphi process. Sixty-five questionnaires

were mailed to panel members and 57 were completed and returned by the close of the study.

An attempt was also made in round two to begin the mailing of questionnaires earlier than in round one so that school board personnel would not be burdened with the extra responsibility of completing questionnaires in May and June. Target dates were set for winter and spring and though these were adhered to, one quarter of the panel members had not replied even by the end of June. Time did not seem to be a factor in securing responses.

An Average Likert Scale Score of greater than 3 was used as the criterion measure for consensus in round two. Results from the round two questionnaire indicated only two areas in need of minor revisions - question 17 on Delton A and 16a on Delton B. Revisions to question 17 of the Delton A involved changing the question from "What did the master's cat eat?" to "Where did the master's cat eat?" Panel members felt that the "what" question could be answered from general knowledge without the student reading the story, whereas the "where" question required that the student read the story material. The matching item on the Schonell test also included a "where" question, so the revision made the questioning strategy more consistent. Problems indicated by panel members responding to 16a involved item stem phrasing and response choices. With revisions carried out on the two test items the delphi process was completed.

The average Likert Scale Score for Form A was 4.2 and, for Form B was 3.7 which provides support for the null hypothesis which states that there is no significant different between reading strategies in the test items of the Schonell and Delton tests.

Studies to correlate student scores on the Delton test items with scores on the Schonell test items were conducted on resource room children ages 7 to 12 in a single school and then in five schools in a single school district. A quasi-experimental test-retest design was used to gather data for the correlations.

In the single school correlational study, cluster sampling rather than random sampling was used for the placement of students into groups, to avoid disruption of ongoing programs and year end assessment. Twenty-six grade 2 and 3 students and ten grade 4 and 5 students were administered the Schonell and Delton Silent Reading Tests - morning groups having the Schonell first followed by the Delton, and afternoon groups the Delton first followed by the Schonell. The purpose of this first correlational study was to evaluate the effectiveness of the test-retest design and to determine the approximate time allotments that would be required for test administration in the larger five school correlational study. Comparison of student scores in the single school correlational study using ANOVA and Pearson

Product Moment Correlations indicated no significant differences between scores on the Schonell and Delton tests.

The five school correlational study in a single school district used random assignment (flip of a coin) to assign students to test groups. Thirty-nine elementary resource room children ages 7 to 12 were administered the Schonell and Delton Reading Tests Forms A and B. Comparison of student scores using ANOVA and Pearson Product Moment Correlations indicated that there were no significant differences between student scores on the Delton and Schonell tests.

Another variable - teacher rating - was used to control for environmental factors and for instrumentation errors due to the use of alternate test forms. Teacher ratings of students' reading levels were compared to the students' reading ages on the Schonell Silent Reading Tests. (Reading age is computed by looking up the student's raw score on the norm tables for the Schonell tests.)

Results from the correlation between teacher ratings of students' reading comprehension and student achievement on the Schonell Silent reading tests were inconsistent, ranging from a slight negative correlation with the Form B scores ($r=.09$, $p=.05$) to a high positive correlation ($r=.76, p=.05$) with the Form A scores. This inconsistency makes it very difficult to make any inferences about the effects of instrumentation errors or environmental factors on study data.

The results from the correlations of student tests scores for the Delton and Schonell Silent Reading Test support the research hypothesis that a correlation of greater than 0.75 exists between students' scores on the Delton Silent Reading Tests and students' scores on the Schonell Silent Reading Tests.

The analysis of study data provided consistent evidence of the equivalence of the test items on the Delton and Schonell tests for content of items, readability level of items, reading strategies of items and correlations of student scores. All null hypothesis were supported in this study.

Conclusions

The Delton Silent Reading Tests developed in this study are intended to be used on mainstreamed or resource room populations in conjunction with teacher observation and other classroom assessment measures to provide mid-term or mid-program evidence of a student's progress through and IEP program. These test instruments, as developed in this study, are formative evaluation tools and not diagnostic instruments.

The Delton Silent Reading Tests are also intended to provide more consistency in follow-up testing for programs which used Schonell Silent Reading Tests to establish student performance baselines in reading comprehension.

The results from Null Hypothesis 1, indicated that items on the Delton and Schonell tests are matched on literary form,

theme, item format and question format. In the field testing data on item content, the items on the Delton tests were able to place resource room students along a reading comprehension continuum as effectively as items on the Schonell tests (Appendix D), providing further evidence of the equivalent effectiveness of the Delton Silent Reading Tests for tracking students in reading comprehension.

It should be noted that some resource room and special education populations have students with mild physical handicaps. This test does not have provision for students needing alternate response formats or modified time allotments. Resource room and special education teachers intending to use this test instrument need to be aware of this limitation.

Results from Null Hypothesis 2 indicated that readability levels of matched test items from the Schonell and Delton tests were not significantly different on the Fry Readability Graph and Gunning's Fog Index.

The results from Null Hypothesis 3 indicated that reading specialists from school boards in Alberta, British Columbia and Saskatchewan, serving as delphi panel members did not find significant differences between reading strategies in matched test items on the Delton and Schonell tests. The results from the delphi panel also indicated that it is difficult to differentiate between test item reading strategies which require making inferences or drawing conclusions. Panel

members found locating information and detecting sequence reading strategies easier to consistently identify in test items from the Delton and Schonell tests. These two knowledge level strategies more directly applied factual information presented in the passages so there was less variation in test item interpretation. These findings have implications for the selection of item stem formats and questionnaire formats for future studies which involve the identification or classification of reading strategies.

Null Hypothesis 3 results did indicate that the Round Two questionnaire was highly effective in gathering data on reading strategy equivalence. In replications of this study, it should be the instrument of choice for the delphi process.

Results from Null Hypothesis 4 indicated that student scores on the Delton Silent Reading Tests had a high, positive, significant correlation with scores on the Schonell Silent Reading Tests. ($r = .93$, $p = .000001$) This implies that the Delton tests, used in re-testing who were students previously tested with the Schonell tests, will provide very dependable, highly significant results. (Guilford,1987)

In summary, the results from this study support the four null hypotheses that items on the Schonell and Delton Silent Reading Tests are equivalent in content, readability levels, reading strategies and student scores. Therefore, the Delton tests can be used as alternative test forms for the Schonell Silent Reading Tests for formative evaluations and follow-up

testing in cases where the Schonell Silent Reading Tests have been used to establish reading comprehension baselines in IEP programs. This not only improves the consistency of existing testing programs, but also allows for greater flexibility in program evaluation and program delivery.

Recommendations

1. In the five school correlational study, problems with the research design were experienced in four areas. One area was the collection of data from the pilot schools. Data from one of the pilot schools could not be used because the wrong Schonell test form was used in the study. It is recommended that in future correlational studies, samples of both the Schonell and Delton Silent Reading Tests be provided to the schools in the study to avoid a reoccurrence of this problem.

2. In the five school correlational study, some test administrators needed a second inservice prior to test administrations. This was especially true in cases where a long period of time had elapsed between the initial inservice of the test administrator and the administration of the test. The time lapses were generally due to delays in the return of the parental consent forms for testing, but inschool activities also caused some delays. To better meet the need for further inservicing or consultations, a video tape of the testing and recording procedures is recommended.

3. Another problem experienced with the study design related to the statistical analysis used in this study design. In calculating The Pearson Product Moment Correlation for the scores from each school (school 1 - 0.96; school 2 - 0.95; school 3 - 0.95; school 4 - 0.33) in a cursory examination for the possible existence of a school effect, the Pearson r scores indicated that in this correlational study a school effect did exist. "School effect" refers to study findings which indicate that the results coming from a particular school are for some reason different from other study findings and that there exists factors unique to that school that are affecting student scores and that should be controlled for in the analysis of the study. The existence of a school effect was not factored into the correlations in this study. To adjust correlation coefficients for this factor, ANCOVA would be a more effective statistical instrument to use in future studies.

4. A fourth problem in the five school correlational study was the inability of the teacher ratings to act as a control variable for environmental factors and instrumentation errors due to the use of alternate test forms. (Borg,1987) The use of ANCOVA would also control for prior experiences of the students, environmental factors and instrumentation errors. Since teacher ratings were not proven an effective control in the school district study, it is recommended that they be

dropped from future replications of this study unless the study is also correlating teacher predictions and student grade scores.

5. Replication of the study on a larger more varied population sample is recommended. Currently a larger correlational study involving 30 to 40 school districts is being planned to replicate the study carried out within the single school district. It is expected that the findings from this larger study will further substantiate the findings of the two correlational studies discussed in this study. The use of teacher ratings is not included in this larger study.

6. In replications of the study, the Round Two questionnaire is recommended for use in the delphi process. It was extremely effective at gathering information on reading strategy equivalence in matched test items and was easier to use and to score. The Likert Scale gave some flexibility to item responses that was not available in the the Round One questionnaire response format.

7. The lack of correlation between teacher ratings and study test scores raises the question as to whether or not these findings are unique to the Schonell Silent Reading Tests or unique to resource room and special education populations or if they apply to other reading tests and regular classroom

populations as well. In view of the current trend to more authentic assessment, a further study of the correlations between reading test scores and teacher ratings is strongly recommended. If the findings in this study are replicated in other studies, it may have some implications for what school boards and school districts do or do not do about authentic assessment.

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APPENDICES

APPENDIX A

DELTON SILENT READING TEST FORM A
(Time - 9 minutes)

Directions:

No marks are to be made on this test booklet. All answers are to be marked on the separate answer sheet.
Read carefully each paragraph and the question at the end of it. Write the answer to the question on your answer paper. The sample questions on this first page will be done with the teacher to help the children understand the test format and the recording of answers.

Example:

(a) I have a rabbit. It is fluffy and white. I feed it grass and carrots. It lives in my yard. I like to play with it.

Where does the rabbit live?

