Comparison of the skills tested on four standardized reading tests

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A COMPARISON OF THE SKILLS TESTED
ON FOUR STANDARDIZED READING TESTS

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CHAPTER I

THE PROBLEM

Introduction

In an age when evaluation, performance contracting, and accountability are major issues, much emphasis is being placed on the testing program. In this is further evidenced in the many types of tests available and the variety within each type, the controversy over teacher-made versus standardized tests, and achievement versus diagnostic tests. A new type of test, the "criterion referenced" test, is emerging which hopefully will be more meaningful to parents as well as teachers as an evaluative tool.

Regardless of the controversies and their outcome, it is essential that the examiner knows the contents of


the test and the purpose for which it is being given. The members of the American Association of School Administrators considered this of such consequence that at their 1959 convention they adopted the following resolution:

The importance and usefulness of tests in evaluation and teaching cannot be overestimated. There is a great need for improved and more adequate instruments for education of many kinds of educational growth. The misuse of tests and the misinterpretation of test data continue to be a glaring danger to good educational programs. Any test instrument should be selected and used in terms of what a particular school had intended to teach.¹

Statement of the Problem

Since the purpose of tests is to evaluate specific areas of learning, it is essential that tests be selectively and wisely chosen. The real value of tests is seen in the follow-up procedures after the test has been administered. It was the purpose of this paper to make a comparative study of the skills tested on four standardized reading tests.

Scope and Limitations

The study was limited to four standardized reading tests chosen somewhat randomly yet within the practical experience of the writer. The study included the following

¹American Association of School Administrators, "Resolution No. 13" School Life, XLII (September, 1959), p.5.
areas:

1. A comparison of the general administrative information.

2. An itemization of each test to discover the skills tested.

3. A comparison of the skills tested on the four tests.

The comparison was limited to the primary and intermediate levels of the four tests.

Significance

Several authors have stressed the importance of teachers being involved in the study and selection of the tests.\(^1\) It is hoped that this study may in some way be of service to those who are in such a position.

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CHAPTER II

REVIEW OF RELATED LITERATURE

Introduction

In recent years the use of tests, standardized and informal, in evaluating people, programs, methods, and in fact, almost every aspect of living, has taken on great importance. Whether this is good or not is not the concern of this paper. The fact is that there is hardly any aspect of life which has not been subjected to experimental evaluation. Norms alone are not sufficient criteria on which to base an interpretation of the results.

A survey of recent research on testing indicates that the basis of test selection is threefold. First, why is the test being given; second, what type of information is expected; and third, how is the information to be used. Sources of information concerning particular tests are Buros' Mental Measurement Yearbooks and the manuals of the tests.

Standardized Tests

In speaking of the extensive use of standardized achievement tests in elementary schools and the tremendous
outlay in time, effort and money, Bliesmer says that, "The extent to which this outlay can be justified depends upon the uses made of test results or scores."¹

Glock reiterates this when he says that some consider a teacher scientific if she administers standardized tests. He further comments that, "unless she uses the results of these tests effectively to help her boys and girls become better readers, no value can possibly accrue from their use."²

Since this paper dealt primarily with standardized tests and standardized reading tests in particular, a definition is in order. Noll gives the following definition:

A standardized test is one that has been carefully constructed by experts in the light of acceptable objectives of purposes; procedure for administering, scoring and interpreting scores are specified in detail so that no matter who gives the test or where it may be given, the results should be comparable; and norms or averages for different age or grade levels have been predetermined.³

The ultimate purpose of standardized tests is to help in making decisions. However, according to Mehrens:

If knowledge of a test result does not enable one to make a better decision than the best decision


that could be made without the use of the test, then the test serves no useful purpose and might just as well not be given. However, if one used and interpreted test information correctly, it would be impossible to make poorer decisions using the additional information.¹

Testing programs are widespread, not only in the elementary school but at all levels of education. Students at every level are being tested to discover potential leaders, scientists, and engineers, for grade placement and entrance placement. As a result, testing programs are being challenged by parents and teachers. "Some feel they (tests) are of no value at all. Others feel that too much emphasis has been placed on them."²

At least one educator feels that tests should be used sparingly. Veatch thinks that a teacher with care and insight can evaluate a child more accurately on material he, the child, selects than on a standardized test.³ However, if test results are considered in the light of all that is known about the individual then emphasis will be placed upon intelligent interpretation and understanding action. "Test results will then be viewed in their proper perspective -


as a useful tool in the hands of a skilled teacher."

Crook sees the greatest drawback to the effective interpretation and use of tests is that teachers are not involved in the decisions as to which tests will be used. He describes several school systems and the methods they use for planning a testing program, selection of tests, scoring, use, and follow-up activities. The success of the testing program was in direct proportion to the involvement of teachers. (Although complete statistical data was not given, the evidence was based on visits to schools, interviews with teachers, and responses to a questionnaire, by some 275 classroom teachers, about their use of standardized tests.)

If the teachers are not directly involved in the selection of tests, they should at least know how to use and interpret them intelligently. Used wisely, they can provide valuable information for pupil guidance. Misused, they can not only be harmful but do a great disservice to the teacher as well as to the child.


