READING READINESS PRACTICES IN KINDERGARTENS AND FIRST GRADES

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CHAPTER I

PRESENTATION OF PROBLEM

Introduction

One of the trends resulting from pressure on education is the earlier introduction of learning tasks, with earlier formal reading occupying a significant place among these trends. This activity has moved into many kindergartens. Practices related to beginning formal reading, reading readiness, are being examined for their potentiality for early learning tasks, in this case specifically for the preparation of reading.

The recommendation that reading instruction should be preceded by a reading readiness program was made in the Twenty-Fourth Yearbook of the National Society for the Study of Education published in 1925. The purpose of these activities was to prepare pupils for reading. Emphasis was on methods and materials, test recommendations, grouping procedures, pupil differences of experiences, training, and learning capacity.

Since then, the various aspects of reading readiness have been emphasized. The concern of Olson (1949), Hymes (1958), and Almy (1966) who are deeply interested in child development is that instruction should not be used to hasten a child through the stages of development. Russell (1961) pointed out that maturation is important but so are information, attitudes, and abilities gained through experiences. However,

Hildreth (1958) questions the use of reading readiness experiences which concentrate on workbooks and special discrimination drills. Sheldon (1962) found little justification for introducing reading in kindergarten. On the other hand, when considering early experiences, Witty (1968) concluded that not only attainment but also ability is positively affected and enhanced by early experiences. Thus, when planning reading readiness instruction, the nature of the child as well as the quality of the experiences should be considered.

The importance of appropriate reading readiness instruction has been pointed out by reading authorities. Betts (1964) stated that a careful study of reading readiness factors should result in the prevention of reading difficulties by giving the teacher bases for beginning instruction. Durrell (1958) also indicated reading difficulties might be prevented as well as eliminate unnecessary instruction if reading readiness abilities were established through effective teaching. Gates and Bond (1936) expressed a similar point that the optimum time of beginning reading is not entirely dependent upon the nature of the child himself but it is in large measure determined by the nature of the reading program. Durkin (1966) recommends that children be taught to read at different ages. In conclusion, accepting each child as a unique individual and adapting instruction to meet his needs is the goal. The work of the educator is to assess the reading readiness of the child and provide beneficial reading readiness experiences.

Need for the Study

When planning a reading readiness program, assessment and instructional practices are considered. According to reading readiness

research, these practices vary in their degree of value for preparing a child to read. The bases of reading readiness practices is founded on research. The implementation of practices based on research is dependent on the classroom teacher. However, in The Torch Lighters, evidence of a gap between research and the classroom practices was observed. According to this report, reading instruction was neither consonant with theoretical concepts advanced in the college classroom nor in accord with what research findings indicate as most effective in teaching children to read.

Statement of the Problem

The general purpose of the present study is to examine the reading readiness research and survey the reading readiness practices in kindergartens and first grades in Oklahoma. The results of the survey are compared with the reading readiness research. To facilitate the analysis of this problem, the investigation has considered three major questions:

(1) How often are practices to assess reading readiness used in kindergarten and first grade?

(2) How often are skills used to develop reading readiness in kindergarten and first grade?

(3) How often are organizational factors which facilitate reading readiness instruction used?

Definition of Terms

The following definition is given to clarify the term that is relevant for this study:

Reading Readiness: The interaction of the many abilities, skills, and interests which may develop; through maturation or learning and thereby contribute to the preparation of reading.

Assumptions

The investigator made the following assumptions:

(a) Reading readiness practices were implemented in the Oklahoma Public Elementary Schools.

(b) There was diversity in the reading readiness practices utilized by the schools.

(c) The sample was a true random selection of the population.

(d) The comparison between existing practices in the classroom and practices indicated as desirable by research were evidence of strengths and weaknesses which may be suggestions for preservice and inservice reading courses.

Limitations

Certain limitations are inherent in the study. These include:

(a) The use of a questionnaire as the source of data collection. This is a limitation for the following reasons: The selected reading readiness research findings from which the questionnaire was developed was a representative sample of source materials. The validity of responses depended upon the willingness of respondents to cooperate, their honesty in answering and the motivating interest of the respondents.

(b) The analysis of results and conclusions was based upon those selected schools which cooperated in the study and excluded those who did not participate.

(c) The study was limited to randomly selected public schools in Oklahoma.

The reader will find in Chapter II the review of the literature. Chapter III includes the methodology of the study.

CHAPTER II

REVIEW OF RELATED LITERATURE

Introduction

A review of the literature indicates diverse reading readiness practices. This review will be organized into four sections: (1) size of the group receiving instruction; (2) frequency of skills taught; (3) frequency of materials used; and (4) opinions of kindergarten teachers concerning reading in the kindergarten. The subdivision under section two will include such activities as becoming acquainted with the alphabet, developing auditory discrimination, developing visual discrimination, associating sounds and printed words, interpreting pictures, developing sequence in telling a story, and developing left to right sequence.

Size of Group

In a study of factors determining success and failure in beginning reading, children who had been receiving mass instruction and were experiencing difficulty in reading, began to learn to read when instruction and materials were adjusted to their individual needs. This indicates the importance of instruction for individual needs. (Gates and Bond, 1936) Austin (1963) found that one third of the kindergartens

which taught reading offered whole class instruction. Whole class instruction prevailed in the results of the study of La Conte (1969).

Frequency of Skills Taught

Alphabet activities were reported. Swenberg and Dykstra (1966) found a greater incidence of activities with alphabet recognition in contrast to recitation and writing activities. La Conte (1969) reported the names of the alphabet letters were taught by the majority (84 per cent) of the teachers. Three fourths of the sample taught the writing of the letters of the alphabet which is a higher frequency in instruction than in the Swenberg and Dykstra report.

Visual discrimination was another activity reported. Swenberg and Dykstra (1966) found that all the respondents indicated that they taught children to recognize like and different shapes; the majority of the teachers taught color and letter discrimination; and less than half of the respondents utilized lessons in discriminating among like and different words. In the survey by La Conte (1969), noting likeness and difference between words was taught regularly by about a third of the respondents, occasionally by half of the respondents, and never by a seventh of the respondents.

Auditory discrimination, the ability to distinguish between sounds in spoken words, was also reported. Swenberg and Dykstra (1966) reported the following results. The majority of the total sample had instruction in beginning sounds. The incidence of instruction with middle and ending letter sounds was much less frequent and in the minority. All but four of the total sample reported instruction in rhyming

and a vast majority reported work with discrimination among like and different sounds.

La Conte (1969) collected data on another aspect of auditory discrimination, that of associating sounds and printed letters. This skill was taught regularly by more than a third of the respondents, occasionally by about half of the respondents, and never by less than a tenth of the group.

The remaining readiness activities surveyed differed in frequency of use. Left to right orientation, picture reading and interpretation, and development of sequence were utilized by most teachers. (Swenberg and Dykstra, 1966) Sensing motion and distance in pictures were occasionally taught by the majority in the study by La Conte (1969).

Frequency of Materials Used

Teaching reading readiness using commercially prepared reading readiness workbooks in a sequentially organized formal program was reported in the following studies. In the study of Swenberg and Dykstra (1966) the majority of the respondents employed workbooks in their programs. In contrast, La Conte (1969) reported half of the respondents never used workbooks, about a tenth of the respondents used workbooks occasionally, and two-fifths of the respondents used them regularly. Austin (1963) found half of the kindergartens which taught reading used workbooks.

Teacher made worksheets and language experience charts were infrequently used according to the findings of Swenberg and Dykstra (1966). La Conte (1969) found duplicated materials to develop visual perception used regularly by 39 per cent, occasionally used by 40 per cent, and

never used by 20.6 per cent of the respondents. The alphabet chart was used regularly by 30.6 per cent, occasionally used by 37.1 per cent, and never used by 32.3 per cent of the respondents. The majority of the respondents used the experience charts. The study by Austin (1963) indicated that all of the kindergartens which taught reading used experience charts. Homemade worksheets were used more frequently than commercially prepared materials.

The use of basal readers is reported next. The majority of respondents in the study by La Conte (1969) never used the preprimers and primers. The findings by Austin (1963) indicated that one third of the kindergartens which taught reading introduced basal readers.

One study reported the use of tests. La Conte (1969) found an equal number of respondents employed reading readiness tests regularly, occasionally, and never.

Adams (1963) found that in first grade, the basic materials used for the major part of reading instruction were experience charts, readers on several levels, trade books, books from several basal series on grade level and other levels were the group of materials utilized most frequently. The second most used category of materials was books from several basal series on their grade level and other levels.

Opinions of Kindergarten Teachers

La Conte (1969) reported findings concerning the opinions of kindergarten teachers on teaching of reading in kindergarten. The respondents were divided on most issues but there was considerable agreement that most kindergarten children are not ready to read and parents push their children at a young age. Even though there was a general

belief that those kindergarteners who are ready to read should be taught, it was observed that teachers did not feel justified to change the curriculum to accomodate those few.

Summary

According to the surveys on reading readiness practices, there is a diversity of practice among the kindergartens and first grades. Whole class instruction exists. The usage frequency of activities and skills differs in the surveys. The kindergarten teachers disagreed on the teaching of reading in kindergarten.

CHAPTER III

REVIEW OF SELECTED LITERATURE FOR QUESTIONNAIRE

Introduction

This review is in three main parts. The first part reviews the research concerning the various factors which are related to reading readiness. The second part presents the assessment of reading readiness. The third part discusses whether or not the various reading readiness skills can be developed through training.

Factors Related to Reading Readiness

Research focused on the relationship between reading readiness and aspects of physiological development: chronological age, developmental age, vision, and speech are considered. Usually chronological age is the criterion for determining when a child enters school. Sister Nila (1953), Nicholson (1958), Barrett (1965), Dykstra (1966), Hirst (1970), and Wilson and Anderson (1969) found chronological age has a low or negative relationship with scores on reading achievement tests. Ilg and others (1965) evaluated school readiness by the Gesell Developmental, Visual and Projective Test. Grade placement of children in kindergarten and primary school on the basis of age alone resulted in marked over-

placement of from one-third to one-half of the pupils in any single class. Ilg and Ames (1965) concluded that:

> What we really need to know in determining readiness for school entrance is a child's developmental level. We need to know at what age he is behaving as a total organism. . . The child's behavioral level may, of course, be at, above, or below the level of his chronological age. But it is his behavioral level rather than his age in years which we consider to be the correct clue to good grade placement. (Ilg and Ames, 1965)

Developmental age as measured by the Gesell School Readiness Test (GSRT) has been examined. Kaufman and Kaufman (1972) found that the GSRT correlated .64 with the Stanford Achievement Test.

Studies have examined the differences in readiness to read between boys and girls entering school and the difference between their respective reading achievement. Prescott (1955) found that the mean score of the girls on the Metropolitan Readiness Test was greater than that of the boys. Anderson and others (1956) found that girls tended to read earlier and there were fewer extreme delays in reading among girls than boys. Nicholson (1958), Kerfoot (1964), and Thackray (1965) reported that the girls were superior to boys in tests. Mortenson (1968) analyzed scores of visual and auditory discrimination tasks and reported sex was a contributing factor in differences in total auditory and visual discrimination variables. Hirst (1969) noted that sex was a predictor variable for first-grade reading achievement but that different measures were needed to predict for each sex. On the other hand, Anderson, Hughes, and Dixson (1956) reported that there are few if any differences in achievement when boys and girls of high intelligence (130 or more) are compared. However, when comparisons are made among children of 100 I. Q. or less, the girls tend to show superior

achievement. Although significant differences between boys and girls on reading readiness favored girls in the preceding evidence, other investigators have found no significant differences between boys and girls. Leibert and Sherk (1970) found that no consistent sex relationships appeared. When Johnson (1969) compared the Clymer-Barrett Prereading Battery (CBP) with the Metropolitan Readiness Test, no sex biases appeared on the CBP.

Another physiological factor related to reading readiness is vision. There is a question of the typical age at which the eyes of children are developed sufficiently for reading with them. Visual accommodation, the activity by which the image of a target is focused on the retina of the eye has been studied. White and Held (1966) found that visual accommodation performance comparable to that of the normal adult is attained by the fourth month. Eames (1962) found that children five years of age had more accommodative power than at any subsequent age.

The next physiological factor considered is the relation of speech to reading readiness. Nila (1953) reported that 40 per cent of the boys and 23 per cent of the girls having speech defects failed in reading. Christine and Christine (1964) reported a significant difference in auditory discrimination ability between children who have functional articulatory speech defects and children who are free from articulatory speech defects.

Conclusions based on studies considering physiological factors are:

1. The relationship between chronological age and reading readiness is low or negative. Chronological age was not a significant factor in the achievement performance.

2. The relationship between chronological age and school readiness based on developmental age is low.
3. The evidence from research concerning the relative performance of boys and girls conflicts. However, more studies indicated superiority of girls in kindergarten and primary grades.
4. There is research evidence that indicates visual accommodative performance is attained sufficiently for a kindergarten or primary grade school child to read.
5. There is some evidence which indicates children with articulatory speech defects may have reading problems.

The background of the home has been found to be related to reading readiness. The environmental factors included socioeconomic status (profession, income place, and cost of residence of relatives), attitudes towards reading, and writing, amount of reading done in the home. Sutton (1969) found that children who showed an early interest in reading experiences tend to have fathers with higher educational levels. Mortenson (1968) and Miller (1969) found that upper and middle socioeconomic level subjects performed significantly better on prereading activities and discrimination tasks. Hirst (1970) and Thackray (1965) identified socioeconomic status as one of the variables associated with success in learning to read. Chomsky (1970) reported that the correlations of socioeconomic status with all measures of books from the parent interview, child interview and Master Book List were significant at the .001 level. In the study by Miller (1969) there were significant differences at the .01 level in home prereading experiences between the middle-class and lower-class children. In a study of children who learned to read at home, Durkin (1961) found that these families had a

high regard for reading and the children had been read to regularly at home. Older siblings had often read to younger siblings. Thus, socio-economic status, home and parental influence are among the environmental aspects which have been found to be related to reading readiness.

Investigators have studied the relationship of emotional and personality factors to reading readiness. Durkin (1961) noted the following characteristics of children who read early: curiousness, conscientiousness, serious mindedness, persistence, and self-reliance. However, Thackray (1966) concluded that emotional and personal attitudes were relatively unimportant.

The relationship between intellectual factors and reading readiness have been studied. In the 1930's the reading readiness factor emphasized was mental age. Morphett and Washburne (1931) considered the mental age at which to begin reading instruction. Correlations were found between the sight-word scores and intelligence and between reading progress and intelligence. Children who had a mental age of six years and six months made better progress than did the less mature children, but they made less satisfactory progress than did those whose mental age was six months greater. The conclusion drawn was:

> . . . By postponing the teaching of reading until children reach a mental level of six and a half years, teachers can greatly decrease the chances of failure and discouragement and can correspondingly increase their efficiency. (Morphett and Washburne, 1931)

Gates (1937) also contributed to the discussion of mental age and success in learning to read. Four groups of children in classroom situations were examined. In the first of the four groups instruction provided was well-adjusted to individual differences and a mental age of five appeared to be sufficient for learning to read; in a second group

conditions were less favorable and a mental age of five and a half was necessary; in a third group the teaching conditions were more inferior and a mental age of six was required to make satisfactory progress; in a fourth group children were taught largely by mass methods, with much oral instruction and little individual work (the poorest conditions), children with a mental age of six and a half had difficulties. Gates concluded:

> Statements concerning the necessary mental age at which a pupil can be instructed to learn to read are essentially meaningless. The age for learning to read under one program or with the method employed by one teacher may be entirely different from that required under other circumstances.

