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**A STUDY OF LISTENING-READING SCORES OF AVERAGE AND  
DEFICIENT READERS**

*The University of Oklahoma*

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A STUDY OF LISTENING-READING SCORES OF AVERAGE AND  
DEFICIENT READERS

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by  
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1983

A STUDY OF LISTENING-READING SCORES OF AVERAGE  
AND DEFICIENT READERS

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AN ANALYSIS OF LISTENING - READING COMPREHENSION SCORES  
FOR REMEDIAL READERS

CHAPTER I

THE PROBLEM

Introduction

Several studies have reported findings that lend support to the theory base that listening comprehension has a positive correlation to reading comprehension. Berg<sup>1</sup> theorized that both listening and reading have common characteristics. The skills needed for listening and reading contain analogous components since both require decoding, both deal with common word symbols, both are concerned with intake of ideas, both contain similar intellectual elements and both have related comprehension difficulties. Both reading and listening are viewed as

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<sup>1</sup>Paul Berg. Reading in Relation to listening. Evaluating College Reading Programs (Fourth Yearbook) Southwest Reading Conference for Colleges and Universities, Texas Christian University Press, February 1955, pp. 52-60.

two major subclasses of a larger class of human behavior - language processing. Language processing is defined as reception and interpretation of linguistic messages.

Studies conducted by Ross, Brown, Condon, Fawcett, Duker and Devine<sup>2</sup> agree that once a person has learned to read, there is a degree of relationship between reading comprehension and listening. In his research, Ross found a coefficient of 0.74 between reading and listening, Brown found coefficients of 0.82 at the fourth-grade level; of 0.76 at the fifth-grade level, and 0.77 at the sixth-grade level. Both Condon and Fawcett recorded their findings as "high" correlations; while Duker reported an average coefficient of 0.57 for the three grades.

Devine proposed that the same higher mental processes underlie both facets of the language arts complex,

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<sup>2</sup>Ramon Ross. "A Look at Listeners." Elementary School Journal 64:369-72, April 1964; Charles T. Brown. "Three Studies of Listening of Children." Speech Monographs 32:129-38, June 1965; Edwyna Forsyth Condon. "Analysis of the Difference Between Good and Poor Listeners in Grades Nine, Eleven and Thirteen." (Ph.D. Dissertation, University of Kansas, 1965) Dissertation Abstracts International 26:3106 (1965); Annabel Elizabeth Fawcett. "The Effect of Training in Listening Upon the Listening Skills of Intermediate Grade Children." (Ph.D., University of Pittsburgh, 1963) Dissertation Abstracts International 25:7108-9A (1965); Sam Duker. "Listening and Reading." Elementary School Journal 65:321-29, March 1965; Thomas G. Devine. "Listening: The Neglected Dimension of the Reading Program." Improvement of Reading Through Classroom Practice. International Reading Association Conference Proceeding (Edited: J. Allen Figurel) Newark, Del., 1964. pp. 119-20.

but did not discard the idea that the tests could be measuring something other than, or in addition to, listening ability. He also believed a relationship existed between listening and intelligence which could be examined through controlled research. Devine concluded from his review of the existent research that a statistical relationship had been evidenced between reading and listening; listening and intelligence; and reading and intelligence. More recent studies done by Leeds<sup>3</sup> appear to support his hypotheses.

Upon investigation of primary grades, Anderson and Fairbanks<sup>4</sup> have proposed that genetically, words are first encountered and learned in an auditory environment. As reading skills develop, the visual forms of the words become associated with their sounds so that a sight vocabulary, based upon a knowledge of words heard, is gradually accumulated. Theoretically, words learned in the auditory experience, when encountered in reading material, allow for the accumulation of a sight vocabulary which parallels the hearing vocabulary. The poorer the reader, the

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<sup>3</sup>Donald S. Leeds. "A Study of the Effect of Teaching Specific Listening Skills on the Reading and Listening Performance of Seventh Grade Students." (Dissertation, Boston University, 1969) Dissertation Abstracts International 31:01A, 298 (1969).

<sup>4</sup>Irving H. Anderson and Grant Fairbanks. "Common and Differential Factors in Reading Vocabulary and Hearing Vocabulary." Journal of Educational Reading 30:317-24, January 1937.

greater the gap between auditory vocabulary and reading ability skills.

Brown<sup>5</sup> had earlier predicated the concept that listening ability supports reading ability during the first years in school. Children learn to recognize the visual representation of the words with which the sounds and meanings are already familiar. Brown's theory was in part based upon an earlier study conducted by Young<sup>6</sup>. Young had investigated two thousand fourth-, fifth-, and sixth-grade children in an attempt to determine the relationship of reading comprehension and retention to listening comprehension and retention. Young found that children do improve in their ability to comprehend through reading throughout the intermediate grades. The development of their reading comprehension ability is paralleled by their ability to comprehend through hearing. He further found in his study that silent reading comprehension skills of the pupil equaled listening comprehension skills by the end of the fifth-grade. By the end of the sixth-grade, reading comprehension skills exceeded listening comprehension.

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<sup>5</sup>Don P. Brown. "Auding as the Primary Language Ability." (Dissertation: Stanford University, 1954) Dissertation Abstracts International 14, 2281 (1954).

<sup>6</sup>William E. Young. "The Relation of Reading Comprehension and Retention to Hearing Comprehension and Retention." Journal of Experimental Education 5:30-39 (September 1936).

Spache<sup>7</sup> suggests that if psychological, physiological and training factors were kept constant, a more nearly perfect correlation would result from a measurement of the two skills. He further suggests that listening ability may indicate a level of educability or reading ability.

Although Hollingsworth<sup>8</sup> identified approximately eighteen factors of reading comprehension which appear to be similar to listening comprehension, the question which has confronted researchers of listening and reading is if or how improvement in one skill, either reading or listening, would make an improvement in the other skill.

#### Significance of the Study

Inasmuch as the ability to read, comprehend and retain is an important factor in achieving success in any educational endeavor and may well be the primary factor in determining vocational success; the data derived from this study will yield the pattern of growth in listening skills of deficient reading students, their

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<sup>7</sup>George Spache. "The Construction and Validation of Work-Type Auditory Comprehension Reading Test." Educational and Psychological Measurement 10 (1950) p.250.

<sup>8</sup>Paul M. Hollingsworth. "Can Training in Listening Improve Reading?" Reading Teacher 18:121-23, November 1964.

relationship to the corresponding pattern of growth in reading skills and emphasize the appropriate level at which a student may benefit from listening instruction.

The conclusion drawn from this research will be generalizable to students of similar demography, therefore of value as an addition to the existent theoretical base of knowledge.

Further benefit will be derived by those responsible for the adjustment of the curriculum to meet the needs of the deficient reading student.

The primary objective of this study will be to determine whether or not there is a statistically significant difference between the listening-reading scores of average readers and the listening-reading scores of deficient readers and to further determine if there is a significant difference between the listening-reading scores of males and females.

#### Statement of the Problem

The purpose of this study is to determine the nature of the relationship between listening and reading scores of students identified as being deficient in reading skills.



### Definition of Terms

The following terms have been developed in connection with this study:

Listening Comprehension: Listening comprehension is defined as the process of directing attention to and becoming aware of the sound sequences, followed by all the various aspects of cognition; including perception, judgment, reasoning, remembering, thinking and imagining.

Average Readers: Average readers are defined as that group performing on the grade level specified by the national norms as reported in the technical manual of the Stanford Achievement Test.

Remedial Readers: Remedial readers are delimited according to Strang's<sup>9</sup> definition, as those who have had normal opportunities for schooling and the capacity to read better, but whose reading performance in a number of reading skills is one or more years below his age or grade level if he is in the primary grades, and two years or more if he is older.