The greatest misuses of tests according to Prescott are:

The rating or evaluation of teacher efficiency solely on the basis of standardized test results; the use of achievement test results as the sole basis for promotion of pupils; and the making of major decisions about pupils on the basis of a single test score.¹

He goes on to give the following six questions as some criteria in selection of tests:

1) Will the test yield the information I need?
2) Will the test yield information that is sufficiently dependable for my purpose?
3) Are the norms adequate?
4) How many forms of the test are there?
5) Will the results be comparable from subtest to subtest, battery to battery, and form to form?
6) Does the test provide suggestions for the proper use and interpretation of the results?²

Hagen affirms that "test results cannot be used in isolation."³ The teacher has to determine ahead of time what information she is seeking. The experience background of the person being tested has to be taken into account. The teacher should be thoroughly familiar with the test so that when she attempts to interpret the score she has a

²Ibid., p. 5
"clear idea of the abilities, skills, or content that go to make up the score."¹

In a discussion of trends and issues in standardized testing, Ludlow states, "Although standardized tests are not a panacea for all educational ills, they will continue to play an important role in evaluative programs."²

**Standardized Reading Tests**

According to Gates, a standardized reading test is "one which has been developed by a person who is, presumably, expert both in the field of reading and in the techniques of test construction. The test-maker should understand what techniques are most useful for testing that ability."³

In speaking of standardized reading tests, Gates offers the following as the major advantages of standardized tests over informal tests of observations. The teacher can know with relative exactness what each test measures. She can compare with high reliability the ability of any pupil with the norm. She can compare each child's accomplishments

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¹Ibid., p. 53.


with her own observations of his ability.\textsuperscript{1}

Teachers at every level are continually faced with the problem of the child who is deficient in reading. According to Blair remedial instruction in reading should be a normal part of the reading program in all grades. "Realizing that this is true, school teachers and administrators throughout the country are giving attention to ways and means of providing effective remedial work."\textsuperscript{2}

The first step in planning a remedial program is for the school to state its overall goals and objectives at each grade level. These should be further studied to determine which can be evaluated by informal observation and which need a more thorough evaluation through standardized tests.

A further step is to provide a thorough diagnostic study of each child. This would include a knowledge of each child's potential for achievement, and his specific areas of strengths and weaknesses. Hence, the need for an effective tool in the hands of an efficient teacher.

Each of the four achievement tests to be examined in this paper will be considered from two points of view, the reviews as found in Buros' \textit{Mental Measurement Yearbooks} and statements from the test manuals.

\textsuperscript{1}Ibid., p.3.

American School Achievement Test

Neither of the two reviews found in the *Fifth Mental Measurement Yearbook* were extremely favorable toward the *American School Achievement Test*. According to Stauffer, the *American School Achievement Test* would be useful for a general survey of reading achievement because it can be administered and scored easily. He does see it as fulfilling its second purpose — that of assisting in classifying pupils. However, he sees it as having little or no diagnostic value.¹

Townsend is even less impressed. She questions whether the reading concept expressed in the test is satisfactory. The saving items she finds in the test are "the careful description of item construction and selection, and the care with which the different forms have been improved as one followed another."²

Both reviewers feel that the test may be reliable but only moderately so since reliability and norms information seem to be based on a small number of cases. Although the test is easy to administer and score, it is rather awkward to handle and at times confusing to the child.


The purpose of the *American School Achievement Test* as stated in the Teacher's Manual is fourfold:

1) to measure pupil progress,
2) to assist in the classification of pupils,
3) to furnish data for remedial programs in the language arts, and
4) to diagnose pupils' knowledge of specific computations and problem-solving.¹

There are only two sections specifically related to reading. They are, Sentence and Word Meaning, and Paragraph Meaning. The first consists of 30 items (40 on the Intermediate level) which measures the child's ability to recognize the meanings of words as a part of a sentence. The test of Paragraph Meaning consists of 15 paragraphs each followed by two questions. Most of the questions are fact; a few are inference questions.

The original standardization was done in the schools of Erie County, Pennsylvania. The norms were later checked against the scores of sample groups of students from school districts located in 13 states. The type of population is not mentioned other than that it ranges from rural areas to large urban school districts. Normative data is sparse, which is one of the chief criticisms of reviewers.

**Metropolitan Achievement Tests**

The *Metropolitan Achievement Test* is a survey test,

but has diagnostic features, namely, it offers possibilities for analysis of weaknesses and strengths of individuals or a class. The Reading section attempts to measure four comprehension skills: main ideas, details, inferences, and meaning of words from context.

The main features of the test according to H. Alan Robinson are: the manual is well done, offering valuable information and explanation about the uses of tests, the directions are clear; the results can be reported in three ways - grade equivalent, stanine, percentile - offering a variety of interpretive purposes. Standardization norms are more than adequate. The test booklets are attractive and easy to follow. Robinson considers the Metropolitan Achievement Test one of the best survey tests of reading available today. "It serves its purpose as a rough measure of reading achievement for comparative purposes and as a tool of identification upon which further evaluation may be based." ¹

The teacher's handbook of the Metropolitan Achievement Test gives valuable information on the purposes and uses of tests. It describes in great detail the correct procedure, stressing maximum testing conditions; how to convert scores into the most suitable equivalent in each particular circumstance; and how to interpret the results so that the tests may be useful.

The Metropolitan Achievement Tests were designed to be of service to teachers regardless of geographic region, socio-economic status, or mental ability. Although little technical information is available, the publisher assures the user that many curriculum sources were used including leading textbook series, syllabi and state guidelines.¹

The standardization process for the 1970 edition took place in October and April of the 1969-70 school year. Exact figures were not given, but included in the standardization sample were four sizes of cities in four geographical regions. The tests do not claim universal validity but provide content outlines of the test whereby the school can judge the content validity for its particular curriculum.²

The specific purposes of the Metropolitan Achievement Test are:

1) to help teachers plan for instruction based on pupils' needs and differences and to evaluate the effects of previous instruction; and
2) to help administrators assess schoolwide progress toward educational goals and to plan for and evaluate curricular changes.³

²Ibid., p. 16.
³Ibid., p. 4.
Diagnostic Reading Tests: Pupil Progress Series

The reviewers are favorably impressed by the format, print and directions of the test. However, they feel that the word "diagnostic" is a misnomer. According to Stauffer, "diagnostic implies an exhaustive analysis of individual differences in ability to use particular skills."\(^1\) He does not feel that such an analysis is possible with this particular test. He considers its usefulness is in providing "a more specific survey of some of the skills of reading."\(^2\)

It would be a useful tool as an inventory of needs for an individualized program.