Nicholson (1958) concluded that a high mental age does not assure a high learning rate in beginning reading. Although children with very high mental ages have better letter knowledge, it is apparently the letter knowledge rather than the mental age which produces the higher learning rate. Gavel (1958) found that September tests of mental age correlated less than .50 with June reading achievement. Sister Nila (1953) concluded that auditory discrimination, visual discrimination, and range of information were more closely related to reading than mental age. Olson (1958) concluded September tests which measure knowledge of letter names provided the best predictions of February success in reading achievement than does mental age. Harrington and Durrell (1955) have concluded that auditory and visual discrimination of word elements appears to be more closely related to the acquisition of the primary-grade reading vocabulary than is mental age. Wilson and Anderson (1969) reported that the Row-Peterson Readiness Test I predicted future achievement much better than did mental age. Kottmeyer (1947) concluded that correlation between scores on the Detroit

Beginning First Grade Intelligence Test and reading achievement as measured by the Gates Test appear to be too low to warrant confidence in prediction of success in reading for individual cases. Thus, evidence from the research concerning mental age and reading readiness show that children have been taught to read with mental age of less than six and a half years. The mental age requirements will vary with methods and materials utilized. Mental age is not closely related to reading readiness. Other factors predict reading success better than mental age.

Investigators have studied the relationship between intelligence and reading. Birch and Belmont (1965) concluded that the correlations obtained between intelligence and auditory-visual integration suggested that the two features were associated but not synonymous. In contrast the correlations between intelligence and reading ability increased with age. Bagford (1968) reported verbal intelligence quotients correlated better than nonverbal intelligence quotients with reading readiness. Again, the highest correlations were between intelligence quotients and achievement scores. In kindergarten, Ames and Walker (1964) administered the Rorschach and the Wechsler Intelligence Scale for Children to children whose reading ability was subsequently tested in fifth grade. Correlations between a predetermined Rorschach prognostic index and fifth-grade reading was .53, that between kindergarten intelligence quotient and reading was .57, and the multiple correlation was .73.

Evidence from other studies show a lower relationship between intelligence quotients and reading readiness. Harris (1969) reported that retention of words was independent of ability as measured by the Harris-Goodenough Draw-A-Man Test of low socioeconomic kindergarten

children. Bryan (1964) reported that visual perception appears to be correlated more closely with reading success than intelligence. Livo (1970) provided evidence of negative correlations between scores on the Information and Vocabulary subtests of the Wechsler Preschool and Primary Scale of Intelligence and scores on the Metropolitan Achievement Test. Barrett (1965) concluded that intelligence scores were not valuable as predictors of reading achievement. Durkin (1961) found that the intelligent quotients of children who read early varied from 91 to 161.

The conclusions reached after the considerations of these studies on intelligence and reading are:

1. The relationship between intelligence and reading vary according to the kind of intelligence test.
2. Correlations between intelligence and reading increase with age.
3. Verbal intelligence scores give a somewhat better prediction of reading success than do nonverbal scores.

The relationship of language to reading readiness and reading achievement depends on how language is defined. Nila (1953) considered English oral language as one of the factors that entered into the process of learning to read. When reading achievement was measured, 72 of the 300 subjects were considered failures. Amont the 72 pupils, 50 were bilinguals. In the study by Martin (1955) recordings of the language of the child were made during an informal sharing period and were evaluated according to the number of words that were used by each child, the number of different words used, and the average length of sentences. Evidence seemed to indicate that at the first grade level, growth in

each language variable followed an individual developmental pattern and was unrelated to readiness, drawing, and writing. Loban (1963) conducted a longitudinal study in which data was collected concerning vocabulary used by children, oral and written language, and teacher judgment of language skills. An interrelation apparent at the third grade level was that those subjects who read well by the end of grade three were the subjects who ranked high in oral language for the kindergarten and first three years of the study. Livo (1970) correlated Oral Language Scores with beginning reading success. The Oral Language Score is the score obtained from an analysis of the oral language sample. Language components considered were: variety of sentence patterns, total length of communication, the number of different words used per hundred running words, agreement between subject and verb, use of figurative language, use of questions, use of tenativeness, use of elaborate cluster of phrases and clauses instead of single word subjects, use of subordinating connectives and picture interpretation using procedures recommended by Marion Monroe. Correlations between scores on the Metropolitan Achievement Test and the scores on the oral language measures were significant at the .01 level.

	Word Knowledge	Word Discrimination	Reading	Total Reading
Word Count	.39*	.35*	.29*	.27*
Sentence Meaning	.36*	.30*	.21*	.22*
Picture Interpretation	.40*	.38*	.27*	.25*
Total Oral Scores	.44*	.41*	.31*	.29*

Intercorrelations between the following measures were:

	Picture Interpretation	Word Count	Sentence Maturity	Full O. L. Score
Total Reading Readiness Score	.32*	.31*	.28*	.35*
Verbal Scaled I. Q.	.53*	.46*	.40*	.56*
Performance I. Q.	.52*	.45*	.42*	.55*
Full Scale I. Q.	.54*	.47*	.42*	.57*

*significant at .01 level

Thackray (1965) reported correlations between the measures of vocabulary profile on the first reading (.431) and on the second reading (.389); and between teachers rating of language on the first reading (.492) and on the second reading (.468). In the study by Bougere (1969) results showed that none of the language measures predicted achievement as accurately as did the Metropolitan Readiness Test but that the predictive value of the Metropolitan Readiness Test for word recognition and comprehension could be significantly increased by the addition of certain language measures, alone or in combination.

Bickley, Dinnan, and Jones (1971) examined the relationship between oral associates and reading readiness test scores. The Metropolitan Readiness Test and the Oral P/S Language Inventory were administered. The inventory included 30 words which were given orally for each subject to respond to with his first association. The responses were classified as having either paradigmatic (superordinate, subordinate, coordinate, contrast, or part-whole) relationships, or syntagmatic (all other responses). The mean syntagmatic responses for the low readiness group was significantly (.01) lower than for the high readiness group.

Chomsky (1972) found a strong correlation between reading exposure measures and language development. First the investigator studied the

language acquisition in children between the ages of six and ten and linguistic competence with respect to complex aspects of English syntax. Five of the nine structures studied revealed a sequence. The test included these constructions: misleading word order, missing subject, and missing verb. Although these structures were acquired in a regular order, there was wide variation in the rate of acquisition. Chomsky suggested five linguistic stages. The formula for measuring syntactic complexity was also applied to books and magazines reported. (A record was kept by children and parents at home of all reading done by children and all listening to books read to each child by the family.) Taking Inventory of Children's Literary Background by Huck was used to assess knowledge of the content of 60 items from literature of children. The important finding was that the higher the Huck score was, the higher was the linguistic stage generally.

An analysis of the previous studies on oral language appears to support the following conclusions.

1. A better combination of tests for predicting reading success includes a language measure.
2. Children who had the largest vocabulary and highest achievement in oral language also ranked highest in reading achievement.
3. Children with the highest syntagmatic responses also had the highest readiness scores.
4. The language of children appears to develop in stages and reflects reading exposure.
5. There is a positive relationship between reading success and oral language ability.

Assessment of Reading Readiness

Reading readiness may be assessed by standardized reading readiness tests or informally by the teacher. In order to find out the relative importance and the predictive value of various reading readiness measures, tests have been given to kindergarten and first-grade children. After a certain lapse of time, posttests usually have been given to the same children and the latter result correlated with the earlier results. The coefficients obtained by this procedure are a measure of the importance of the particular readiness factor for later success in learning to read. Even though correlation between a readiness skill and reading skill achievement can be demonstrated, the two skills can be correlated without being causally related.

Gates (1939) and Monroe (1935) concluded that readiness tests give satisfactory predictions of reading ability. However, the predictive value varies with the teaching method. The better the teachers adjust the work to the abilities of pupils, the better the prediction made by the tests.

Positive correlations between readiness tests and reading achievement tests have also been reported by Bagford (1968), Barrett (1965), Bilka (1972), Craig (1937), Grant (1938), Henig (1949), Johnson (1969), Kingston (1962), Lee, Clark, and Lee (1934), Livo (1970), Olson and Johnson (1970), Parsley and Powell (1961), Thackray (1965), Trimble (1970), Ward (1970), and Wilson and Anderson (1969). Even though Bagford (1968) found reading readiness test scores significantly related to later success in reading, correlations were not typically high enough to predict individual reading success but were useful for either group prediction or indications of instructional needs.

Other studies have analyzed particular readiness tests. Olson and Fitzgibbon (1968) applied factor analysis to the subtest scores of the Lee-Clark Reading Readiness Tests and the Metropolitan Readiness Tests. The analysis revealed that the nine subtests appeared to be contributing to one general common factor and did not measure separate and distinct features.

An analysis of five readiness tests did not show a high degree of agreement in the content. Barrett (1965) analyzed the Gates Reading Readiness Tests, the Harrison Stroud Reading Readiness Profiles, the Lee-Clark Reading Readiness Tests, the Metropolitan Readiness Tests, and the Murphy-Durrell Diagnostic Reading Readiness Test. The general factor of visual discrimination was measured by at least one subtest in all of the test and visual discrimination of words was evaluated by four tests.

The Content of Five Standardized Readiness Tests

Readiness Factor Measured	Number of Tests Measuring the Factor
Visual discrimination	5
Visual discrimination of words	4
Visual discrimination of letters	2
Visual discrimination and knowledge of letters	2
Visual discrimination of pictures	1
Miscellaneous visual discrimination	1
Auditory discrimination	3
Discrimination of beginning sounds	1
Discrimination of ending sounds	1
Discrimination of both beginning and ending sounds	1
Word meanings and concepts	2
Listening comprehension and use of oral context	2
Visual-motor coordination--copying	1
Learning rate of words	1
Number concepts	1
Word-picture relationships	1

Other studies have considered reading readiness tests along with other measures to determine reading readiness. Gates (1940) concluded that a combination of readiness tests and mental age had greater predictive value for success in reading than either of the two measures alone. Olson and Johnson (1970) reported that at third grade the best predictor of both word meaning and paragraph meaning was a combination of the Metropolitan Readiness Test and the Wechsler Intelligence Scale for Children.

In Predicting Reading Failure (deHirsch, Jansky, and Langford, 1966) 53 kindergarten children were studied intensively and given 37 different predictive instruments. The aim was to find a combination of instruments that would predict which children would have difficulty learning to read. The question of how children were taught to read was almost totally ignored. The data from the study were analyzed by correlating the scores on various prediction instruments with measures of reading, writing, and spelling achievement for the same children at the end of second grade. The authors selected a Predictive Index of ten tests, that in combination best predicted those children who became below-average readers and spellers. In another study, Askov, Otto, and Smith (1972) concluded that the deHirsch tasks may be useful as tests of developmental skills which should be examined in kindergarten. Trimble (1970) concluded that the Predictive Index Test is a fairly good screening implement for success or difficulty in first grade reading.

Bilka (1972) concluded phonemes and letter names are the two most important factors for predicting reading success. A study by Olson (1958) indicated that knowledge of letter names was the best predictor

of success in reading. Gavel (1958) reached the same conclusion, using a test which measured ability of children to write dictated letters, identify letter names, and to learn new words. deHirsch (1966) found a positive correlation between Overall Reading Performance and letter naming. Muehl and Kremenak (1966) found letter naming predicted reading achievement.

Other studies are also pertinent to this discussion. Kaufman and Kaufman (1972) compared the effectiveness of tests built from tasks devised by Gesell, by Piaget, and the Lorge-Thorndike Intelligence Tests. The Stanford Achievement Test (SAT) was given at the end of the first grade. The Piaget and Gesell batteries each correlated .64 with SAT composite; Lorge-Thorndike MA correlated .58.

Research evidence indicates that visual perception is related to reading readiness. Goins (1958) attempted to determine the predictive validity of fourteen visual perception tasks which used pictures and designs for content. Pattern copying had the highest correlation with subsequent reading success in her investigation, and she concluded that this task should be included in readiness tests. Barrett (1965) found that predictive power was increased when measures of pattern copying and word matching were added to letter identification. However, Bilka (1972) found that Pattern Copying Tests are not as adequate predictors as the Murphy-Durrell or the Metropolitan Readiness Tests.

DiMeo (1969) explored some facets of visual-motor skills of kindergarten children and related them to the Word Form Test of Betts Ready to Read Test. For this study visual-motor skills refer to the copying of outline forms which includes a visually perceived stimulus, intersensory mediation, and a motor response. Visual-motor skill

of kindergarten subjects was significantly related to achievement in intersensory (visual-haptic-kinesthetic) equivalencies and in visual discrimination of geometric forms. DiMeo considered visual-motor behavior of young subjects important in the educational sense to the extent that it reveals (a) an identifiable level of this type of perceptual achievement, (b) valid inferences regarding probable perceptual needs, (c) a significant relationship to the perceptual facet of reading behavior, and (d) possible implications for improving perceptual abilities.

Olson and Johnson (1970) determined how well the Frostig Developmental Test of Visual Perception, the Gates Reading Readiness Test, the Metropolitan Readiness Tests, and the Olson Reading Readiness Test predicted reading achievement at first and third grade. The Frostig Developmental Test of Visual Perception was the poorest predictor of reading achievement.

Scott (1968) tested the hypothesis that seriation, ordering by size or orientation of objects, was related to and predictive of achievement at the end of grade two. In addition, the study investigated whether a test of seriation ability administered in kindergarten differentiated grade two children who were experiencing difficulty from those who were not. A coefficient of correlation of .59, significant at the .005 level, was obtained between the California Achievement Test and the total score on the Seriation Test. A significant (.005) chi square was obtained when the two groups of good readers were studied, indicating that the Seriation Test was a good predictor of reading achievement at grade two.

Scott (1970) extended the study of seriation, studying the relation between reading readiness and third grade reading achievement in lower-and-middle class schools. The scores on the two tests correlated .82, but also the ST correlated with the Number Readiness subtest of the Metropolitan (.69). The Negro subjects scored 1.43 standard deviations below the Caucasians on the ST. By third grade, only 151 subjects were available. Their scores on the ST at kindergarten correlated about .50 with reading achievement on the Iowa Test of Basic Skills. The correlations were lowest for Negro females (.10) and highest for white females (.53). Trial-error correlations of Negro children on the ST, with the Metropolitan, were consistently higher while operational correlations were higher for white children. This finding revealed a difference in quality of performance on the ST which may be related to visual perceptual maturity.

Several studies seem to indicate varying degrees of relationship between reading readiness and auditory discrimination. Harrington and Durrell (1935) concluded that skill in auditory and visual discrimination of word elements is more closely related to success in learning primary word vocabulary than is mental age.

Hanesian (1966) administered the Wepman Auditory Discrimination Test; the Roswell-Chall Auditory Blending Test; Wechslers Intelligence Scale for Children--Digit Span; and specially constructed tests for discrimination of nonsense syllables, memory of words and nonsense syllables to 175 first graders. There was a positive significant relationship between fall auditory abilities and spring reading achievement.