Rural Area: Rural area is defined as those towns consisting of less than twenty-five hundred (2,500) population.<sup>10</sup>

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<sup>9</sup>Ruth Strang. Understanding and Helping the Retarded Reader. Tucson: University of Arizona Press, 1967, p.1.

<sup>10</sup>Oklahoma Employment Security Commission. Special Studies, Census Enumerations. Research and Planning. July 1981.

Cognition: Cognition is defined by Piaget<sup>11</sup> as the ongoing intellectual process of interaction in which adaptation and organization occurs with the environment.

Motivation: Motivation has been identified by Chall and Mirsky<sup>12</sup> as any object or event which causes a person to perform in a specific way.

### Hypotheses

The null hypotheses formulated for this study are as follows:

Ho<sub>1</sub>: There is no statistically significant difference between the listening scores of average students and the listening scores of deficient/remedial students.

Ho<sub>2</sub>: There is no difference between the reading scores of average students and the reading scores of deficient/ remedial students.

Ho<sub>3</sub>: There will be no difference in the listening scores of males and females.

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<sup>11</sup>Jean Piaget. The Origins of Intelligence in Children. New York: International University Press, 1952.

<sup>12</sup>J. Chall and A.F. Mirsky. "The Implications for Education." Education and the Brain. Part II. Seventy-Seventh Yearbook of the National Society for the Study of Education. Chicago: University of Chicago Press, 1978, pp. 371-378.

Ho<sub>4</sub>: There will be no difference in the reading scores of males and females.

Ho<sub>5</sub>: There will be no linear correlation between listening scores and reading scores.

#### Delimitations of the Study

The study will be limited to third, fourth and fifth-grade students residing in Oklahoma and who are currently enrolled in rural school districts. The study will not be generalizable to the total academic population, but applicable only to those students of similar demographic conditions. It will be delimited in terms of those variables the test instrument purports to assess.

#### Assumptions

1. It is assumed that the Durrell Listening-Reading Series is an appropriate instrument to qualitatively analyze the listening and reading scores of remedial/deficient readers in grades three, four and five.
2. It is assumed that the Durrell Listening-Reading Series has been sufficiently standardized and validated to demonstrate its use and precision to assess listening and reading ability.

3. It is assumed that each subject in the study is of average intelligence.
4. It is assumed that the independent environmental factors accompanying each test administration were constant.
5. It is assumed that the various schools from which the subjects were chosen, though independent of each other, contained similar cultural and socio-economic characteristics.

#### Organization of the Study

The introduction to the study, significance of the study, the problem under investigation, hypotheses to be tested, definition of terms, delimitations, assumptions and general organization have been introduced in Chapter I.

A review of the literature related to this study is presented in Chapter II. Specific topics to be included are studies focusing upon cognition as it is related to listening-reading ability, studies emphasizing motivation as it relates to listening-reading ability and studies reflecting the effects of training upon listening-reading ability.

The methodology, procedures, and instruments used to gather the data are described in Chapter III. Also

included in Chapter III will be the rationale for the sample selection and a description of the pilot study.

The findings and an analyses of the data are presented in Chapter IV. Tables depicting the data are included. A summary of the investigation, conclusions and recommendations of the study are discussed in Chapter V.

## CHAPTER II

### REVIEW OF THE LITERATURE

#### Introduction

Research conducted during the Twentieth Century which appears to have contributed notably to the theoretical knowledge of the relationship between listening and academic achievement, specifically reading comprehension, will be categorized. The first category presented will be studies focusing upon the psychological process of cognition as it relates to listening-reading ability. The second category will cover studies emphasizing the sociological component of motivation and its relationship to listening reading ability. Lastly, studies reflecting the effects of the environmental component of training upon listening-reading ability will be considered.

## Cognition

Durrell and Hayes<sup>1</sup> propose that the ability to understand spoken language demonstrates that one has the intelligence and perceptual abilities to handle words and sentences, the bases for all later communication skills. They feel that intelligence tests measure a variety of mental functions which have varying degrees of relationship to reading, but that listening comprehension measures language acquisition, the knowledge of the very same words and sentences which are to appear later in reading.

Anderson and Fairbanks<sup>2</sup> predicate that genetically, words are first encountered and learned in an auditory experience. In the course of reading development within the primary grades, the visual forms of words become associated with their sounds so that a sight vocabulary, based upon a knowledge of words heard, is gradually accumulated. Words learned in the auditory experience, when encountered in reading material, allow for the accumulation of a sight vocabulary which parallels the hearing

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<sup>1</sup>Donald D. Durrell and Mary T. Hayes. Durrell Listening-Reading Series: Manual for Listening and Reading Test, Primary Level, Form OE. New York: Harcourt Brace Jovanovich, 1969.

<sup>2</sup>Irving H. Anderson and Grant Fairbanks. "Common and Differential Factors in Reading Vocabulary and Hearing Vocabulary." Journal of Educational Research 30:317-24, January 1937.

vocabulary. The better the reader the greater the overlap of auditory vocabulary and reading ability skills. Similarly, poor readers possess a greater auditory vocabulary than reading vocabulary.

Dechant<sup>3</sup> further posited that there are varying degrees of ability in listening and these abilities develop sequentially, with the first level being auditory acuity; the second state interpretation and aural assimilation of the nerve stimuli; the highest level being discrimination and retention. Although it is recognized that the ability to listen attentively and critically is generic to all academic success.

Bond<sup>4</sup> found a significant difference between good and poor readers in auditory discrimination and auditory perception. He theorized these handicaps would hinder the development of hearing vocabulary more than reading vocabulary. Yet in spite of the auditory limitations, he found that poor readers recognized more words which were representative of reading material when the words were heard rather than read. Based upon his findings, he further predicated the superiority shown by good

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<sup>3</sup>Emerald V. Dechant. Improving the Teaching of Reading. Englewood Cliffs, New Jersey, Prentice Hall, 1964.

<sup>4</sup>Guy L. Bond. "Auditory and Speech Characteristics of Poor Readers." Teacher's College Contributions to Education. No.657 New York: Teacher's College, Columbia University, 1935, p.48.



readers with average vocabulary scores was due to their knowledge of the more difficult words found on the tests. The more difficult words were likely to have occurred in reading material more than in conversation. Good readers, because of their extensive reading experience, would have encountered the word often in reading although might have never heard the word. Equally, vocabulary scores of poor readers was based upon their knowledge of simple and common words. Although the words occurred frequently in reading material, they were also frequently used in ordinary conversation. Poor readers tended to avoid reading situations, therefore it would be possible for them to have learned more words through hearing than through reading. Logically, Bond concluded, poor readers would then encounter words in their silent reading which they could not recognize visually, although they might understand them in hearing them.

Anderson and Fairbanks<sup>5</sup> investigated the hypothesis that if the hearing vocabulary of poor readers was superior to their sight vocabulary, perhaps their hearing vocabulary could be translated into a sight vocabulary through remedial training. With a sample of two hundred twenty college freshmen, they obtained a correlation coefficient of 0.80 between reading and vocabulary. The

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<sup>5</sup>Irving H. Anderson and Grant Fairbanks. "Common and Differential Factors in Reading Vocabulary and Hearing Vocabulary." Journal of Educational Research 30:317-24, January 1937.

numerical difference between group means for the two measures was ninety on the test of hearing vocabulary and ninety-two on the test of reading vocabulary. It was felt that comprehension was common to both measures, therefore central factors accounted for the close relationship between the two. It appeared to Anderson and Fairbanks that vocabulary ability was a general function which operated independently of the mode of the presentation of the material.