Some of the more specific criticisms are: on the primary level the word recognition test is more the ability to locate a word rather than recognize it in isolation; rate of reading is not an important skill at the primary level, but much emphasis is placed on it; rereading rather than remembering is encouraged on the Rate of Reading Test; too much emphasis is placed on factual questions rather than on inference and judgment.

Both reviewers consider the norms to be relatively high. The test was standardized on a Catholic school


\(^2\)Ibid., p. 745.
population with no available public school norms. Some of the subtests, especially the rate of reading, have low reliability. However, both reviewers feel that the test makes a special contribution, especially as a survey of reading skills.

One of the noteworthy features of the test is that on the Elementary and Advanced levels the same subtests are used. Thus a closer follow-up from year to year can be made.

The purpose of the Pupil Progress Series as stated in the Technical Report is twofold:

1) to help the teacher identify pupils who are deficient in reading;
2) to provide assistance in the establishment of a remediation program by pointing out areas in reading in which pupils function at a low level.

There are two forms of each level for grades one through eight. Form B was constructed the year after Form A. After developing Form A it was discovered that there should be more 'upper level' in the vocabulary score. As a result, although Form B follows the same general specifications as Form A, the test is somewhat more difficult.

The method of determining reliability was item statistics reliability using Kuder-Richardson Formula 21. Test scores are best used for class diagnosis rather than for

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individual evaluation. The intercorrelations of scores are worked out and presented in the Technical Report for each level of Form A.

Most of the tests are specifically power tests while others emphasize speed. In every instance when the emphasis was placed on speed there was a decided drop in the percentage of items attempted.\(^1\) This again emphasizes the need for the teacher to be aware not only of what is being tested but also how it is being tested.

**California Reading Test**

Flanagan reviewed some of the criticisms made on the earlier editions of the California Reading Test. Although he feels that little change was made in the content of the test, the norms for standardization of the 1950 edition are based on a substantially larger population. He suggests that more technical information should be made available. Another criticism he makes is that since the test is one of power rather than speed, it does not seem advisable to conclude testing when 90% of the students have finished. In spite of the above criticisms he is of the opinion that the California Reading Test is still a "valuable tool in appraising the progress of pupils with respect to these

\(^1\)Ibid., p. 14.
important skills of vocabulary and reading comprehension.\textsuperscript{1}

The chief criticism Hobson offers is the absence of proof of validity. He does not feel that it is sufficient for such a widely-used test to pass over lightly such an important item. Although the publisher states that information is available, it should be included in the manual. He further cautions that the test only gives clues as to where to begin remedial work.\textsuperscript{2}

On the positive side, Hobson considers the test to measure the reading skills that are necessary and a part of the child's daily schoolwork. He particularly recommends the diagnostic profile and the section which discusses the uses of test results. Overall, he sees the test as having great diagnostic value.\textsuperscript{3}

The 1970 revised edition of the \textit{California Achievement Test} was designed specifically to measure student performance in the major curricular areas, i.e., reading language and mathematics. The general areas of measurement


\textsuperscript{3}\textit{Ibid.}, p. 570.
as stated in the manual are:

the ability to understand the meaning of the
content material presented,
the performance of the student in applying
rules, facts, concepts, conventions, and principles
of problem solving in the basic curricular material,
and
the level of performance of the student in
using the tools of reading, mathematics and language
in progressively more difficult situations.¹

The standardization procedures of the revised California
Achievement Test were performed over a two-year period of
time. Sampling was made over seven geographical regions,
three categories of school districts and four types of
communities. Sampling of Catholic schools was made separately.
Public schools with fewer than 300 students enrolled and
non-Catholic private schools were not included in either
sampling because of the minority of persons they represent.²

The two reading sections cover the general areas of
vocabulary and comprehension. The skills tested are suited
to the grade level. On the comprehension section of the upper
level test items are presented which measure the student's
ability to make relationships, draw inferences, recall facts
and identify main ideas.³

¹Ernest W. Tiegs and Willis W. Clark, "Examiner's
Manual," California Achievement Tests, (Monterey, California:
²Ibid., p. 6-7.
³Ibid., p. 9.
Conclusion

Every standardized reading test is designed for a particular purpose and standardized on a particular population. In selecting a test the administrator or teacher should keep this in mind. She should also be aware of the specific skills measured. The final consideration is the purpose for which she intends to use the test. The extent to which the examiner is cognizant of all these purposes is the extent to which she will effectively use the test and fulfill its purpose and hers.
CHAPTER III

THE PROCEDURE

Introduction

Since the purpose of this paper was to make a comparison of the skills tested on the American School Achievement Test, the California Reading Test, Pupil Progress Series, and the Metropolitan Achievement Test, and not a critique of each test, any criticisms or evaluations will be made in the light of this comparison. A test is not just a booklet put in the hands of students for the purpose of evaluation. The test is the purpose, rationale, population, on which and for which it was devised and standardized. Although some points were touched upon in Chapter II, for the purpose of comparison they will again be mentioned in this chapter. Only those sections related to reading will be discussed even though other subject matter may be included in a battery. The comparison will be limited to one form of each test from grades one to six.
Comparison of Technical Information

The amount of technical information given varies from a very brief description (American School Achievement Test) of the purpose, nature, standardization procedure, reliability, and interpretation of norms, to a very comprehensive report (Pupil Progress Series and California Achievement Tests). In addition to the preceding information, the Metropolitan Achievement Test offers suggestions for follow-up activities.

Three of the tests, Pupil Progress Series, Metropolitan Achievement Tests, and California Achievement Tests, provide the option of machine or manual scoring. Although the American School Achievement Test does not provide this option, it is constructed in such a way as to make correcting and scoring very simple.

Total scores on the Metropolitan Achievement Tests, and the California Achievement Tests can be converted to standard score, grade equivalents, percentiles or stanines. Scores on the Pupil Progress Series can be converted into percentiles and grade equivalents. Scores on the American School Achievement Tests can be converted into grade equivalents and age scores.