Birch and Belmont (1965) required children aged five and one half to eleven and one half years to match a series of taps presented auditorily with a series of dots presented visually. The test scores and reading achievement scores correlated significantly for the six and seven year olds, not thereafter.

Sister Mary Nila (1953) tested 300 first-grade entrants with four individual and four group tests. The factors which seemed to have the greatest relationship to reading achievement were auditory discrimination with the highest correlation; visual discrimination next, range of information third in rank, and finally mental age.

Thackery (1965) tested 182 children in Britain by using the Harrison-Stroud Reading Readiness Profiles, the Kelvin Measurement of Ability Test for Infants, and the Southgate Group Reading Tests. He also included rankings by teachers of the language, speech, and information on socioeconomic background. The measures of auditory discrimination and visual discrimination correlated most highly (.53 and .50 respectively) with reading achievement.

Thompson (1963) conducted a study to determine: (1) whether there was a relationship among auditory discrimination, intelligence, and success in primary reading, (2) whether the subjects made significant improvement in auditory discrimination skill in the first and second grades, and (3) whether the poor readers established a different pattern from that of good readers in the twelve subtests of the Wechsler Intelligence Scale for Children. Auditory discrimination skill and intelligence correlated highly with the success in primary reading.

In the study by Christine and Christine (1964) subjects, selected at random from a midwestern school district, were divided into three

groups: a control group reading at grade level, a group retarded in reading, and a group with articulatory defects. The Wepman Auditory Discrimination Test was administered. There was a significant difference ($p = .05$) between the mean Wepman scores.

Although the preceding studies suggest that auditory discrimination skill is related to initial success in learning to read, not all research results indicate that same degree of relationship. Dykstra (1963) reported comparatively low correlations, .19 to .46 between tests of auditory discrimination and achievement on a first-grade reading test. He found the Lorge-Thorndike Intelligence Test, a group test, to be the best predictor of both word recognition and paragraph reading. As a result, he felt that there is relatively little need to test for auditory discrimination abilities if intelligence test data is available.

Kerfoot (1964) found measure of visual discrimination to be better predictors of reading and spelling achievement than measures of auditory discrimination; although, the best auditory measures were better predictors than the poorest visual measures. Visual discrimination measures included Gates Picture Directions, Gates Word Matching, Gates Word-Card Matching, Gates Naming Letters and Numbers, Goins Picture Squares, Goins Pattern Copying, and Goins Reversals. The findings were that measures of visual discrimination were better predictors of reading and spelling achievement than were measures of auditory discrimination, although the best auditory measures: Using Context and Auditory Clues, Pronunciation, and Making Auditory Discriminations were better predictors than the poorest visual measures.

A number of studies examined the relationship between ratings of pupils by teachers and reading achievement. Ebbesen (1968), Henig (1949), Karlin (1957), Kermoian (1962), and Koppman and LaPray (1969) reported that teacher estimates of pupil success in reading correlated with reading achievement at approximately the same level as the actual tests scores. Kottmeyer (1947) noted that teachers seem to make most of their errors of judgment in assuming readiness on the part of children who are not ready. Kermoian (1962) noted that teachers over-rate pupils.

Cautious use of test scores and teacher estimates has been suggested. Using first graders, Annesley, Odhner, Madoff, and Chansky (1970) examined four methods of judging achievement relative to ability (achievement and ability T scores within one standard deviation of each other; achievement T score subtracted from ability T score ratios; regression of achievement on ability, and teacher judgment as to the juxtaposition of achievement and ability). There was lack of agreement among the four different methods of identifying underachievers, over-achievers, and adequate-achievers. The methods in closest agreement were the prediction of achievement relative to ability with teacher judgment. Askov, Otto, and Smith (1972) concluded that although both the Predictive Index and the Metropolitan Readiness Tests allow significant prediction of second grade reading scores, the standard error measurement associated with each measure is sufficiently high to preclude very effective prediction of individual cases.

Measurement of reading readiness is complicated by the pupils' unfamilarity with testing procedures. Calfee and Venezky (1968) found that the makeup of items in the tests was such that ability to follow

instructions and general language competence are common factors which entered significantly into the performance of all subtests on the reading readiness and achievement subtests.

The findings of the preceding research evidence indicates the relationship between reading readiness tests and reading achievement, the nature and use of readiness tests, and relationship between teacher judgment and reading achievement vary. Conclusions reached are:

1. Children who do well on the readiness tests also do well on achievement tests. Reading readiness tests are useful in predicting beginning reading.
2. The better the teachers adjust work to the special abilities of pupils as revealed by readiness tests, the better the prediction made by the test.
3. Recognition of letters and discrimination of beginning sounds were the best predictor subtests.
4. The general factor of visual discrimination was measured by at least one subtest in five readiness tests.
5. A combination of factors may have better predictive value than a single measure.
6. Teacher ratings correlated positively with readiness tests and achievement tests. There was some tendency of teachers to over-rate pupils.
7. When predicting reading success for individual cases, use readiness test scores and teacher rating cautiously.

Developing Reading Readiness Through Training

Next, studies concerned with whether or not reading readiness can be developed through training will be discussed. First, studies of complex programs designed to develop reading readiness will be described. Second, studies examining the influence of training of auditory discrimination are discussed. Third, studies investigating the training of visual discrimination are presented. Last, other studies dealing with concept training on letter discrimination, teaching of letter names, neurological training, perceptual-motor training and different types of instruction are discussed.

Rosenthal (1969) reported that there was a positive relationship between reading readiness achievement and kindergarten training in younger children, and that without training maturation plays a large part in affecting reading readiness of children. Wheelock and Silvaroli (1967) and Spache and others (1966) noted that children from the lower extreme of the socioeconomic continuum seemed to profit most from the training. Wheelock (1968) also found that on training of visual discrimination, the greatest gains were made by the lower socioeconomic group. Significant gains were also made in the Letter Form Test. In the study by Bernabei (1968) evaluation of the readiness program developing generalized concepts, visual-motor triordination, visual and auditory discrimination, visual and auditory memory (imagery) and oral language usage indicates significant differences in reading skills between the interim and normal classes. Morrison and Harris (1968) followed their subjects through the end of grade three and

presented achievement data comparing kindergarten and non-kindergarten attendees at the end of grades one, two, and three. Children were taught to read by either a Skills Centered or a Language Experience approach. Within the Skills Centered approach, either a basal reader or a combination basal reader-phonic system was used. The Language Experience (LE) approach followed either a regular LE program or a LE-Audio-Visual program. At the end of grade three, there were four significant differences. All favored LE kindergarten children over LE non-kindergarten children. Comparisons between approaches revealed a significant difference favoring LE kindergarten children over Skills Centered kindergarten children. Differences for non-kindergarten children were not significant.

Brzeinski, Harrison, and McKee (1967) investigated special instruction given in kindergarten for twenty minutes a day. The instruction consisted of seven types of learning activities: (1) spoken context, (2) initial consonant sounds, (3) forms of letters, (4) context and initial consonant sounds, (5) sounds and forms of letters, (6) context and displayed initial letter, (7) context and displayed words. Optimum reading achievement was obtained by children in the experimental group who had received beginning reading instruction in kindergarten and who had an adjusted reading program in later grades. Significant gains in reading achievement persisted throughout the study.

Durkin (1970) reported on the first two years of a longitudinal study of a pre-school reading program. Goals of the program, based on findings from previous research with pre-school readers, included teaching children to print and to identify letters and numerals. In addition, children were exposed to words in numerous situations and also

given practice on some words during periods devoted to reading. The second or kindergarten year of the program, children also received some phonics instruction. Children were predominantly from upper-lower class and lower-middle class backgrounds. Language development was assessed by the Illinois Test of Psycholinguistic Abilities (ITPA). Word identification tests developed for the program were administered at the end of each year. For the total ITPA score and word identification, coefficients were .41 for the first year and .53 for the second year. An analysis of data showed that children were able to identify an average of 29.1 words, and at the end of the second year averaged 123.8 words. Mean scores of 37.9 and 49.7 were achieved on a 52 item letter identification test at the end of the first and second years respectively.

McConnell, Horton, and Smith (1969) found that the experimental group who participated in a daily program of language and sensory-perceptual instruction gained 15 months in Language Age on the Illinois Test of Psycholinguistic Abilities (ITPA), whereas the control group made a gain in Language Age of two months. The language program for the first year emphasized receptive language, listening skills, and attention span. The second year of the program utilized procedures delineated by Bereiter and Engelman, and the Peabody Language Development Kit, preschool level. On the Metropolitan Reading Readiness Test, the mean total scores were 44 for the experimental subjects and 13 for the control subjects which placed them in the lowest seven per cent of children entering grade one.

The effect of special language activities based on diagnosed needs as disclosed by the performance on the Illinois Test of Psycholinguistic Abilities was studied by Hayes and Dembo (1971). Scores on the Caldwell

Preschool Inventory used for pre- and posttesting revealed that the experimentals attained significantly greater gains than did the controls.

Using findings from other readiness studies, Stanchfield (1971) developed a research design to teach prereading skills in a sequential developmental order in six major areas: (1) listening for comprehension of content, (2) listening for auditory discrimination, (3) visual discrimination, (4) oral language skills, (5) motor perceptual skills, and (6) sound-symbol correspondence skills. The experimental classes achieved a significantly higher mean score than did the control classes on the total test.

Researchers have conducted studies examining the influence of training of auditory discrimination ability on reading achievement. Durrell and Murphy (1953) conducted a study in which four groups equated for mental age, learning rate, speaking vocabulary, and auditory discrimination ability. One group was given ten minutes daily work in ear training; the second group was given ten minutes daily instruction in visual discrimination of letters and words; the third group received a combination of ear training and visual discrimination exercises for the ten minutes daily; and the fourth group followed the exercises in the regular reading system. The experimental group showed significant superiority over the control group. Noted was that children who were especially low in auditory analysis profited particularly by ear training.

Other studies support auditory discrimination training in varying degrees. In the study by Gavel (1958) sounding letters and identifying sounds in words were two of the factors on the September test which

correlated less than .50 with June reading achievement. In a study of early instruction in letter names and sounds, Linehan (1958) found that the experimental group given incidental letter names and sound instruction during the year achieved significantly better than the control group. Nila (1953) found a consistently high correlation between auditory discrimination and reading achievement.

Spache and others (1966) studied the effectiveness of training. First grade pupils were administered the Pintner-Cunningham Primary Test, the Thurston Pattern Copying and Identical Forms Test; the Murphy-Durrell Diagnostic Reading Readiness Test; the Word Meaning and Listening subtests of the 1965 Metropolitan Reading Readiness Test. The three major facets of readiness measured were visual discrimination, auditory discrimination, and auditory language. Pupils in the top quarter started reading in November. Pupils in the third quarter started reading in January and pupils in the lowest quarter started reading in March. Specific materials to develop visual and auditory perception skills were used. The program seemed to have an insignificant effect upon those pupils who were mature enough to read early in the school year; hence participated in it only to a limited extent.

Studies have also examined the influence of visual discrimination training. The evidence from research results concerning nonletter forms, letters, search patterns, and letter names will be considered in terms of the influence the training has on developing reading readiness. Williams (1968) found that kindergarten children receiving discrimination training in which the stimuli to be matched were transformation (right-left and up-down reversals) performed significantly better on a series of visual discrimination tests than children who either spent a

comparable amount of time tracing and copying the standards or receiving simple discrimination training. Rosen (1966) concluded that training on fine-motor exercises which use geometric or nonletter-like figures contributed little to the development of skills initially required in the areas of reading and writing. Durrell (1958) indicated that first-grade children were able to match identical letter forms and that this skill was not enhanced by teaching non-word forms or picture matching. Williams (1969) performed experiments to determine the most effective training to develop visual discrimination of forms resembling letters. Difference among the training methods were significant with the younger but not with the older group. The work of Gibson and others (1962) designed to study the development of the ability to discriminate visually lend support to the argument that training directed to the significant attributes to be learned, that is alphabet letters, holds greater potential transfer value than the typical matching tasks found in readiness materials. Rystrom (1969) concluded that children need much more and more intensive drill in distinguishing between significant and non-significant features of letters. Muehl (1960) also supports providing visual discrimination training with the relevant letters prior to presenting them as parts of words. Wheelock (1968) investigated the effect of training in recognition and discrimination of capital letters on visual discrimination. Analysis of covariance revealed that the experimental group made significant (.01) gains on the Lee-Clark tests, compared to controls, and that the greatest gains were made by the lower socioeconomic group. Significant gains were also made in the Letter-Form test.

Hardt (1970) concluded that the use of letter position cues by prereaders was enhanced by minimizing formal similarity (overlap between letter features) and maximizing the role of experiential factors such as bigram letter frequency. Nodine and Evans (1969) provided a tenative description of the search pattern used by prereaders in differentiating among words. Their findings suggest that comparisons of letter strings under the horizontal format requires a sequential search of the display in which the subjects must keep track of both letter and position information. Under the vertical format, single fixation provides both letter and position information, thus eliminating the need for an extensive search pattern in differentiating among words.

Results of a study by Timko (1970) support the finding that the first letter in the word seems to be utilized more often by beginning readers than any other cue. Olson (1969) also concluded that the initial configuration was the major cue.

King (1964) studied visual training and transfer of training with six groups (23 each) of kindergarten children. The six groups and their stimuli were: (1) different words from the reading task; (2) different meaningful words (visual, sound, and pictorial presentation); (3) same words as reading task: successive presentation and simultaneous presentation; (4) same letters which were constituents of reading words; and (5) geometric forms (the control group). The words used for the stimuli and training of the same word groups were the words to be learned in the reading task. For the different word group, the words were different from those in the reading task. In addition to the printed words, the different meaningful word group was also provided with appropriate picture and auditory stimuli produced by the

experimenter saying the words. The same letter group matched letters appearing in the words used in the reading task. An analysis of variance indicated significant group differences in reading performance, favoring groups trained in matching different meaningful words and the same letters.

In another study of visual discrimination pretraining, Muehl (1961) using a different set of pretraining tasks, concluded that beginners discriminate among words having similar length and different shapes on the basis of specific letter differences. Again this suggested that pretraining with relevant letters as parts of the total words was more effective than pretraining with letters presented singly.

Not all the evidence supports visual discrimination training. Staats, Staats, and Schutz (1962) studied the comparative effects of (1) discrimination pretraining using the same words as those in the list, (2) pretraining with letters making up the words in the list, and (3) no discrimination pretraining. All three groups were then tested for their ability to learn the same list of words. Final retention of the test words was similar for all types of discrimination training.

Caldwell and Hall (1969) studied the influence of concept training on letter discrimination. Group one, given relevant orientation, performed significantly better than the group given irrelevant orientation or the control group. The findings were interpreted as suggesting the need for a more adequate analysis of the task to be performed, and the implementation of concept learning as a prerequisite step in the learning procedure.

Even though knowledge of letter names is a predictor of successful reading, the evidence does not support teaching letter names.

Muehl (1962) found that knowing relevant letter names produced interference in the word naming task. Samuels (1969) found that there was no difference between the group given letter name training and the control group in learning a transfer list.

