DOCUMENT RESUME

ED 040 824 RE 002 804

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TITLE Direct Comparisons Between Listening and Reading as Language Comprehension Abilities in the Intermediate Grades.
PUB DATE Mar 70
NOTE 11p.; Paper presented at the conference of the American Educational Research Association, Minneapolis, Minn., Mar. 2-6, 1970

EDRS PRICE EDRS Price MF-$0.25 HC-$0.65
DESCRIPTORS Achievement Tests, *Intermediate Grades, *Language Tests, *Listening Comprehension, Multiple Choice Tests, *Reading Comprehension, Reading Research, *Reading Tests, Test Construction, Test Reliability

ABSTRACT

Listening comprehension and reading comprehension editions of an experimental test were devised to provide equivalent measures from which raw scores would be directly comparable. The test was designed for a four-place multiple-choice category format. Forms A and B were administered on a rotation basis for the study. The testing population consisted of 515 students from grades 4, 5, and 6, with approximately the same number of boys and girls at each level. The split-half reliability coefficients varied from .91 to .96 on the reading comprehension tests and from .82 to .88 on the listening comprehension tests. Listening was found to be statistically superior to reading comprehension in all grades. Mean differences between the two decreased at each successively higher grade level. It was also found that reading comprehension had a higher correlation with listening than with IQ, mental age, or sex. Students with IQ's above 110 had slight differences between listening and reading; those with IQ's below 110 were far superior in listening. Students with high verbal IQ scores had slight differences between listening and reading; those with high quantitative scores were superior in listening comprehension. There were no significant differences between boys and girls. Tables and references are included. (CM)

Direct Comparisons Between Listening and Reading as Language Comprehension Abilities in the Intermediate Grades

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The purpose of the study was to discover the direct relationships between listening comprehension and reading comprehension among children in the intermediate grades in order to make direct comparisons between the two abilities and grade level, intelligence levels, mental ages derived from quantitative and verbal tests, and sex.

The close relationship between listening and reading comprehension has long been researched in the effort to better understand the reading processes and ways in which to improve them. Investigators agree that there is a relationship between the two modes of learning, but in a review of the research this relationship is not clear, nor are the materials consistent. Questions of major eduational import remain unanswered. What are the true differences between reading and listening at different intermediate grades? What are the relationships between listening ability and such factors as mental age IQ, and sex?

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*Presented at the Annual Meeting, American Education Research Association, Minneapolis, Minnesota, March, 1970.

Research Findings

The first major study of listening and reading comprehension was carried out by Goldstein in 1940. Using selections from the McCall-Crabbs Standardized Test Lessons, he found a raw correlation of .78 between listening and reading. He also found that children with lower intelligence levels comprehended more through the listening channel. He pointed out the importance of this finding to education and also noted that passages which were equivalent for reading might not be equivalent for listening.

In 1950 in reviewing research in listening comprehension, Caffrey found that students who had higher auding scores also had higher scores on non-verbal IQ tests than on verbal IQ tests. On the basis of similar results Spache suggested that measures of auding ability mark the potential ceilings for reading ability.

Further studies on vocabulary disclosed that elementary school children come to school with a vast listening vocabulary but with slight or no reading vocabulary. Comparisons in the vocabularies of the two media reveal that the auding vocabulary increases at a constant rate, while the reading vocabulary increases at a mildly accelerated rate until the later elementary grades. (Caffrey, 1950)

In more recent studies carried out independently by Harris, Abrams, and others (1963), informal tests were developed and administered as measures of listening comprehension.

Scores were compared to reading scores from standardized achievement tests. Using this method, the investigators compared the student's ability to gain and use information through listening with the results of the reading tests, and estimated the degree of reading retardation, by the difference between the listening comprehension scores and the reading test results. Cleland (1962) investigated all tests of reading capacity and concluded that a child's aural-verbal facility is the best single indication of reading potential, and that the best instrument for measuring this facility is a valid and reliable listening test. Bleismer (1954) found that the Durrell-Sullivan Listening Capacity Test gave the highest of reading expectancy than other such tests.