Of all the tests, the format of the Metropolitan Achievement Tests is the most attractive. There is a puzzle on the cover of the three lower levels. The illustrations and type are clear and well-spaced. The California Achievement-
ment Test is a well-planned test. The print is clear and pictures are well-defined and well-used. The format of the Pupil Progress Series is not attractive. The pictures are quite small and at times difficult to interpret. The American School Achievement Test is quite awkward to handle and at times it is difficult to determine how the items follow each other.

American School Achievement Test

The American School Achievement Test has three batteries within the age range being evaluated. Primary Battery I is for students of Grade 1. Primary Battery II is for the students of Grades 2 and 3. The Intermediate Battery is for Grades 4 through 6. There are four forms, D, E, F, G, of the test at each of these levels. The Reading Test is composed of two sections, Sentence and Word Meaning and Paragraph Meaning. Form D of the 1955 edition of the American School Achievement Test was used in this study.

The Sentence and Word Meaning section consists of 30 items at the primary levels and 40 items at the intermediate level. This test measures the child’s ability to recognize the meanings of words as part of a sentence. The partial sentence is followed by four choices, all of which are somewhat related in meaning to the correct word.

The test of Paragraph Meaning consists of 15 paragraphs followed by 30 items at the primary level, and 19 paragraphs followed by 40 items at the intermediate level.
The paragraphs at each level are selected for their interest value and level of difficulty. Each question or statement is followed by four choices, all of which are somewhat related to the correct choice. Most of the answers are facts directly stated in the paragraphs, while some answers are inferred. On the Intermediate level five questions ask for the statement of the main idea.¹

**Metropolitan Achievement Test**

The Metropolitan Achievement Test is composed of four levels within the age range under consideration. The four levels are Primary I Battery, Primary II Battery, Elementary Battery, Intermediate Battery. Although each battery consists of tests on subjects other than reading, only those tests concerned with reading will be discussed. At the Primary level, there are three tests related to reading: Word Knowledge, Word Analysis, and Reading; while at the Elementary and Intermediate levels there are only two related tests: Word Knowledge and Reading. There are three forms, F, G, H, at each level. Form F is under consideration in this study.

The Primary I Battery is for children who are in the middle of Grade 1 to the middle of Grade 2.

Test 1, Word Knowledge, of Primary I Battery, is composed of 35 items. Each item includes a stimulus picture

and four word choices. The child is to select the word that best describes each picture.

Test 2, Word Analysis, consists of 40 items. Each item includes four words all of which are similar in configuration and/or sound. The child is to select the word dictated by the teacher.

Test 3, Reading, has two parts. Part A consists of 13 items which require the child to select the one sentence out of three which best describes a picture. Part B consists of eight riddles and 13 paragraphs. The questions to the paragraphs include factual as well as inferential information.

The total reading score is a composite of these three tests. There are not separate vocabulary and comprehension scores.

The tests of the Primary II Battery are similar to those of Primary I. Test 1, Word Knowledge, is divided into two sections. In the first 17 items, the child is to select one out of four words which best describe a picture. The second half consists of 23 statements which require the child to identify a synonym or antonym for the underlined word. Four choices for each statement are given.

Test 2, Word Analysis, consists of 35 items which measure the child's knowledge of sound-letter relationships. The child is to select, out of four words, the one dictated by the teacher. The words are similar in configuration and/or sound patterns.
Test 3, Reading, is divided into two sections. The first section requires the child to select the one out of three sentences which best describes a picture. Thirteen pictures are given. Part 2 is composed of six paragraphs and thirty-one questions. The questions require factual as well as inferential knowledge.

The Elementary Battery is for children in Grades 3.5 to 4.9. There are only two specific reading tests at this level. Test 1, Word Knowledge, is composed of 50 items which measure the child's knowledge of vocabulary. The child is to select the one word out of four which is similar or opposite in meaning to the word underlined.

Test 2, Reading, measures the child's ability to get meaning from what he reads. The test consists of eight paragraphs with 45 questions. The questions include getting factual information, making inferences, and identifying the main idea.

The Intermediate Battery is for Grades 5.0 to 6.9. It also consists of only two tests. Test 1, Word Knowledge, measures the extent of the child's vocabulary. The 50 items include words drawn from general information, science, mathematics, social studies, and humanities. No technical terms are included. The child is to find the one word out of four which best describes the word in bold type.

Test 2, Reading, measures the child's ability to comprehend written material. The test is made up of eight paragraphs and 45 questions. The questions draw heavily on the
child's ability to make inferences. There are a few questions which require factual information, and several which require identifying the main idea.\(^1\)

Pupil Progress Series

The Pupil Progress Series, like the American School Achievement Test, has three batteries within the age range under consideration. Primary Level I is for students of Grade 1 and beginning Grade 2. Primary Level II is for students of Grades 2.5 to 3.9. The Elementary Level is for students of Grades 4 through 6. There are only two forms, A and B, at each of the levels. Form A of the 1956 edition was used in this study.

Each test is divided into three sections. At the Primary levels the sections are Vocabulary, Rate, and Comprehension. At the Elementary level the first section is Knowledge and Use of Sources. The other two sections are the same as the Primary level. Vocabulary is included in the Comprehension section. Each major section, except Rate of Reading, includes several tests. Since the subtests at each level vary, each level will be mentioned separately. The tests which are similar will not be repeated.

The first three tests under Total Vocabulary measure the pupil's vocabulary level. On test 1, Word Recognition,

the child simply finds the word named by the teacher. There are 15 items, four choices for each item. On test 2, Word to Content Relation, the child is to relate words in print to a stimulus picture. There are 10 items, four choices for each item. On test 3, Words in Use, the child is required to use the word within the context of a given sentence. There are 15 items with three choices for each item.

Part II, Rate of Reading, simply measures the speed of reading within a specified time. Four paragraphs of increasing length and difficulty are given.