The research evidence did not lend to support of neurological training. Stone and Pielstick (1969) concluded that there was little support for the notion that neurological training benefits reading readiness at the kindergarten level. Cornish (1970) also concluded that neurological training exercises specifically cross-patterning did not improve perceptual-motor skills.

Support for perceptual-motor training is indicated in the following studies. To test the effect on reading growth of a perceptual-motor program, McCormick, Schnobrich, and Footlik (1969) randomly assigned grade one pupils to either a perceptual-motor activities group or a control group. Experimental program exercises included cross-lateral crawling, walking, balancing, hopping, skipping, and jumping rope. No significant differences were obtained for total first grade groups. However, when means and standard deviations were compared for children who scored in the lowest third of the original Metropolitan Achievement Test administration, the gains exhibited by the experimental group were statistically significant (.01 level). Faustman (1968) investigated the effects of selected kindergarten lessons in perception upon first-grade reading achievement. When the Perception Ability Forms Test was readministered, no significance in growth between the two groups was found. However, when the Gates Primary Word Recognition Test, administered in November and May of grade one, was scored, findings at both testings favored the experimental group. In a study by McConnell,

Horton, and Smith (1969) directed at prevention of learning problems in school, provided sensory-perceptual instruction to children from two community day care centers located in the lowest socioeconomic areas of a large city. Sensory-perceptual training included Montessori materials to aid in developing size, form, number, and color concepts as well as the Frostig Program for the Development of Visual Perception. Experimental groups made statistical significant gains on four of the five sub-tests of the Frostig Test of Visual Perception while the control group gained significance on one. Gamsky and Lloyd (1971) found that the Frostig program benefited children by improving visual perceptual abilities.

Other studies reveal no support for perceptual training. Falik (1969) found no significant difference between mean scores of a group who was provided special perceptual-motor training and a group who experienced a typical kindergarten curriculum. Fortenberry (1971) found no significant differences in the mean scores of the group receiving training (Frostig Program for the Development of Visual Perception) and the control group. Jacobs, Wirthlin, and Miller (1968) noted no significant differences for reading achievement between controls and either experimental group (one year Frostig program or two-year Frostig program). Pryzwansky (1972) reported no statistically significant differences between control and experimental groups using the Frostig Development Book of Visual Perception, Templete Training, and Peterson Handwriting System. Sheffer (1969) did not find any significant differences in performance between the experimental group who were taught a program stressing body imagery, general coordination, balance, eye-hand coordination, eye movements, form perception, and visual memory

and the control group. Stern and Firth (1970) found that developmental growth as measured by the Gesell Developmental Placement Examination is not accelerated by a program of visual-motor skills.

Several studies pertaining to instruction are relevant to the study of reading readiness. In classrooms where teaching was mostly mass instruction, children were examined. Those who were failing in reading were placed with remedial teachers who instructed pupils individually for a period and then grouped several together. Gates and Bond (1940) reported that these pupils made marked improvement in reading ability. Stanchfield (1972) reported that children in the kindergarten who were taught in a structured sequential program with appropriate materials achieved significantly more reading readiness skills than the children in the regular kindergarten curricula. These studies suggest the value of appropriate instruction. However, Tovey (1972) found that most of the phonics instruction in a given school district was not matched to the specific abilities of children.

The following studies point out other means of facilitating instruction. Goralski and Kerl (1968) found significant differences between groups at the end of one semester in favor of the group with teacher aides. Niedermeyer (1970) reported statistically significant treatment effect favoring pupils in the Parent-Assisted Learning Program.

Sullivan and Labeaune (1971) identified effective procedures to maintain reading skills of children during the summer months. This involved initial tryout of materials for a summer program that used parent-administered structured reading practices at home. The children had participated in First-Year-Reading Program of SWRL. Materials for

for each week included a sheet of three exercises designed to provide practices on reading content covered by children in kindergarten: 32 page paperback storybook; Weekly Record Sheet consisting of a short assessment exercise and an activity checklist to be marked by the parent; and an animal poster to be given the children after they had completed the activities. Significant differences between the experimental and control groups favored summer participants.

The research evidence appear to support the following conclusions:

1. There is a positive relationship between kindergarten training and reading readiness achievement.
2. There is a varying degree of relationship between auditory discrimination training and reading achievement.
3. Children who were low in auditory discrimination skills particularly profited from ear training.
4. Training on nonletter-like forms contributed little to the development of skills initially required in reading readiness.
5. Presenting words in a vertical format was superior to a horizontal format.
6. The first letter in the word seems to be utilized more often by beginning readers.
7. Meaningful presentation of words and same letters in prereading training was better than nonmeaningful presentations.
8. Concept training with relevant orientation for letter discrimination was superior to irrelevant orientation.
9. Training with letter names was not supported as facilitating reading readiness.

10. There was no support for neurological training to develop reading readiness skills.
11. There is conflicting evidence for perceptual-motor training. However, children who scored low on achievement tests benefited from training. Also, children from the lowest socio-economic level benefited from perceptual-motor training.
12. Developmental growth was not accelerated by a program of visual-motor training.
13. Children who were provided with instruction according to their particular needs succeeded in reading.
14. Assistance from teacher aides or parents seemed to make a difference in the achievement of pupils.

CHAPTER IV

DESIGN AND METHODOLOGY

Introduction

The most appropriate research method for this study was descriptive research which will reveal prevailing practices. Accurate facts about existing reading readiness practices in the classroom will provide educators with practical and immediately useful information. Factual information about existing status enables members of the profession to make more intelligent plans about future courses of action and helps them interpret educational problems more effectively. Pertinent data regarding the present scene may focus attention upon needs that otherwise would remain unnoticed. (Van Dalen, 1962, p. 212)

Description of the Population

To obtain a representative sample, s stratified random sampling procedure was utilized. The steps in this procedure were to: (a) define the population, (b) procure a list of school buildings of the population, and (c) draw a sample which is sufficiently large to represent the characteristics of the population.

The population included all kindergarten and first-grade teachers in public schools in Oklahoma. To accomplish a representative sample, four strata based on the number of elementary school teachers in a

school district were identified. The Oklahoma Educational Directory 1972-1973, the latest available edition, was the source for the number of teachers in a school district. The strata were stratum I with one to 25 elementary school teachers in the district; stratum II with 26 to 99 elementary school teachers in the district; stratum III with 100 to 569 elementary school teachers in the district; and stratum IV with the teachers from the metropolitan (Oklahoma City and Tulsa) school districts. The school buildings were listed in the appropriate stratum and numbered.

The number of elementary teachers in strata I, II, III, and IV were 5,094, 3,241, 3,561, and 2,373 respectively, totaling 14,269 elementary teachers. The proportionate number of teachers in each stratum to the total number of teachers was: 36% in stratum I; 23% in stratum II; 25% in stratum III; and 16% in stratum IV. With the assumption that approximately one-seventh of the teachers in a school building were either kindergarten or first-grade teachers, approximately 2,100 of the total number of teachers were considered to be kindergarten or first-grade teachers. Approximately one-seventh of the 2,100 teachers or 300 kindergarten or first-grade teachers were selected for the study. Using the proportionate number of teachers in each stratum to the total number of teachers, the approximate number of kindergarten and first-grade teachers for strata I, II, III, and IV was 108, 69, 75, and 48 respectively, totaling 300 teachers.

The next step in the sample selection procedures was to randomly select school buildings within the framework described in the previous step. Each school building in a stratum was numbered beginning with 001. The sample was drawn by using the table of random numbers in Handbook

of Statistical Tables by D. B. Owens. The table of random numbers was entered at any point by moving a pencil over the table without looking and letting the pencil down at any place. After the school buildings with the approximate number of teachers needed for a stratum were selected, the procedure was repeated for each stratum.

Principals of randomly selected school buildings were sent letters describing the study. Enclosed in the letter was a self-addressed return postcard on which the principal was to indicate interest in completing the questionnaires, grant permission for interviewing teachers, and supply the names of the kindergarten and first-grade teachers. (See Appendix A.) Letters were sent to 98 principals in stratum I, 31 principals in stratum II, 42 principals in stratum III, and 28 principals in stratum IV.

Tulsa and Oklahoma City Public Schools required the study to be approved by their research committees. Permission was granted by each school system to conduct the study in their elementary public schools.

Approximately two weeks after the letter was sent to the principals, a follow-up postcard requesting return of the postcard which was enclosed with the introductory letter. (See Appendix A.) The results were as follows: In stratum I, 98 letters were sent, 59 postcards were returned with the names of 133 teachers, two schools indicated no interest, and one school was nonapplicable. In stratum II, 31 letters were sent, 21 postcards were returned with the names of 68 teachers, one school indicated no interest, and three schools were nonapplicable. In stratum III, 42 letters were sent, 26 postcards were returned with the names of 73 teachers, five schools indicated no interest, and three schools were nonapplicable. In stratum IV, 28 letters were sent, 18

postcards were returned with the names of 46 teachers, three schools indicated no interest, and one school was nonapplicable.

Development of the Instrument

The development of the questionnaire proceeded through three stages. Stage one of the developmental process was concerned with the review of relevant research on reading readiness. The research findings were the basis for the questionnaire and interview.

Stage two involved the pilot study concerned with the extent to which instructions and items of the instrument were understood. The questionnaire was submitted to a panel of reading experts as well as to kindergarten or first-grade teachers for their reactions. The reading experts who judged the instrument were Edith Haraughty, former elementary teacher, reading teacher, and currently professor of North Western State College, Tahlequah, Oklahoma; Donna Hicks, former first-grade teacher and currently doctoral candidate and graduate assistant at Oklahoma State University; Edna Jungers, former elementary teacher and currently supervisor of elementary public schools, Stillwater, Oklahoma; Loree Ferguson, former elementary teacher and currently professor at Central State University, Edmond, Oklahoma; and Sarah Webb, former elementary teacher and currently at the State Department of Education, Oklahoma City, Oklahoma. At Oklahoma State University, Dr. Belden, Professor, Dr. Mangum, Associate Professor, and Dr. Smith, Assistant Professor, judged the instrument. The pilot study questionnaire was adjusted according to the comments and reactions of those who participated in the pilot study.

Two forms of the questionnaire were prepared. Each form had the same items but the items were presented in different orders within each part of the questionnaire. The part concerning reading readiness assessment was page two in Form I and page four in Form II. The part concerning the practices in the teaching of reading readiness was page four in Form I and page two in Form II. Other parts were in the same place in each form. (See Appendix B.)

Procedure for Data Collection

As postcards indicating willingness to participate in the study were returned to the researcher, teachers were sent a letter of introduction, the questionnaire, and a stamped, self-addressed return envelope. The envelopes were alternately stuffed with Form I or Form II of the questionnaire. The teachers were asked to respond and return the completed questionnaire directly to the researcher. Approximately three weeks after the materials were sent, a follow-up postcard requesting return of the questionnaire was mailed to the teachers who had not replied.

In order to identify respondents, a code was typed on the return envelope to the researcher. In the address a number was placed after Gundersen Hall. The numbers 100 to 199 indicated stratum I, 200 to 299 indicated stratum II, 300 to 399 indicated stratum III, and 400 to 499 indicated stratum IV.

A total of 232 questionnaires or 73% of the 320 questionnaires mailed were returned. For stratum I, 84 of 133 questionnaires mailed were returned. For stratum II, 53 of 68 questionnaires mailed were

returned. For stratum III, 61 of 73 questionnaires mailed were returned. For stratum IV, 33 of 46 questionnaires mailed were returned.

Follow-Up Interview

Twelve per cent of each stratum of the sample who received and returned the questionnaires and who taught in a town within a 70 mile radius of Stillwater were interviewed by the researcher. Selection was made by using names in the hat method.

The interview was based on a parallel form of the questionnaire. (See Appendix C.) The purpose of the interview was to verify the information received in the questionnaire which was mailed. A pilot interview was conducted by the research with a kindergarten teacher not included in the study.

Data Analysis

Descriptive data may be expressed quantitatively. The frequency of use of the various reading readiness practices was counted using the IBM System 360 Model 65 Computer. The program employed was FREQ 2 One-Way Frequency Count (Multiple-Digit) by Iris McPherson. The frequency of response for the corresponding items of the two forms of the questionnaire was combined and the per cent of response for each type of response was calculated. The reported usage indicating classroom practices was compared with the research evidence.

The chi square test for independent samples was used to determine whether the questionnaire and the interview differed in the proportion of responses recorded and whether the two forms of the questionnaire differed in the proportion of responses recorded. If an observed chi

square is equal to or greater than the value given in a Table of Critical Values of Chi Square for a particular level of significance, at a particular degree of freedom, the two sets differ significantly.

Siegel states that:

> When the data of research consist of frequencies in discrete categories, the X^2 test may be used to determine the significance of differences between two independent groups. (Siegel, 1956)

The following formula for chi square test describes the computational procedure:

$$X^2 = \sum_{i=1}^{r} \sum_{j=1}^{k} \frac{(O_{ij} \quad E_{ij})^2}{E_{ij}}$$

where O_{ij} = observed number of cases categorized in ith row of jth column

E_{ij} = number of cases expected to be categorized in ith row of jth column

$\sum_{i=1}^{r} \sum_{j=1}^{k}$ directs one to sum all (r) rows and all (k) columns, i.e., to sum over all cells (Siegel, 1956)

Summary

This chapter has described the population of this study and the data collection procedures employed. A description of the development of the questionnaire and interview was included. In addition, the data analysis technique and the computational formula were presented.

CHAPTER V

RESULTS

Introduction

A questionnaire was constructed according to reading readiness research. The purpose of the instrument was to ascertain the status of reading readiness practices in Oklahoma for the 1973-1974 school year. Reading experts and experienced kindergarten and first-grade teachers participated in a pilot study and made recommendations regarding the questionnaire. The questionnaire was revised according to the suggestions. An introductory letter was mailed to principals of randomly selected school buildings (17.5 per cent) in Oklahoma. The percentage of response was 62.0. The principals interested in the study listed the names of 320 teachers who were willing to participate in the study. Of the 320 teachers mailed questionnaires, 73 per cent replied. Twenty-eight (12.0 per cent) of the responding teachers were randomly selected for follow-up classroom interviews to verify the information received in the questionnaire. The chi square test was used to determine whether there was a difference in response between the two forms of the questionnaire. For each questionnaire item the number and percentage of response was determined. The reading readiness practices as indicated on the questionnaire were compared with reading readiness research evidence. Strengths and weaknesses of reading readiness practices as determined

by the comparison indicated topics which need to be considered in pre-service and inservice training of teachers.

First, the results of the comparison of the responses to the questionnaire and interview will be described. Second, the resuls from the two forms of questionnaire will be described. Third, the combined responses from the two forms will be discussed and compared with research evidence. Materials listed by the teachers on the questionnaire will be included. Fourth, responses to each of the questionnaire items analyzed according to number of elementary teachers in the school district, age of teachers, college degree, years of teaching experience, years of teaching at present school, teaching level, years teaching at present level, class size, whether or not the teacher had a reading course, and whether or not consultant services were available will be discussed.

The chi square test was used to determine whether the questionnaire responses or interview responses of the same 28 teachers differ in the frequency with which they indicated usage of reading readiness practices. Table I shows the frequencies with which teachers responded to the questionnaire and interview and also the categorization for always, often, occasionally, never, or no response to an item.

