A COMPARISON STUDY OF TWO SELECTED READING READINESS TESTS AS MEASURES OF FUTURE ACHIEVEMENT ON A READING TEST

BY

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A COMPARISON STUDY OF TWO SELECTED READING READINESS TESTS AS MEASURES OF FUTURE ACHIEVEMENT ON A READING TEST

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by

Glenda Taylor Hunter

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To the Graduate Council:

I am submitting herewith a Research Paper by Glenda Taylor Hunter, entitled "A Comparison Study of Two Selected Reading Readiness Tests as Measures of Future Achievement on a Reading Test." I recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Arts in Education.

Garland E. Blair
Major Professor

Accepted for the Council:

Wayne C. Slemp
Dean of the Graduate School

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INTRODUCTION TO THE PROBLEM

At a meeting of the Catholic Education Association of Pennsylvania some five years ago, one of the sessions for supervisors was addressed by Sister M. Bernardine, I.H.M., of the Psychology Department of Marywood College. Sister Bernardine deplored the fact that many children, because of immaturity, become poor readers. She noted that many children brought for psychological evaluations showed this defect. Her main concern was that something positive should be done before children were admitted to school if they were not ready. Her speech began a very interesting and profitable project. (1961)

Seven pilot schools, based on a program of ability grouping, were initiated. A bulletin sent from the superintendent's office in March, 1959, gave the first formal intimation of the initiation of this new admission policy. It stated:

> "The most serious problem of the primary department is the immature child. Children admitted to school before they are ready for the first grade work constitute the highest percentage of failures in the first grade. They become permanent educational problems, developing habits and attitudes which are impediments to good learning and teaching."

Any experienced educator will agree that just chronological age is no criterion of a person's readiness

or aptitude for learning. The Metropolitan Readiness Test Manual states that the progress young children make when they enter school in the primary grades depends to a large extent upon the provisions the school makes for variations in readiness. Among the factors that contribute to readiness, are linguistic attainments and aptitudes, visual and auditory perception, muscular coordination and motor skills, number knowledge and the ability to follow directions and to pay attention to group work.

How far advanced the school beginner will be in these skills depends on many factors, such as his intelligence, his degree of emotional maturity, his social adjustment and general background of experience. Lack of readiness in any of the traits may account for a pupil's failure to read.

Upon analysis of this data, the question presents itself, what are the best methods to test a child's readiness for school and success in learning to read? It is the objective of this study to examine two selected readiness tests.

STATEMENT OF THE PROBLEM

The major purpose of this study is to determine to what extent two selected reading readiness tests are measures of future achievement in reading. The reading readiness tests used in this study were the Anton-Brenner-

Gestalt Readiness Test (BGT) and the Metropolitan Readiness Test (MRT). Reading achievement was measured by the Gates-MacGinite Reading Test Form C[1]. Two scores from this test were used, the vocabulary test (GMV) and the comprehension test (GMC). The subjects chosen for this study were the third grade classes at Byrns L. Darden Elementary School in the Clarksville-Montgomery County School System. There were eighty-five children used in this study: thirty-seven boys and forty-eight girls.

REVIEW OF RELATED LITERATURE

Reading readiness can be described as an area of educational indecision. Although the use of reading readiness tests to predict possible growth in reading has achieved wide acceptance in the schools throughout the nation, several authors question the relationship between the scores children obtain on the reading readiness tests and the reading achievement tests. The tests are usually administered at the end of the kindergarten or the beginning of the first grade of the elementary school.

A correlation study done by Karlin (1957) on the prediction of reading success, clearly indicated the need for better understanding of what reading readiness tests measure. His study included the Metropolitan Readiness Test which was administered to one hundred and eleven first grade pupils and the scores correlated with the scores on

the Gates Primary Reading Test. He found a coefficient of correlation of .36 with r significant at the one percent level. Even though the findings were significant, Karlin concluded that it is virtually impossible to predict from the reading readiness scores how well any child in the sample do on a future reading test. Rude (1973)concurs with Karlin's conclusions. He adds that there is almost no evidence that the increased teaching of the skills of readiness will ensure success in learning to read.

Bremer (1959) examined the test scores of 2,069 pupils in the primary grades. They were given the MRT during the first month of the first grade. At the beginning of the children's second grade, they were given the reading subtests of the Gray-Votaw-Rogers General Achievement Test, Form Q. He found a coefficient of correlation of .40, which is significant at the one percent level. He concludes as Karlin, that readiness tests probably cannot be used to predict reading achievement with any degree of accuracy. He suggests that test-makers should use less technical language in their descriptions of just what certain tests are designed to do. Zingle (1964) also supports this position. By comparing the MRT to two achievement tests, he found a coefficient of correlation of .31.