Part III, Total Comprehension, combines the results of tests 5, 6 and 7 to give an overall measure of a child's total reading comprehension. Test 5, Recalling Information, measures the child's ability to recall content read during Rate of Reading. This test gives some indication of the relationship between rate and understanding. Fifteen statements with three choices to complete the statement are given. Time is also a factor here.

Test 6, Locating Information, measures the child's ability to scan quickly to locate factual material. For this particular test three paragraphs and 20 statements are presented. Each statement has four choices closely related to the content of the paragraph and to each other.

Test 7, Reading for Descriptions, measures the child's ability to associate a written description to a visual stimulus. This test is composed of 10 descriptive sentences with three picture choices for each description.
The three major areas of Primary Level II are identical to those of Level I. However, there is some variance in the subtests. Test 1, Words in Use, of Part I, Total Vocabulary, measures the child's ability to use vocabulary in context. Thirty incomplete statements are presented, each statement followed by three word choices.

On test 2, Word Meaning, the child is asked to select a synonym for each underlined word in the stimulus phrase. There are 35 such items to this section.

The paragraphs of Part II, test 4, Rate of Reading, are identical to those found at the primary Level I. At the Primary Level II, the allotted time is lessened by two minutes.

Part III, tests 4, 5, and 8 of Primary Level II are identical to tests 5, 6, and 7 of Level I. Test 6, Reading for Meaning, is composed of 3 paragraphs and 10 statements, all of which measure the child's ability to make inferences. Test 7, Following Directions, measures the child's ability to understand and follow printed directions.

The Elementary Level of the Pupil Progress Series begins with a completely different approach; namely, the child's ability to use reference sources. There are four tests to this first section.

Test 1 of Part I, Functions of Common Sources, measures the child's understanding of material usually included in standard reference works. This test is composed of 15 questions requiring a yes/no answer.
Test 2, Selection of the Best Source, requires the child to select the best source for locating specific information. This test involves 15 questions with four possible sources.

Test 3, Use of the Index, measures the child's ability to use an index. It is made up of 15 questions with four possible answers.

Test 4, Use of the Table of Contents, measures the child's ability to use the table of contents. Fifteen questions are presented, based on timed reading of the two passages used in tests 6 and 7.

The last five tests make up the composite score for Reading Comprehension. Test 5, Word Meaning, measures the child's ability to select synonymous words. Thirty items are presented with four possible choices.

Test 6, Reading for Recall of Information, measures the child's ability to recall information read under a timed situation without referring back to the selection. Twenty items are given with four choices for each.

Test 7, Reading for Meaning, measures the child's ability to understand what he read. Fifteen statements are made with four possible endings. All require ability to make inferences.

Test 8, Reading to Locate Information, tests the child's ability to scan a passage in order to locate specific information. Twenty statements are made, followed by four possible answers. All require factual information.
Test 9, Reading for Directions or Procedures, measures the child's ability to understand and follow printed directions. Fifteen directions are given with four possible choices.

Test 10, Reading for Descriptions, is the same as that used at the primary level.¹

California Achievement Test

The California Achievement Test was designed to measure, evaluate and analyze school achievement in the curricular areas of reading, mathematics and language. The Reading test is composed of two parts, Vocabulary and Comprehension. There are three levels: Level 1, Grades 1.5 and 2; Level 2, Grades 2 through 4; and Level 3, Grades 4 through 6, of the California Achievement Test under consideration. The 1970 revision contains five levels and two forms. Form A will be used here.

The Vocabulary section of Level 1 is divided into two parts, Word Skills and Words in Context. Word Skills has seven subtests.

Test 1 measures the child's ability to associate a visual representation with a verbal statement. There are 10 items each of which has four picture choices. The child is to find the picture which illustrates a word in the sentence.

Test 2 measures the child's ability to discriminate sounds heard at the beginning of words read aloud. This test is composed of 10 items with four letter choices for each item.

Test 3 is similar to the preceding test with the exception that it measures the child's ability to identify sounds heard at the end of words read aloud.

Test 4 measures the child's ability to recognize letters. Each of the 15 items contains a key letter and a group of four letters. The test measures the ability to find letters that are the same and partner letters.

Test 5 consists of 10 pairs of words followed by the letters S and D. For each item the child is to black out the Letter S if the two words are the same, and D if the two words are different. At times the words are the same but presented differently; that is, one is in capital letters, the other in small letters. For the other words there is a difference in spelling.

Test 6 measures the child's ability to choose from four words which look alike and/or sound similar, the one word which is the correct symbol for the given picture. Ten items are given in this test.

Test 7 consists of 12 items of four words each. The child is to find the word read by the examiner. The words are similar in configuration and spelling.

The second part of the Vocabulary section, Words in Context, contains 15 items, each consisting of a phrase and
The child is to select the word that is most similar to the word in boldface type.

The Reading Comprehension section is composed of four paragraphs of increasing length and difficulty. Each paragraph is followed by six multiple choice items. The questions require both factual and inferential knowledge.

Level 2, for Grades 2 through 4, is divided into parts similar to Level 1, but not as lengthy. There are only two subtests in the vocabulary section, Word Skills and Words in Context.

Test 1, Word Skills, contains 20 items with four words each. Some of the words are in capital letters and some of the words are in small letters. The child is to identify the word read by the examiner.

Test 2, Words in Context, is composed of 20 items. Each item consists of a phrase and four word choices. The child is to find the word that is closest in meaning to the word in boldface type.

The comprehension section measures the child's skill in three areas; alphabetizing, use of table of contents and index, and comprehending what is read. Of the 45 items in this section, the first five measure the child's ability to put words in alphabetical order. The next five items give some indication of the child's ability to use a table of contents and index. The last 35 items measure the child's ability to derive factual and inferential information from paragraph reading. Five paragraphs are given, increasing in length
and difficulty.

The Reading Tests of Level 3 are for children from Grades 4 through 6. It is composed of only two sections, Vocabulary and Comprehension.

The Vocabulary section contains 40 items, each consisting of a phrase and four word choices. The child is to find the word that is closest in meaning to the word in boldface type.