The formula for chi square is as follows:

$$X^2 = \sum_{r} \sum_{k} \frac{(\text{Observed Frequency} - \text{Expected Frequency})^2}{\text{Expected Frequency}}$$

In computing chi square by using the figures presented in Table I it is found to be 103.68. The chi square is significant beyond the .002

TABLE I

FREQUENCIES OF RESPONSES AS REPORTED BY TEACHERS ON THE QUESTIONNAIRE AND IN THE INTERVIEW

	QUESTIONNAIRE	INTERVIEW	
ALWAYS	472.5* 549**	472.5* 396**	945
OFTEN	349.5* 338**	349.5* 361**	699
OCCASIONALLY	249.5* 199**	249.5* 300**	499
NEVER	273.5* 234**	273.5* 313**	547
NO RESPONSE	27.0* 52**	27.0* 2**	54
	1372	1372	2744

*expected frequencies
**observed frequencies

level. A better indication of reliability might have been secured if the questionnaire had been readministered at a later date.

Reactions of interviewed teachers varied. Some of the teachers were confident. One of the teachers apologized that this was her first year of teaching. One teacher said the interview was worse than a college test. Some teachers had difficulty in deciding how often they used the various practices. One teacher asked the interviewer to put in a good word for her with the principal. Some teachers were eager to talk and provided detailed explanations of their programs. Other teachers were brisk and answered only with the responses: always, often, occasionally, or never.

The chi square test was used to determine whether form one and form two of the questionnaire differed with respect to presenting items in different order. Was the form of the questionnaire independent of the usage of the items? Was the proportion of the responses of form one the same as the proportion of the responses of form two? Table III shows the frequencies of responses of the 114 teachers to form one and the responses of the 118 teachers to form two as well as how the responses are distributed among always, often, occasionally, never, and no response.

The formula for chi square is as follows:

$$X^2 = \sum_{r} \sum_{k} \frac{(\text{Observed Frequency} - \text{Expected Frequency})^2}{\text{Expected Frequency}}$$

In computing chi square by using the figures presented in Table III, it is found to be 58.14. The chi square is significant beyond the .002

TABLE II

RESPONSES TO QUESTIONNAIRE ITEMS AND INTERVIEW FREQUENCY OF USAGE OF FACTORS FOR ASSESSING READING READINESS

	ALWAYS		OFTEN		OCCASIONALLY		NEVER		NO RESPONSE		QUESTIONNAIRE ITEMS
	#	%	#	%	#	%	#	%	#	%	
Q	20	71.4	7	25.0	0	0.0	0	0.0	1	3.6	VISUAL DISCRIMINATION OF SHAPES AND FORMS
I	17	60.7	8	28.5	1	3.7	2	7.1	0	0.0	
Q	3	10.7	9	32.1	10	35.7	5	17.9	1	3.6	CHRONOLOGICAL AGE
I	25	89.0	1	3.6	2	7.1	0	0.0	0	0.0	
Q	1	3.6	2	7.1	5	17.9	20	71.4	0	0.0	EDUCATION OF FATHER AND MOTHER
I	0	0.0	2	7.1	9	32.1	16	57.1	1	3.6	
Q	21	75.0	7	25.0	0	0.0	0	0.0	0	0.0	AUDITORY DISCRIMINATION OF SOUNDS REPRESENTING LETTERS
I	14	50.0	9	32.1	5	17.8	0	0.0	0	0.0	
Q	4	14.3	2	7.1	11	39.3	9	32.2	2	7.1	INTELLIGENCE QUOTIENT
I	1	3.6	0	0.0	7	25.0	20	71.4	0	0.0	
Q	8	28.6	6	21.4	11	39.3	3	10.7	0	0.0	SPEECH ARTICULATION
I	9	32.1	10	28.5	10	35.7	1	3.6	0	0.0	
Q	20	71.4	7	25.0	0	0.0	0	0.0	1	3.6	VISUAL DISCRIMINATION OF LETTERS
I	16	57.1	12	42.8	0	0.0	0	0.0	0	0.0	
Q	4	14.3	11	39.3	6	21.4	7	25.0	0	0.0	HOME ENVIRONMENT
I	11	39.2	7	25.0	5	17.8	5	17.8	0	0.0	
Q	14	50.0	12	42.9	2	7.1	0	0.0	0	0.0	LEVEL OF LANGUAGE DEVELOPMENT
I	5	17.8	9	32.1	10	35.7	4	14.2	0	0.0	
Q	14	50.0	11	39.2	2	7.1	1	3.6	0	0.0	LEARNING RATE
I	6	21.4	10	35.7	7	25.0	4	14.2	1	3.6	
Q	2	7.1	9	32.2	9	32.2	6	21.4	2	7.1	MENTAL AGE
I	2	7.1	5	17.8	6	21.4	15	53.5	0	0.0	
Q	8	28.5	14	50.0	4	14.3	1	3.6	1	3.6	PERSONALITY TRAITS
I	9	32.1	10	35.7	8	28.6	1	3.6	0	0.0	
Q	3	10.7	16	57.1	5	17.9	4	14.3	0	0.0	PHYSICAL CONSIDTION
I	10	35.7	9	32.1	8	28.5	1	3.6	0	0.0	

	#	%	#	%	#	%	#	%	#	%	QUESTIONNAIRE ITEMS
Q	0	0.0	4	14.3	10	35.7	14	50.0	0	0.0	SIBLINGS
I	1	3.6	5	17.8	9	32.1	13	46.4	0	0.0	
Q	1	3.6	5	17.9	14	50.0	8	28.5	0	0.0	SOCIOECONOMIC LEVEL
I	4	14.2	2	7.1	9	32.1	13	46.4	0	0.0	
Q	19	67.9	8	28.5	1	3.6	0	0.0	0	0.0	VISUAL DISCRIMINATION OF WORDS
I	11	39.2	12	42.8	4	14.2	1	3.6	0	0.0	
Q	16	57.2	9	32.1	2	7.1	1	3.6	0	0.0	PERCEPTUAL-MOTOR ABILITY
I	13	46.4	6	21.4	8	28.5	1	3.6	0	0.0	
Q	20	71.4	7	25.0	1	3.6	0	0.0	0	0.0	AUDITORY DISCRIMINATION OF WORDS
I	13	46.4	13	46.4	2	7.1	0	0.0	0	0.0	
Q	17	60.7	9	32.1	1	3.6	1	3.6	0	0.0	KNOWLEDGE OF LETTER NAMES
I	14	50.0	8	28.5	5	17.8	1	3.6	0	0.0	
Q	20	71.4	8	28.6	0	0.0	0	0.0	0	0.0	ATTENTION SPAN
I	16	57.1	11	39.2	1	3.5	0	0.0	0	0.0	
Q	1	3.6	1	3.6	1	3.6	19	67.8	6	21.4	GATES-MACGINITTE READING READINESS TEST
I	0	0.0	0	0.0	0	0.0	28	100.0	0	0.0	
Q	16	57.2	6	21.4	1	3.6	5	17.8	0	0.0	METROPOLITAN READING READINESS TEST
I	19	67.8	1	3.6	0	0.0	8	28.5	0	0.0	
Q	15	53.5	10	35.7	1	3.6	1	3.6	1	3.6	TEACHER JUDGMENT
I	20	71.4	5	17.8	3	10.7	0	0.0	0	0.0	
Q	1	3.6	7	25.0	6	21.4	11	39.3	3	10.7	INDIVIDUAL STANDARDIZED INTELLIGENCE TESTS
I	0	0.0	1	3.6	5	17.8	22	78.5	0	0.0	
Q	0	0.0	0	0.0	1	3.6	23	82.1	4	14.3	GESELL SCHOOL READINESS TEST
I	0	0.0	0	0.0	0	0.0	28	100.0	0	0.0	
Q	0	0.0	0	0.0	0	0.0	24	85.7	4	14.3	ILLINOIS TEST OF PSYCHOLINGUSITIC ABILITIES
I	0	0.0	0	0.0	1	3.6	27	96.4	0	0.0	
Q	0	0.0	6	21.4	3	10.7	14	50.0	5	17.9	PERCEPTUAL-MOTOR TESTS
I	1	3.6	0	0.0	6	21.4	21	75.0	0	0.0	

FREQUENCY OF USAGE OF:

	ALWAYS		OFTEN		OCCASIONALLY		NEVER		NO RESPONSE		QUESTIONNAIRE ITEMS
	#	%	#	%	#	%	#	%	#	%	
Q	8	28.6	8	28.6	9	32.1	2	7.1	1	3.6	TOTAL CLASS FOR REAHING READINESS INSTRUCTION
I	6	21.4	9	32.1	12	42.8	1	3.6	0	0.0	
Q	16	57.1	8	28.6	4	14.3	0	0.0	0	0.0	SMALL GROUP READING READINESS INSTRUCTION WITHIN THE CLASS
I	16	57.1	11	39.2	1	3.6	0	0.0	0	0.0	
Q	4	14.3	8	28.6	11	39.3	5	17.8	0	0.0	INDIVIDUAL DIAGNOSED PRESCRIBED INSTRUCTION FOR READING READINESS
I	1	3.6	7	25.0	13	46.4	7	25.0	0	0.0	
Q	0	0.0	1	3.6	5	17.8	21	75.0	1	3.6	READING READINESS INSTRUCTION ACCORDING TO SEX DIFFERENCES
I	0	0.0	0	0.0	6	21.4	22	78.5	0	0.0	
Q	4	14.3	2	7.1	5	17.9	17	60.7	0	0.0	READING READINESS INSTRUCTIONAL ASSISTANCE FROM TEACHER AIDES
I	5	17.8	2	7.1	3	10.7	18	64.2	0	0.0	
Q	6	21.4	6	21.4	8	28.6	8	28.6	0	0.0	READING READINESS INSTRUCTIONAL ASSISTANCE FROM PARENTS OR TUTORS
I	12	42.8	8	28.5	7	25.0	1	3.5	0	0.0	

FREQUENCY OF USE OF FACTORS FOR DEVELOPING READING READINESS:

	ALWAYS		OFTEN		OCCASIONALLY		NEVER		NO RESPONSES		
	#	%	#	%	#	%	#	%	#	%	
Q	18	64.3	4	14.3	5	17.8	0	0.0	1	3.6	VISUAL DISCRIMINATION OF WORDS
I	7	25.0	13	46.4	7	25.0	1	3.6	0	0.0	
Q	23	82.1	4	14.3	0	0.0	0	0.0	1	3.6	AUDITORY DISCRIMINATION OF SOUNDS REPRESENTING LETTERS
I	17	60.7	9	32.1	2	7.1	0	0.0	0	0.0	
Q	21	75.0	5	17.8	0	0.0	1	3.6	1	3.6	NAMING LETTERS
I	10	35.7	13	46.4	3	10.7	2	7.1	0	0.0	
Q	23	82.1	4	14.3	0	0.0	0	0.0	1	3.6	VISUAL DISCRIMINATION OF LETTERS
I	8	28.5	17	60.7	3	10.7	0	0.0	0	0.0	
Q	10	35.7	12	42.9	5	17.8	0	0.0	1	3.6	PERCEPTUAL-MOTOR TASKS
I	8	28.5	14	50.0	5	17.8	1	3.6	0	0.0	

FREQUENCY OF USAGE OF FACTORS FOR DEVELOPING READING READINESS

	ALWAYS		OFTEN		OCCASIONALLY		NEVER		NO RESPONSE		
	#	%	#	%	#	%	#	%	#	%	
Q	19	67.9	7	25.0	0	0.0	0	0.0	2	7.1	SOUND-SYMBOL ASSOCIATION TASKS
I	8	28.5	7	25.0	10	35.7	3	10.7	0	0.0	
Q	21	75.0	5	17.8	1	3.6	0	0.0	1	3.6	EXPRESSIVE ORAL LANGUAGE
I	8	28.5	10	35.7	10	35.7	0	0.0	0	0.0	
Q	21	75.0	5	17.8	1	3.6	0	0.0	1	3.6	VISUAL DISCRIMINATION OF SHAPES AND FORMS
I	9	32.1	12	42.8	7	25.0	0	0.0	0	0.0	
Q	22	78.6	4	14.3	0	0.0	0	0.0	2	7.1	INITIAL CONSONANT SOUNDS AND SPOKEN CONTEXT
I	11	39.2	10	35.7	6	21.4	1	3.6	0	0.0	
Q	22	78.6	5	17.9	0	0.0	0	0.0	1	3.5	LISTENING
I	12	42.8	11	39.2	5	17.8	0	0.0	0	0.0	
Q	14	50.0	9	32.1	4	14.3	0	0.0	1	3.6	VISUAL MEMORY
I	2	7.1	10	35.7	13	46.4	3	10.7	0	0.0	
Q	10	35.7	6	21.4	11	39.3	0	0.0	1	3.6	ISOLATED SOUNDS OF LETTERS
I	5	17.8	9	32.1	14	50.0	0	0.0	0	0.0	
Q	11	39.3	14	50.0	1	3.6	0	0.0	2	7.1	ASSOCIATION OF WORDS
I	2	7.1	4	14.2	15	53.5	7	25.0	0	0.0	
Q	9	32.1	10	35.7	7	25.0	1	3.6	1	3.6	SIMILAR WORDS IN LISTS
I	8	28.5	14	50.0	4	14.2	2	7.1	0	0.0	
Q	12	42.9	10	35.7	5	17.9	0	0.0	1	3.5	AUDITORY MEMORY
I	1	3.6	5	17.8	12	42.8	10	3.6	0	0.0	
Q	7	25.0	8	28.6	10	35.9	2	7.1	1	3.6	CLASSIFICATION OF WORDS
I	3	10.7	12	42.8	11	39.2	2	7.1	0	0.0	

* Q represents questionnaire
I represents interviews

TABLE III

FREQUENCIES OF RESPONSES AS REPORTED BY TEACHERS ON FORM ONE AND FORM TWO OF THE QUESTIONNAIRE

	FORM ONE	FORM TWO	
ALWAYS	319.9* 305**	331.1* 346**	651
OFTEN	2012.2* 2204**	2082.8* 1891**	4095
OCCASIONALLY	1468.7* 1413**	1520.3* 1576**	2989
NEVER	941.5* 876**	974.5* 1040**	1916
NO RESPONSE	843.7* 788**	873.3* 929**	1717
	5586	5782	11368

*expected frequencies
**observed frequencies

level. A better indication of reliability might have been secured if the two forms had been administered to the same sample.

Usage frequencies were tabulated for each item of the questionnaire. In order to give a clear picture of the information gained from responses to the questionnaire, each item was presented individually. The following chart shows the responses of 232 teachers for frequency of usage of factors for assessing reading readiness, frequency of usage of various forms of instruction, and frequency of usage of factors for developing reading readiness.