Several studies indicate that reading readiness tests do significantly predict reading achievement. Akers (1969) conducted a predictive validity study of the MRT. He, like

Karlin, correlated the MRT with the Gates Primary Reading Test. He interpreted his results to mean that the Metropolitan Readiness Test could significantly predict reading achievement and recommended highly the use of the MRT. Bagford (1968) conducted a correlation study of the reading readiness scores and success in reading. He concluded that research consistently indicates a significant relationship between reading readiness scores and measures of early success in reading. Bliesmer (1951) found that correlations between reading readiness scores and measures of early success normally fall between .50 and .60. Bagford also stated that reading readiness scores are as related to later success in reading as they are to early success.

A major strength of the MRT, as compared with its competitors, is the expectancy tables to explain more adequately the relationship between performance on the readiness test and end of first grade achievement. Dykstra (1967) praises the administration of the MRT. He states that the MRT appears to be valid and reliable and it provides unusually specific information about the instructional significance of the test.

Svagr (1965) conducted a longitudinal predictive validity study of the Brenner-Gestalt Test (BGT). The BGT was administered to seven hundred and eighty-eight children early in kindergarten in 1960. A follow-up study was made in 1964. The levels of reading and of perceptual motor

skills was measured, computing the Pearson Product Moment Correlation. One major finding was that reading achievement can be predicted by means of the Brenner-Gestalt Readiness Test given in kindergarten.

The Anton-Brenner Gestalt Readiness Test (BGT) has several flaws as presented by Deloria (1967). She states that there is a gap between the suggested uses of the BGT and the validity data supporting those uses. A number of references are presented at the end of the manual, but they are not specifically cited to support the validity of particular test applications. The test is not recommended for use by teachers in its present form because of the ambiguity in the manual.

Smith and Chapel (1970) state that reading readiness is a product of the whole child, and is manifested in physiological, psychological, educational and sociological growth. Several studies indicate that composite of tests should be given for a more accurate prediction of success in reading. Koontz (1960) identified fourteen variables in the study. By using the multiple regression technique, four revealed significant relationships with reading achievement in grades two and three.

1. Number Readiness Scores from the MRT
2. Matching (MRT)
3. Sex of the child
4. General Health of the Child

Flamard (1961) also conducted a similar study. The MRT and an intelligence test correlated at the .57 level

more highly than any other variable analyzed in the study. The MRT, Learning Rate of Words Inventory, and the Stanford Binet yielded a multiple correlation of .7336. An alternate composite of the MRT, Learning Rate of Words Inventory, and the New Gestalt Test yielded a correlation of .7254. Nash (1963) found that the latter was more appropriate for classroom use. These studies imply that there are many factors which influence the reading process and these factors are complex and interrelated. Two authors contend that the most important variable indicated by most studies in reading achievement is the child's intelligence. Slobodzian (1968) found that as a group, successful readers have a significantly higher WISC verbal performance than do non-achievers. Kephart (1971) stated that intelligence sets the level at which teaching can begin.

Burke (1972) points out several flaws in the Gates-MacGinitie Reading Test. She states that the set of skills and strategies that make for success in taking this test may not have a direct relationship to these called to use by a successful reader. However, according to Roekel (1972) the level manuals and the technical manual are complete, well-organized and easy to follow. The standardization appears to have been carefully done. He concluded that the GMRT used alone, function best as survey tests. Even with its limitations, Powell (1969) writes that the GMRT provides usable data on achievement in comprehension, vocabulary, and speed

and will continue to be used extensively. The GMRT was used in this study as the criterion measure of the predictability of the two readiness tests.

Table 1

Correlations Given in The Review of Literature

Study	Instruments	r
Karlin (1957)	MRT & Gates Primary	.36
Bremer (1959)	MRT & Gray-Votaw-Rogers General Achievement	.40
Zingle (1964)	MRT-Two Achievement tests	.31
Flamard (1961)	MRT & Intelligence test	.57
Nash (1963)	MRT & Learning Rate of Words & Stanford Binet	.7336
Nash (1963)	MRT & Learning Rate of Words & New Gestalt Test	.7254
Koontz (1960)	Number Readiness Scores MRT Matching - MRT Sex of Child General Health of Child	not given
Bliesmer (1951)	not given	.50-.60
Akers (1969)	MRT & Gate Primary Reading	not given
Svagr (1965)	BGT & Reading Test	not given

Table 1 summarizes the important date given in the review of the literature. The correlations of the MRT with other tests range from .31 to .60. Although all of these correlations were found to be highly significant, the

researchers gave widely differing interpretations of their usefulness. The highest correlations (.7336 and .7254) were achieved when a composite of tests were given. Consideration should be given to other instruments, in addition to a readiness test in evaluating readiness for reading.