Under the conditions of their experiment, they also found that reading vocabulary was more clearly related to intelligence than was hearing vocabulary. Their data revealed that those students identified as being in the lowest five per cent in reading ability scored higher in hearing vocabulary than in reading vocabulary. In the median and superior groups, however, this relationship was reversed. Anderson and Fairbanks theorized that a reading vocabulary may be acquired of words which a person has never heard unless they have been subvocalized while reading. Mature readers not vocalizing during silent reading, may therefore develop a sight vocabulary which does not duplicate their hearing vocabulary. It was concluded that the median and superior readers made significantly higher scores on words read rather than heard due to their reading knowledge of words of which they did not have an active command.

In an attempt to determine the relationship of reading comprehension and retention to listening comprehension and retention, Young<sup>6</sup> studied two thousand fourth-, fifth-, and sixth-grade children. He found that children do improve in their ability to comprehend through reading throughout the intermediate grades. The development of their reading comprehension ability is paralleled by their ability to comprehend through hearing. Young found no children placing in the highest quarter of one phase of language comprehension and in the lowest quarter of the other.

As a result of his study with five hundred students in grades four through eight, Caughran<sup>7</sup> concluded (1) growth in comprehension through listening showed steady and progressive development in annual increments of mental ages eleven through sixteen; (2) growth in comprehension through listening from one increment period to another was more significant at mental ages thirteen through fifteen; (3) listening resulted in more effective comprehension than did reading from a mental age of ten up

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<sup>6</sup>William E. Young. "The Relation of Reading Comprehension and Retention to Hearing Comprehension and Retention." Journal of Experimental Education 5:30-39 (September 1938).

<sup>7</sup>Alex M. Caughran. "The Effect on Language Comprehension of Three Methods of Presentation." (Ph.D. Dissertation, University of Missouri, 1953) Dissertation Abstracts, XIII, Part 2, No.6, 1113 (1953).

to an approximate mental age of thirteen and one-half; (4) reading resulted in more effective comprehension than did listening from an approximate mental age of thirteen and one-half through mental age sixteen; (5) growth in reading comprehension was more rapid than growth in listening comprehension from mental age twelve through fifteen; (6) for mental ages eleven through fifteen, reading-listening was the most effective means of comprehension.

The study concluded by Caughran tended to demonstrate that auditory presentations were more successfully used with younger children, however, at the higher age levels, reading or a combination of reading-listening was the superior approach. Research completed by Many<sup>8</sup> confirmed Caughran's findings. Many reported that prior to a mental age of ten, children learn more and remember better through listening than reading.

Research studies in listening have been predicated upon the assumptions that listening ability can be measured and that effective measuring instruments exist. The investigation of Hollingsworth and Devine<sup>9</sup> was based

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<sup>8</sup>W.A. Many. "Is There any Difference - Reading vs Listening?" Reading Teacher 1965, 19:110-113.

<sup>9</sup>Paul M. Hollingsworth. "Can Training In Listening Improve Reading?" Reading Teacher, 18:121-23, November 1964; Thomas G. Devine. "The Neglected Dimension of the Reading Program." Improvement of Reading Through Classroom Practice, International Reading Association Conference Proceedings. (Edited by J. Allen Figurel) Newark, Del., 1964. Vol. 9, pp. 119-120.

upon these assumptions. Devine believed that the same higher mental processes underlie both reading and listening, if one could be trained to read they could also be trained to listen. Even as he held this theory he did not discard the idea that the tests used to establish correlations reported by Ross and Brown<sup>10</sup> could be measuring something other than, or in addition to, listening ability. Ross had reported a coefficient of 0.74 and Brown had found coefficients of 0.82 at the fourth-grade level, of 0.76 at the fifth-grade level, and 0.77 at the sixth-grade level.

Neuman<sup>11</sup> designed a project to try to answer the questions: can auditory skills be taught and if they can, do they produce gains in reading comprehension? Post-test results did show that auditory training produced superior growth in auditory skills; however, these gains did not produce better reading comprehension.

Winter<sup>12</sup> designed her study to evaluate not only the relationship between reading and listening comprehension, but also to evaluate the relationship between

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<sup>10</sup>Ramon Ross. "A Look at Listeners." Elementary School Journal 64:369-72, April 1964; Charles T. Brown. "Three Studies of the Listening of Children." Speech Monographs 32:129-138, June 1965.

<sup>11</sup>Susan B. Neuman. "Effect of Teaching Auditory Perceptual Skills on Reading Achievement in First Grade." Reading Teacher, January 1981, pp. 422-6.

<sup>12</sup>Clotilda Winter. "Listening and Learning." Elementary English XLII, October 1966, pp. 569-72.

listening and intelligence and listening and total school achievement. Selecting over five hundred fourth-, fifth-, and sixth-grade students to participate, they were then given the Sequential Tests of Educational Progress, Form 4A as well as the SRA Achievement Test. The listening scores were correlated with the achievement scores to determine the existent relationship. The California Test of Mental Maturity scores were correlated with the listening scores to determine the amount of relationship between listening and intelligence. She reported:

The relationship between listening and intelligence was found to be moderate and highly significant (.01 level). This seems fairly consistent with findings, but indicates that many factors other than intelligence need to be taken into consideration when children's listening skills are examined.

She also reported that moderate but highly significant relationships were found between reading comprehension, listening and reading vocabulary. She concluded that to a moderate degree the child who is a good listener will be a good reader.

Research which collaborated Winter's finding was done by Reeves, Butler, Caccavo and Breiter.<sup>13</sup>

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<sup>13</sup>Rachael and Joanne Reeves. "A Study of the Relation Between Listening Performance and Reading Performance of Sixth-Grade Pupils as Measured by Certain Standardized Tests." (Ed.D. Dissertation, University of Alabama, 1968) Dissertation Abstracts International 29, 4196A (1968); Joseph Butler. "Comprehension of Listening Abilities, Categorized as Good and Poor, of Inner-City Children

Breiter found that children of above average intelligence comprehended significantly more by reading than by listening, but that children of average and below intelligence did not.

Butler's study of sixth-grade students concurred. Using the Sequential Tests of Educational Progress, Listening Test and the Stanford Achievement Test as well as the Otis-Lennon Mental Ability Test, he found that good listeners tend to be higher in intelligence than poor listeners. In a similar direction, but more in depth, was a study done by Caccavo. Its purpose was to determine the relationship between the level of listening comprehension and intelligence, as measured by individual tests, and to determine if the level of listening comprehension could be used as a predictor of the level of intelligence. Caccavo found a strong positive correlation between listening age and the WISC mental age for the total group of sixty subjects ( $r=.79$ ).

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in the Sixth-Grade." (Ed.D. Dissertation, Indiana University, 1970). Dissertation Abstracts International 31, 5655A (1971); Emil Caccavo. "The Listening Comprehension Level of an Informal Reading Inventory as a Predictor of Intelligence of Elementary School Children." (Ph.D. Dissertation, New York University, 1968) Dissertation Abstracts International 30, 164A (1969); Joan Catherine Breiter. "A Comparison of Reading and Listening as Techniques of Instruction in the Social Studies at the Sixth-Grade Level." (Ed.D. Dissertation, Colorado State College, 1968) Dissertation Abstracts International 29, 2429A (1969).

Kreamer<sup>14</sup> sought to determine if a listening comprehension test was as valid a predictor as a readiness test, a group intelligence test or an individual intelligence test. His instruments were the Metropolitan Readiness Test, the Stanford-Binet Intelligence Scale, the SRA Primary Mental Abilities Test and the Durrell Listening-Reading Series. The Metropolitan Readiness Test was found to be the best predictor of vocabulary with the Stanford-Binet Intelligence Scale as the best predictor of comprehension. The Durrell Listening-Reading Series although showing a lower correlation, was not significantly less effective as a predictor on either the vocabulary or comprehension. The conclusion drawn from Kreamer's study was that listening comprehension tests can be used effectively to predict first grade reading achievement as well as either the Stanford-Binet Intelligence Scales or the Metropolitan Readiness Test.