(b) Every day on my way to school I cross over a little brook that rushes past the steep rocky shores filled with brightly colored flowers.

Choose the word below that tells about the brook and write it on your answer paper.

dirty swift rocky slow-moving

Begin reading here.

1. I am a friendly dog. My home is in John's back yard. I live in a dog house there. I like to run and jump.

   Where is the dog's home?

---

2. We have three children in our family. My baby brother is just starting to speak. He can say my name. He makes it sound funny.

   How many children are in the family?

---

3. Last week we went to the park. We spent a lot of time beside the pond watching the ducks. From a wooden bridge we could throw breadcrumbs and watch them dive for food.

   What was the bridge made of?

---

4. The sun had just risen when Jane climbed out of bed and began to dress. Today was a holiday and she wanted to enjoy every minute of it. "What will I do today?" she thought. " It is too early to call my friends."

   Do you think that Jane has slept in?

   Yes No Cannot tell

---

5. Jennifer danced along the path, her eyes sparkling and her feet keeping time to the joyful tune she sang. "I must be the luckiest girl on earth to have such pretty shoes to wear."

   Jennifer was happy or unhappy?

---

6. In the city you cannot just dash across the street because the traffic is too heavy. You must go to the corner and wait to cross. The red light tells you to stop, the green light tells you to go and the orange light tells you to get ready.

What light tells you to get ready?

---

7. In the forest lived a poor woodcutter who worked from dawn till dark cutting logs for people in the nearby village. Though he worked very hard he could scarcely earn enough to feed his family.

Choose a word below that tells what the woodcutter was like and write it on your answer paper.

lazy unkind idle hardwording proud

---

8. When I do sit ups, I lay flat on my back and bend my knees upward, then as I curl my head and shoulders upward I reach forward with my hands to touch my knees, then curl back downward.

Choose the word below that tells how you reach with your hands.

upward downward forward backward

---

9. I sit on your bedside table. Each morning I ring to get you up for school. You look at me to check when you should leave for school.

What am I?

---

10. In a land faraway and long ago, there lived a kind old man. All during the day the children gathered at his feet as he cut and stitched, and he told them wonderful stories of the days long past. The children called him Opa, which meant grandpa.

    Write the old man's name on the answer blank for this question. If you think he was a tailor, put a circle around his name.

---

11. The sun bent down and kissed the leaves
    And her last rays touched the soft sea breeze
    Then she softly sank beneath the seas.

    What time of day is it?

---

12. Close by the meadow
    Buzzing round a hive
    Was an angry queen bee
    And her little bees five.

    How many bees altogether buzzed around the hive?

---

13. In July we celebrate our country's birthday. Fireworks and parades mark this special summer day, and school children have just begun their summer holidays. How strange it is that for people in some lands, like New Zealand and Australia, it is winter season.

    Choose a word below which best tells what July is likely to be like in Australia.

    windy cold hot warm summery

---

14. A princess and a servant were playing with a golden ball in the palace gardens. In the excitement of the game, the servant tossed the ball too hard and it sailed over the head of the princess and into the high branches of a nearby tree. "My ball is lost", cried the princess. "No, no!" said the servant, "It is at the _____ of the tree."

Write the word that has been left out.

---

15. When you are driving into the city, the first thing you see is the tall skyscrapers and the city lights. As you near the city houses and stores can be seen.

If you were leaving the city, choose the word below that tells the last thing you would see, and write it on your answer sheet.

people houses stores skyscrapers

16, Just behind the meadow the forest began. Birch trees and low bushes gave way to pine and spruce trees. As you moved deeper into the forest creepers and mossy patches covered the trunks of trees and everywhere was stillness.

Were the pine trees before or after the birch trees as you went into the forest?

---

17. Each day the master's cat chased the mice from the table and each day the number of mice grew less and less. Finally concerned for their safety, the mice met to discuss a plan to rid themselves of the cat.

What did the master's cat eat?

---

18. As night crept about my room,
Through the window, onto my bed
Came a silver moonbeam,
Touched my sleeping head,
Then quietly went on its way.

What touched the child?

the window the night the moonbeam the sun

Name_____

Date_____

DELTON SILENT READING TEST FORM A

1._____

2._____

3._____

4._____

5._____

6._____

7._____

8._____

9._____

10._____

11._____

12._____

13._____

14._____

15._____

16._____

17._____

18._____

DELTON SILENT READING TEST ANSWER KEY FORM A

A. in my yard

B. swift

1. in John's back yard
2. three
3. wood
4. no
5. happy
6. orange
7. hardworking
8. forward
9. alarm clock
10. Opa
11. evening
12. six
13. cold
14. top
15. skyscrapers
16. after
17. dining room/table
18. the moonbeam

APPENDIX B

DELTON SILENT READING TEST FORM B

(Time - 15 minutes)

Directions:

Read each paragraph carefully. You will notice there are spaces marked with the letters "A" and "B". Write on your answer paper the word from Row A that would make the best sense when put into Space A, then write on your answer paper the word from Row B that woud make the best sense when put into Space B. Do the sample paragraph below with your teacher. All Answers are to be put on the answer sheet. No marks are to be made on the test booklet. Check to see that your question number matches the blank number on the answer sheet.

Sample:

Jane's mother bought her a new pair of shoes, but they were too tight and hurt Jane's _____A_____. Jane's mother took them back to the _____B_____ and bought Jane another pair that were larger.

A.	feelings	feet	mother	hands
B.	school	doctor	drugstore	shop

Begin reading here.

1. Trina has two pet rabbits. She keeps them in a pen in her back yard. The pen is made of wire and ____A____. One day when she went to feed them, the rabbits were not there. Someone had left the ____B____ open and the rabbits had run out.

A.	cloth	sand	paper	wood	grass
B	window	yard	garage	door	roof

---

2. The children ran through the meadow grass, frightening a mother duck as she sat on her eggs in the tall grass and bullrushes near the ____A____. Soon they had grabbed the loose rope ofthe raft and were pulling it out onto the smooth surface of the pond. There the children could lay peacefully, looking up at the birds and clouds above them in the blue ____B____.

A.	house	pond	trees	garden	hill
B.	water	boat	flag	house	sky

---

3. One day a woodcutter went into the woods hoping to chop some ____A____. As he walked through the forest looking for just the right size trees to cut, he stumbled over a copper pot. He picked the ____B____ up and looked at it. It was old and dented.

A.	vines	wood	fruit	bushes	leaves
B.	pot	wood	ax	flowers	stone

---

4. Word reached the Emperor that some weavers had come into town. The Emperor who loved clothes asked for his royal minister. The royal minister came to the foot of the throne and ____A____ lowly before the Emperor."What is it that your royal highness wishes?" asked the minister. "Bring the weavers to me at once!" said the____B____.

A.	stood	spoke	bowed	knelt	sang
B.	minister	weavers	soldier	page	Emperor

5. Into the window of the palace drifted the song of the little nightingale. The prince went over to the window to listen. The song was so ___A___ it made him weep. "Why do you weep? asked his servant. "The song of the nightingale on the branch below my window makes me weep." Just then a tear fell on the nightingale, and in a flash before him stood a beautiful ____B____ whose crown twinkled in the moonlight.

A.	sad	happy	peaceful	joyful	loud
B.	sparrow	nightingale	princess	girls	servant

---

6. An old lady named Hanna Hendersonn lived in a house at the edge of a little village. When she wrote her name she wrote____A____ letters altogether, and of these letters ___B___ would be "n".

A.	three	twelve	two	ten	fifteen
B.	three	two	twelve	four	five

---

7. Tim and Fred were playing marbles. Each boy kept his marbles in a bag. So far each boy had won nothing. When the teacher went by she asked the boys how they were doing. "Fine!" said Tim. "When I win the ___A___ and ___B___ more I will have won six marbles.

A.	game	boy	marbles	one	tin
B.	marbles	two	one	five	Fred's

8, A hungry fox spotted two fat rabbits near the edge of a thicket. Being greedy he wanted the two fat rabbits for ___A___. So he began to plan how he could catch ___B___ of them.

A.	friends	enemies	himself	playing	nothing
B.	one	plenty	none	three	both

---

9. The two mice had lived under the house steps for some time now. When they ran up the steps, the woman in the house would sometimes ___A___ them with her broom, and they had to hurry to safety under the steps. But life was still very good for them there. It was warm and dry under the steps and there were lots of seeds from plants in the ___B___ nearby.

A.	sweep	chase	wash	clean	help
B.	house	garden	trees	steps	window

---

10. In large cities, today, as in olden days, it is not unusual to find very rich and very poor people living very near to each other. In the smaller and older apartment buildings in cities you find people who are _A___ and can only afford to pay low rents. In the larger and newer apartment buildings you will find the ___B___ who can afford the higher rents.

A.	poorer	richer	fatter	older	healthier
B.	happier	poorer	richer	younger	hungrier

---

11. Have you ever heard the saying "Breaking a mirror is bad luck"? Some people believe that this saying began in colonial days when glass had to be shipped from England in barrels of molasses. To ensure that servants would carefully dust and ___A___ mirrors, they were told that breaking mirrors was ___B___.

A.	break	admire	dirty	clean	ship
B.	usual	unlucky	fortunate	helpful	lucky

12.A father took his children to the zoo. As they walked through the zoo, the father pointed to the signs that told them not to feed the animals. The family had just reached the lion's cage and the father, admonishing the children, pointed to the sign "DO NOT FEED THE ANIMALS". At that moment a mouse darted between his feet and into the lion's cage. The lion pounced on the mouse. After a few moments of stunned silence, the father was heard to say to his children, "See, if he had obeyed the ___A___he could have missed the ___B___."