The Comprehension section measures the child's knowledge and use of table of contents and index, recall of facts, inferences, and identification of main idea. The four reading passages incorporate material similar to that found in the child's social studies, mathematics, science and general reading texts.¹

Comparison of Skills

Three of the tests, California Achievement Test, Pupil Progress Series, and American School Achievement Test cover relatively the same grade levels on each of their tests. The Metropolitan Achievement Test varies quite a bit, requiring four levels where the others only use three, to cover the same span of years. For the sake of expediency, the tests will be compared at three levels.

The two broad skills which each of the tests measure at every grade level are Vocabulary and Comprehension. The way these skills are measured is part of the uniqueness of each individual test.

Vocabulary at the Primary level is measured three ways: word-to-picture relationship (Metropolitan Achievement Test, Pupil Progress Series, California Achievement Test); locate picture by means of a verbal clue (California Achievement Test); locate word by means of a verbal clue (Pupil Progress Series, American School Achievement Test, California Achievement Test, Metropolitan Achievement Test); and decoding (California Achievement Test, Metropolitan Achievement Test). The breakdown of each test into its component parts is illustrated in Table 1.

TABLE 1
VOCABULARY SKILLS PRIMARY LEVEL

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Word-to-Picture</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Picture-by-Verbal Clue</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Word-by-Verbal Clue</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Decoding</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Of the Comprehension skills at the Primary level, all four tests measure the child's ability to recall or locate factual information. Three of the tests (American School Achievement Test, California Achievement Test, Metropolitan Achievement Test) require some use of inferential reasoning. The California Achievement Test alone requires the recognition of the main idea. The breakdown of skills can be seen in Table 2.

**TABLE 2**

COMPREHENSION SKILLS PRIMARY LEVEL

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Words in Context</td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Sentence-Picture Relationship</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Riddles</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Fact</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Inference</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Main Idea</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

The Vocabulary skills measured at Level 2 are somewhat similar to those measured at Level 1. All four tests measure the child's ability to use words in context and select synonymous responses. The American School Achievement Test and Metropolitan Achievement Test also measure the child's ability to use antonyms and classify words. Table 3 gives the breakdown of the vocabulary skills measured at Level 2.
There is quite a diversification of comprehension skills at Level 2. The one skill common to all four tests is the child's ability to recall or locate factual information. Three of the tests (California Achievement Test, American School Achievement Test, and Metropolitan Achievement Test) measure the child's ability to make inferences. Two of the tests (Pupil Progress Series, Metropolitan Achievement Test) require the child to select the one sentence out of four which best describes the picture. The Pupil Progress Series evaluates the child's ability to follow printed directions. The California Achievement Test, alone, measures the child's ability to use reference skills. The breakdown of the comprehension skills measured at Level 2 can be found in Table 4.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Words in Context</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Synonyms</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Antonyms</td>
<td></td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Classification</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>
On the third level, the vocabulary skill measured by all four tests is the child's ability to identify synonymous terms, especially in a contextual setting. Two other skills evaluated by the American School Achievement Test and the Metropolitan Achievement Test are the ability to recognize antonyms and to classify words. The breakdown of skills can be found in Table 5.
### Table 5

**Vocabulary Skills Intermediate Level**

<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Synonym</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Antonym</td>
<td></td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Word Classification</td>
<td></td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Word in Context</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

The only comprehension skill common to all four tests at Intermediate level is the child's ability to locate or recall factual information. The American School Achievement Test, Metropolitan Achievement Test, and California Achievement Test measure the child's ability to draw inferences. The Pupil Progress Series evaluates the child's ability to understand the meaning of words from the context. The Pupil Progress Series and California Achievement Test alone measure the child's ability to use reference sources. Table 6 illustrates the skills tested at Level 3.
### TABLE 6
**COMPREHENSION SKILLS INTERMEDIATE LEVEL**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Inferences</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Main Idea</td>
<td></td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Factual</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Words from Context</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Use of Table of Contents</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Use of Index</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Use of References</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>
CHAPTER IV

SUMMARY AND CONCLUSIONS

Restatement of the Problem

A comparative study of the skills tested on four standardized reading tests was made in an effort to aid in the wise selection of tests.

Description of Procedure

The writer reviewed research concerned with testing, uses of tests, types of tests, and objectives of testing. The research mostly considered what authorities have said about standardized tests in general and standardized reading tests in particular. Buros' *Fourth, Fifth, and Sixth Mental Measurement Yearbooks* were used as a guide in reviewing each particular test. The Manuals of each test were also used.

The tests selected for the study were American School Achievement Test, Metropolitan Achievement Test, Pupil Progress Series, and California Achievement Test. One form of each of the tests from Grades one to six was used in the comparison.
The Manual of each test was studied. Mention was made of the thoroughness, or lack of thoroughness, in the amount of technical information given, the clearness of directions, and the ease with which a test may be administered and scored.

Each test was examined to ascertain not only what skills were tested, but also how they were tested. Finally, a comparison was made of the skills tested at each of the three levels.

Findings and Conclusions

The review of research bears out the fact that, to be effective, it is essential that users of tests have clearly in mind the purpose for which they are giving the test. At the elementary school level, the purpose is usually: to compare with local or national norms, to measure progress, to identify areas of weakness, to use as a basis of grouping, or as a basis of remediation.

Although each of the tests reviewed here include the above-mentioned goals as part of the test rationale, the degree to which this is carried out varies from test to test.

Although each of the Test Manuals indicates that the test can be used for remedial purposes, none of them provides an item or diagnostic analysis whereby specific strengths and weaknesses can immediately be pinpointed.
The writer sees this as the biggest weakness of all the tests. Total scores are not an effective or efficient basis for grouping. Groups should be formed according to needs.

If one is looking for a test which does not consume much time to administer or correct, and the primary purpose for administering the test is to measure pupil progress, or as a basis of grouping, the test to use is the American School Achievement Test. The skills tested are: use of vocabulary through identification of synonyms, antonyms, and words in context; and factual and inferential understanding.