#### Motivation

Several studies have explored the sociological factors which affect the listening-reading process.

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<sup>14</sup>Thomas Lawrence Kreamer. "Listening Comprehension as a Predictor of First Grade Reading Achievement." (Ed.D. Dissertation, McNeese State University, 1973) Dissertation Abstracts International 34, 1487A (1974).



Larsen and Feder<sup>15</sup> undertook a study to "determine whether or not certain psychological abilities differentiate between the processes involved in reading and listening comprehension." They reported the superiority of performance in reading comprehension over that in hearing comprehension was found to be independent of the level of difficulty of the material. They concluded that those low in scholastic aptitude and general reading ability comprehended almost as well by reading as by listening, whereas the median groups showed a slight superiority in favor of reading comprehension. The group high in scholastic aptitude showed a definite superiority in reading comprehension.

A study conducted by Goldstein<sup>16</sup> substantiated Larsen and Feder's work. Goldstein pointed out that the less intelligent groups favored the listening mode of presentation and exhibited greater success on easy than hard material. He concluded that passages which are equivalent for reading may not be equivalent for listening.

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<sup>15</sup>Robert P. Larsen and D.D. Feder. "Common and Differential Factors in Reading and Hearing Comprehension." Journal of Educational Psychology, XXI, 241-252 (April 1940).

<sup>16</sup>Harry Goldstein. "Reading and Listening Comprehension at Various Controlled Rates." Bureau of Publications Teacher's College, Columbia University, 1940.

The effect of age was studied by Farrow<sup>17</sup> who noted that objective scores on listening tests increase with age while Brown<sup>18</sup> studied the effect of televiewing upon elementary students. He found that the impact of television had increased listening scores; although the number of hours spent viewing appeared to have no relationship to the listening scores. The listening scores of poor and good readers were compared by Ross<sup>19</sup> to such variables as personality, personal and social adjustments and socioeconomic factors. His conclusion was that there existed a high positive correlation between listening and all variables except personality.

Van Valkenburg<sup>20</sup> conducted a "listening-socio-cultural" investigation across grade levels. It was noted that students classified as "low socio-economic status" gained more from the listening experiences than did students from the "high socioeconomic status" classification. Van Valkenburg reported the "low socioeconomic status"

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<sup>17</sup>Vern Leslie Farrow. "An Experimental Study of Listening Attention at the Fourth, Fifth and Sixth-grade." (Ph.D. Dissertation. Eugene: University of Oregon, 1963) Dissertation Abstracts International 24:3146.

<sup>18</sup>Charles T. Brown. "Three Studies of the Listening of Children." Speech Monographs 32:129-38, June 1965.

<sup>19</sup>Ramon Ross. "A Look at Listeners." Elementary School Journal 64:369-72, April 1964.

<sup>20</sup>J. Van Valkenburg. "Learning Through Listening: Implications for Reading." Unpublished Dissertation. The University of Rochester, 1968.

students were able to learn many of the reading skills through training in listening. He felt that to some degree, listening lessons were effective in overcoming the influence of cultural deprivation.

Ingersoll and Johnson<sup>21</sup> sought to clarify the relationship among personality traits and reading comprehension. They discovered that subjects who rated themselves as being controlled by external factors fared better on cloze type tests than on multiple choice tests. Subjects rating themselves as possessing internal locus control performed better on multiple choice tests.

Franklin<sup>22</sup> was able to further relate externality to lower socioeconomic status, minority group membership and physical handicaps; while Buck and Astrin<sup>23</sup> concurrently demonstrated that internals achieve higher academically, therefore perform at a higher level of reading, than externals. Nowicki and Segal<sup>24</sup>

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<sup>21</sup>Gary M. Ingersoll and Patricia Johnson. "Attitudes and Reading Comprehension: a Preliminary Investigation." Reading Improvement, Fall 1974, 11:52-56.

<sup>22</sup>R.D. Franklin. "Youth's Expectancies About Internal Versus External Control of Reinforcement Related to N. Variables." (Ph.D. Dissertation, Purdue University, 1973) Dissertation Abstracts International 24, 1684A (1963).

<sup>23</sup>U.R. Buck and H.R. Astrim. "Factors Related to School Achievement in an Economically Disadvantage Group." Child Development 1971, 42:1813-1826.

<sup>24</sup>S. Nowicki, Jr. and W. Segal. "Perceived Parental Characteristics, Locus of Control Orientation, and Behavioral Correlates of Locus of Control." Developmental Psychology 1974, 10:33-37.

found female internality related to high grade point average, but to low achievement scores, leading to the conclusion that females perceive the importance of grades, learn to cooperate with teachers, but do not truly value academic excellence.

Studies relating locus of control to instructional style have also produced discrepant results. According to Allen and Harshberger's<sup>25</sup> theory, the internally oriented student should perform better than the externally oriented student under independent learning situations. However, Pentecoste<sup>26</sup> found that black, bright, under-achieving students who had external orientations performed best in an individualized reading course.

In an effort to identify children with learning problems, Black<sup>27</sup> studied the relationship between self-concept and reading achievement. He found a high negative correlation between self-concept and achievement which crossed all ages and grade levels; contrarily,

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<sup>25</sup>A.R. Allen and M. Harshberger. "Student Locus of Control and Teaching Style in Relation to College Reading Improvement." Reading Improvement 1977, 14:104-108.

<sup>26</sup>J. Pentecoste. "An Experiment Relating Locus of Control to Reading Success for Black Bright Under-achievers." Reading Improvement 1975, 12:81-86.

<sup>27</sup>William F. Black. "Self-Concept as Related to Achievement and Age in Learning-disabled Children." Child Development 1974, 45:1137-1140.

Rees<sup>28</sup> studied one hundred and sixteen children who had been referred to the Reading Clinic at a Midwestern University. She found that the clinic children had positive self-concepts, slightly higher than those of the normative population. Self-concept was not found to be related to reading retardation; nor was race, intelligence or socioeconomic status positively correlated with self-concept. She did find that the higher the intelligence, the higher the self-regard. Talan's<sup>29</sup> study supported Rees' findings. However, she found that self-concept did not correlate significantly with reading achievement or reading attitude.

Contrarily, researchers Butkowsky and Willows<sup>30</sup> found that similar characteristics were found in children with reading difficulties and children possessing learned helplessness.

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<sup>28</sup>Majorie E. Rees. "Factors Related to the Self-Concept of Children Enrolled in a Reading Clinic." (Ph.D. Dissertation, University of Missouri, Kansas City, 1979.) Dissertation Abstracts International 40, 5385A (1980).

<sup>29</sup>Carole Smithers Talan. "A Correlative Analysis of Reading Achievement, Reading Attitude, Home Literary Environment and Self-Concept in the Middle School." (Ph.D. Dissertation, University of Tennessee, 1980) Dissertation Abstracts International 41, 2040A (1980).

<sup>30</sup>Irwin S. Butkowsky and Dale M. Willows. "Cognitive-Motivational Characteristics of Children Varying in Reading Ability: Evidence for Learned Helplessness in Poor Readers." Journal of Educational Psychology, Vol. 72:408-22, 1980.

Equivocally, Lawrence<sup>31</sup> proposed that retarded readers would be helped as much or more by improving their self-esteem through counseling as they would by remedial reading instruction. In a series of studies, using junior age children, he investigated four groups of children deficient in reading skills. One group received only counseling, one group received counseling and remedial instruction, one group received only remediation and the fourth group received nothing. He found that the students who received only counseling made the greatest gains in reading followed by those who received both counseling and remedial instruction, the third group in the hierarchy of gains was the group receiving remedial instruction only, while the group making the least gain was the group receiving no help.