A.	lion	father	sign	children	zookeeper
B.	father	children	sign	feet	dinner

13.When most people think of trees, they think of tall trunks and large leafy branches. They also think of trees as being attached to one spot. There is a tree in Florida, however, called the Walking Tree that does not stay in one spot. It moves along the ground atabout ten feet a year. The long ___A___ reach out like legs and sink into the muddy ground, and as they reach out the tree ___B___.

A.	roots	hands	branches	spiders	leaves
B.	rots	dies	moves	disappears	falls

14. Two faithful friends had stood beside each other in good times and in ___A___. Now it happened that one friend, Pythias, had spoken agains the actions of the king andhad been arrested as a traitor and sentenced to death. His last request was that he be given permission to say farewell to his family. At first the king refused this request, but when Pythias's firend offered to take his place in prison, the king granted the request. Leaving his friend in ___B___, Pythias hurried to see his family, promising to ___C___ in two weeks.

A.	sunshine	places	wind	bad	sideways	
B.	company	prison	peace	merriment	court	
C.	rest	escape	recover	apologize	return	

15. When it was time to return to the palace, Pythias asked his servant to prepare his horse for the journey. In a shaky voice, the servant confessed that he had killed the horse so that Pythias would not go back. Angrily Pythias struck him a fierce blow, "You ___A___ man, it is not my horse you have killed, it is my friend." Then he dashed off on foot to the king's palace. Along the highway stopped a passing ___B___ and taking his horse rode to the palace, arriving just as the noose was geing placed around the neck of his friend. Riding to the platform he freed his friend. "Pardon! Pardon!" shouted the people, and it was granted.

A.	wise	careful	thoughtful	foolish	faithful
B.	traveler	king	shepherd	robber	soldier

---

16. Sailors were often very superstitious. Records show that brooms were regarded as wind makers. Sailors, after toiling against a wind, would throw out brooms when they passed another ship. The brooms were to ___A___ the wind and cause it to blow in their favor. An old broom was burned to make wind when the weather was ___B___.

A.	speed	reverse	stop	help	sweep
B.	passing	night	ruined	calm	useless

---

17. Comparing icebergs to towers, cathedrals, palaces and spires, explorers have written vivid descriptions of the beauty of icebergs. The biggest ones tower over four hundred feet above the surface of the ocean, exposing only one tenth of their actual size. Formed of frozen fresh water, icebergs have sometimes been used by ___A___ as an emergency supply of fresh water. Drawing off the water from iceberg pools they put it in small boats and transport it back to the ___B___.

A.	fish	pilots	sailors	dolphins	whales
B.	ship	ocean	field	sky	plants

18. The conelike catkins of the hop plant are dried to form the hops for brewing. The plant is rough stemmed, related to the mulberry family. It has been cultivated in Europe since medival times. The pistillate and the staminate flowers are produced on separate plants but four or five staminate plants will fertilize a whole field of female plants. Though widely ___A___ in Europe they had to be ___B___ in United States.

A.	seen	celebrated	cooked	cut	grown
B.	burned	introduced	destroyed	crushed	hunted

---

19. Flax is one of the strongest natural fibers known. It is used in products that require high strength including fish nets, sewing thread, andfire hoses. Linen made from flax can be bleached white and used for tableclothes, napkins, and handkerchiefs. Linen is also highly water absorbent so makes good ___A___. Flax harvested in late summer is pulled into bundles and ___B___ in the sun. The stalks are combed to remove the ___C___.

A.	sponge	raincoats	mats	towels	swimsuits
B.	stored	waved	dried	scattered	stacked
C.	seeds	dirt	bugs	leaves	flowers

---

20. The three fellows must have been watching us closer than we thought, as we soon had proven. For, coming through the narrows we had to lie very near the southern point of the island, and there we saw all three of them kneeling together on a spit of sand with their arms raised in supplication. It went to all our ___A___ to leave them in that wretched state, but we could not risk another mutiny bytaking them ___B___.

A.	plans	fears	thoughts	voyages	hearts
B.	fishing	guns	aboard	hunting	supplies

Name_____

DELTON SILENT READING TEST FORM B

1. (A)_____
   (B)_____
2. (A)_____
   (B)_____
3. (A)_____
   (B)_____
4. (A)_____
   (B)_____
5. (A)_____
   (B)_____
6. (A)_____
   (B)_____
7. (A)_____
   (B)_____
8. (A)_____
   (B)_____
9. (A)_____
   (B)_____
10. (A)_____
    (B)_____
11. (A)_____
    (B)_____
12. (A)_____
    (B)_____
13. (A)_____
    (B)_____
14. (A)_____
    (B)_____
    (C)_____
15. (A)_____
    (B)_____
16. (A)_____
    (B)_____
17. (A)_____
    (B)_____
18. (A)_____
    (B)_____
19. (A)_____
    (B)_____
    (C)_____
20. (A)_____
    (B)_____

DELTON SILENT READING TEST ANSWER KEY FORM B

Sample: (A) feet
(B) shop

1. (A) wood
(B) door

2. (A) pond
(B) sky

3. (A) wood
(B) pot

4. (A) bowed
(B) Emperor

5. (A) sad
(B) princess

6. (A) fifteen
(B) five

7. (A) one
(B) five

8. (A) himself
(B) both

9. (A) chase
(B) garden

10. (A) poorer
(B) richer

11. (A) clean
(B) unlucky

12. (A) sign
(B) dinner

13. (A) roots
(B) moves

14. (A) bad
(B) prison
(C) return

15. (A) foolish
(B) traveler

16. (A) reverse
(B) calm

17. (A) sailors
(B) ship

18. (A) grown
(B) introduced

19. (A) towels
(B) dried
(C) seeds

20. (A) hearts
(B) aboard

APPENDIX C

COVER LETTER FOR ROUND ONE QUESTIONNAIRE

May 6, 1991

Dear

The questionnaire form which was randomly selected for you is attached to this cover letter. Some boards have several staff members participating as panel members. If you are aware of other panel members please do not consult withthem when completing the questionnaire. For our results to be valid, we need the expert opinion of each panel member rather than a consensus of a group.

The attached questionnaire takes ten to fifteen minutes to complete and when completed can be mailed back to our school in the self-addressed, stamped envelope. I am hoping to have the completed forms back by the end of May so I can deliver them to Oregon State University in mid-June, but I am aware too, of how hectic the school year gets at this time and that there may be some delays.

Thank you again for your help invalidating this test instrument. Follow-up information on this study will be forwarded to you when the questionnaire results have all been collected and analyzed. Thanks again.

Sincerely,

Shirley Dudiak
Special Ed./Resource
Delton Elementary School

Dr. Ken Arhendt
Major Professor
Oregon State University

cc. Simon Van der Valk
Monitoring/Student Information
Edmonton Public School Board

APPENDIX D

PART A ROUND ONE QUESTIONNAIRE

PART A QUESTIONNAIRE

This questionnaire is asking you to classify reading questions into reading strategies of each of the four following types: locating information, detecting sequence, making inferences, and drawing conclusions. To indicate your choice of strategy for each question, place a tick mark in the column to the right indicating the strategy you have chosen for each question. The four stategy types are defined as follows:

1. Locating information requires the reading to identify or recognize facts presented in a selection and to develop skill in finding answers.
2. Detecting Sequence requires the reader to identify the order in which events or information are presented in a selection by using clues that establish the proper time relationships.
3. Making Inferences requires that the reader combine verified facts found in a selection with hypothesized facts from experience to arrive at a probable conclusion.
4. Drawing Conclusions requires the reader to form a final statement or answer to a question using verifiable facts contained in a selection and interpreting those facts logically.

	Locating Information	Detecting Sequence	Making Inferences	Drawing Conclusions
There was once a shoemaker who worked very hard and was very honest, but still he could not earn enough to live on; and at last all he had in the world was gone except enough leather for one pair of shoes. Choose a word below that tells what the shoemaker was and write it on you answer paper: lazy dishonest hardworking proud idle				
In the city traffic is so heavy, you must go to the corner and wait for the lights. The red light stops the traffic, the orange light says"get ready", then the green says "cross". What light tells you to get ready?				
In some cities colored lights are used to direct the cars at cross streets. A red light means "Stop", an orange light means "Get Ready", and a green light means "Go". What light is used for "Get Ready"?				
As night crept about my room, Through the window, onto my bed Came a silver moonbeam, Touched my sleeping head, Then quietly went on its way. What touched the child? the window the night the moonbeam the sun				
Each day the master's cat chased the mice from the table and each day the number of mice grew less and less. At last the mice met to discuss a plan to put an end to the cat. What did the master's cat eat?				
A princess and her servant were playing ball in the palace gardens.. The servant tossed the ball too hard. It sailed over the head of the princess and into the high branches of a nearby tree. "My ball is lost!" cried the princess. "No,no!" said the servant, "It is at the _____of the tree." Write the word that was left out.				
Close by the meadow Buzzing round a hive Was a happy queen bee And her little bees five. How many bees altogether buzzed around the hive?				
I can skip. I go to school every day. I wear a pretty dress. I have long hair. What am I?				
In a land faraway lived a kind old man whom the children called Opa. Each day as he cut and stitched he told them wonderful stories. Write the old man's name on the answer blank for this question. If you think he was a tailor, put a circle around his name.				
December is a winter month in England, but in Australia it is summer at that time of the year. Christmas Day comes on the 25th of December. Choose the word below which tells what Christmas Day in Australia is likely to be like. Write it on your answer paper. windy freezing hot cold frosty				
The sun was just rising when Jane climbed out of bed. It was the weekend and she planned to enjoy each minute. "What will I do now?" she thought. "It is too early to call my friends." Do you think that Jane has slept in? yes no cannot tell				
Last Monday we went to the zoo. We spent much time in front of an iron cage which held ten monkeys. They made us laugh when they put out their paws for nuts. What was the monkey's cage made of?				
It was getting so dark that Alice thought there must be a storm coming on. "What a thick black cloud that is!" she cried. "And how fast it comes! Why, I do believe it 's got wings." Do you think the sun was shining? Yes No Cannot tell				