The value of a measure of listening comprehension is further emphasized by Barbe (1965). He found that group reading tests give no indication of actual comprehension level of the child and are merely checks on the child's ability to use reading skills. With a listening test, the classroom teachers can measure more accurately the level to which they can hope to raise the child's reading ability. He concludes that if a new type of reading test were developed which actually measured how well and at what level the child was capable of comprehending, an entirely new era of achievement testing and teaching might evolve.

In theory, the relationship between reading and listening has seemed promising for learning about reading potential. There is ample evidence from many studies to indicate that

a more meaningful basis for judging reading potential is gained by comparing reading and listening test scores, however, accurate comparisons between the two abilities has not been possible because of the construction of the tests available for measuring the two abilities.

The only two published tests for elementary school children are the Durrell-Sullivan and the STEP Tests of Listening forms of the Sequential Tests of Educational Progress (STEP). Both sources also provide tests of reading achievement as well as norms for the listening and reading scores. These scores are then used to compare the listening comprehension and the reading comprehension of students.

Both the Durrell-Sullivan and the STEP Listening tests present the same problem when the test results are used to study the relationships between listening and reading comprehension. The listening tests are built with a selected number of vocabulary items and, or paragraphs, and standardized on a population of intermediate grade children. The reading tests are built on completely different items and paragraphs, then standardized on results from an entirely different population. Thus, neither test has comparable reading and listening tests. For comparison of these two language abilities, unequal funds of language achievement for listening and for reading are compared. A fourth-grade norm in reading might indicate the ability to read 4,000 words, while a similar norm in listening may indicate an understanding of 8,000 words. A child at the fourth-grade norm in both abilities might actually

have double the ability in his listening than he does in reading, but these tests do not allow him to display this.

Procedure

In order to make direct comparisons between listening comprehension and reading comprehension, it was necessary to build measures with the same content, each measure equated for both abilities, to obtain raw scores which would be directly comparable. The vocabulary items were selected from Rogets' Thesaurus, the source most typical of language experiences. The numerical balance among the six word classes in the Thesaurus served as the guide for the number of categories to be selected from each of the word classes. Ninety-six categories were drawn from the Thesaurus. Paragraph selections were written by the author.

The test was designed for a four-place multiple choice-category technique. On the vocabulary section each category was represented by an illustration. Three forms of the measures were constructed, each containing 160 vocabulary items. Each form was printed in two editions - one for listening, the other for reading comprehension. Forms A and B were administered on a rotation basis for this study. Kuhlmann-Anderson Mental Abilities Tests established the intelligence levels and mental ages. The testing population consisted of 515 students from grades 4, 5, and 6, with approximately the same number of boys and girls at each level. The mean IQ was slightly higher than average - 111.9 for grade 4, 111.6 for grade 5, 118.1 for grade 6.

The reliability of each form of the test was computed by the split-half method and corrected by the Spearman-Brown formula. The reliability coefficients varied from .91 to .96 on the reading comprehension tests. As listening comprehension tests reliability coefficients ranged from .82 to .88.

Results

Table 1

Raw Score Comparisons of Listening and Reading Comprehension

		Listening		Reading				
Gr.	N.	Mean	S.D.	Mean	S.D.	Diff.	t.t.	%
4	178	120.39	20.56	111.50	26.83	8.89	3.43**	92.6
5	163	131.20	20.44	123.57	25.53	7.63	3.10**	94.0
6	174	152.88	21.52	147.83	29.69	5.05	1.94**	96.0

**Significant at the .05 level

In grades 4, 5, and 6 listening comprehension was superior to reading comprehension. The difference between the two abilities was greatest in grade 4 -- 8.89 points of mean raw score. The superiority of listening comprehension was statistically significant at each of the grades.