Scott and Seifert as well as Sciara and Jantz<sup>32</sup> studied the impact of family size and father absence of lower socioeconomic white children on reading achievement. They reported that children from small

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<sup>31</sup>Denis Lawrence. "Remedial Reading and Counseling." Reading (UKRA), March 1975, 9:12-17.

<sup>32</sup>Ralph Scott and Keith Seiffert. "Family Size and Learning Readiness Profiles of Socioeconomically Disadvantaged Preschool Whites." The Journal of Psychology January 1975, 52:30-36; Frank J. Sciara and Richard K. Jantz. "Father Absence and its Apparent Effect on the Reading Achievement of Black Children From Low Income Families." Journal of Negro Education Spring, 1974, 43:221-27. (Secondary Source: Reading Research Quarterly Number 3, 1975-76, pp. 379-383).

families scored higher on tests which assessed learned skills than did children from large families and that pupils from father present homes had higher reading scores than did pupils from father absent homes. Callaway, Jerrolds and Gwaltney<sup>33</sup> expanded the study to include the relationship of parental occupation to reading achievement. No significant differences in achievement were apparent between groups whose fathers and mothers worked and groups whose fathers or mothers did not work. Occupational status of the principle wage earner also appeared to be unrelated to reading and language achievement.

### Training

The first studies in the area of listening, were recorded by Munsterberg and Bigham.<sup>34</sup> Their investigation with adults reported the superiority of an auditory-visual combination for maximum learning. Kirkpatrick<sup>35</sup> extended Munsterberg's research by expanding the age level of the subjects from third grade through

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<sup>33</sup>Bryon Callaway, Bob W. Jerrolds and Wayne Gwaltney. "The Relationship Between Reading and Language Achievement and Certain Sociological and Adjustment Factors." Reading Improvement Spring, 1974, 11:19-26.

<sup>34</sup>Hugo Munsterberg and J. Bigham. "Studies from the Harvard Psychological Laboratory." The Psychological Review I, 34-38 (1894).

<sup>35</sup>Edwin A. Kirkpatrick. "An Experimental Study of Memory." Psychological Review I (1894) 603-09.

college. The results of his findings were extended to include the tactile as well as the auditory and visual retention. He found that concrete objects were remembered better than the written name of the object and the written name was remembered better than the spoken name of the objects.

An inquiry conducted by Quantz<sup>36</sup> sought to answer the question, "Are persons who are distinctively of the visual type more rapid or more intelligent readers than those of the auditory type, or less so?" He compared eye and ear learning by testing the auditory and the visual span as well as the ability to reproduce the thoughts of two selections, one of which was read to the subject, the other read silently by him at the same time. Quantz concluded that actual results showed that the addition of a second sensory process was not an advantage for individuals who were distinctively of one type, it was in many cases an actual hindrance. He noted that slow readers had a lower memory span than rapid readers.

Interest in the relative values of visual and auditory presentations was also evidenced by studies made in Europe. These studies yielded inconsistent and conflicting results. Some of the studies appeared to favor an oral procedure over the visual; others, a visual over

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<sup>36</sup>J.O. Quantz. "Problems in the Psychology of Reading." Psychology Review Monographs II, pp. 1-51 (December, 1897).



the oral; while still others showed superiority for a combination of visual, oral and motor procedures.

Most of the early studies were based upon small groups of adults and university students. The resultant consensus was that listening, as compared to reading, seemed more effective in early childhood than for older subjects.

Bloomfield and Bernhardt<sup>37</sup> defined reading as a correspondence of sound and visual symbols, conversely, Clymer<sup>38</sup> regarded reading as a four-part process - decoding, understanding, evaluating and assimilating. Defining listening appeared to be equally difficult. Harwood<sup>39</sup> described listening as receiving a signal responding to it, interpreting it and understanding; while Rankin<sup>40</sup> chose to only list the subskills necessary for good listening.

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<sup>37</sup>Leonard Bloomfield and Clarence Barnhardt. Let's Read: A Linguistic Approach. Detroit, Michigan, Wayne State University Press, 1961.

<sup>38</sup>Theodore Clymer. "What is Reading?" Elementary School Notes, Language Arts Issue, Boston Ginn, 1967.

<sup>39</sup>Kenneth Harwood. "A Concept of Listenability." Western Speech (1950) Vol. 14, pp. 10-12.

<sup>40</sup>P.T. Rankin. "Listening Ability: Its Importance, Measurement and Development." Chicago School Journal 12 (1930) 177-179.

Fries<sup>41</sup> and Carroll<sup>42</sup> have pointed to the similarities between reading and listening, theorizing that reading is in essence only transferred listening, i.e., reading is listening when the speaker is present in written form only.

Smith<sup>43</sup> goes so far in pointing to the differences as to say that written language could be regarded as a manifestation of a language independent from the spoken language. Wilkinson<sup>44</sup> views reading comprehension from yet another perspective. He defines it as a holistic psychological process with three components: recognition, comprehension and memory. Despite the opposing definitions, much of the Twentieth Century research has been concerned either directly or indirectly with some phase of instruction in listening. It has further supported the assumption that listening ability can be improved with instruction.

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<sup>41</sup>Charles Fries. Linguistics and Reading New York: Holt, Rinehart and Winston, 1962.

<sup>42</sup>John Carroll. "The Nature of the Reading Process." Theoretical Models and Processes of Reading, Harry Singer and Robert Ruddell, Eds. Newark, Del.: International Reading Association, 1970.

<sup>43</sup>Frank Smith. Understanding Reading. New York: Holt, Rinehart and Winston, 1971.

<sup>44</sup>Alex Cherry Wilkinson. "Children's Understanding in Reading and Listening." Journal of Educational Psychology, 1980, 72:561-74.

A representative study of the teachability of listening was done by Fawcett,<sup>45</sup> who created and used exercises to develop listening ability at the fourth-, fifth-, and sixth-grade levels. Pre- and post-scores on the Sequential Test of Educational Progress: Listening Comprehension showed that students who received listening instruction scored significantly higher on the post listening test. Lundsteen<sup>46</sup> investigated the effects of instruction on critical listening. Critical listening skills were isolated and taught. She found that students receiving instruction showed a significant gain over those students not receiving critical listening instruction. This type of study, as well as studies done by Edgar, Hollow, Hogan, Kellog, Lunsteen, Penfield and Pratt<sup>47</sup>

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<sup>45</sup>Annabel Elizabeth Fawcett. "The Effect of Training in Listening Upon the Listening Skills of Intermediate Grade Children." (Ph.D. Dissertation, University of Pittsburgh, 1963) Dissertation Abstracts International 25, 7108-7109A (1965).

<sup>46</sup>Sara Wynn Lundsteen. Teaching Abilities in Critical Listening in the Fifth and Sixth Grades. (Ph.D. Dissertation. Berkeley: University of California, 1963.) Dissertation Abstracts International 24:5247-8; No. 12, 1964.

<sup>47</sup>K.F. Edgar. "The Validation of Four Methods of Improving Listening Ability." (Ph.D. Dissertation, University of Pittsburgh, 1961) Dissertation Abstracts International 22:1084A (1961); M.K. Hollow. "An Experimental Study of Listening at the Intermediate Grade Level." Unpublished Doctoral Dissertation, Fordham University, 1955; U. Hogan. "An Experiment in Improving Listening Skills of Fifth and Sixth-Grade Pupils." Unpublished Master's Thesis, University of California, 1953; R.E. Kellogg. "A Study of the Effects of a First Grade Listening Instructional Program Upon Achievement in Listening

support Devine's<sup>48</sup> theory that general listening ability is positively affected by instruction.

Duker<sup>49</sup> lists studies of how the teaching of reading or listening skills tend to improve the other skill. The results tend to affirm Taba's<sup>50</sup> thesis that there is a tendency to transfer cognitive skills. Duker also reports that studies support the hypothesis that listening tests provide a more accurate prediction of reading potential than do intelligence tests.