Page 2

	Locating Information	Detecting Sequence	Making Inferences	Drawing Conclusions
A sailor dropped the captain's silver tea-pot into the sea. The captain went to the sailor and said to him, "You let my tea-pot fall into the sea, did you not? It is lost." "No, no." said the sailor, "I know where it is. It is at the _____of the sea." Write the word that has been left out.				
I sit by your bedside. I ring to get you up. I tell you when you should leave for school. What am I?				
A field mouse had a friend who lived in a house in town. Now the town mouse was asked by the field mouse to dine with him, so out he went and sat down to a meal of wheat. Where did they dine? At the field mouse's home or at the town mouse's home?				
Hans took the stone and went off with a light heart; his eyes sparkled for joy and he said to himself, "I must have been born in a lucky hour; everything that I wish comes to me of itself." Was Hans happy or unhappy?				
In July we celebrate our country's birthday and school children celebrate the beginning of summer holidays. But for people in New Zealand and Australia, it is the winter season. Choose a word below which best tells what July is likely to be like in Australia. sunny cold hot warm summery				

APPENDIX E

PART B ROUND ONE QUESTIONNAIRE

PART B QUESTIONNAIRE

This questionnaire is asking you to classify reading questions into reading strategies of each of the four following types: locating information, detecting sequence, making inferences, and drawing conclusions. To indicate your choice of strategy for each question, place a tick mark in the column to the right indicating the strategy you have chosen for each question. The four strategy types are defined as follows:

1. Locating Information requires the reader to identify or recognize facts presented in a selection and to develop skill in finding answers.
2. Detecting Sequence requires the reader to identify the order in which events or information are presented in a selection by using clues that establish the proper time relationships.
3. Making Inferences requires that the reader combine verified facts found in a selection with hypothesized facts from experience to arrive at a probable conclusion.
4. Drawing Conclusions requires the reader to form a final statement or answer to a question using verifiable facts contained in a selection and interpreting those facts logically.

	Locating Information	Detecting Sequence	Making Inferences	Drawing Conclusions
The flowers of the hop plants are collected and taken to the "oast house" or kilns to be dried. The oast house is shaped like a cone. At the top there is a big black funnel of tin which swings around in such a way as to prevent the wind blowing in the hole at the top of the cone. Inside the oast house the hops are dried on wire netting above a furnace. While they are _____(A) they must be turned over and over or they would by _____(B) (A) boiling drying smouldering cooking raining (B) ripe soft wet clean spoiled				
Have you ever heard the saying "Breaking mirrors is bad luck"? Some people believe that this saying began in early colonial days when glass was very hard to get. Window and mirror glass had to be shipped from England in barrels of molasses. To ensure that household servants would carefully dust and _____(A) mirrors, they were told that breaking mirrors was _____(B). Afraid of the evils that would come to them if they broke the mirrors, the servants handled them with great care. (A) break admire dirty clean ship (B) usual unlucky fortunate helpful lucky				
The three fellows must have been watching us closer than we thought, as we soon had proven. For, coming through the narrow we had to lie very near the southern point of the island, and there we saw all three of them kneeling together on a spit of sand with their arms raised in supplication. It went to all our _____(A) to leave them in that wretched state, but we could not risk another mutiny by taking them _____(B). (A) plans fears thoughts voyages hearts (B) fishing guns aboard hunting supplies				
Word reached the Emperor that a group of weavers had come to town. The Emperor who loved clothes called for the royal minister. The royal minister came to the foot of the throne and _____(A) lowly before the Emperor asked, "What is it that your highness wishes?" "Bring the weavers to me at once!" said the _____(B). (A) stood spoke bowed laid sang (B) minister weavers soldier page Emperor				
Cotton goods cannot be made in every place. For spinning and weaving cotton well there must be moist air, plenty of water and plenty of coal. If the air is dry, the cotton threads snap when they are tightly stretched. The south-west winds which blow across Lancashire are moist or wet winds. They keep the air _____(A) so that _____(B) can be spun and _____(C). (A) hot dry warm moist cool (B) wool plants rope clothes cotton (C) sold woven bought colored worn				
Sailors were often very superstitious. Records show that sailors regarded brooms as wind makers and would throw out brooms when they passed another ship. The brooms were to _____(A) the wind and cause it to blow in their favor and old brooms were burned to make wind when the weather was _____(B). (A) speed reverse stop slow sweep (B) passing night ruined calm useless				
Two friends were travelling on the same road together when they met a bear. The one, in great fear, without a single thought of his companion, climbed up into a tree and hid himself. The other, seeing that he had no chance single-handed against the bear, had _____(A) left but to throw himself on the ground and feign to be dead; for he had heard that a bear will never touch a dead _____(B). As he thus lay the bear came up to his head, muzzling and sniffing at his nose and ears; but the man held his _____(C) and the bear, supposing him to be dead, walked away. (A) nothing comething only perhaps neither (B) fly leap body horse orange (C) hand paw coat gun breath				
When the bear was fairly out of sight, his companion came down out of the tree and asked what it was that the bear whispered to him, "For," said he, "I observed that he put his mouth very close to your ear." "Why," replied the other, "It was no great secret; he only bade me beware how I kept company with those who, when they get into a _____(A) leave their _____(B) to look after themselves." (A) stream difficulty house train road (B) money pupils goods friends horses				

	Locating Information	Detecting Sequence	Making Inferences	Drawing Conclusions
The song of the nightingale drifted in the palace window and the prince leaned out of the window to listen. The song was so _____(A) it made him weep. "Why do you weep?" asked his servant. "The song of the nightingale on the branch below my window makes me weep." Just then a tear fell on the nightingale and in a flash before him stood a lovely _____(B) whose crown twinkled brightly. (A) sad happy peaceful joyful loud (B) sparrow nightingale princess girls servant				
The children ran through the meadow grass, startling a mother duck who sat on her eggs in the tall grass and bullrushes near the _____(A). Soon they had grabbed the raft and were pulling it out onto the smooth surface of the pond. There the children could lay and gaze up at the birds and clouds above them in the blue _____(B). (A) house pond trees garden hill (B) water boat flag house sky				
A boy was once fishing, and he had by his side a very large can in which to put the fish he caught. So far he had caught nothing. A man who was passing saw that the lad had a bite and waited to see whether he would bring the fish to land or not. He said to the boy, "How many fish have you caught, Tommy?" The boy replied: "When I have caught this _____(A) and _____(B) more I shall have three." (A) cold one line two worm (B) bites two three one fish				
Trina has two rabbits. She keeps them in her backyard in a pen made of wire and _____(A). One day when she went to feed the rabbits they were not there. Someone had left the _____(B) open and the rabbits had run out. (A) cloth sand paper wood grass (B) window yard garage door roof				
They came to the church tower, all the crows flew out in fright. "Caw, Caw!" they cried. "Go away! You must not peep in our _____(A)." And then Tom and his friend went high, high up in the balloon till the church looked as small as Noah's Ark and the sheep and the cows were like dots on the _____(B). (A) game hat nests books dinner (B) plate river house trees fields				
The conelike catkins of the hop plant are dried to form the hops for brewing. The plant has a rough stem and is related to the mulberry family. It has been widely cultivated in Europe since the middle ages. The female and the male flowers are produced on separate plants. It takes only four or five male plants to fertilize a whole field of female plants. Even though these plants are widely _____(A) in Europe they had to be _____(B) in United States. (A) introduced celebrated cooked extinct grown (B) burned introduced destroyed crushed hunted				
Hundreds of years ago it was the custom for young men and women to go before daybreak on the first of May to a wood near at hand; some played music and some blew horns as they walked to the wood. They broke down branches of trees and gathered flowers. When they returned home about sunrise they decked their houses with the _____(A) and flowers. They spent the afternoon dancing around the Maypole which was placed in a suitable part of the village and which stood there until next _____(B). (A) ribbons paint nuts branches flags (B) autumn winter October holiday May				
A boy's name was Ross Smithson, so that each time he wrote his name he would write altogether _____(A) letters, and of these letters _____(B) of them would be the letter S. (A) eight ten eleven nine twelve (B) two five three four six				
Two young boys, Tim and Fred, were playing a game of marbles at school one day. Each boy kept his marbles in a little bag at his side. So far in the game each boy had not won any marbles. When the teacher went by she stopped to ask the boys how they were doing. "Fine!" said Tim gaily. "When I win this _____(A) and _____(B) more I will have won six marbles at school today." (A) game boy marbles one tin (B) marbles two one five Fred's				
Birds travelling long distances usually fly at night and are attracted by the bright lamps of lighthouses. In the past, thousands of birds have been killed by dashing themselves against the thick glass. Nowadays, many of our lighthouses have been fitted with special frames on which the _____(A) perch and rest, and this has saved the _____(B) of countless numbers of birds. (A) lights sailors birds storm fish (B) lives ships wings flight homes				
Two faithful friends had stood beside each other in good times and in _____(A). Now it happened that one friend, Pythias, has spoken against the king and had been arrested and sentenced to death. His last request was that he be able to say farewell to his family. At first the king refused this request, but when Pythias's friend offered to take his place in prison, the king granted the request. Leaving his friend in _____(B), Pythias hurried to see his family, promising to _____(C) in two weeks. (A) sunshine place wind bad sideways (B) company prison peace merriment court (C) rest escape recover apologize return				
The big Polar Bear, which lived among the cold, snowy forest trees, hated the fire and the people who had it. He was greedy and wanted the North land all for _____(A), and he watched for a chance of putting out their _____(B). (A) nothing morning himself playing others				

APPENDIX F

DELPHI PANEL ROUND ONE REQUEST LETTER AND CONSENT FORM

March 28, 1991

Dear

My name is Shirley Dudiak. I am one of a committee of three Edmonton Public School teachers, who with the permission of Clarke Irwin Publishing Company, have been working on the development of equivalent test forms for the Schonell Silent Reading Tests. The Schonell tests are widely used in our school system as screening devices for special needs students.