Of all the tests, the Metropolitan Achievement Test has the most attractive format. It can be machine- or hand-scored and can be administered in a relatively short time. Like the American School Achievement Test it measures use of vocabulary by means of synonyms, antonyms and context; and comprehension by factual knowledge and inferential reasoning.

The Pupil Progress Series unlike the other three tests is classified as a diagnostic reading test. The skills measured on this test are little different than those measured on the achievement tests. The vocabulary section includes word recognition, words in use and word meaning. Comprehension skills at the primary levels include words in context, sentence-picture relationships, and recall of factual information. Inferential reasoning is not included at any level. In addition
to the skills measured at the primary levels, comprehension skills at the elementary level include questions related to the knowledge and use of reference sources.

The California Achievement Test is by far the most thorough in its coverage of skills at every level. In addition to the skills mentioned on the other tests, the California Achievement Test includes at the primary level a section on decoding. Besides recall of factual information and inferential reasoning, the California Achievement Test measures the child's ability to select the main idea of a paragraph. This begins at the primary level. Questions relating to the knowledge and use of reference sources are introduced at the second level. Although the test booklet has an attractive and well-planned format, the manual is cluttered and difficult to work with.

Each of the tests studied in this research has its own purpose and style. It is imperative that the examiner be thoroughly familiar with its purpose and contents. Since the tests do not provide an item or diagnostic analysis, the examiner may wish to develop her own. Thus, the test can be used more effectively as a remedial instrument.

Suggestions for Further Research

It has come to the attention of the writer that most tests do not provide a means, such as a diagnostic analysis,
to plan for effective remediation. It would be profitable, therefore, if a diagnostic study were made of a particular test with specific recommendations for planning a remedial program.

A most effective and valuable study would be that of a Reading Readiness Test. The research could revolve around discovering which subtests are most closely related to success in beginning reading. This could be an invaluable study since, at the present time, total scores are used as a basis of grouping.
APPENDIX I

CORRESPONDENCE
Dear Sir,

As part of my requirements towards a Master's Degree at Cardinal Stritch College, I am conducting a comparative study of skills tested on four reading tests. I would like to use the California Achievement Test as one of my tests.

Would you please send me a copy of the test and manual for grades one to six. I would also appreciate any other information your company could give as regards: similar studies previously made, item-analysis of your tests, evaluation of tests.

The completed research will become the property of Cardinal Stritch College, and as such, will not be indiscriminately available to others.

I am grateful for any help you can give me in this endeavor.

Sincerely,

[Signature]

I would appreciate your assistance for Sister JoAnn Betzold.

[Signature]

Director of Reading Clinic
Sister Jo Ann Betzold S.N.D. de N.
St. Paul Convent
359 North State Street
Westerville, Ohio 43081

Dear Sister Jo Ann:

We have forwarded to you under separate cover a complete set of the American School Achievement Test in Reading for grades 1-6. Complete statistical information is included in the manuals which accompany these tests.

Please let me know if we may be of further service to you, and you have our every wish for success in your research.

Sincerely yours,

Leo Gans
Director - Test Division

LG:sa

cc: Sister Marie Colette
Dear Sister JoAnn Betzold:

Under separate cover we are forwarding copies of the Primary and Elementary Levels of the Pupil Progress tests.

I regret to say we know of no comparison studies such as yours that have been conducted. I would expect that there have been a number of informal studies, but we have not to my knowledge received information about them. Similarly, the only item analysis of these tests that I know of would be the original studies made at the time the original forms were developed. Since that work was conducted in the 1950's, the data are no longer available. As for an evaluation of the tests, the Seventh Mental Measurements Yearbook, which is scheduled for publication in the spring of 1972, we believe will contain a review of these tests. Unfortunately, previous editions of the MMY have not contained descriptions of the right combinations of tests — they have apparently confused several of our reading tests which were then available.

We would be extremely interested in reading about the results of your studies. Would it be possible for us to see a copy of your completed thesis? We feel sure the results would be of considerable interest and value to us as well as to you.

Thank you very much for your interest in STS materials. If we may be of further help, please feel free to call on us.

Sincerely yours,

Herbert J. Greig
President
August 7, 1971

Herbert J. Greig
President
Scholastic Testing Service, Inc.
480 Meyer Road
Bensenville, Illinois 60106

Dear Mr. Greig,

I appreciate your prompt attention to my request for tests and other materials. Thank you for your offer of further assistance. I will keep in contact with you.

Sincerely yours,

Sister Jo Ann Betzold, S.N.D.
APPENDIX II

DIAGNOSTIC ANALYSIS OF LEARNING DIFFICULTIES
Diagnostic Analysis of Learning Difficulties

American School Achievement Tests

Primary Battery

1. Sentence and Word Meaning
   1,2,3,4,5,9,10,15,16
   19,21,22,23,26,29..............Statement of fact
   6,7,8,11,12,13,14,17
   18,24,25,27,28,29,30...........Similarity of meaning
   20,22.................................Opposites

2. Paragraph Meaning
   1,2,3,4,5,6,7,9,11,12,13
   14,15,18,19,21,22,25.............Fact
   8,10,16,17,20,23,24,
   26,27,28,29,30.....................Inference

Intermediate Battery

1. Sentence and Word Meaning
   1,2,4,5,6,7,9,10,
   18,22,27,28.................Statement of fact
   3,8,11,13,14,15,17,19,21,
   24,25,26,30,31,32,33,34,
   35,36,37,38,39,40.............Similarity of meaning
   13,16,20,23,29..................Opposites

2. Paragraph Meaning
   1,2,3,4,6,3,9,10,
   12,17,18,21,22,25,
   27,33,37,38,40.................Fact
   5,7,11,13,14,16,20,24,
   23,29,30,31,32,34,36,37........Inference
   15,19,23,26,35..................Main Idea
Diagnostic Analysis of Learning Difficulties

