

# Reading Readiness

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The nature and assessment of reading readiness are considered through an examination of factors in reading readiness, and through an examination of purposes and principles in reading readiness assessment. Skills in extant reading readiness tests are identified, and subskill categories derived from research on reading readiness, reading acquisition, and reading achievement are considered. These skills include attention and automaticity; linguistic awareness; understanding of the task; letter, letter-sequence, word, and word-sequence skills; and flexibility in reading. Effects of instructional factors on reading readiness are also considered. The providing of information for instructional decision-making is identified as the major purpose of reading readiness assessment. Twelve principles for the design and use of reading readiness tests are developed, and twelve major categories of factors that should be considered in an assessment of reading readiness are identified. It is argued that reading readiness should be conceptualized and assessed in terms of the specific reading skill or skills demanded by the task confronting the learner.

J. Downing and D. Thackray (1971, p. 72) define "readiness activities" as "a means of narrowing the gap between the state of the human individual and the conditions of the task to be mastered." A reading readiness test, then, is a means of measuring the gap between the state of an individual and the conditions involved in learning to read. The nature of reading readiness and trends in assessing reading readiness are the subject of this paper.

## Factors in Reading Readiness

There is a variety of viewpoints about the nature of the skills that make up reading. Also, there is a variety of viewpoints about the nature of the skills that are prerequisites for learning to read.

R. Rude (1973, p. 575) notes that "There is lack of consensus among test authors as to which [reading readiness] skills should be assessed as well as the techniques employed to assess them. The

Gates-MacGinitie Reading Test—Readiness Skills for example, includes seven separate subtests while the Murphy-Durrell Reading Readiness Analysis consists of only three subtests.” This lack of consensus suggests that it would be preferable to consider initially a broad range of factors potentially involved in reading readiness, rather than trying to define reading readiness in terms of an extremely limited set of factors, or indeed, in terms of just one factor—a dominant approach in the past.

A detailed historical analysis of the concept of reading readiness, and how it has been assessed, can be found in D. Durkin (1968, 1970). She states that “Traditionally, readiness has been viewed as a product; for instance, in the beginning, readiness to read was assumed to be the product of maturation (1970, p. 38).” The criterion was either chronological age or mental age. If the child had reached a certain chronological (or mental) age, then he was ready to learn to read; if he had not reached that age, then he was not yet ready to learn to read. In this case, the prescription would be that the teacher wait until the child was ready to learn to read.

The question “At what age is a child ready to learn to read?” continues to ignite debate between those who feel that the earlier instruction is begun, the better (see, e.g., Doman, 1963), and those who feel that it is better to wait until the child is older and closer to being ready (see, e.g., Biemiller, 1974). Durkin (1974, p. 229) provides the background for use of a single-factor criterion for determining reading readiness: “What about mental age? And, especially, what about the frequently reported idea—even in current texts—that a mental age of 6.5 years is necessary for success with reading? This particular notion . . . is closely associated with a study of first grade reading described by Morphett and Washburne in a 1931 article, ‘When should children begin to read?’ Central to their research was a particular kind of first grade reading instruction given in a particular kind of setting; and for success the combination appeared to require a mental age of about 6.5.” H. Singer (1970, p. 29) refers to the Morphett and Washburne article as “a study which had a significant and long-lasting effect, but shouldn’t have. . . . Even though the Morphett and Washburne recommendation was based upon a particular

test of intelligence and a particular method of instruction, 'conventional wisdom' overgeneralized their recommendation to all tests of intelligence, programs of instruction, and evaluation instruments."

W. MacGinitie (1969, p. 398), like Durkin, rejects the use of any single-factor criterion to gauge reading readiness: "The child is in school to learn—what and how is he ready to learn? The notion of readiness is no more than that." In accord with this definition, reading readiness assessment is a process of gauging the match between learner characteristics and task characteristics. For the most part, MacGinitie's concern for the question of "how is the child ready to learn?" has not been incorporated in readiness assessment procedures, for, as Rude (1973, p. 579) notes, "Attention span, cognitive learning style, and experiential background are only three important factors which are not measured in the five batteries [reading readiness tests] examined."