The project began three years ago and is an attempt to better track special educations students in the mainstream by providing an eqivalent test package for mid-year or mid-program assessment. The test development has been under the direction of Dr. Ken Arhendt and Dr. Jodi Engel from Oregon State University. Much of the test validation has already been completed but at this time we are seeking members for a Delphi Panel to evaluate the reading strategies used in the test questions of the new test instrument. The panel is to consist of specialists in the fields of reading and special education from the provinces of Alberta, British Columbia and Saskatchewan.

A two-part questionnaire has been developed from the A and B forms of the two test instruments. The questionnaire provides for the classification of test questions into four reading strategy categories. The first part of the questionnaire consists of 18 randomly selected questions from the A forms of the two tests and takes 10 minutes to complete. The second part of the questionnaire consists of 20 randomly selected questions from the B forms of the two tests and takes about fifteen minutes to complete. Panel members will be randomly assigned to one of the two parts but will not complete both. The questionnaire arrives by mail andis returned bymail, so the time investment for panel members is minimal, but their expertise is important for the validation of the questioning strategies.

If you would be willing to participate as a panel member, please complete the consent slip attached to this letter and return it to Delton Elementary School in the self-addressed envelope. We would appreciate having the consent forms back by April 30, 1991 so that we can begin the mailing of the questionnaires to panel members.

If you do not wish to participate, please indicate that on the consent form and return the information in the envelope provided.

We appreciate the time that you have already taken on our behalf and look forward to working with you as a panel member.

Sincerely,

Shirley Dudiak
Resource Rm/Spec.Ed.
Delton Elementary School

Dr. Ken Arhendt
Major Professor
Oregon State University

Consent Form

- Please complete the appropriate area on this form and mail the form back to Delton Elementary School in the self-address stamped envelope by April 30, 1991.

- I _____do not wish to participate as a Delphi Panel member in this test validation study.

- I_____do wish to participate as a Delphi Panel member. Please send my copy of the questionnaire on receipt of this consent form. My mailing address is

  _____
  _____
  _____
  _____
  _____

  My school board is _____
  _____

APPENDIX G

COVER LETTER AND QUESTIONNAIRES FOR ROUND TWO OF DELPHI

March 20, 1992

Dear

Attached to this cover letter is your copy of the questionnaire form. Results from the questionnaire pilot study conducted by Adoline Glenn in Edmonton indicate that on the average Form A questionnaire took 15 minutes to complete and Form B took 25 minutes to complete. You are receiving the same form of the questionnaire that you were randomly assinged in round 1. Once completed the questionnaire can be mailed back to Delton School in the self-addressed, stamped envolope provided. We are aiming for an April 30th closure date for this round so that if another round is necessary, it can be completed before the end of this year.

Thank you again for all the help and support you have given. Adoline, Hilda and I really appreciate your dedication. Follow-up information from this study will be forwarded to you once results have been collected and analyzed.

Sincerely,

Shirley Dudiak
Spec. Ed./Resource Rm.
Edmonton Public School Bd.
Doctoral Candidate, OSU

Dr. Ken Ahrendt
Major Professor
Oregon State University

FORM A

QUESTIONNAIRE

This questionnaire is asking you to compare for equivalence, the reading strategies in each matched set of questions from the Schonell and Delton Tests (eg. Delton 1 - Schonell 1; Delton 2 - Schonell 2). Indicate if you "strongly agree", "agree", "not sure", "disagree" or "strongly disagree" on their equivalence by placing and "X" under the appropriate heading.

SCHONELL	DELTON	strongly agree	agree	not sure	disagree	strongly disagree
1. I am a wild bird. My home is in a tree. I can fly high in the air. I can sing a song. Where is the bird's home?	1. I am a friendly dog. My home is in John's yard. I like to play with John. I like to run and jump. Where is the dog's home?					
2. We have a baby. When we speak to him he waves his little hand. He has ten teeth. He sleeps in a cot most of the day. How many teeth has the baby?	2. We have three children in our family. My baby brother is just starting to speak. He can say my name. He makes it sound funny. How many children are in the family?					
3. Last Monday we went to the Zoo. We spent much time in front of an iron cage which held ten monkeys. They made us laugh when they put out their paws for nuts. What was the monekeys' cage made of?	3. Last week we went to the park. We spent a lot of time beside the pond where we could watch the ducks. From the wooden bridge we threw breadcrumbs and watched the ducks dive for food. What was the bridge made of?					
4. It was getting so dark that Alice thought there must be a storm coming on. "What a thick black cloud that is!" she cried. "And how fast it comes. Why, I do believe it's got wings." Do you think the sun was shining? yes no not sure	4. The sun was just rising when Jane climbed out of bed. It was the weekend and she planned to enjoy each minute. "What will I do now?", she thought. "It is too early to call my friends." Do you think that Jane has slept in? yes no not sure					
5. Hans took the stone and went off with a light heart; his eyes sparkled for joy and he said to himself, "I must have been born in a lucky hour; everything that I wish for comes to me of itself." Was Hans happy or unhappy?	5. Kim Lee danced along the path, her eyes shone brightly and her feet kept time to the joyful tune she sang. "I must be the luckiest girl on earth to have such pretty shoes to wear." Was Kim Lee happy or unhappy?					
6.	6. CONSENSUS WAS ACHIEVED ON THE FIRST ROUND QUESTIONNAIRE					
7. There was once a shoemaker who worked very hard and was very honest, but still he could not earn enough to live on, and at last all he had in the world was gone except enough leather for one pair of shoes. Choose the word below that tells what the shoemaker was and write it on your answer paper: lazy dishonest hardworking proud idle	7. In the forest lived a poor woodcutter who worked very hard each day from dawn till dark cutting logs for people in the nearby town, but though he worked very hard he could not earn enough money to feed his family. Choose a word below that tells what the woodcutter was like and write it on your answer paper. lazy unkind idle hardworking proud					
8. When a duck wants to come to rest on water it draws its head backward, tilts its body upward, thrusts its feet forward and spreads its tail outward. Choose the word below telling how the duck places its head. upward forward backward downward	8. To do sit-ups, I lay flat on my back, draw my knees upward, tilt my head and shoulders upwards reaching forward with my hands to touch my knees, then curl back downward. Choose the word below that tells how you reach with your hands. upward downward forward backward					
9. I can skip. I go to school every day. I wear a pretty dress. I have long hair. What am I?	9. I sit by your bedside. I ring to get you up. I tell you when you should leave for school. What am I?					

SCHONELL	DELTON	strongly agree	agree	not sure	disagree	strongly disagree
10. Long ago there lived on the sea coast of Japan a young man named Yaina, a kindly fellow and clever with his rod and line. Write the word Yaina on your answer paper. If you think he was a fisherman, put a line under his name; if you think he was not, put a cross under his name.	10. In a land faraway lived a kind old man the children called Opa. Each day as he cut and stitched his cloth he told wonderful stories. Write the old man's name on the answer blank for this question. If you think he was a tailor, put a circle around his name.					
11. The daylight is dying Away in the west, The wild birds are flying In silence to rest. Do these lines tell about evening or morning?	11.The sun bent down to kiss the leaves Her last rays touched the soft sea breeze, As she softly sank beneath the seas. What time of day does the poem describe?					
12. Over in the meadow In the reeds on the shore Lived a mother water-rat And her little water-rats four. How many water-rats altogether lived in the reeds?	12. Close by the meadow Buzzing round a hive Was an angry queen bee And her little bees five. How many bees altogether were buzzing around the hive?					
13. December is a winter month in England, but in Australia it is summer at that time of the year. Christmas Day comes on the 25th of December. Choose the word below which tells what Christmas Day in Australia is likely to be. Write it on your answer paper. windy freezing hot cold frosty	13. In July we celebrate our country's birthday and school children celebrate the beginning of summer holidays. But for people in New Zealand and Australia, it is the winter season. Choose a word below which best tells what July is likely to be like in Australia. sunny cold hot scorching summery					
14. A sailor dropped the captain's silver tea-pot into the sea. The captain went to the sailor and said to him, "You let my tea-pot fall into the sea, did you not? It is lost." "No,no," said the sailor, "I know where it is. It is at the _____ of the sea." Write the word that has been left out.	14. A princess and her servant were playing in the palace gardens. The servant tossed the ball too hard. It sailed over the head of the princess and into the high branches of a nearby tree. "My ball is lost", she cried. "No,no!" said the servant,"It is at the _____ of the tree." Write the word that was left out.					
15. If you are waiting onshore for a ship to come in, the first thing you see is the smoke. Later the funnels and masts come in sight, and lastly the hull of the ship itself is seen. Suppose you were watching a ship leaving the land. Choose the word below that tells you the last thing you would see. Write it on your paper: people masts smoke funnels hull	15. When you are driving towards a large city, the first thing you see is the tall skyscrapers and the city lights. When you enter the city, street, houses and stores can be seen. If you are leaving the city, choose the word below that tells the last thing you would see as you were driving away and write it on your answer sheet. people houses stores skyscrapers					
16. Behind the little house were apple trees, a plum tree and two or three pear trees. Then came a stretch of rough grass and a stone wall with a gate leading into the pasture. Was the stone wall in front, behind, or at the side of the house?	16. Behind the meadow. the forest began. Birch trees and low bushes gave way to pine and spruce trees. Beneath these, forest creepers and patches of moss cushioned the ground so that everywhere was stillness. Were pine trees before or after the birch trees as you went into the forest					

SCHONELL	DELTON	strongly agree	agree	not sure	disagree	strongly disagree
17. A field mouse had a friend who lived in a house in town. Now the town mouse was asked by the field mouse to dine with him, so out he went and sat down to a meal of wheat. Where did they dine? At the field mouse's home or at the town mouse's home?	17. Each day the master's cat chased the mice from the table and each day the number of mice grew less and less. At last the mice met to discuss a plan to put an end to the cat. What did the master's cat eat?					
18. Upon a mountain height, far from the sea, I found a shell, And to my listening ear, the lonely thing Ever a song of ocean seemed to tell. Which seemed to sing a song? the mountain the shell the ocean	18. As night crept about my room, Through the window, onto my bed Came a silver moonbeam, Touched my sleeping head, Then quietly went on its way. What touched the child? the window the night the moonbeam					

FORM B

QUESTIONNAIRE

This questionnaire is asking you to compare for equivalence, the reading strategies in each matched set of questions from the Schonell and Delton Tests (eg. Delton 1 - Schonell 1; Delton 2 - Schonell 2). Indicate if you "strongly agree", "agree", "not sure", "disagree" or "strongly disagree" on their equivalence by placing an "X" under the appropriate heading.