Metropolitan Achievement Tests

Primary I Form F

Test 1. Word Knowledge
1-35..........................Visual clues

Test 2. Word Analysis
1-40..........................Auditory clues

Test 3. Reading
1-13..........................Sentences
14-21..........................Riddles
22,24,25,26,28,29,
31,32,33,35,37,38,
39,40,42........................Fact
23,27,30,34,36,41............Inference

Primary II Form F

Test 1. Word Knowledge
1-17..........................Visual clues

Test 2. Word Analysis
1-35..........................Auditory clues

Test 3. Reading
1-13..........................Sentences
14,15,18,19,20,21,
23,24,25,26,28,29,
30,31,32,33,35,37,
40,41,42,43....................Fact
16,17,22,34,38,39............Inference
27,36,44........................Main Idea

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Metropolitan Achievement Tests

Elementary Form F

Test 1. Word Knowledge

3, 6, 11, 12, 13, 14,
16, 17, 18, 19, 21,
22, 23-34, 37-40. .........................Synonym

1, 7, 9. .................................Antonym

2, 8, 10, 15, 20, 35, 36. ........Word classification

Test 2. Reading

1, 3, 4, 6, 9, 13, 21,
24, 32, 34, 35, 38,
41, 42, 45. .............................Fact

2, 7, 8, 10, 11, 12,
14, 15, 16, 20, 22,
25, 26, 27, 28, 30,
31, 36, 39, 43, 44. .....................Inference

5, 17, 29, 40. ..........................Main idea

13, 19, 23, 33, 37. ....................Meaning from content

Intermediate Form F

Test 1. Word Knowledge

1, 5, 7, 12, 14, 15,
17, 22, 23, 26, 35,
36, 41, 42, 45, 46,
47, 48, 49. .............................Synonym

9, 30, 43. ...............................Antonym

2, 3, 4, 6, 8, 10, 11,
13, 16, 18, 19, 20, 21,
24, 25, 27, 28, 29, 31,
32, 33, 34, 37, 38, 39,
40, 44, 50. .............................Word classification
Test 2. Reading

1, 7, 9, 34, 45...............................Fact

3, 4, 8, 10, 11, 14, 16,
20, 21, 22, 26, 28, 30,
32, 33, 35, 36, 38, 40,
41, 44...............................Inference

5, 11, 18, 24, 31,
37, 43...............................Main idea

2, 6, 15, 7, 19, 23, 25,
27, 29, 39, 42...............................Word from context
Primary Level I Form A

Part I. Total Vocabulary
Test 1 1-15.............. Word recognition
Test 2 1-10............ Word to content relation
Test 3 1-15.............. Words in use

Part II. Rate of Reading

Part III. Total Comprehension
Test 5 1-15.............. Recall of information
Test 6 1-20.............. Locating information
Test 7 1-10.............. Reading for descriptions

Primary Level II Form A

Part I. Total Vocabulary
Test 1 1-30.................. Words in use
Test 2 1-35.................. Word meaning

Part II. Rate of Reading

Part III. Total Comprehension
Test 4 1-15.............. Recall of information
Test 5 1-10.............. Locating information
Test 6 1-10.............. Reading for meaning
Test 7 1-10.............. Following directions
Test 8 1-10.............. Reading for descriptions
Pupil Progress Series

Elementary Form A

Part I. Knowledge and Use of Sources

Test 1. Functions of Common Sources
1, 4, 5, 14............................. Glossary
2, 3, 9, 12............................. Index
6, 7, 15................................. Encyclopedia
8, 10, 13............................... Table of contents
11........................................ Dictionary

Test 2. Selection of the Best Source
16-23................................. Text books
24-30................................. Reference books

Test 3. Use of Index
31-45................................. Index

Test 4. Use of the Table of Contents
46-60................................. Table of contents

Part II. Rate of Reading for Meaning

Part III. Reading Comprehension

Test 5.
1-30................................. Word meaning

Test 6.
1-20..... Reading for recall of information

Test 7. Reading for Meaning
5, 6, 8, 9, 12, 13........................ Fact
1, 2, 3, 4, 7, 10, 15...................... Inference
11, 14.................................... Main idea

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Pupil Progress Series

Test 8.
1-20........Reading to locate information

Test 9.
1-15..Reading for directions or procedures

Test 10.
1-9...............Reading for descriptions
Diagnostic Analysis of Learning Difficulties

California Achievement Test

Level 1 Form A

A. Reading Vocabulary

1-10. Picture identification with verbal clues
1-10. Beginning sounds
1-10. Ending sounds
1-15. Likenesses and differences in letters
1-10. Likenesses and differences in words
1-10. Picture identification with visual clues
1-12. Word recognition

B. Reading Comprehension

1-15. Words in context
1, 2, 3, 4, 7, 8, 9,
12, 13, 14, 15, 16,
17, 19, 20, 22, 23. Fact
5, 10, 11, 21, 24. Inference
6, 18. Main idea

Level 2 Form A

A. Reading Vocabulary

1-20. Word recognition
1-20. Words in context

B. Comprehension

1-5. Alphabetical order
6-10. Table of contents
California Achievement Test

11, 12, 14, 16, 19, 21,
22, 23, 24, 25, 26, 27,
28, 29, 31, 32, 33, 34,
35, 36, 38, 39, 41, 42, 43, 44..................... Fact
15, 17, 18, 20, 30, 37......................... Inference
13, 45................................. Main idea

Level 3 Form A

A. Reading Vocabulary

1-40................................. Words in context

B. Comprehension

1, 2, 3............................... Table of contents

4, 5, 6............................... Index

7, 8, 9, 10, 12, 14, 17,
18, 21, 22, 24, 25, 26,
27, 28, 29, 30, 32, 33,
35, 36, 37, 38, 39, 40..................... Fact

11, 13, 15, 16, 19,
20, 34, 41, 42......................... Inference

23, 31................................. Main idea
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