S. Weintraub (1967, p. 551) provides a further comment on the usefulness of reading readiness assessment procedures: "The most commonly used predictive measures of success in learning to read have been readiness and intelligence tests. . . . Readiness tests tend to correlate somewhere between .4 and .6 with later measures of reading achievement, while intelligence tests, for the most part, show an even lower relationship at the lower reading levels. The readiness tests do an adequate job of identifying the extremes on the normal curve, those who will probably succeed and those who will probably fail. However, the large group of children in the middle may go in either direction when placed in a reading program." E. Gibson and H. Levin (1975) take the same position on the usefulness of current reading readiness assessment procedures.

#### *Skills in Extant Reading Readiness Tests*

Downing and Thackray (1971, p. 90) discuss an analysis of eight reading readiness tests used in the U.S. "All use a test of visual discrimination, six use tests of vocabulary, three use motor tests, two use tests of the reproduction of patterns and shapes from memory, and two make use of tests of relationship. Other tests used include: ability to recall a story, ability to remember ideas in sequence, pronunciation, rhyming of words, auditory discrimination, and handedness and eyedness."

In an analysis of five reading readiness tests (Clymer-Barrett Prereading Battery, Gates-MacGinitie Reading Test—Readiness Skills, Harrison-Stroud Reading Readiness Profiles, Metropolitan Readiness Tests, and Murphy-Durrell Reading Readiness Analysis), Rude (1973) identified twelve subskill categories comprising reading readiness:

1. Vocabulary knowledge (the child's store of verbal concepts).
2. Listening comprehension.
3. Letter recognition.

4. Numerical concepts and operations. Rude (p. 576) comments that "this test is not a reading assessment, per se. . . ." Yet, it is part of a test used to assess reading readiness. Thus, in evaluating procedures for testing reading readiness, one cannot just consider the test, but one must also take into account how a particular assessment tool is used. Rude goes on to point out that "the numbers subtest in earlier versions of the [Metropolitan Readiness] test proved repeatedly to be the most powerful single predictive subtest of later academic achievement."

5. Visual-motor coordination. One of the readiness tests requires the child to make copies of different geometric shapes. A second readiness test has one subtest in which the child has to complete partially drawn geometric shapes so that they match a stimulus, and another subtest in which he has to copy a sentence. A third readiness test requires the child to supply the remaining strokes to incomplete letters so that they will match the stimuli. The copy-a-sentence subtest is different from the other subtests in that copying a sentence would appear to require more effort, and perhaps a different kind of effort, than copying or adding a missing line to a geometric shape or individual letter. If, however, the skills required to perform the copy-a-sentence task are not different from those required to add missing lines to partially completed geometric shapes so that they match the stimulus, then it is not clear why these two subtests are included in the same reading readiness test. If the skills are different, then Rude's procedure of classifying both of these subtests under visual-motor coordination is questionable. Rude (p. 576) does introduce the section on visual-motor coordination in the following way: "Three batteries include a subtest measuring visual-motor coordination. Each measure is unique, however."

6. Determination of whether or not two words rhyme.

7. Phoneme correspondence. Rude (p. 577) expresses surprise that only three out of the five readiness tests he analyzed included a subtest dealing with this subskill category. In one of the three tests, the child is taught the sound for each of the consonant letters being tested; then, the child "marks two of the four choices which begin with the same sound." In the second test, the phoneme correspondence section is entitled "Discrimination of Beginning Sounds in Words," and in it, the child selects "from a three item picture-array the response matching the consonant stimulus." The third subtest is like the second, for the child must "identify which of a two choice picture array begins with the same initial consonant as the stimulus."