SCHONELL	DELTON	strongly agree	agree	not sure	disagree	strongly disagree
1. Fred had five white mice. He kept them in a tiny hutch made of wood and ___A___ . One day when he went to feed the mice he found that they had gone. He looked around and found a small ___B___ in the wire. (A) bread sand wire leaves paper (B) pot nut pole stick hole	1. Trina had two rabbits. She kept them in her backyard in a pen made of wire and ___A___ . One day when she went to feed the rabbits they were not there. Someone had left the ___B___ open and the rabbits had run out. (A) cloth sand paper wood grass (B) window yard garage door roof Blank A Blank B					
2. They came to the church tower, and all the crows flew out in fright. "Caw! Caw!" they cried. "Go away! You must not peep in our ___A___ ". And then Tom and his friend went high, high up in the balloon till the church looked as small as Noah's Ark and the sheep and the cows were like dots on the ___B___. (A) game hat nests books dinner (B) plate river house trees fields	2. The children ran through the meadow grass. They startled a mother duck who sat on her eggs in the tall grass and bullrushes near the ___A___. Soon they had grabbed the loose rope of the raft and were pulling it out onto the smooth surface of the pond. There the children could lay and gaze up at the birds and clouds above them in the blue ___B___. (A) house pond trees garden hill (B) water boat flag house sky Blank A Blank B					
3. One day a poor fisherman was casting his net into the sea, hoping to catch some ___A___. As he pulled in his net he saw in it a small glass bottle, but no fish. He picked up the ___B___ and looked at it. It seemed to be quite empty. (A) wood fruit seaweed fish shells (B) fish rope bottle stick shell	3. One day a woodcutter went into the woods hoping to chop some ___A___. As he walked through the forest looking for just the right size of trees to cut, he stumbled over a copper pot and dropped his axe. He picked the ___B___ up and looked at it. It was old and dented. (A) vines wood fruit bushes leaves (B) pot wood axe flowers stone Blank A Blank B					
4. The king had just had a good sleep, for it was a hot day; and now he drank a cup of coffee and smoked a long pipe, and was happy. His chief servant came in, and crossing his ___A___ upon his breast bowed low before him. "Sir," he said, "there is a pedlar outside, and he has many costly things in his pack." "Bring him in at once," said the ___B___. (A) feet flowers pipe head hands (B) servant man pedlar king boy	4. Word reached the Emperor that a group of weavers had come to town. The Emperor who loved clothes called for his royal minister. The royal minister came to the foot of the throne and ___A___ lowly before the Emperor asked, "What is it that your highness wishes?" "Bring the weavers to me at once!" said the ___B___. (A) stood spoke bowing laid sang (B) minister weavers soldier Emperor Blank A Blank B					
5. Just then the moon came out, and they saw an owl perched up on a beam, wiping the tears from her great, brown eyes. "Why do you weep?" asked the king. "I am so ___A___", said the owl. "I am not really a bird, but a princess. A wicked man gave me a magic drink which changed me into an ___B___." (A) happy long fat sad glad (B) sparrow woman owl man beam	5. The song of the nightingale drifted in the palace window and the prince leaned out the window to listen. The song was so ___A___ it made him weep. "Why do you weep?" asked his servant. "The song of the nightingale on the branch below my window makes me weep." Just then one tear fell on the nightingale and in a flash before him stood a lovely ___B___ whose crown twinkled brightly. (A) sad happy peaceful joyful loud (B) sparrow nightingale princess girls servant Blank A Blank B					
6.						

CONSENSUS WAS ACHIEVED ON THE FIRST ROUND QUESTIONNAIRE

SCHONELL	DELTON	strongly agree	agree	not sure	disagree	strongly disagree
7. A boy was once fishing, and he had by his side a very large can in which to put the fish he caught. So far he had caught nothing. A man who was passing saw that the lad had a bite and waited to see whether he would bring the fish to land or not. He said to the boy, "How many fish have you caught, Tommy?" The boy replied: "When I have caught this ___A___ and ___B___ more I shall have three." (A) cold one line two worm (B) bites two three one fish	7. Two young boys crouched on the ground playing a game of marbles at school one day. Each boy kept his marbles in a little bag at his side. So far in the game each boy had not won any marbles. When the teacher went by she stopped to ask the boys how they were doing. "Fine!" said one gaily. "When I win this ___A___ and ___B___ more I will have won six marbles at school today. (A) game boy marbles one tin (B) marbles two one five boys Blank A Blank B					
8. The big Polar Bear, which lived among the cold, snowy forest trees, hated the fire and the people who had it. He was greedy and wanted the North land all for ___A___. and he watched for a chance of putting out their ___B___. (A) nothing morning himself playing (B) fire food clothes home garden	8. A hungry fox spotted two fat rabbits eating birch bark from trees near the edge of a thicket. Being greedy he wanted the two fat rabbits for ___A___, so he began to plan how he could catch ___B___ of them. (A) friends enemies himself playing (B) one plenty none three both Blank A Blank B					
9. A pair of sparrows had built their nest in a hollow place near the top of a chimney. The wind sometimes blew the ___A___ about them; but they did not mind that much for most of the day they spent in the streets below, chasing one another, peeping in at shop windows, or picking up crumbs from the village ___B___. (A) leaves stones clouds smoke food (B) plates streets chimneys roofs trees	9. For a long time the little mice had lived under the house steps. Each time they ventured up the steps, the woman in the house would ___A___ them with her broom, and they would scurry back under the steps. Yet life was very good for them because it was warm and dry under the steps and seeds were plentiful from plants in the ___B___ nearby. (A) sweep chase wash clean help (B) house garden trees steps window Blank A Blank B					
10. In Paris, in the old days, it was quite common to find very rich and very poor people living near to each other. In a large building the underground rooms might be rented by the very ___A___ while in the large chambers above, where there was plenty of air and light, might live people who were very ___B___ indeed. (A) rich poor old fat tired (B) poor happy rich young hungry	10. In frontier forts, it was not unusual to find very rich and very poor people living near to each other. In the smaller and older buildings in the fort, you would find people who were ___A___ and could only afford space shared with several other families. In the larger, newer building you would find the ___B___ people who could afford to build and care for larger buildings. (A) poorer richer fatter older (B) happier poorer richer younger Blank A Blank B					
11. Hundreds of years ago it was the custom for young men and women to go before daybreak on the first of May to a wood near at hand; some played music and some blew horns as they walked to the wood. They broke down branches of trees and gathered flowers. When they returned home about sunrise they decked their houses with the ___A___ and flowers. They spent the afternoon dancing around the Maypole which was placed in a suitable part of the village and which stood there until next ___B___. (A) ribbons paint nuts branches flags (B) autumn winter October holiday May	11. Have you ever heard the saying "Breaking a mirror is bad luck"? Some people believe that this saying began in early colonial days when glass was very hard to get. Window and mirror glass had to be shipped from England in barrels of molasses. To ensure that household servants would carefully dust and ___A___ mirrors, they were told that breaking mirrors was ___B___. Afraid of the evils that would come to them if they broke the mirrors, the servants handled them with great care. (A) break admire dirty clean ship (B) usual unlucky fortunate helpful Blank A Blank B					