The frequency of use of the practices as reported by the teachers on the questionnaire were compared to the research evidence. The analyses of the results revealed the following findings:

1. Visual discrimination of shapes and forms for assessing reading readiness was often used by 58.6 per cent of the teachers and occasionally used by 34.1 per cent of the teachers. This practice is supported by research.
2. Chronological age was never used for assessing reading readiness by 38.4 per cent of the teachers. The teachers may not have considered that the entrance to kindergarten or first grade depends on a predetermined chronological age. In the research, the relationship between chronological age and reading readiness is low.
3. The educational level of the father and mother was never used for assessing reading readiness by 31.5 per cent of the teachers. However, 56.5 per cent of the teachers did not respond. Research evidence indicates there is a positive relationship

TABLE IV

RESPONSES TO QUESTIONNAIRE ITEMS FREQUENCY OF USAGE OF FACTORS FOR ASSESSING READING READINESS

ALWAYS		OFTEN		OCCASIONALLY		NEVER		NO RESPONSE		QUESTIONNAIRE ITEMS
#	%	#	%	#	%	#	%	#	%	
9	3.9	136	58.6	79	34.1	8	3.4	0	0.0	VISUAL DISCRIMINATION OF SHAPES AND FORMS
8	3.5	32	13.8	64	27.6	89	38.4	39	16.9	CHRONOLOGICAL AGE
6	2.6	7	3.0	15	6.4	73	31.5	131	56.5	EDUCATION OF FATHER AND MOTHER
7	3.0	142	61.2	66	28.4	15	6.5	2	0.9	AUDITORY DISCRIMINATION OF SOUNDS REPRESENTING LETTERS
12	5.2	21	9.1	49	21.1	80	34.4	70	30.2	INTELLIGENCE QUOTIENT
8	3.4	51	22.0	78	33.6	76	32.8	19	8.2	SPEECH ARTICULATION
8	3.5	142	61.2	72	31.0	10	4.3	0	0.0	VISUAL DISCRIMINATION OF LETTERS
7	3.0	19	8.2	79	34.1	90	38.8	37	15.9	HOME ENVIRONMENT
6	2.6	90	38.8	111	47.8	23	9.9	2	0.9	LEVEL OF LANGUAGE DEVELOPMENT
7	3.0	99	42.7	96	41.4	27	11.6	3	1.3	LEARNING RATE
10	4.3	47	20.3	88	37.9	51	22.0	36	15.5	MENTAL AGE
9	3.9	91	39.2	96	41.3	34	14.7	2	0.9	PERSONALITY TRAITS
8	3.5	46	19.8	96	41.4	62	26.7	20	8.6	PHYSICAL CONDITION
6	2.6	7	3.0	26	11.2	95	41.0	98	42.2	SIBLINGS
8	3.5	11	4.7	32	13.8	97	41.8	84	36.2	SOCIOECONOMIC LEVEL
6	2.6	124	53.4	67	26.9	31	13.4	4	1.7	VISUAL DISCRIMINATION OF WORDS
7	3.0	112	48.3	92	39.6	19	8.2	2	0.9	PERCEPTUAL-MOTOR ABILITY
7	3.0	133	57.3	74	31.9	17	7.3	1	0.4	AUDITORY DISCRIMINATION OF WORDS
6	2.6	120	51.7	75	32.3	25	10.8	6	2.6	KNOWLEDGE OF LETTER NAMES
6	2.6	158	68.1	63	27.0	5	2.2	0	0.0	ATTENTION SPAN
68	29.3	16	6.9	11	4.7	9	3.9	128	55.2	GATES-MACGINITIE READING READINESS TEST
35	15.1	92	39.7	36	15.5	19	8.2	50	21.5	METROPOLITAN READINESS TEST
13	5.6	143	61.6	65	28.0	9	3.9	2	0.9	TEACHER JUDGMENT
33	14.2	24	10.3	27	11.6	84	36.2	64	27.6	UNDIVIDUAL STANDARDIZED INTELLIGENCE TESTS
48	20.7	2	0.9	5	2.2	12	5.2	165	71.1	GESELL SCHOOL READINESS TEST
49	21.1	2	0.8	1	0.4	11	4.7	169	72.8	ILLINOIS TEST OF PSYCHOLINGUISTIC ABILITIES
36	15.5	10	4.3	36	15.5	46	19.8	104	44.8	PERCEPTUAL-MOTOR TESTS

ALWAYS		OFTEN		OCCASIONALLY		NEVER		NO RESPONSE		QUESTIONNAIRE ITEMS
#	%	#	%	#	%	#	%	#	%	
						FREQUENCY OF USAGE OF:				
12	5.2	53	22.8	71	30.6	68	29.3	28	12.1	TOTAL CLASS FOR READING READINESS INSTRUCTION
6	2.6	130	56.1	72	31.0	22	9.5	2	0.8	SMALL GROUP READING READINESS INSTRUCTION WITHIN THE CLASS
13	5.6	30	12.9	65	28.0	82	35.4	42	35.4	INDIVIDUAL DIAGNOSED PRESCRIBED INSTRUCTION FOR READING READINESS
15	6.5	2	0.8	10	4.3	35	15.1	170	73.3	READING READINESS INSTRUCTION ACCORDING TO SEX DIFFERENCES
12	5.2	31	13.4	39	16.8	43	18.5	107	46.1	READING READINESS INSTRUCTIONAL ASSISTANCE FROM TEACHER AIDES
10	4.3	49	21.1	61	26.3	65	28.0	47	20.3	READING READINESS INSTRUCTIONAL ASSISTANCE FROM PARENTS OR TUTORS
						FREQUENCY OF USAGE OF FACTORS FOR DEVELOPING READING READINESS:				
12	5.2	119	51.3	51	22.0	46	19.8	4	1.7	VISUAL DISCRIMINATION OF WORDS
7	3.0	170	73.3	45	19.3	10	4.3	0	0.0	AUDITORY DISCRIMINATION OF SOUNDS REPRESENTING LETTERS
8	3.5	154	66.4	45	10.4	22	9.5	3	1.2	NAMING LETTERS
7	3.0	158	68.1	61	26.3	5	2.2	1	0.4	VISUAL DISCRIMINATION OF LETTERS
11	4.7	103	44.4	91	39.2	25	10.8	2	0.9	PERCEPTUAL-MOTOR TASKS
14	6.0	148	63.8	53	22.9	16	6.9	1	0.4	SOUND-SYMBOL ASSOCIATION TASKS
7	3.0	120	51.8	91	39.2	13	5.6	1	0.4	EXPRESSIVE ORAL LANGUAGE
9	3.9	148	63.8	62	26.7	13	5.6	0	0.0	VISUAL DISCRIMINATION OF SHAPES AND FORMS
10	4.3	146	63.0	59	25.4	14	6.0	3	1.3	INITIAL CONSONANT SOUNDS AND SPOKEN CONTEXT
9	3.9	172	74.1	48	20.7	3	1.3	0	0.0	LISTENING
8	3.5	102	45.7	85	36.6	33	36.6	0	0.0	VISUAL MEMORY
7	3.0	91	39.2	68	29.3	55	23.7	11	4.8	ISOLATED SOUNDS OF LETTERS
12	5.2	82	35.4	81	34.9	53	22.8	4	1.7	ASSOCIATION OF WORDS
8	3.5	69	29.7	73	31.5	63	27.1	19	8.2	SIMILAR WORDS IN LISTS
9	3.9	91	39.2	92	39.6	34	14.7	6	2.6	AUDITORY MEMORY
12	5.2	46	19.8	67	28.9	79	34.0	28	12.1	CLASSIFICATION OF WORDS

between reading readiness and the educational level of the father and the mother.

4. Auditory discrimination of sounds representing letters was reported being used often by 61.2 per cent of the teachers. This practice is supported by the research evidence.
5. Intelligence quotient was reported never being used by 34.4 per cent of the teachers. However, 30.2 per cent of the teachers did not respond. The research indicates that intelligence quotients measures correlated less with reading readiness than other measures.
6. For assessing reading readiness, speech articulation was reported being used often by 22.0 per cent of the teachers and always used by 3.4 per cent of the teachers. The research evidence seems to indicate a positive relationship between speech articulation and reading readiness.
7. The frequency of using visual discrimination of letters for assessing reading readiness was often used by 61.2 per cent of the teachers. Research results support this practice.
8. Home environment used for assessing reading readiness was reported being occasionally used by 34.1 per cent of the teachers and never being used by 38.8 per cent of the teachers. Research results seem to indicate a close relationship between reading readiness and home environment.
9. For assessing reading readiness, level of language development was used occasionally by 47.0 per cent of the teachers. There seems to be a positive relationship between reading readiness and level of language development.

10. For assessing reading readiness, learning rate was often used by 42.7 per cent of the teachers and occasionally used by 41.4 per cent of the teachers. The research indicates learning rate is a predictor of reading readiness.
11. For assessing reading readiness, mental age was often used by 20.3 per cent of the teachers and occasionally used by 37.9 per cent of the teachers. Research indicates that other measures predict reading success better than mental age. The mental age requirements will vary with methods and materials utilized.
12. For assessing reading readiness, personality traits were often used by 39.2 per cent of the teachers and occasionally used by 41.3 per cent of the teachers. The research evidence concerning personality traits is conflicting.
13. For assessing reading readiness, physical conditions of the pupils were occasionally used by 41.1 per cent of the teachers and 26.7 per cent of the teachers never used this aspect.
14. For assessing reading readiness, siblings were never used by 41.1 per cent of the teachers and 42.2 per cent of the teachers did not respond. Research seems to indicate that siblings who were read to by older siblings scored higher on reading readiness.
15. For assessing reading readiness, socioeconomic level was never used by 41.8 per cent of the teachers and 36.2 per cent of the teachers did not respond. Research indicates a positive relationship between socioeconomic level and reading readiness.

16. For assessing reading readiness, visual discrimination of words was often used by 53.4 per cent of the teachers. Research evidence seems to indicate a positive relationship between this practice and reading readiness.
17. For assessing reading readiness, perceptual-motor ability was often used by 38.3 per cent of the teachers. The research concerning this practice is conflicting.
18. For assessing reading readiness, auditory discrimination of words was often used by 57.3 per cent of the teachers. The research tends to support this practice.
19. For assessing reading readiness, knowledge of letter names was often used by 51.7 per cent of the teachers. This aspect is one of the best predictors of reading readiness.
20. For assessing reading readiness, attention span was often used by 68.1 per cent of the teachers. Research evidence tends to support this practice.
21. For assessing reading readiness, the Gates-MacGinitie Reading Test was always used by 29.3 per cent of the teachers; 55.2 per cent of the teachers did not respond. The research results support this practice.
22. For assessing reading readiness, the Metropolitan Readiness Test was often used by 39.7 per cent of the teachers. This practice is also supported by research results.
23. For assessing reading readiness, teacher judgment was often used by 61.1 per cent of the teachers. Research indicates that teacher ratings correlated positively with readiness tests and achievement tests.

24. For assessing reading readiness, individual standardized intelligence tests were never used by 36.2 per cent of the teachers and 27.6 per cent of the teachers did not respond. Research indicates that the relationship between intelligence and reading vary according to the kind of intelligence tests. Verbal intelligence scores give a somewhat better prediction of reading success than do non-verbal scores.
25. For assessing reading readiness, the Gesell School Readiness Test was always used by 20.7 per cent of the teachers; 71.1 per cent of the teachers did not respond. The Gesell School Readiness Test is useful for predicting school readiness.
26. For assessing reading readiness, the Illinois Test of Psycholinguistic Abilities was always used by 21.1 per cent of the teachers; 72.8 per cent of the teachers did not respond. The use of this test is supported by the research results.
27. For assessing reading readiness, the perceptual-motor tests were always used by 15.5 per cent, never used by 19.8 per cent and 44.8 per cent of the teachers did not respond. The evidence concerning perceptual-motor tests is conflicting.
28. The total class was used for reading readiness instruction occasionally by 30.6 per cent of the teachers and never used by 29.3 per cent of the teachers. Total class reading readiness instruction does not seem to be supported by the research results.
29. Small group reading readiness instruction within the class was often used by 56.1 per cent of the teachers.

30. Individual diagnosed prescribed instruction for reading readiness was never used by 35.4 per cent of the teachers and 35.4 per cent of the teachers never responded. The research evidence supports this practice.
31. Reading readiness instruction according to sex differences was never used by 15.1 per cent of the teachers; 73.3 per cent of the teachers did not respond. The research indicates there seem to be differences between the reading readiness of boys and girls.
32. Reading readiness instructional assistance from teacher aides was often used by 13.4 per cent of the teachers and occasionally used by 16.8 per cent of the teachers. The research evidence seems to support the use of teacher aides.
33. Reading readiness instructional assistance from tutors or parents was infrequently used (4.3 always, 21.1 often, and 26.3 occasionally). Research supports this practice.
34. Visual discrimination of words for developing reading readiness was often used by 51.3 per cent of the teachers. This practice is supported by the research evidence.
35. Auditory discrimination of sounds representing letters for developing reading readiness was often used by 73.3 per cent of the teachers. This practice is supported by research evidence.
36. Teaching letter names to develop reading readiness was often used by 66.4 per cent of the teachers. This practice is not supported by research evidence.

37. Visual discrimination of letters to develop reading readiness was often used by 68.1 per cent of the teachers. This practice is supported by research evidence.
38. Perceptual-motor tasks for developing reading readiness was often used by 44.4 per cent of the teachers and occasionally used by 39.2 per cent of the teachers. The research evidence for this practice is conflicting.
39. Sound-symbol association tasks for developing reading readiness was often used by 63.8 per cent of the teachers. Research evidence supports this practice.
40. Expressive oral language for developing reading readiness was often used by 51.8 per cent of the teachers and occasionally used by 39.2 per cent of the teachers. Research evidence supports this practice.
41. Developing reading readiness through the use of visual discrimination of shapes and forms was reported being often used by 63.8 per cent of the teachers and occasionally used by 26.7 per cent of the teachers. Research evidence does not seem to support this practice.
42. Initial consonant sounds and spoken context for developing reading readiness was often used by 63.0 per cent of the teachers. Research evidence supports this practice.
43. Developing reading readiness through listening was often used by 74.1 per cent of the teachers. Research evidence supports this practice.
44. Visual memory for developing reading readiness was often used by 45.7 per cent of the teachers and occasionally used by 36.6

per cent of the teachers. The research evidence supports this practice.

45. Developing reading readiness through the use of isolated sounds of letters was often used by 39.2 per cent of the teachers and occasionally used by 29.3 per cent of the teachers. The research evidence supports this practice.
46. Developing reading readiness through association of words was often used by 35.4 per cent and occasionally used by 34.9 per cent of the teachers. The research evidence supports this practice.
47. Developing reading readiness through the use of similar words in lists was often used by 29.7 per cent of the teachers and occasionally used by 31.5 per cent of the teachers. This practice is supported by research evidence.
48. Developing reading readiness through the use of auditory memory was often used by 39.2 per cent of the teachers and occasionally used by 39.6 per cent of the teachers. This practice is supported with research evidence.
49. Developing reading readiness through the use of classification of words was often used by 19.8 per cent of the teachers and occasionally used by 28.9 per cent of the teachers. Research evidence supports this practice.

Questionnaire Analysis by Categories

The number and per cent of the responses for the reading readiness practices as reported on the questionnaire were determined for each of the following areas: number of teachers in the school district, age of

teachers, college degree, years of teaching experience, years teaching at present school, teaching level, years teaching at present level, class size, whether or not the teacher had a reading course, and whether or not consultant services were available. (See Table V.)