8. Rate of learning. Only one of the five readiness tests considered by Rude contains this subtest. It provides an indication of how easy it is for a child to learn to read a sample set of words. Presumably, the child for whom this task is easy is "more ready" to learn to read than the child for whom this task is hard.

9. Sound discrimination. This subskill category deals with whether or not the child can discriminate between words that sound alike. It differs from subskill category #2 (listening comprehension), since listening comprehension subtests in reading readiness tests generally ask the child to select from a set of pictures the one that "depicts the sentence or paragraph read by the teacher."

10. Blending individual sounds together.

11. Word reading. Marking the written word in the set that was read by the teacher.

12. Selecting from a visual array the visual form that matches a sample.

#### *Factors in Reading Readiness Identified in Research Studies*

J. Mackworth's (1974b, pp. 1-2) analysis of skills involved in reading readiness is quoted at length, since her appraisal provides information on skills involved in the process of reading acquisition, as well as a listing of skills necessary for reading readiness. "The necessary pre-reading skills involve adequate sensory discrimination, particularly in the visual and auditory areas. But in addition,

the child needs a good spoken vocabulary, which is consistent with the kinds of reading material that will be presented to him, and a good knowledge of grammar together with an understanding of word order, as well as good comprehension. All this depends greatly on his early environment. . . . [Another] prerequisite is a good knowledge of his letters. . . . In addition to the prereading skills of language and letter naming, the young reader has to learn a whole new series of skills, involving visual memory, parallel processing, and the recognition of left-to-right order of letters and words. Beyond these visual skills, he must learn the sounds made by the written symbols, and how a wide range of written groups of symbols can have the same sound. Finally, he needs to master his visual behavior, moving his eyes from left to right along the type, and fixating on the important words within each sentence. He must master a reasonable speed of reading, because if he is too slow, he will have few words in his visual store, and he will read like a caterpillar, humping from word to word. His comprehension span will be too short for him to gain an understanding of the whole story, and his ability to predict what word comes next will be impaired.”

Rude (p. 579) identifies four prereading skills, based on his appraisal of a sample of research on reading readiness:

1. Grapheme perception.
2. Left-to-right visual scan.
3. Grapheme-phoneme relationships.
4. Phoneme blending.

In a “how-to” list for parents, providing suggestions on how parents can help their child develop readiness for reading, the following subskill categories are mentioned (Nelson, 1972, pp. 139-140):

1. Visual discrimination.
2. Visual memory.
3. Auditory discrimination.
4. Auditory memory.
5. General knowledge.
6. Verbal expression.
7. Muscular control.
8. Sense of responsibility.

The suggestions for parents following each of these subskill categories are practical and “do-able.” Whether or not following the suggestions in the list provided by J. Nelson will develop a child’s reading readiness is open to question.

Examination of W. Eller and R. Farr’s (1974a) position paper on consumer awareness in test reviews indicates the following kinds of skills to be considered in an assessment of reading readiness:

1. Reading ability (if the child already knows how to read, there is no reason to assess his reading readiness).
2. Ability to follow directions.
3. Background of experiences (“primarily oral vocabulary or concept development”).
4. Visual discrimination (“ability to see likenesses and differences in words and letters when those are presented in isolation and in context”).
5. Auditory discrimination.
6. Language development.
7. “Attention span and readiness to attend to the kind of instruction that will be provided.”

Perusal of the Downing and Thackray and the Rude lists of subskill categories in extant reading readiness tests, and the J. Mackworth, Rude, Nelson, and Eller and Farr lists of subskill categories derived from research on reading readiness, acquisition, and achievement should provide convincing evidence that there is lack of overall consensus on what skills should be tested in assessing reading readiness. Yet, there are important points of agreement. Following are brief discussions of six major sets of skills that research studies indicate are particularly important in reading readiness.

#### *Attention and Automaticity*

In a task testing children’s and adult’s viewing of pictures, N. Mackworth and J. Bruner (1970, p. 174) speak of “selective viewing as the essential category for recognition.” They also observe (p. 172) that “Children could not place their gaze so skillfully [as adults]. . . . Apparently some of the 6-year-old children lacked an effective program for visual search. . . .”