The more recent studies of Sticht<sup>51</sup> tend to confirm these earlier findings. Sticht, et al., in an extended study found the same cognitive processes at work

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and Reading." (USOE Cooperative Research Project Number 6-8468). San Diego, California: Department of Education, San Diego County, 1966; S. Lundsteen. "Teaching and Testing Critical Listening in the Fifth and Sixth Grades." Elementary English, 1964. 41:743-747; D.A. Penfield. "Learning to Listen: A Broad Demonstration Study." Paper presented at the American Educational Research Association Conference, 1970, Minneapolis; L.E. Pratt. "The Experimental Evaluation of a Program for the Improvement of Listening in the Elementary School." (Ph.D. Dissertation, University of Tulsa, 1953) Dissertation Abstracts International 13:118A (1953).

<sup>48</sup>Thomas G. Devine. "Listening." Review of Educational Research. (April 1967) pp. 152-158.

<sup>49</sup>Sam Duker. "Listening and Reading." Elementary School Journal 1965, 65:321-29.

<sup>50</sup>Hilda Taba. Curriculum Development. New York: Harcourt, Brace and Jovanovich, 1962.

<sup>51</sup>Thomas Sticht and others. Auding and Reading: A Developmental Model Alexandria, Va.: Human Resources Research Organization, 1974.

in both listening and reading and, therefore, a high correlation between the two.

Mosenthal<sup>52</sup> used syllogisms in written and aural form to test differences in comprehension. His conclusion, essentially the same as the others, was that a common linguistic competence underlay both silent reading and oral language processing.

Smiley<sup>53</sup> and others investigated the importance of decoding skills as an explanation of poor reading performance. Selecting seventh-grade students from a federally funded remedial reading class, they found the poor readers had as much difficulty in recall after listening as after reading. Because the poor readers responded so inadequately to the recall questions, the same material and recall questions were presented to average first graders. The first grade children had essentially the same responses as the remedial seventh graders. Smiley's conclusion was "poor readers seem to be poor listeners."

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<sup>52</sup>Peter Mosenthal. "Psycholinguistic Properties of Aural and Visual Comprehension as Determined by Children's Abilities to Comprehend Syllogisms." Reading Research Quarterly Vol. 12, No. 1 (1976-1977) pp. 55-92.

<sup>53</sup>Sandra Smiley. "Recall of Thematically Relevant Material by Adolescent Good and Bad Readers as a Function of Written Versus Oral Presentation." Journal of Educational Psychology Vol. 69 (1977) pp. 381-87.

A similar experiment was conducted by Guthrie and Tyler.<sup>54</sup> They studied comprehension difficulties in listening in poor readers. The students were asked to read eight sentences which had been developed from a word list of sixty-four words, which had previously been mastered by each student. The poor readers were worse in reading than in listening. Guthrie and Tyler concluded that knowing the words had little if any impact upon the level of comprehension. This conclusion supports the work done by Oaken, Weiner and Cromer,<sup>55</sup> who found that students taught to identify all the words in a paragraph did not understand the paragraph any better than comparable students not given training.

Although all input received through the ear is commonly thought of generically as listening, it has been noted that listening is multi-dimensional, requiring different types of attending behavior, cognitive input, and responses according to given expectations. Weaver and Rutherford<sup>56</sup> observe that there exists the possibility

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<sup>54</sup>John Guthrie and S. Jane Tyler. "Psycholinguistic Processing in Reading and Listening Among Good and Poor Readers." Journal of Reading Behavior, Vol. 8 (1976) pp. 415-425.

<sup>55</sup>Robert Oaken, Morton Weiner and Ward Cromer. "Identification, Organization and Reading Comprehension for Good and Poor Readers." Journal of Educational Psychology Vol. 62 (1971) pp. 71-79.

<sup>56</sup>S.W. Weaver and W L. Rutherford. "A Hierarchy of Listening Skills." Elementary English, 1974, 51:1146-1150.

of developing listening efficiency through placing demands upon the listener.

The only conclusion which has consistently been reported and unanimously agreed upon by Bond, Chall, Roswell, Blumenthal, de Hirsch, Jansky, Langford, Durrell, Murphy and Harrington<sup>57</sup> is that the child who is unable to hear and distinguish sounds will have difficulty in reading.

#### Summary

The review of the literature included in this chapter provided background information and research findings relative to the factors of cognition, motivation and environment. While the cumulative effect of the preceding studies is to support the hypothesis that reading and listening involve the same skills, other studies show that weekly training in some area of listening comprehension

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<sup>57</sup>Guy L. Bond. "Auditory and Speech Characteristics of Poor Readers." Teacher's College Contributions to Education, No. 657, New York: Teacher's College, Columbia University, 1935, p. 48; Jeanne Chall, Florence G. Roswell and Susan Hahn Blumenthal. "Auditory Blending Ability: A Factor in Success in Beginning Reading." Reading Teacher (November 1963) pp. 113-118; Katrina de Hirsch, Janette J. Jansky and William F. Langford. Predicting Reading Failure. New York: Harper and Row, 1966; Donald D. Durrell and Helen Murphy. "The Auditory Discrimination Factor in Reading Readiness and Reading Disability." Education 73:556-60 (May 1953); Sister Mary Jane Harrington and Donald D. Durrell "Mental Maturity Versus Perceptual Abilities in Primary Reading." Journal of Educational Psychology 46:375-80 (October 1955).

had no impact upon reading comprehension. Furthermore, listening comprehension tests may not test listening skills but verbal comprehension, i.e., they do not test the listening process but understanding of what is heard.



## CHAPTER III

### DESIGN AND PROCEDURES

The material in this chapter is divided into five sections. The first section describes the results of the pilot study; the methodology for subject participation, the utilization of the Reading Teacher and the administration of the Durrell Listening - Reading Series. Section two is concerned with the size and nature of the sample. A description of the instruments used in this study is given in the third section. The fourth section presents the methodology involved in the collection of the data. The fifth section describes the procedures used in the analysis of the data.

#### The Pilot Study

The pilot study was conducted during the weeks of August 2-3, August 30 and September 6, 1982, at Washington Elementary School, Washington, Oklahoma.

Four third-graders, eleven fourth-graders and ten fifth-graders for a total of twenty-five remedial reading students participated. To obtain an equal number of average students from each of the involved grades, the following procedure was used:

1. From the total enrollment of grade three, minus all special (EMH, LD and gifted) children and the remedial reading students,
2. Names were assigned to individual slips of paper.
3. The slips were divided according to the sex of the child.
4. Slips were randomly drawn from each category until the required number of boys and girls had been selected to fulfill N for that grade.
5. Identical procedures were utilized for fourth and fifth-grade students.
6. Each student was assigned a code identity. All names were omitted from the test booklets. The student was identified to the researcher by code only.
7. Remedial students were identified as "Special Boy/Girl" plus grade plus an identification number. Average students were identified as "Boy/Girl", grade, and identification number.

Each student was administered the Durrell Listening-Reading Series, Intermediate level, Form DE. The examiner was a certified reading teacher. It was necessary to use illustrated instructions with all third- graders. The examiner illustrated on the chalk board with a grid containing the categories for animals, places, people, and buildings. The examples utilized were "dog, Jimmy, Oklahoma City and cafeteria." Two monitors were employed to assist the subjects on marking in the correct space on the answer sheet. Older students also exhibited a need for assistance on marking their responses in the correct answer space.

The examiner varied from administration procedures by scheduling the tests for four equal time periods instead of two. Class periods for remedial students at Washington are thirty minutes. Administration time for each session is forty minutes; therefore the examiner divided each part into two sessions, using four days for the total examination rather than the designated two days. As a result of the elongated scheduling, more than seven days lapsed between the listening session and the reading session for some of the subjects.