DESIGN OF THE STUDY

Hypotheses

The null hypotheses are stated as follows: (significance was set at the .05 level)

1. There is no significant correlation between the scores on the BGT given in the first grade and the scores on the GMV, given in the third grade.

2. There is no significant correlation between the scores on the BGT given in the first grade and the scores on the GMC, given in the third grade.

3. There is no significant correlation between the scores on the MRT, given in the first grade and the scores on the GMV given in the third grade.

4. There is no significant correlation between the scores on the MRT when compared to the scores on the GMC.

5. There is no significant multiple correlation between the scores on the BGT and MRT with the scores on the GMV.

6. There is no significant multiple correlation between the scores on the BGT and the MRT with the scores on the GMC.

7. There is no significant correlation between the scores on the BGT and the scores on the MRT.

Procedures for Treating Data: The hypotheses listed above were treated by the same statistical method. The statistical procedure used was the Pearson Product Moment Correlation and multiple correlation.

Subjects: The third grade class at Byrns L. Darden were chosen for this study because they had been given the Brenner-Gestalt Test and the Metropolitan Readiness Test in the beginning of the first grade. The Gates-MacGinitie Reading Test was administered to the Third grade students at Darden in September, 1974. There were eighty-five children involved in this study; thirty-seven boys and forty-eight girls.

Description of Instruments and Procedure: The Metropolitan Readiness Test consists of six subtests that are combined by summing the raw scores into a composite readiness score. The six subtests are word meaning, listening matching, alphabet, numbers and copying. Each first grade teacher administered the test to her class at the beginning of the first grade. The tests were hand-scored by the teacher.

The Anton-Brenner Gestalt Developmental Test of School Readiness (BGT) is divided into five subtests; number producing, number recognition, ten dot Gestalt, sentence Gestalt and Draw-a-man. There is an optional set of sixteen rating items using a one-to-five scale, half of which forms an Achievement Ability rating scale, and half a

Social-Emotional Behavior rating score. This test was administered, individually, by resource personnel to all the first grade classes the first week of school in 1972. These tests were also hand-scored by the examiners.

The Gates-MacGinitie Reading Tests (Primary C) was given in grade three. It consists of two separate tests: vocabulary and comprehension. The vocabulary tests samples the child's ability to recognize or analyze words in isolation. The child selects the word that matches the picture. The comprehension section measures the child's ability to read complete prose passages with understanding. At one level, the student selects one of four pictures to match a sentence or paragraph. At other levels there are two multiple choice questions following each selection.

Analysis of Data

Table 2 gives the correlations for all the tests administered. The highest correlation with any single test was the MRT with the GMV (.48). The MRT with the GMC had a correlation of .453. The lowest correlation was the BGT to the GMC (.29). The multiple correlation of the BGT and the MRT with the GMV and GMC scores yielded the r of .50 and .46, respectively. All correlations were significant at the .01 level.

Table 2

Correlations Between Tests

Tests	r	n
BGT-MRT	.472	85
BGT-GMC	.29	85
BGT-GMV	.358	85
MRT-GMV	.48	85
MRT-GMC	.453	85
BGT & MRT-GMV	.50	85
BGT & MRT-GMC	.46	85

Discussion of Data

The purpose of this study was to determine the predictive value of the two selected readiness tests. The correlation coefficients obtained in this study ranged from .29 to .50. The MRT correlated with the GMV (.453) and GMC (.48). This finding was in agreement with the studies done by Akers, Bagford, and Bliesmer, who reported significant correlations between the scores on the MRT and scores on several reading tests. They interpreted their results to support the MRT and other reading readiness tests as good predictors of reading achievement. However, this did not agree with interpretations of Karlin, Gremer, Rude, and Zingle, who state that readiness tests cannot be used to

predict reading achievement with any degree of accuracy. Although Karlin's study was found to be significant at the .01 level, he and others would not support the usefulness of the MRT.