SCHONELL	DELTON	strongly agree	agree	not sure	disagree	strongly disagree
12. A farmer visiting the National Gallery stopped before a portrait of a man sitting in a high-backed chair. On a card at the foot of the picture the farmer read these words:"A portrait of Edward Jefferies, by himself." The old fellow laughed to himself, saying, "How foolish these city people are. Anybody looking at that picture would know that Jefferies was by __A__. There isn't anyone in the __B__ with him." (A) an artist chair himself portrait (B) picture gallery farm name chair	12. A father walking through the zoo with his children pointed to a sign that read "DO NOT FEED THE ANIMALS". The family had just reached the lion's cage and were standing beneath the "DO NOT FEED THE ANIMALS" sign when a mouse darted between the father's feet and into the lion's cage. The lion quickly pounced. After a moment of stunned silence, the father said to his children, "See, if he had obeyed the __A__ he would not be the lion's __B__." (A) lion father sign children (B) father children sign feet dinner Blank A Blank B					
13. Birds travelling long distances usually fly at night and are attracted by the bright lamps of lighthouses. In the past thousands of birds have been killed by dashing themselves against the thick glass. Nowadays, many of our lighthouses have been fitted with special frames on which the __A__ perch and rest, and this has saved the __B__ of countless numbers of birds. (A) lights sailors birds storm fish (B) lives ships wings flight homes	13. When most people think of trees, they think of giant trunks and leafy branches. They also think of trees being attached to one spot, however, there is a tree in Florida called the "Walking Tree" that moves along the ground at about ten feet a year. The long __A__ reach out like legs and sink into the muddy ground, and as they reach out the tree __B__. (A) roots hands branches spiders (B) roots dies moves disappears falls Blank A Blank B					
14. Two friends were travelling on the same road together when they met a bear. The one, in great gear, without a single thought of his companion, climbed up into a tree and hid himself. The other, seeing that he had no chance single-handed against the bear, had __A__ left but to throw himself on the ground and feign to be dead; for he had heard that a bear will never touch a dead __B__. As he thus lay the bear came up to his head, nuzzling and sniffing at his nose and ears; but the man held his __C__ and the bear, supposing him to be dead, walked away. (A) nothing something only perhaps (B) fly leap body horse orange (C) hand paw coat gun breath	14. Two faithful friends had stood beside each other in good times and in __A__. Now it happened that one friend, Pythias, had spoken against the king and had been arrested and sentenced to death. His last request was that he be able to say farewell to his family. At first the king refused the request, but when Pythias's friend offered to take his place in prison, the king granted the request. Leaving his friend in __B__, Pythias hurried to see his family, promising to __C__ in two weeks. (A) sunshine place wind bad sideways (B) company prison peace merriment (C) rest escape recover apologize return Blank A Blank B Blank C					
15. When the bear was fairly out of sight, his companion came down out of the tree and asked what it was that the bear had whispered to him, "For," said he "I observed that he put his mouth very close to your ear." "Why," replied the other, "It was no great secret; he only bade me beware how I kept company with those who, when they get into a __A__ leave their __B__ to look after themselves." (A) stream difficulty house train road (B) money pupils goods friends horses	15. When it was time to return, Pythias asked his servant to prepare his horse, but the frightened servant confessed that he had killed the horse. Angrily Pythias struck him saying, "You __A__ man, it is not my horse you killed, but my friend in prison. Dashing off on foot, Pythias stopped a passing __B__ and taking his horse rode to the city, arriving just as the noose was being placed around the neck of his friend. Rushing to the platform he freed his friend. (A) wise careful thoughtful foolish (B) traveler king shepherd robber Blank A Blank B					
16. The sailors who manned Ceaser's ships, made a mistake. There being a full moon and a Spring tide, the ships that he had grounded (for easier landing for his soldiers) were caught, badly anchored, by the rising __A__ and several were dashed against each other and __B__. (A) moon soldiers sun fields tide (B) saved painted helped lost found	16. Sailors were often very superstitious. Records show that sailors regarded brooms as wind makers and would throw out brooms when they passed another ship. The brooms were to __A__ the wind and cause it to blow in their favor and old brooms were burned to make wind when the weather was __B__. (A) speed reverse stop slow sweep					

SCHONELL	DELTON	strongly agree	agree	not sure	disagree	strongly disagree
17. So long as icebergs sail over deep water they move freely about as the currents or winds may drive them. But when they get into water shallow enough to allow their bottoms to grate along the sea floor, they tear up the mud and sand there until they are at last stranded. The coast of Labrador is often fringed with such grounded icebergs, some so small as to be driven on to the ___A___, others so large as to run aground while still a long ___B___ from the shore. (A) pier fields beach streets rivers (B) miles view ship rope way	17. Comparing icebergs to towers, palaces and spires, sailors have written vivid descriptions of the beauty of icebergs. The biggest ones rise over four hundred feet above the ocean surface, exposing only one tenth of their actual size. Formed of frozen fresh water, icebergs have sometimes been used by ___A___ as an emergency supply of fresh water. Drawing water from iceberg pools they put it in small boats and carry it back to the ___B___. (A) fish pilots sailors dolphins (B) ship ocean field sky plants Blank A Blank B					
18. The flowers of the hop plants are collected and taken to the "oast house" or kilns to be dried. The oast house is shaped like a cone. At the top there is a big black funnel of tin which swings round in such a way as to prevent the wind blowing in the hole at the top of the cone. Inside the oast house the hops are dried on wire netting above a furnace. While they are ___A___ they must be turned over and over or they would be ___B___. (A) boiling drying smouldering cooking (B) ripe soft wet clean spoiled	18. The conelike catkins of the hop plant are dried to form the hops for brewing. The plant has a rough stem and is related to the mulberry family. It has been widely cultivated in Europe since the middle ages. The female and the male flowers are produced on separate plants. It takes only four or five male plants to fertilize a whole field of female plants. Even though these plants are widely ___A___ in Europe they had to be ___B___ in United States. (A) introduced celebrated cooked grown (B) burned introduced destroyed hunted Blank A Blank B					
19. Cotton goods cannot be made in every place. For spinning and weaving cotton well there must be moist air, plenty of water and plenty of coal. If the air is dry, the cotton threads snap when they are tightly stretched. The south-west winds which blow across Lancashire are moist or wet winds. They keep the air ___A___ so that ___B___ can be easily spun and ___C___. (A) hot dry warm moist cool (B) wool plants rope clothes cotton (C) sold woven bought coloured worn	19. Flax is one of the strongest natural fibers known. It is used in products that require high strength such as fish nets and fire hoses, and when bleached can be used for linen tablecloths, napkins and handkerchiefs. Linen is also highly water absorbent making good ___A___ Flax harvested in the late summer is pulled into bundles and ___B___ in the sun. The dry stalks are combed to remove the ___C___, which are crushed into linseed oil. (A) sponge raincoats mats towels (B) stored waved dried scattered (C) seeds dirt bugs leaves flowers Blank A Blank B Blank C					
20. One day we were becalmed among a group of islands, most of which appeared to be uninhabited. As soon as we were in want of fresh water, the Captain sent the boat ashore to bring off a cask or two. But we were mistaken in thinking there were no native, for scarcely had we drawn near the shore when a band of ___A___ rushed out of the bush and assembled on the beach, brandishing their clubs and spears in a threatening ___B___. (A) pigs animals savages pirates horses (B) wave manner help yell speech	20. The three fellows must have been watching closer than we thought, as we soon had proven. For, coming through the narrow we had to lie very near the southern point of the island, and there we saw all three of them kneeling together in supplication. It went to all our ___A___ to leave them in that wretched state, but we could not risk another mutiny by taking them ___B___. (A) plans fears thoughts hearts (B) fishing guns aboard hunting Blank A Blank B					

APPENDIX H

DELPHI PANEL ROUND TWO REQUEST AND FOLLOW-UP LETTERS

January 6, 1992

Dear

The Delphi Process requires that we use the same panel members for each round of the questionnaire process. In compliance with this requirement we are again approaching you, as the original panel member, to request your assistance in the second round of the delphi process. We anticipated a second round because research on delphi panels indicates that they generally run three or four rounds, however, the second round did become a necessity when 80% consensus was reached on only 5 of the 38 test items presented in the original questionnaire forms A and B.

The questionnaire forms have been revised to more directly address the issue of equivalent strategies and also to clear up some of the confusion that existed in the directions of the B form of the questionnaire. Questions on the A and B forms meeting criteria have been deleted from this questionnaire. We found the comments and advice from panel members tremendously helpful in our revisions and would like to express our appreciation for the excellent support we have received from our original delphi panel.

A sample of the revised questionnaire is attached to this letter to give you an idea of what will be required in this second round. We sincerely hope that you will continue to support this project as a panel member and look forward to continuing to work with you.

As in our first letter of introduction, a consent form is attached to allow you to indicate your decision and to advise us of that choice. Please complete the consent form and return it to Delton Elementary School in the self-addressed stamped envelope.

Thank you again for your time and support.

Sincerely,

Shirley Dudiak
Resource Room/Special Ed.
Edmonton Public School Board
Doctoral Candidate, OSU

Dr. Ken Ahrendt
Major Professor
Oregon State University

June 30, 1992

Dear

Our research files indicate that we have not received your copy of the questionnaire. Since school is now closed for the summer it is necessary to give some new directions for returning the completed questionnaire.

It has been a busy year. We are beginning to plan the pilot for the coorelational study to be conducted in the Edmonton Public School System. That in itself is exciting because it means the end is in sight. Your information is valuable to us in completing the reading strategies correlations. I hope that you will take the time to complete the questionnaire and return it in the new return envelope enclosed in this letter? Your opinions and information are valued.

Thank you again for your help. We will send results of the analysis of this round of the questionnaires to you once all the results are in and the analysis has been completed. Enjoy your summer break!

Sincerely yours,

Shirley Dudiak
Spec.Ed/Resource Rm.
Edmonton Public Schools
Doctoral Candidate, OSU