Each test booklet was hand scored by the researcher.

The following recommendations were developed from the data gathered in the pilot study.

1. The examiner use illustrations in conjunction with the oral instructions given in the technical manual to aid the subjects in locating the correct space for recording their responses.
2. The researcher administer the tests instead of the reading teacher.
3. That all (remedial and average) participating students from one school be tested together in one listening session and one reading session.

The pilot study was undertaken in order to make a thorough check of the testing instrument for any unforeseen problem that might be presented during its administration. The researcher determined: (1) that with the inclusion of illustrations in the test instructions, less errors occurred due to lack of comprehension; (2) that with the researcher administering the instrument, the probability of administrative rescheduling was less; (3) that with a single grouping of the participating subjects, less class interruptions were required.

#### The Sample

The subjects for this research study were chosen from nineteen hundred thirty-nine students who were

enrolled in the public schools of five school districts in Oklahoma.

Remedial readers were identified by their performance on the Gates MacGinitie Reading Test administered to all students during the first week of the fall semester, 1982. One hundred twenty students who scored below their grade placement were then contacted for further testing for this investigation. These students became one hundred nineteen of the subjects for this research.

Random numbers were assigned to all the remaining third-, fourth-, and fifth-graders in the participating schools. From the assigned numbers, an equal number of students were selected and matched with the remedial student by grade and sex. They also participated in further testing for this research. These students complete the total of two hundred thirty-eight subjects involved in this study.

#### Description of Instrument

The instrument used in this study was the Durrell Listening-Reading Series, Intermediate Level, Form DE. The instrument is a group administered test consisting of two subtests; listening and reading. The tests were designed to measure the student's ability to understand both spoken and written language and to compare the

two abilities. The parallel listening and reading tests are matched for content, difficulty, item type and administration procedure. Both the listening and reading tests contain vocabulary and comprehension subtests, each of which is accompanied by separate norms and by a table which compares the scores on the listening and reading tests.

Bormuth<sup>1</sup> stated "The content validity of the Durrell Listening-Reading Series is outstanding among standardized vocabulary and comprehension tests. The test user may interpret a student's score as representative of his ability to cope with the language in instruction." At each grade level, Grades 1 to 9, all forms are equal for both the listening test and the reading test. The average cumulative scores for all forms of the Listening Test are within one point of the individual raw score; the same is true for the Reading Test. Through selecting vocabulary words representative of each class and section of Roget's Thesaurus, a reasonable balance was assured. There was no attempt to analyze different types of mental processes in relation to reading and listening.

The Durrell Listening-Reading Series was standardized on 22,247 students in eight regions of the United

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<sup>1</sup>Bormuth, John R. "Tests and Reviews: Reading - Miscellaneous." The Seventh Mental Measurements Yearbook, pp. 1133-37.

States. The participating school systems conformed to the 1960 census figures for the national population with regard to the two socioeconomic indexes known to be related to educational achievement; median family income and median number of years of schooling completed by persons twenty-five years of age or older.

Durrell<sup>2</sup> reports the split-half (odd-even) reliability coefficients of .92 for grades three, .93 for grade four and .94 for grade five as corrected by the Spearman-Brown Phrophecy Formula, and the reliability coefficients of .93 for grades three and four and .94 for grade five as obtained using Kuder-Richardson Formula 21; standard error of measurement is also reported for each grade. The coefficients are reported by grade by subtest and total. Both coefficients concern the homogeneity of content or internal consistency of the tests. They are based upon the total standardization sample. Durrell further reports the reliability of the differences between listening scores and the reading scores. They too, are based upon the total sample.

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<sup>2</sup>Durrell, Donald D. Durrell Listening-Reading Series, Intermediate Level, Form DE. Technical manual for listening and reading tests. New York: Harcourt, Brace, Jovanovich, Inc. 1970, p. 11-19.

## Method

### Test Administration and Monitoring the Study

An individual meeting was held with each teacher who assisted with the study for the purpose of coordinating the testing sessions which were to be used in the collection of the data. Four classroom teachers, three remedial teachers and one Chapter I teacher, all of whom are certified to teach reading in the State of Oklahoma, participated in the study. The purpose and use of the instrument as it relates to the theory of the study was discussed by the investigator. Copies of the test and instruction manual were provided. Conversations with the participating teachers were again initiated by the researcher on the two days designated for the administration. The researcher administered both the listening and reading portions of the instrument, while the cooperating teachers were utilized as monitors.

Coordinating efforts were handled by the researcher, who obtained permission from both the superintendent of each school district and the building principal in order that the Reading Teacher and the designated students be allowed to participate in this study.



The researcher administered the Durrell Listening-Reading Series, Intermediate Level, Form DE to all subjects. The subjects had previously been identified as remedial or average by their performance on the Gates MacGinitie Reading Test.

All subjects, average and remedial, grades three, four and five were combined for one administration of the listening test and one administration of the reading test. During the listening test, the examiner asked each student to relate the spoken word to one of four categories in a cluster. The category words constituting the options in each cluster were illustrated by pictures to aid the subject in their meaning. In the paragraph comprehension test, the passages compared or contrasted two people, places or things. Each passage was followed by statements which the examinee was asked to classify as true of the one, true of the other, true of both or information not given. In the listening test, the option words in both subtests were read aloud by the examiner, allowing the student to be tested only on his comprehension of the spoken items. The Reading test had the same format as the Listening test, but different content.

All of the test booklets were hand scored by the researcher.

## Analysis of Pilot Data

The data generated by the pilot study was not initially analyzed as the primary purpose of the pilot study was to determine the appropriateness of the administrative procedures of the instrument. However, at a later date, the data were nested within the comprehensive sample and analyzed by means of an analysis of variance, utilizing a .05 level of significance for rejection of the null hypotheses.

### SUMMARY

A pilot study was conducted in the fall semester of 1982 to determine the appropriateness of the instrument to be used in the study. Twenty-five remedial third-, fourth-, and fifth-grade students were selected to participate in the pilot study. An equal number of students who had no reading difficulties were selected and paired with the remedial students by sex and grade. The same procedure was utilized for the totality of the sample of two hundred thirty-eight students participating in this research.

The data generated by the pilot study were not initially analyzed as an entity. Subsequently, the data were nested within the comprehensive sample and analyzed by means of analysis of variance. Analysis and interpretation of this data will be presented in Chapter IV.

## CHAPTER IV

### ANALYSIS AND INTERPRETATION OF DATA

The purpose of this study was to investigate the relationship of the listening-reading comprehension scores of average students to the listening-reading comprehension scores produced by students classified as deficient/remedial readers. The raw scores of two hundred thirty-eight third-, fourth-, and fifth-grade rural Oklahoma students generated both the listening scores and the reading scores. Scores derived from the Reading Comprehension portion of the Durrell Listening-Reading Series were utilized to illustrate the relationship within each student's reading-listening comprehension.

The null hypotheses formulated for this study tested the overall effect of sex with the overall relationship between listening comprehension and reading comprehension for average and deficient/remedial readers. Descriptive statistics were computed for the main effect

of the independent variables of sex and reading ability upon the dependent variables of reading scores and listening scores. Included within the total sample were fifty students who participated in the pilot study to ascertain the adequacy of the testing procedures. The Statistical Analysis Systems package and the General Linear Model were utilized to compute a non-orthogonal one-way analysis of variance (ANOVA) for comparing group means to determine that members of the pilot study were members of the same population which represented the larger sample. The procedure yielded an F ratio of .45 ( $p > .50$ ) for listening scores and an F ratio of .13 ( $p > .7232$ ) for reading scores. It was concluded that no difference existed between the pilot group and the larger sample. Therefore, the pilot group was included as a part of the total analysis. The .05 level of significance was adopted for rejection of the null hypotheses.