In a study of the role of attention in the development of reading skill, J. Heiman, M. Fischer, and A. Ross (1973) provided a group of problem readers with a supplementary training program that averaged a *total* of 4¼ hours (spread over a seven-week period). The members of both the experimental and control groups were participants in a remedial reading tutoring program. The training program was aimed at getting the children to attend to the reading task: "By making attention necessary to complete the task successfully, the experimental subjects were 'trained' to attend (p. 397)." At the end of the six-month tutoring program, the group that had received the 4¼-hour-long attention-training program was more than a full year ahead of the matched control group.

In another study of the role of attention in reading, J. Samuels and J. Turnure (1974) found that "girls were significantly superior to boys in word recognition, as had been previously reported, and significantly superior in classroom attentiveness as well. . . . The sex difference favoring girls frequently found in reading achievement seems to be mediated by an attentional variable (p. 31)." Whether one looks at attention at the macro level (as in the case of Samuels and Turnure, and Heiman, et al.) or whether one looks at attention at the micro level (as in the case of J. Mackworth, and N. Mackworth and Bruner), attention appears to be a very important factor in learning to read.

D. LaBerge and Samuels (1976) shed more light on the role of attention, and on a complementary factor, automaticity: "All readers must go through similar stages of learning to read but do so at different rates. . . . In consideration of each stage, for example learning to sound letter patterns, it would appear that there are two criteria of achievement, accuracy and automaticity. During the achievement of accuracy we assume the student should have his attention focused on the task at hand to code the association between the visual letters and their sounds. . . . Once he has learned the letter-sound correspondences, he may or may not be ready to attack the next stage, namely to 'blend' these sounds into syllables or words. To ascertain his readiness to move ahead, we must consider a further criterion, namely automaticity. If a good deal of attention is required for him to be accurate in

sounding letter-patterns, then 'blending' will be more difficult to perform owing to the total number of things he must attend to and hold in short-term memory. . . . In short, accuracy is not a sufficient criterion for readiness to advance to skills which build on the subskills at hand. One should take into account the amount of attention required by these subskills as part of the readiness criterion."

### *Linguistic Awareness*

Reading involves both linguistic and visual skills; there is debate about their relative importance. P. Kolars (1972, p. 8) takes the position that "reading is only incidentally visual" because of research showing "how little reading may depend upon the visual component." On the basis of a series of studies, L. Gleitman (1974) and Gleitman and P. Rozin (1973) have concluded that "the ability to reflect on phonological properties of language distinguishes among those who will find reading hard or easy to learn (Gleitman, 1974, p. 6)." This ability is part of linguistic awareness. Gleitman (1974, p. 7) states that "As fluency increases, the speaker becomes successively capable of reflecting on more and more 'trivial' (surface) aspects of his own language behavior. . . . The methodological prerequisites for linguistic analysis require informant judgments concerning language structure, at many levels."

Gleitman enumerates the following components of linguistic awareness that might reasonably be discerned in a child ready to learn to read:

- "(1) The ability to conceive of language 'as an object' as evidenced by awareness that the relation between an object and its name is arbitrary, or by the ability to provide judgments of [grammatical] acceptability.
- "(2) Aptitude for learning pig-Latin, and related phonological rules.
- "(3) More primitively, tendency to profit from rhyme as a mnemonic in learning tasks (p. 4)."

In research on one of these components R. Calfee, R. Chapman, and R. Venezky (1972) tested the rhyming abilities of kindergartners and found that the children's performance did not exceed

chance level. E. Savin (1972, p. 319), in considering another component of linguistic awareness, points out that most discussions of learning to read “assume that the child already perceives speech as a sequence of phonemes. . . .” As G. Miller (1974), T. Sticht (1974), and many others point out, the beginning stages of reading require the child to decode to speech. Therefore, if the child who is learning to read does not already perceive speech as a sequence of phonemes, then it is virtually impossible for him to translate from visible language to speech, since he is not conscious of the “building blocks” that make up speech.