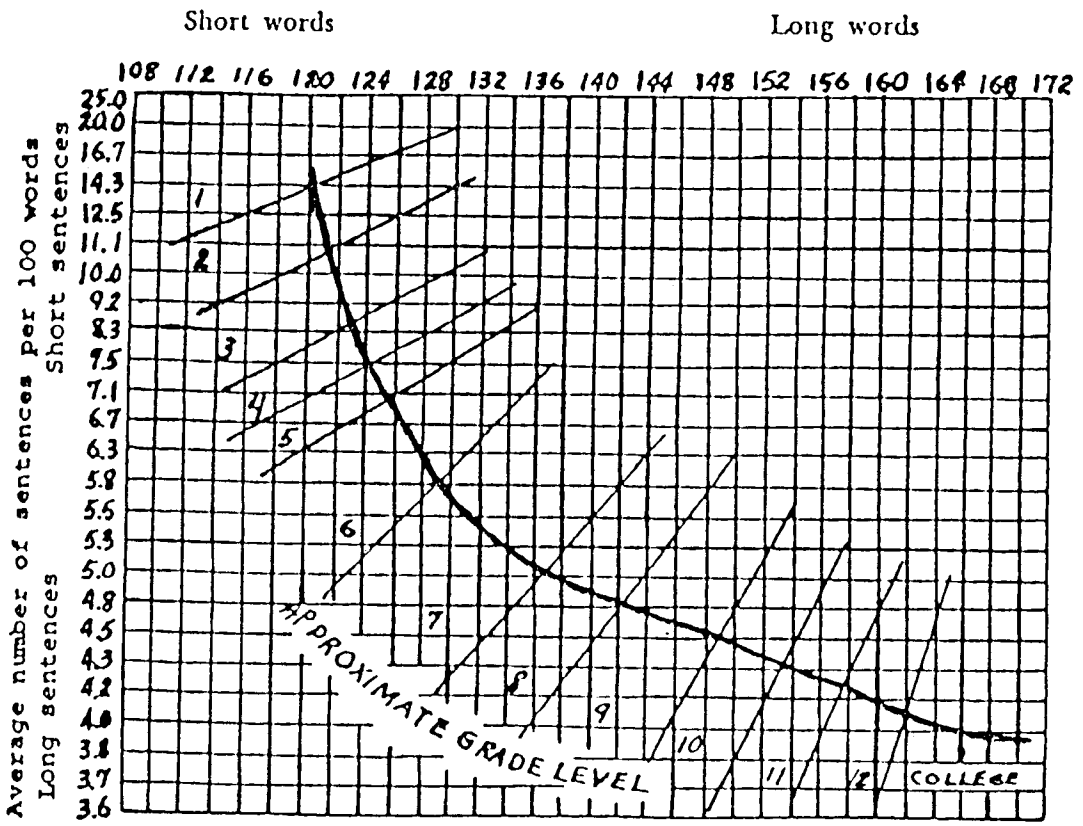
APPENDIX I

FRY READABILITY GRAPH

Graph for Estimating Readability

by Edward Fry, Rutgers University Reading Center

Average number of syllables per 100 words



DIRECTIONS: Randomly select 3 one hundred word passages from a book or an article. Plot average number of syllables and average number of words per sentence on graph to determine area of readability level. Choose more passages per book if great variability is observed.

Note: The Readability Graph is not copyrighted. Anyone may reproduce it in any quantity, but the author and the editors would be pleased if this source were cited.

APPENDIX J

STUDY RECORD SHEET

Order of Administration	Form	Student Number	Schonell Score	Delton Score	Sex	Grade
Delton/Schonell	A	1	3	2	M	2
Delton/Schonell	A	2	6	6	F	2
Delton/Schonell	A	3	2	2	F	2
Delton/Schonell	A	4	4	0	M	2
Delton/Schonell	A	5	4	2	M	2
Delton/Schonell	A	6	2	1	F	2
Schonell/Delton	A	7	0	0	M	2
Schonell/Delton	A	8	2	3	F	2
Schonell/Delton	A	9	3	4	F	2
Schonell/Delton	A	10	2	2	M	2
Schonell/Delton	A	11	5	5	M	2
Schonell/Delton	A	12	2	3	M	2
Schonell/Delton	A	13	8	7	F	3
Schonell/Delton	A	14	4	3	M	3
Schonell/Delton	A	15	3	2	M	3
Schonell/Delton	A	16	9	8	M	3
Schonell/Delton	A	17	7	9	F	3
Schonell/Delton	A	18	10	10	F	3
Delton/Schonell	A	19	2	3	F	3
Delton/Schonell	A	20	3	4	M	3
Delton/Schonell	A	21	3	5	F	3
Delton/Schonell	A	22	6	7	M	3
Delton/Schonell	A	23	3	2	M	3
Delton/Schonell	A	24	3	2	F	3
Delton/Schonell	A	25	5	4	F	3
Delton/Schonell	A	26	9	9	F	3
Schonell/Delton	B	1	10	12	M	4
Schonell/Delton	B	2	17	19	F	4
Schonell/Delton	B	3	10	7	F	4
Schonell/Delton	B	4	9	11	M	4
Schonell/Delton	B	5	18	17	M	4
Schonell/Delton	B	6	24	26	F	5
Delton/Schonell	B	7	5	6	M	5
Delton/Schonell	B	8	7	2	M	4
Delton/Schonell	B	9	8	6	M	4
Delton/Schonell	B	10	15	15	F	5

APPENDIX K

PEARSON PRODUCT MOMENT CORRELATIONS-CONTENT RELATED EVIDENCE

PEARSON PRODUCT MOMENT CORRELATIONS FOR SCHONELL A/DELTON A FIELD TESTING FOR CONTENT RELATED EVIDENCE

Student	Schonell(x)	Delton(y)	x sq.	y sq.	xy
1	6	2	36	4	12
2	1	1	1	1	1
3	2	2	4	4	4
4	5	5	25	25	25
5	2	4	4	16	8
6	5	4	25	16	20
7	2	1	4	1	2
8	6	6	36	36	36
9	1	2	1	4	2
10	6	7	36	49	42
11	4	6	16	36	24
12	3	2	9	4	6
Total	43	42	197	192	182

N = 12

$$r = \frac{182 - \frac{(43)(42)}{12}}{\sqrt{\left(197 - \frac{(43)(43)}{12}\right)\left(192 - \frac{(42)(42)}{12}\right)}}$$

$$r = \frac{31.58}{43.95}$$

$$r = 0.72$$

(Alpha = .05, p = .576, df = 10)

PEARSON PRODUCT MOMENT CORRELATIONS SCHONELL B/DELTON B
FIELD TESTING FOR CONTENT RELATED EVIDENCE

Student	Schonell(x)	Delton(y)	x squared	y squared	xy
1	21	21	441	441	441
2	28	25	784	625	700
3	15	19	225	361	285
4	10	6	100	36	60
5	8	7	64	49	56
6	12	12	144	144	144
7	18	13	324	169	234
8	15	11	225	121	165
9	15	18	225	324	270
10	10	7	100	49	70
11	13	7	169	49	91
12	19	19	361	361	361
13	12	7	144	49	84
14	10	7	100	49	70
15	6	11	36	121	66
16	8	10	64	100	80
17	3	6	9	36	18
18	7	6	49	36	42
19	5	3	25	9	15
20	9	8	81	64	72
21	12	10	144	100	120
Total	256	233	3814	3293	3444

N = 21

$$r = 3444 - \frac{(256)\ (233)}{21}$$

$$\sqrt{\left(3814 - \frac{(256)(256)}{21}\right)\ \left(3293 - \frac{(233)(233)}{21}\right)}$$

$$r = \frac{603.62}{700.49}$$

$$r = 0.86$$

(Alpha = .05, df = 19, p = .4329)

APPENDIX L

ITEM DIFFICULTY COMPARISONS - FIELD TEST

ITEM DIFFICULTY SCHONELL A/DELTON A
PERCENT OF CORRECT RESPONSES ON TEST ITEMS

Test Question	% Correct Responses on Schonell A	% Correct Responses on Delton A
1	.92	.83
2	.75	.67
3	.25	.25
4	.58	.58
5	.25	.42
6	.25	.33
7	.25	.17
8	.17	.25
9	.17	.00
10	.08	.00
11	.00	.00
12	.00	.00
13	.00	.00
14	.00	.00
15	.00	.00
16	.00	.00
17	.00	.00
18	.00	.00

N = 12

ITEM DIFFICULTY SCHONELL B/DELTON B
PERCENT OF CORRECT RESPONSES ON TEST ITEMS

Question Number	Schonell B			Delton B		
	A	B	C	A	B	C
1	.81	.90	--	.81	.86	--
2	.52	.48	--	.81	.86	--
3	.90	.81	--	.76	.24	--
4	.19	.81	--	.38	.57	--
5	.48	.71	--	.29	.71	--
6	.57	.38	--	.29	.14	--
7	.43	.43	--	.19	.38	--
8	.62	.43	--	.48	.48	--
9	.24	.24	--	.14	.38	--
10	.29	.24	--	.33	.29	--
11	.29	.33	--	.24	.33	--
12	.19	.14	--	.14	.33	--
13	.14	.14	--	.14	.19	--
14	.10	.19	.10	.14	.05	.05
15	.00	.00	--	.05	.05	--
16	.00	.00	--	.00	.00	--
17	.00	.00	--	.00	.00	--
18	.00	.00	--	.00	.00	--
19	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00

N = 21

APPENDIX M

STUDY RECORD SHEET

STUDY RECORD SHEET Site #_____

Order of Administration (Decided by flip of a coin)	Student Number	Teacher Rating	Schonell Score	Delton Score	Sex	Age	Date of Previous Schonell Testing, Form, Score
	1						
	2						
	3						
	4						
	5						
	6						
	7						
	8						
	9						
	10						

APPENDIX N

TEACHER REFERRAL FORM

Name of Student:

_____

Reason for Referral:

_____

_____

_____

_____

Testing Information collected by the teacher:

_____

_____

Estimated grade level at which child reads: _____

Teacher making referral:_____

APPENDIX O

PARENTAL CONSENT FORM

Dear Parent or Guardian,

Your child's classroom teacher has referred your son/daughter for a reading assessment.

We would like to pursue the testing of your child in order to provide your child's teacher with more information on the current silent reading attainment of your child.

Testing will include the use of two silent reading test instruments: one that is currently in use in our school system and a second equivalent test instrument that we would like to include in our current testing program.

After testing, the results for your child on both test instruments will be sent in a report to your child's classroom teacher and to the school principal. The classroom teacher will then set up a conference with you to share those test results and to make recommendations if necessary for further testing.

Please sign the form below acknowledging that you are aware that your child has been referred for the reading assessment and that you give permission for the proposed reading assessment to be undertaken.

If you have any questions or concerns, please contact your child's teacher, the school principal or Shirley Dudiak at Delton Elementary School.

Sincerely yours,

S. Dudiak
Teacher
Edmonton Public School Board

I am aware that a referral has been placed requesting assessment on my child and that all information will be shared with me on receipt of the report at the school.

I give permission for my child _____ to be tested using the Schonell and Delton Silent Reading Tests.

Teacher_____

_____ _____

Parent's Signature Date