There were four groups of school districts (school districts with one to 25 teachers, school districts with 26 to 99 teachers, school districts with 100 to 569 teachers, and the metropolitan districts of Oklahoma City and Tulsa. The group, age of teachers, was subdivided into teachers of 21 to 25 years old, 26 to 45 years old, 46 to 60 years old, and teachers older than 60 years. The subcategories for college degree were Bachelor of Science, Master of Arts, Life Certificate, and Bachelor of Arts. The subcategories of years of teaching experience were zero to two years, three to nine years, ten to 15 years, 16 to 25 years, and 26 to 45 years of teaching at present school. The teaching levels were kindergarten and first grade. The years of teaching at present level were divided into zero to two years, three to nine years, ten to 15 years, 16 to 25 years, and 26 to 45 years. Class size was divided into classes with one to 19 pupils, classes with 20 to 29 pupils, and classes with 30 to 39 pupils. Either a yes or no response was requested for whether or not the teacher had a reading course. Whether or not consultant services were available was also answered with a yes or no.

The categories which had the widest range of differences were the following: life certificate for the response of often, 10 to 15 years of teaching experience for the response of often, 26 to 45 years teaching at present school for the responses of always, often, and

occasionally, kindergarten and first grade teaching level for the response of often, and class size of 30 to 39 for the response of often.

TABLE V

FREQUENCY OF USAGE OF ALL READING READINESS PRACTICES AS REPORTED ON THE QUESTIONNAIRES ACCORDING TO DEMOGRAPHIC DATA

	NUMBER OF TEACHERS IN SCHOOL DISTRICT								AGE OF TEACHERS								COLLEGE DEGREE							
	1 - 25		26 - 99		100 - 569		METRO		21 - 25		26 - 45		46 - 60		60 PLUS		B. S.		M. A.		LIFE CERT.		B. A.	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
ALWAYS	233	5.7	133	5.1	155	5.2	129	8.0	76	4.5	383	5.6	115	5.0	64	13.1	438	5.6	112	4.6	8	8.2	93	9.0
OFTEN	1383	33.6	928	35.7	1192	39.9	587	36.3	593	35.6	2474	36.3	835	36.3	135	27.6	2664	34.2	1036	42.3	11	11.2	384	37.3
OCCASIONALLY	1199	29.1	698	26.9	698	23.3	378	23.4	441	26.5	1773	26.0	636	27.6	129	26.3	2159	27.7	556	22.7	41	41.9	233	22.6
NEVER	696	16.9	436	16.8	479	16.0	291	18.0	311	18.7	1134	16.7	379	16.4	86	17.5	1316	16.9	418	17.1	22	22.4	160	15.6
NO RESPONSE	605	14.7	402	15.5	465	15.6	232	14.3	245	14.7	1047	15.4	338	14.7	76	15.5	1214	15.6	328	13.3	16	16.3	159	15.5

	YEARS OF TEACHING EXPERIENCE										YEARS TEACHING AT PRESENT SCHOOL										TEACHING LEVEL			
	0 - 2		3 - 9		10 - 15		16 - 25		26 - 45		0 - 2		3 - 9		10 - 15		16 - 25		26 - 45		KINDER.		FIRST	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
ALWAYS	129	6.0	219	4.6	124	6.9	126	7.8	54	5.5	263	6.4	283	5.2	68	6.6	36	4.9	17	17.3	287	6.1	364	5.4
OFTEN	748	34.7	1860	38.7	490	27.0	603	37.3	393	40.1	1439	35.0	1988	36.9	322	31.3	329	44.8	29	29.6	1418	30.1	2677	40.2
OCCASIONALLY	592	27.4	1145	23.8	606	33.4	410	25.3	236	24.1	1053	25.6	1453	27.0	285	27.7	169	23.0	28	28.6	1332	28.3	1657	24.9
NEVER	353	16.4	838	17.5	324	17.9	250	15.5	151	15.4	700	17.0	902	16.7	179	17.4	107	14.5	20	20.4	898	19.1	1018	15.3
NO RESPONSE	334	15.5	740	15.4	269	14.8	228	14.1	146	14.9	661	16.0	764	14.2	175	17.0	94	12.8	4	4.1	769	16.4	948	14.2

	YEARS TEACHING AT PRESENT LEVEL										CLASS SIZE						READING COURSE				CONSULTANT SERVICE			
	0 - 2		3 - 9		10 - 15		16 - 25		26 - 45		1 - 19		20 - 29		30 - 39		YES		NO		YES		NO	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
ALWAYS	204	5.4	292	5.8	114	8.3	29	3.5	12	4.1	111	4.5	453	5.6	76	9.7	372	5.8	279	5.7	355	5.1	287	6.8
OFTEN	1358	35.5	1769	35.1	488	35.6	342	41.0	138	47.3	872	35.6	2987	37.2	197	25.1	2405	37.2	1690	34.5	2584	37.4	1420	33.7
OCCASIONALLY	1010	26.4	1344	26.6	362	26.4	218	26.4	55	18.0	690	28.2	2048	25.5	221	28.2	1714	26.5	1275	26.0	1788	25.9	1130	26.8
NEVER	646	16.9	857	17.0	228	16.6	143	17.2	42	14.4	383	15.7	1353	16.8	165	21.1	1072	16.5	844	17.2	1170	16.9	718	17.1
NO RESPONSE	604	15.8	785	15.5	180	13.1	101	12.1	47	16.1	392	16.0	1195	14.9	125	15.9	905	14.0	812	16.6	1012	14.7	659	15.6

CHAPTER VI

SUMMARY AND CONCLUSIONS

General Summary of the Investigation

This descriptive study investigated the status of reading readiness practices in kindergarten and first grade. A questionnaire was constructed according to reading readiness research. Reading experts and experienced kindergarten and first-grade teachers participated in the pilot study and made recommendations regarding the questionnaire. The questionnaire was revised according to the suggestions. An introductory letter was mailed to principals of randomly selected school buildings (17.5 per cent) in Oklahoma. The percentage of response was 62.0. The principals interested in the study listed the names of teachers who were willing to participate in the study. Of the 320 teachers who were mailed questionnaires, 232 teachers (73 per cent) replied. Twenty-eight (12.0 per cent) of the responding teachers were randomly selected for follow-up classroom interviews to verify the information received in the questionnaire. The chi square test was used to determine whether there was a difference in response between the two forms of the questionnaire. For each questionnaire item the number and percentage was determined. The reading readiness practices as indicated on the questionnaire were compared with reading readiness research evidence. Strengths and weaknesses of reading readiness practices as determined

by the comparison indicated topics which need to be considered in pre-service and inservice training of teachers.

Findings

The comparison of practices as revealed by the questionnaire and the practices supported by research suggest which practices need to be emphasized even more in training of teachers. Practices supported by research and used by teachers, practices supported and little used by teachers, practices unsupported by research and used by teachers, and unsupported practices and little used practices will be discussed.

Respondents indicated that the following practices for assessing reading readiness were those more frequently used and the practices were supported by research:

1. visual discrimination of shapes and forms, letters, and words
2. auditory discrimination of sounds representing letters and words
3. knowledge of letter names
4. teacher judgment

Respondents indicated that the following practices for developing reading readiness were those more frequently used and the practices were supported by research:

1. visual discrimination of words and letters
2. auditory discrimination of sounds representing letters and sound-symbol association
3. expressive oral language
4. initial consonant sounds and spoken context
5. listening

Respondents indicated that the following practices for assessing reading readiness were less frequently used even though the practices were supported by research:

1. level of education of father and mother
2. intelligence quotient
3. speech articulation
4. home environment
5. level of language development
6. learning rate
7. physical condition
8. siblings
9. socioeconomic level
10. Gates-MacGinitie Reading Readiness Test
11. Metropolitan Reading Readiness Test
12. individual intelligence tests
13. Gesell School Readiness Test
14. Illinois Test of Psycholinguistic Abilities
15. perceptual-motor tests

Respondents indicated that the following organizational factors which facilitate reading readiness were less frequently used even though the practices were supported by research:

1. individual diagnosed prescribed instruction
2. instruction according to sex differences

Respondents indicated that the following factors for developing reading readiness were less frequently used even though the practices were supported by research:

1. visual memory
2. association of words
3. similar words in lists
4. auditory memory
5. classification of words

Respondents indicated that the following practices for assessing reading readiness were less frequently used and the practices were not supported by research:

1. chronological age
2. mental age

Respondents indicated that the following organizational factor for reading readiness instruction was less frequently used and the practice was not supported by research:

1. total class

Respondents indicated that practices for developing reading readiness were those more frequently used even though the practices were not supported by research:

1. naming letters
2. visual discrimination of shapes and forms

Recommendations

The following recommendations are made with respect to the development of reading readiness practices in the public kindergarten and first grades of Oklahoma:

1. Certification and accreditation standards by the State Department of Education in Oklahoma should be strengthened and

enforced to include a reading course with an emphasis on reading readiness for elementary school teachers.

2. Educators who are concerned with immediate improvement of existing reading readiness practices should focus attention on inservice training.
3. Reading readiness programs need to focus on the interrelationships of the multi-abilities, skills, and interests which are developed through training and maturation. One method of helping teachers improve reading readiness programs would be through demonstration programs.
4. Encourage the use of consultants for improving reading readiness practices.
5. There is a need to evaluate undergraduate preparation for the teaching of reading readiness and to increase and improve the opportunities provided by teacher education institutions for prospective teachers.

Suggestions for Related Study

Further research suggestions in the area of reading readiness practices which might be of value to educators include:

1. A follow-up study of reading readiness practices in Oklahoma in five to ten years to assess the progress made state-wide toward implementation of practices supported by research.
2. Research into the role of journals and books regarding reading readiness practices in kindergarten and first grade.
3. Research into the role of administrators in implementation of improved reading readiness practices.

4. The effect of consultant services on reading readiness practices.

Conclusion

Reading readiness is not unilateral but multilateral. The varying reading readiness factors are interrelated and best developed through multi-faceted approaches depending on the reading readiness strengths and weaknesses of the individual child. Teachers need to give increased attention to the reading readiness practices supported by research which enables them to identify instruction which matches the various abilities, skills, and interests of children.

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APPENDIX A

COMMUNICATION WITH PRINCIPALS

Oklahoma State University
Stillwater, Oklahoma 74074
October 15, 1973

Dear Principal:

May I invite your kindergarten and first grade teachers to participate in a study? Enclosed is a brief description of the study concerned with the use of reading readiness practices in the kindergartens and first grades of Oklahoma. This project is concerned specifically with determining the present status of reading readiness practices in our state. The results of this study will help provide criteria to be used for improving preservice and inservice teacher education courses at Oklahoma State University. Results will be made available to you for your own inservice work. The estimated time for teachers to complete the questionnaire is fifteen to thirty minutes.

The questionnaire developed from research findings will be sent only to those kindergarten and first grade teachers in schools selected by stratified random sampling procedures. The questionnaire will incorporate practices for assessing and developing reading readiness. When the questionnaires are returned, an analysis comparing what is happening in the field with the research findings will be made. Ten per cent of the teachers who receive questionnaires will be randomly selected for interviews. All returns will be treated as confidential and individual responses will not be identified.

Will you please return the enclosed reply card indicating whether or not you are willing for the kindergarten and first grade teachers in your school to complete a questionnaire? On the reply card, also indicate if your teachers may be interviewed. Please list the names of the kindergarten and first grade teachers in your school.

Your cooperation in this project will be appreciated.

Sincerely,

(Mrs.) Melvie Ross
Curriculum and Instruction Department

Bernard R. Belden
Professor
Curriculum and Instruction Department

___Yes, I am interested in having the kindergarten and first grade teachers from our school participate.
___No, I am not interested in having the kindergarten and first grade teachers from our school participate.

The teachers may be interviewed. Yes_____ No_____

The names of the kindergarten and first grade teachers are:

_____

_____

_____

_____

Principal_____School_____City_____

November 7, 1973

Dear Principal:

Three weeks ago, a card requesting kindergarten and first grade teachers' names as well as permission for an interview was forwarded to you. It is important to have these teachers from your school included in the study.

Will you please complete the card and return it to me as soon as possible? Thank you.

Sincerely,

(Mrs.) Melvie Ross

APPENDIX B

COMMUNICATION WITH TEACHERS

Oklahoma State University
Stillwater, Oklahoma 74074

Dear Kindergarten or First Grade Teacher:

The attached questionnaire concerned with reading readiness practices used in kindergarten and first grade is part of a state wide study. This project is concerned specifically with determining the present status of reading readiness practices in our state. The results of this study will help to provide criteria to be used for improving preservice and inservice teacher education at Oklahoma State University.

We are interested in obtaining your responses because your reading readiness practices will contribute to our understanding of the status of education in this area. In reporting the results of the study, the names of participating teachers will not be used. The average time required for teachers trying out the questionnaire was thirteen minutes.

It will be appreciated if you will complete the questionnaire as soon as possible and return it in the stamped-addressed envelope enclosed. Other phases of this research cannot be carried out until we complete analysis of the questionnaire data. We will welcome any comments that you may have concerning any aspect of reading readiness practices not covered in the questionnaire. We will be pleased to send you a summary of the results if you desire.

Thank you for your cooperation.

Sincerely,

(Mrs.) Melvie Ross
Curriculum and Instruction

Bernard R. Belden
Professor
Curriculum and Instruction

CURRENT READING READINESS PRACTICES

IN KINDERGARTEN AND FIRST GRADE

DIRECTIONS: Please complete the information on this form and return it in the enclosed envelope at your earliest convenience. ALL REPLIES WILL BE TREATED AS CONFIDENTIAL.

1. Male____ Female____
2. Age 21-25____ 26-45____ 46-60____ 61 plus____
3. Highest degree held_____
4. Year degree was obtained_____
5. Year(s) of teaching experience (not counting this year)_____
6. Year(s) of teaching at present school_____
7. Present teaching level: kindergarten_____ first grade_____
8. Year(s) of teaching at present level_____
9. School enrollment_____
10. Class size_____
11. Have you had a reading course with special attention given to reading readiness? Yes____ No____
12. Are consultant services available? Yes____ No____

DIRECTIONS: From the four alternates for each item, circle the number which will best represent the use you make of the factor in assessing reading readiness.

	Always Used	Often Used	Occasionally Used	Never Used
A. visual discrimination of shapes and forms	1	2	3	4
B. chronological age	1	2	3	4
C. education of father and mother	1	2	3	4
D. auditory discrimination of letter sounds	1	2	3	4
E. intelligence quotient	1	2	3	4
F. enunciation, speech defects	1	2	3	4
G. visual discrimination of letters	1	2	3	4
H. home environment	1	2	3	4
I. level of language development	1	2	3	4
J. learning rate	1	2	3	4
K. mental age	1	2	3	4
L. personality traits such as persistence, self-reliance	1	2	3	4
M. evidence pertaining to physical condition	1	2	3	4
N. siblings in family	1	2	3	4
O. socioeconomic level	1	2	3	4
P. visual discrimination of words	1	2	3	4
Q. perceptual-motor ability	1	2	3	4
R. auditory discrimination of words	1	2	3	4
S. knowledge of letter names	1	2	3	4
T. attention span, being able to concentrate until the task is completed	1	2	3	4
U. other_____	1	2	3	4
_____	1	2	3	4

DIRECTIONS: From the four alternates for each item, circle the number which will best represent your use of these methods for assessing reading readiness.