Table 2

Raw Score Comparisons of Listening and Reading Comprehension at Different Intelligence Levels

Gr.	N.	IQ	Mean	S.D.	Mean	S.D.	Diff.	t.	%
4	(107)	110	125.27	19.76	121.10	24.72	4.17	1.36**	96.3
	(71)	109-	113.04	19.54	97.03	23.14	16.01	4.45	85.8
5	(87)	110	139.22	18.27	134.08	22.76	5.14	1.64	96.5
	(76)	109-	122.03	18.87	111.54	23.10	10.49	3.07**	91.3
6	(107)	110	161.18	16.10	160.92	22.24	.26		99.8
	(67)	109-	139.63	22.41	126.43	28.08	13.20	3.01	90.9

**Significant at the .05 level

For children whose IQ's were 110 and above, the reading-listening ratios were very close in grades 4 and 5, and approximately identical in grade 6. There is a noticeable difference for students with IQ's of 109 or below. Listening comprehension is superior to reading comprehension by more than 10 points of mean and raw score at each grade level.

Table 3

Raw Score Comparisons Between Listening and Reading Comprehension of Verbal and Quantitative Mental Measures

		Listening		Reading				
M.A.	N.	Mean	S.D.	Mean	S.D.	Diff.	t.	%
144	Verbal (119)	155.11	19.29	151.33	24.24	3.78	1.30	97.7
	Quant. (61)	144.82	22.39	141.66	29.22	3.16	.67	93.7
	Verbal (75)	122.3	19.30	114.70	24.64	7.60	3.22**	93.7
	Quant. (41)	120.34	25.26	103.93	27.76	16.41	2.80*	86.3

*Significant at the .01 level

**Significant at the .05 level

Upon inspection of all scores, the mean mental age was established 144. For students who had a mental age of 12 years and above, there was a slight and insignificant difference between listening and reading for either group. Verbal or quantitative, whether the mental ages were derived from high- or from low-reading-loaded tests. However, for students whose mental age was below 12 years there was a much lower listening-reading ratio. The difference was greater for those whose score was derived from the low-reading-loaded test. This would indicate that mental abilities tests based on reading comprehension do not yield an accurate estimate of either mental ability or reading potential.

Table 4

Raw Score Comparisons Between Listening and Reading Comprehension of Boys and Girls

		Listening		Reading				
Gr.	N.	Mean	S.D.	Mean	S.D.	Diff.	t.	%
4	(89) Boys	121.45	21.10	112.05	26.79	9.40	2.60**	92.3
	(89) Girls	119.34	19.95	110.96	26.86	8.38	2.36**	92.1
5	(73) Boys	131.74	20.25	126.78	25.44	4.96	1.30	94.6
	(90) Girls	130.78	20.58	120.97	25.30	9.81	2.86**	92.5
6	(93) Boys	151.44	20.54	147.56	27.68	3.88	1.08	97.4
	(81) Girls	154.53	22.47	148.14	31.84	6.39	1.47*	96.6

*Significant at the .01 level

**Significant at the .05 level

Listening was superior to reading for both boys and girls in grade 4, for girls in grade 5. Boys and girls achieved at about the same levels in listening comprehension and in reading comprehension except at the fifth grade where boys were superior to girls by 6 points of mean raw score in reading.

Results

1. Listening was superior to reading comprehension in all grades. All differences were statistically significant. Mean differences between the two decreased at each successively higher grade level.

2. Reading comprehension had a higher correlation with listening than with IQ, MA, or sex.
3. Students with IQ's above 110 had slight differences between listening and reading; those with IQ's below 110 were far superior in listening.
4. Students with high verbal IQ scores had slight differences between listening and reading; those with high quantitative scores were superior in listening comprehension.
5. There were no significant differences between boys and girls.

Implications

1. There is now a test available to measure directly the differences between listening and reading comprehension.
2. Listening comprehension is a better predictor of reading potential than IQ or MA scores.
3. Listening is a better channel for language comprehension than reading for children with IQs below 110 or MAs below 12 years.
4. The above students display greater reading potential on a listening comprehension test than on measures of mental ability, whether verbal or quantitative.
5. The above group is penalized by tests of mental abilities.

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