#### Testing Hypotheses Ho<sub>1</sub> - Ho<sub>4</sub>

A two-way analysis of variance (ANOVA) using sex and grade as independent variables was used to test hypotheses Ho<sub>1</sub> - Ho<sub>4</sub> which are:

Ho<sub>1</sub>: There is no significant difference between the listening scores of average students and the listening scores of deficient/remedial students.

Ho<sub>2</sub>: There is no significant difference between the reading scores of average students and the reading scores of deficient/remedial students.

Ho<sub>3</sub>: There are no significant differences in the listening scores of males and females.

Ho<sub>4</sub>: There are no significant differences in the reading scores of males and females.

No F values for the difference between the listening scores of average and deficient/remedial readers and the reading scores of average and deficient/remedial readers were significant at the .05 level of significance. Therefore, hypotheses Ho<sub>1</sub> and Ho<sub>2</sub> are rejected. F values for the difference between the listening scores and reading scores of males and females were not significant at the .05 level of significance; consequently, Ho<sub>3</sub> and Ho<sub>4</sub> failed to be rejected. These data are included in Tables I and II.

Table I depicts the listening-reading score means both by sex and reading ability. N is quantified with eighty-eight females and one hundred fifty males, revealing twenty-six percent more males designated as deficient readers than females. The mean reading score for males was computed as 61.2 compared with 60.4 for the females.

The mean listening score for males, 75.1, exceeded the mean female listening score, 72.2.

Table I further represents the mean reading score for the average reader to be 73.3 contrasting 49.4 for the deficient/remedial reader. A similar, yet lesser differential occurred in the listening scores for both average and deficient readers. Average readers mean listening scores yielded 81.4 while deficient/remedial readers mean listening scores registered 67.3.

Table II, using two two-way analyses of variance, tested the independent variables of sex and reading ability with reading scores and listening scores as the dependent variables. A two-way analysis of variance was chosen to allow examination of a possible interaction effect between sex and reading ability. The analysis of variance results disclosed no interaction effect existed with either the reading or listening scores.

Also, Table II indicates there is no significant difference between sexes on either the reading or listening scores. There appears to be a highly significant difference between students of normal reading ability and students classified as deficient/remedial in both reading and listening scores. Examination of the cell means for these data indicate the higher scores were produced by the average reader. These means are represented in Table I.

An investigation was conducted by computing a linear regression using listening scores as the independent predictor variables. The results attest that listening scores are equally valid as relatively good predictors of reading ability. Reading scores accounted for approximately 56.8 percent of the variance in listening scores.

#### Testing Hypothesis $H_{05}$

$H_{05}$ : There is no linear correlation between listening scores and reading scores.

The F value for the correlation of 0.75 between listening scores and reading scores was significant at the .001 level; therefore,  $H_{05}$  was rejected. These data are contained in Table III. The regression indicates that listening scores are relatively good predictors of reading scores, accounting for 56.8 percent of the variance found in reading scores.

TABLE I

LISTENING-READING SCORE MEANS BY SEX AND READING ABILITY

<u>SEX</u>	<u>N</u>	<u>READING SCORE</u>	<u>LISTENING SCORE</u>
Female	88	60.3977	72.2159
Male	150	61.1722	75.1192

<u>READING CATEGORY</u>	<u>N</u>	<u>READING SCORE</u>	<u>LISTENING SCORE</u>
Average	114	73.2261	81.3826
Remedial	124	49.4435	67.2500



TABLE II

TEST OF MEANS OF READING SCORES BY  
SEX AND READING ABILITY

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Source	df	Sums of Squares	F Value	p>F
Sex	1	33.347	0.13	0.7179
Reading Performance	1	33716.1	132.24	0.0001
Sex by Reading Category	1	52.58	0.21	0.6502

N = 238

TEST OF MEANS OF LISTENING SCORES BY  
SEX AND READING ABILITY

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Source	df	Sums of Squares	F Value	p>F
Sex	1	468.65	1.96	0.1633
Reading Performance	1	11813.444	49.30	0.0001
Sex by Reading Category	1	5.767	0.02	0.88

N = 238

TABLE III

PREDICTION OF LISTENING ABILITY FROM READING ABILITY

<u>Predictor</u>	<u>df</u>	<u>Sums of Squares</u>	<u>F value</u>	<u>p&gt;F</u>	<u>R-Square</u>
Reading Score	1	38989.3687	312.03	0.0001	0.5683

Parson's Product Moment Correlation

Coefficient = 0.75

N = 238

### Summary

In this chapter an analysis of the data generated from the testing instrument was presented. The null hypotheses were analyzed utilizing an analysis of variance and a linear regression. The Statistical Analysis Systems computer subprogram, General Linear Model procedure, processed the data. The null hypotheses formulated for this study tested the overall effect of sex and the overall relationship between listening comprehension and reading comprehension for average and deficient/remedial readers.

Ho<sub>1</sub> - Ho<sub>2</sub> and Ho<sub>5</sub> did reach significance at the .05 level of confidence and, therefore, were rejected. Ho<sub>3</sub> - Ho<sub>4</sub> which tested the difference between the listening scores and reading scores of male and female were not rejected at the .05 level of significance. Conclusions and recommendations drawn from these analysis will be presented in Chapter V.

## CHAPTER V

### SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This study investigated the relationship of the listening and reading comprehension scores achieved by average students to the listening-reading comprehension scores produced by students classified as deficient/remedial readers. The sample for this research was two hundred thirty-eight third-, fourth-, and fifth-grade rural Oklahoma students. There were eighty third-grade, seventy-six fourth-grade and eighty-two fifth-grade students. Each student was administered the Durrell Listening-Reading Series in two separate testing sessions scheduled two days apart. Test session one contained the subtests of listening vocabulary and listening paragraph, while session two was singularly devoted to reading vocabulary and reading paragraph.

A pilot study was conducted utilizing twenty-five remedial reading students and twenty-five average students.

In the first stage of the analysis of the data, group means were computed by a Statistical Analysis System and the General Linear Model procedure to determine that members of the pilot study were members of the same population represented by the larger sample.

The second stage of the analysis tested the hypotheses of the study by a two by two analysis of variance. This provided a comparison of the main effect of the independent variables of sex and reading-listening performance upon the dependent variables of reading scores and listening scores.

### Conclusions

From the statistical analysis of the data, the following conclusions can be drawn:

1. Remedial/deficient readers not only produce lower reading comprehension scores than the average student, but also produce lower listening comprehension scores.

2. There is no difference between the reading scores of male and female whether they belong to the average category or deficient/remedial classification.

3. There is no difference between the listening scores of male and female.

4. Listening comprehension scores can be used as a relatively accurate predictor of reading ability.

5. Reading comprehension scores can be used as a relatively accurate predictor of listening ability.

6. Reading comprehension and listening comprehension appear to be the result of the same cognitive function.

7. As with any instrument of measure, the variable of motivation cannot be evaluated.

8. Group administration of the instrument and the effect of immunity from accountability may have caused the subjects of this study to produce scores lower than their actual ability.

#### Recommendations

From the findings and conclusions drawn from this study, the following recommendations are made:

1. It is recommended that more research in this area be conducted emphasizing listening comprehension as a component of reading ability for remedial readers.

2. Future research might seek to determine the nature of the cognitive relationship between listening comprehension and reading comprehension.

3. There appears to be a need for empirical assessment of cognitive controls (attention, discrimination, organization and retrieval) interacting on a remedial reader's ability to listen.

4. It is recommended that other studies investigate the relationship between the type of instruction remedial readers receive and its effect upon listening comprehension.

5. It is recommended that other research ascertain the effectiveness of training in listening comprehension for increased reading comprehension.

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