The multiple correlation of the BGT and MRT with the GM proved to be slightly higher than either test used alone. The studies of Smith and Chapel, Flamard, and Nash showed that a battery of selected tests should be given, in addition to teacher rating. In light of the significant multiple correlations, it is concluded that consideration should be given to a number of variables to determine reading readiness. If the MRT is included in the battery of tests, it probably would not be worthwhile to use the BGT as another measure in the battery. The MRT showed a higher correlation with the GMC than did the BGT. It is also concluded that the MRT proved to be a better test of future achievement on a reading test. This agrees with Dykstra who stated that the MRT provided unusually specific information about the instructional significance and predictability of the test.

Table 3 is an expectancy table based on the correlation between the BGT and the GMV. The number in parentheses is the percentage of students at each level of the BGT who scored at the indicated level of the GMV. It reveals that a student who scores in the high range of the BGT has a 61 percent chance of reading on grade level in

the third grade. The table indicates that a student scoring in the low range on the BGT has a 51 percent chance of reading at the 1.9 reading level or below. A student scoring in the low range has only a 13 percent chance of scoring at the 3.0 level or above.

Table 3

Relationship of BGT and GMV

	1.9-Below	2.0-2.9	3.0 Above	Total n
High	3 (13)	6 (26)	14 (61)	23
Average	6 (20)	10 (32)	15 (48)	31
Low	16 (51)	11 (36)	4 (13)	31
				85

Table 4 is an expectancy table based on the correlation between the BGT and GMC. If a student scores in the high range of the BGT, he has a 48 percent chance of reading at the 3.0 level or above in the third grade. The student scoring in the low range has a 55 percent chance of scoring at the 1.9 reading level or below. The low-scoring student has a 9 percent chance of reading on grade level in the third grade.

Table 4

Relationship of BGT and GMC

	1.9 Below	2.0-2.9	3.0 Above	Total n
High	5 (22)	7 (30)	11 (48)	23
Average	8 (26)	10 (32)	13 (42)	31
Low	17 (55)	11 (36)	3 (9)	31
				85

The figures in Table 5 indicate that the students found in the A range on the MRT have a 60 percent chance of reading on grade level or above. If a student scored in the A or B level of the MRT, the table shows that he has a good chance (43-60 percent) of reading on grade level in the third grade. However, a person who scores D or E, has little chance of achieving grade level in reading. Of the students in the D range, only one was reading above second grade level.

Table 5

Relationship of MRT and GMV

	1.9 Below		2.0-2.9		3.0 Above		Total n
A	2	(8)	8	(32)	15	(60)	25
B	10	(27)	11	(30)	16	(43)	37
C	5	(42)	6	(50)	1	(8)	12
D	8	(89)	1	(11)	0	(0)	9
E	1	(50)	1	(50)	0	(0)	2
							85

A student scoring in the D and E range of Table 6 is not likely to achieve grade level in reading. The table reveals that no students who scored in the lower ranges were reading at the third grade level. The students scoring in the A range have over a 50 percent chance of reading at the 3.0 level and above. A score in the B range, indicates a student has about a 30 percent chance of reading on grade level.

Table 6

Relationship of MRT and GMC

	1.9 Below		2.0-2.9		3.0 Above		Total N
A	4	(16)	7	(28)	14	(56)	25
B	12	(32)	14	(38)	11	(30)	37
C	9	(69)	3	(23)	1	(8)	13
D	4	(50)	4	(50)	0	(0)	8
E	1	(50)	1	(50)	0	(0)	2
							85

The percentages reveal that despite the considerable relationship between the high test scores on the readiness tests and the GMC, some students in the top tests range are not achieving at grade level. They also reveal that despite many variables, some low-scoring students achieve well in reading. These expectancy tables could be of valuable use to the teacher in the primary grades. Judgements could be made as to possible placement and help for the students in reading.

Summary

The major purpose of this study was to investigate the predictive value of two reading readiness tests, the Brenner-Gestalt and the Metropolitan Readiness, to reading achievement. The BGT and MRT were correlated to the vocabulary section and the comprehension section of the Gates-MacGinitie Reading Test. Eighty-five children at Byrns Darden Elementary School were used as subjects for this study.

Although all correlations were found to be significant at the .01 level, the MRT correlated more highly with the GMV and GMC than did the BGT. In light of these, and considering the ease of administration of the MRT, it is concluded that the Metropolitan Readiness Test is a better reading readiness test to use for predicting future achievement in reading.

The multiple correlation of the BGT and the MRT with the GM proved to be slightly higher than either test used alone. Considering the significant multiple correlations, it is also concluded that several variables should be utilized when determining reading readiness. However, if the MRT is included in the variables, it would not be worthwhile to use the BGT as another measure in the battery.

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