	Always Used	Often Used	Occasionally Used	Never Used
A. standardized reading readiness tests				
Gates-MacGinitie Reading Readiness Test	1	2	3	4
Metropolitan Readiness Test	1	2	3	4
other reading readiness tests_____	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4
B. teacher judgment	1	2	3	4
C. individual standardized intelligence tests	1	2	3	4
D. Gesell School Readiness Test	1	2	3	4
E. Illinois Test of Psycholinguistic Abilities	1	2	3	4
F. perceptual-motor tests such as Frostig Developmental Test of Visual Perception	1	2	3	4
G. other methods:_____	1	2	3	4
_____	1	2	3	4

DIRECTIONS: From the four alternates for each item, circle the number which best represent your use of instructional reading readiness practices.

	Always Used	Often Used	Occasionally Used	Never Used
A. total class reading readiness instruction	1	2	3	4
B. small group instruction within the class	1	2	3	4
C. individual diagnosed prescribed instruction	1	2	3	4
D. instruction according to sex differences	1	2	3	4
E. instructional assistance from teacher aides	1	2	3	4
F. instructional assistance from parents or tutors	1	2	3	4

DIRECTIONS: From the four alternates for each item, circle the number which will best represent your use of practices in the teaching of reading readiness. Do you teach:

	Always Used	Often Used	Occasionally Used	Never Used
A. visual discrimination of words?	1	2	3	4
B. auditory discrimination of letter sounds?	1	2	3	4
C. naming of letters?	1	2	3	4
D. visual discrimination of letters?	1	2	3	4
E. perceptual-motor tasks?	1	2	3	4
F. sound symbol association?	1	2	3	4
G. expressive oral language?	1	2	3	4
H. visual discrimination of shapes and forms?	1	2	3	4
I. initial consonant sounds and spoken context?	1	2	3	4
J. listening?	1	2	3	4
K. visual memory?	1	2	3	4
L. isolated sounds of letters?	1	2	3	4
M. association of words?	1	2	3	4
N. similar words in lists (word families/patterns)?	1	2	3	4
O. auditory memory?	1	2	3	4
P. classification of words?	1	2	3	4
Q. others_____	1	2	3	4

Please list materials and programs used for reading readiness.

_____

_____

_____

_____

CURRENT READING READINESS PRACTICES

IN KINDERGARTEN AND FIRST GRADE

DIRECTIONS: Please complete the information on this form and return it in the enclosed envelope at your earliest convenience. ALL REPLIES WILL BE TREATED AS CONFIDENTIAL.

1. Male____ Female____
2. Age 21-25____ 26-45____ 46-60____ 61 plus____
3. Highest degree held_____
4. Year degree was obtained_____
5. Year(s) of teaching experience (not counting this year)_____
6. Year(s) of teaching at present school_____
7. Present teaching level: kindergarten_____ first grade_____
8. Year(s) of teaching at present level_____
9. School enrollment_____
10. Class size_____
11. Have you had a reading course with special attention given to reading readiness? Yes____ No____
12. Are consultant services available? Yes____ No____

DIRECTIONS: From the four alternates for each item, circle the number which will best represent your use of practices in the teaching of reading readiness. Do you teach:

	Always Used	Often Used	Occasionally Used	Never Used
A. auditory discrimination of letter sounds?	1	2	3	4
B. naming of letters?	1	2	3	4
C. sound symbol association?	1	2	3	4
D. expressive oral language?	1	2	3	4
E. initial consonant sounds and spoken context?	1	2	3	4
F. visual memory?	1	2	3	4
G. association of words?	1	2	3	4
H. visual discrimination of words?	1	2	3	4
I. perceptual-motor tasks?	1	2	3	4
J. visual discrimination of shapes and forms?	1	2	3	4
K. auditory memory?	1	2	3	4
L. listening?	1	2	3	4
M. visual discrimination of letters?	1	2	3	4
N. classification of words?	1	2	3	4
O. isolated sounds of letters?	1	2	3	4
P. similar words in lists (word families/patterns)?	1	2	3	4
Q. others_____	1	2	3	4

Please list materials and programs used for reading readiness.

_____

_____

_____

_____

DIRECTIONS: From the four alternates for each item, circle the number which will best represent your use of these methods for assessing reading readiness.

	Always Used	Often Used	Occasionally Used	Never Used
A. teacher judgment	1	2	3	4
B. individual standardized intelligence tests	1	2	3	4
C. Gesell School Readiness Test	1	2	3	4
D. perceptual-motor tests such as Frostig Developmental Test of Visual Perception	1	2	3	4
E. Illinois Test of Psycholinguistic Abilities	1	2	3	4
F. standardized reading readiness tests Gates-MacGinitie Reading Readiness Test	1	2	3	4
Metropolitan Readiness Test	1	2	3	4
other reading readiness tests_____	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4
G. other methods:_____	1	2	3	4
_____	1	2	3	4

DIRECTIONS: From the four alternates for each item, circle the number which best represent your use of instructional reading readiness practices.

	Always Used	Often Used	Occasionally Used	Never Used
A. instructional assistance from parents or tutors	1	2	3	4
B. instruction according to sex differences	1	2	3	4
C. total class reading readiness instruction	1	2	3	4
D. small group instruction within the class	1	2	3	4
E. instructional assistance from teacher aides	1	2	3	4
F. individual diagnosed prescribed instruction	1	2	3	4

DIRECTIONS: From the four alternates for each item, circle the number which will best represent the use you make of the factor in assessing reading readiness.

	Always Used	Often Used	Occasionally Used	Never Used
A. chronological age	1	2	3	4
B. auditory discrimination of letter sounds	1	2	3	4
C. enunciation, speech defects	1	2	3	4
D. home environment	1	2	3	4
E. learning rate	1	2	3	4
F. personality traits such as persistence, self-reliance	1	2	3	4
G. siblings in family	1	2	3	4
H. visual discrimination of words	1	2	3	4
I. auditory discrimination of words	1	2	3	4
J. attention span, being able to concentrate until the task is completed	1	2	3	4
K. visual discrimination of shapes and forms	1	2	3	4
L. education of father and mother	1	2	3	4
M. intelligence quotient	1	2	3	4
N. visual discrimination of letters	1	2	3	4
O. level of language development	1	2	3	4
P. mental age	1	2	3	4
Q. evidence pertaining to physical condition	1	2	3	4
R. socioeconomic level	1	2	3	4
S. perceptual-motor ability	1	2	3	4
T. knowledge of letter names	1	2	3	4
U. other factors:_____	1	2	3	4
_____	1	2	3	4

November 30, 1973

Dear Teacher,

Recently, a letter with a questionnaire regarding reading readiness was forwarded to you. It is important to have the questionnaire from you included in the study. Will you please complete the questionnaire and return it to me as soon as possible? Thank you.

Sincerely,

(Mrs.) Melvie Ross

APPENDIX C

INTERVIEW COMMUNICATION

FACTORS IN ASSESSING READING READINESS

	Always Used	Often Used	Occasionally Used	Never Used
A. In assessing reading readiness, how often do you consider the age of the student? For example, is there an age requirement for pupils to enter kindergarten or first grade?	1	2	3	4
B. In assessing reading readiness, how often do you consider the pupil's ability to hear the sounds letters represent, that is to hear the difference between /f/ and /t/?	1	2	3	4
C. In assessing reading readiness, how often do you consider if the student has clear speech or a speech defect?	1	2	3	4
D. In assessing reading readiness, how often do you consider home environment: a home where someone has read to him, where books and magazines are available for the child to look at, where there is an interest in reading?	1	2	3	4
E. In assessing reading readiness, how often do you consider learning rate? For example, if a child is taught five words and remembers them after one hour, after 24 hours, and a week later, a learning rate has been established. If a child remembers only two of the five words after a lapse of time, this is his established learning rate.	1	2	3	4
F. In assessing reading readiness, how often do you consider personality traits such as persistence and self-reliance?	1	2	3	4
G. In assessing reading readiness, how often do you consider how many siblings are in the family and the position of the child in the family?	1	2	3	4
H. In assessing reading readiness, how often do you consider visual discrimination of words such as matching "this" in a row of words: thing, that, this?	1	2	3	4
I. In assessing reading readiness, how often do you consider auditory discrimination of words such as distinguishing between two words beginning with the same sounds or different sounds, like fish-wish or fish-fish?	1	2	3	4

	Always Used	Often Used	Occasionally Used	Never Used
J. In assessing reading readiness, how often do you consider attention span, whether the pupil can attend to the reading task?	1	2	3	4
K. In assessing reading readiness, how often do you consider visual discrimination of shapes, being able to distinguish between squares and triangles?	1	2	3	4
L. In assessing reading readiness, how often do you consider the education, the number of years of schooling, of the father and/or mother?	1	2	3	4
M. In assessing reading readiness, how often do you consider the pupil's intelligence quotient?	1	2	3	4
N. In assessing reading readiness, how often do you consider visual discrimination of letters, like finding a specific letter in a row of letters?	1	2	3	4
O. In assessing reading readiness, how often do you consider level of language development: the variety of sentence patterns, total length of communication, the number of different words used per hundred running words, agreement between subject and verb, use of figurative language, use of questions, use of tenativeness, use of elaborate cluster of phrases and clauses instead of single word subjects?	1	2	3	4
P. In assessing reading readiness, how often do you consider the child's mental age?	1	2	3	4
Q. In assessing reading readiness, how often do you consider physical condition such as ear problems, eye problems, bodily chemistry problems (children who are given drugs)?	1	2	3	4
R. In assessing reading readiness, how often do you consider socioeconomic level, whether the pupil comes from an upper-income, middle-income, low-income home?	1	2	3	4
S. In assessing reading readiness, how often do you consider perceptual-motor ability, those skills involved in the process by which sensory impressions are received through the eye and responses are expressed through gesture of movements?	1	2	3	4

	Always Used	Often Used	Occasionally Used	Never Used
T. In assessing reading readiness, how often do you consider knowledge of letter names?	1	2	3	4
U. In assessing reading readiness, what other factors do you consider? How often?	1	2	3	4

METHODS FOR ASSESSING READING READINESS

	Always Used	Often Used	Occasionally Used	Never Used
A. How often do you use your judgment to determine whether or not a pupil is ready to read?	1	2	3	4
B. How often do you use individual standardized intelligence tests to determine if a child is ready to read?	1	2	3	4
C. How often do you use the Gesell School Readiness Test to determine if a pupil is ready to read?	1	2	3	4
D. How often do you use perceptual-motor tests such as the Frostig Developmental Test of Visual Perception to determine if a child is ready to read?	1	2	3	4
E. How often do you use the Illinois Test of Psycholinguistic Abilities to determine if a child is ready to read?	1	2	3	4
F. How often do you use standardized reading readiness such as Gates-MacGinitie Reading Readiness Test?	1	2	3	4
Metropolitan Reading Readiness Test?	1	2	3	4
other reading readiness tests? (specify) _____	1	2	3	4
G. Do you use other assessment methods? How often? _____	1	2	3	4

INSTRUCTIONAL READING READINESS PRACTICES

	Always Used	Often Used	Occasionally Used	Never Used
A. How often do you use instructional assistance from parents or tutors? These tutors may be other children.	1	2	3	4
B. How often do you provide instruction according to sex differences, that is you teach boys differently than girls?	1	2	3	4
C. How often do you provide total class reading readiness instruction?	1	2	3	4
D. How often do you provide small group instruction within the class?	1	2	3	4
E. How often do you use instructional assistance from teacher aides?	1	2	3	4
F. How often do you individually diagnose and prescribe instruction?	1	2	3	4

PRACTICES IN THE TEACHING OF READING READINESS

	Always Used	Often Used	Occasionally Used	Never Used
A. How often do you use exercises of auditory discrimination of letter sounds, the teacher names a word and the pupils respond with other words beginning with the same sound?	1	2	3	4
B. How often do you give practice in the naming of the letters of the alphabet?	1	2	3	4
C. How often do you use sound-symbol association exercises such as when the teacher names a word and the pupils write the letter representing the sound with which the word begins?	1	2	3	4
D. How often do you use activities for expressive oral language such as choral reading, dramatics, spontaneous speech, and the use of desired forms through imitation?	1	2	3	4
E. How often do you use exercises utilizing initial consonant sounds and spoken context such as John drank his m____?	1	2	3	4
F. How often do you use visual memory exercises like having a pupil look at a picture, cover the picture, and tell everything he can remember seeing in the picture?	1	2	3	4
G. How often do you use word association activities such as showing a word on a card and saying the word, then asking the child what the word makes him think of?	1	2	3	4
H. How often do you use visual discrimination of words like finding the same word in a row of words?	1	2	3	4
I. How often do you use perceptual-motor tasks such as having the pupils imitate the leader hopping on the right and then the left foot; tracing or following the dots?	1	2	3	4
J. How often do you use visual discrimination of shapes such as matching triangles and circles?	1	2	3	4
K. How often do you use auditory memory activities like saying a group of letters out of order and having the pupil repeat the group of letters in the same order?	1	2	3	4

	Always Used	Often Used	Occasionally Used	Never Used
L. How often do you teach listening? For example, do you read a story to a child and let him tell all he remembers of the story?	1	2	3	4
M. How often do you use exercises of visual discrimination like matching letters?	1	2	3	4
N. How often do you use activities having the children name everything that is used in the kitchen, that is classifying?	1	2	3	4
O. How often do you use isolated sounds representing the letters like "What sound does the lion make when he roars?" and the pupil responds with the appropriate sound?	1	2	3	4
P. How often do you use similar words in a list like fat, cat, and the pupil adds words with the same pattern?	1	2	3	4
Q. What other practices do you use in the teaching of reading readiness? How often?	1	2	3	4

What program and materials do you use for reading readiness?

VITA

Melvie Lynn Ross

Candidate for the Degree of

Doctor of Education

Thesis: READING READINESS PRACTICES IN KINDERGARTENS AND FIRST GRADES

Major Field: Elementary Education

Biographical:

Personal Data: Born at Peoria, Illinois, the daughter of Melvin and Elvie J. Hippe.

Education: Attended elementary and secondary school in Upsala, Minnesota, a private school in Gillette State Hospital, St. Paul Minnesota, a private school at Alexandra, Victoria, Australia, graduated from Upsala High School in 1956; received the Bachelor of Science Degree from St. Cloud State College in 1960 with a degree in elementary education; received the Master of Arts degree in 1963 with a degree in elementary education; completed requirements for the Doctor of Education degree in May, 1974.

Professional Experience: Taught a combination 4-5 grade at the Consolidated School, Swanville, Minnesota from 1960-1961; taught a fourth grade at North Elementary, Brighton, Colorado from 1962-1963; taught a first grade or second grade at the San Tomé Staff School, San Tomé, Venezuela from 1963-1967; taught a third grade at Skyline Elementary School, Stillwater, Oklahoma from 1970-1971; instructor of college reading improvement, Fall of 1971 and Spring of 1972; supervisor of reading center, material collection, Summer and Fall of 1972; graduate assistant for Mrs. Marsden, teaching children's literature, Spring of 1973; instructor of undergraduate reading skills course, Summer of 1973; diagnostician for Community Based Right-to-Read program, Fall of 1973.