### *Understanding of the Task*

The preceding discussion raises other questions: Does the child understand what reading is? Does the child understand what he is supposed to do when he is learning one of the component skills of reading—for example, when the teacher tells the child to “blend the sounds,” does the child know what is required? And, in tests—whether they be achievement, diagnostic, or readiness tests—does the child understand what is being required of him? As Eller and Farr (1974b) point out, it seems reasonable to expect that a reading readiness test would, at the very outset, test whether or not the child already can read. Eller and Farr also argue that a readiness test, at its outset, should test the child’s ability to follow the kinds of directions that he will encounter in the actual assessment of his reading readiness and in his reading instruction. While these two points may seem obvious, there are commercially available reading readiness tests that fail to include such measures, or neglect to put them at the beginning of the test, where they belong.

### *Letter, Letter-Sequence, Word, and Word-Sequence Skills*

J. Mackworth (1974b, p. 2) points out that “However true it is that the individual letter is not always examined in fluent reading, the basic steps in learning to read must be built upon individual letters.” Gibson and Levin (1975), and Calfee, Chapman, and Venezky (1972) note that young prereaders generally do not have problems in discriminating individual letters; far more problems occur with letter-sequences. The important role of word-level units in reading is clear from research into the process and pedagogy of

reading. For example, P. Gough's (1972) model of the reading process is essentially a word-perception model of reading. The whole-word method of teaching reading stresses the word as the critical unit in early reading instruction (Grimes & AllinSmith, 1961). Also, strategies for reading development and remediation emphasize word perception (Fry, 1974). Singer (1974, p. 3) provides the following comment on the need to work with units beyond the level of the individual word: "Some children can identify words in isolation, but have not yet learned how to organize semantically and syntactically their responses to printed words so that they can gain information from the printed page. Integration of word recognition, semantic, and syntactic systems also has to be learned." Samuels (1973) and N. Mackworth (1973) also point to the phenomenon of children who can "bark" at words but who are not successful in integrating word meanings in a sequence of words.

#### *Instructional Factors*

Rather than ask "Is this child ready for the reading classroom?" one might better ask "Is the reading classroom ready for this child?" A State of New York (1974, p. 21) study indicates that "no single factor could account for school effectiveness, but that a number of factors are important." Pupil reading achievement was higher in a school where "the principal and his assistant principals were able to run an orderly, peaceful, and efficient school. . . ." Calfee, Chapman, and Venezky (1972, p. 140) report that "The most relevant variable in determining the success of any remedial program would appear to be *time*—the amount of time a teacher spends in one-to-one contact with the individual child. . . ." It should be noted that Calfee, et al., point both to the *amount* of instructional contact and to the *kind* of instructional contact— one-to-one.

One-to-one contact enables instruction to be tailored to the individual characteristics of each child, and it maximizes the amount of "feedback" given to the child in his efforts to "crack the code" and to make sense in reading. In an examination (Wanat, 1974) of experimental instructional programs dealing with reading readiness and the initial stages of reading acquisition,

it was found that there was wide variation in the extent to which these programs advocated individual instruction. Components of each of these programs were in various stages of conceptualization, pilot-testing, and larger-scale implementation. One program had as its goal an instructional system in which each child worked almost exclusively on an individual basis. Another program was designed for group instruction; it is claimed that the whole class could work as one group. However, the program that made the strongest claim that learning should take place on an individual basis provided for individual learning only to the extent that a child could go through the activities at his own rate, and could have a certain amount of freedom in sequencing the skills that had to be practiced.

Consistent with Calfee, et al.'s analysis, an instructional factor which needs to be considered is whether or not instruction is actually being delivered to a given child. R. McDermott (1976) cites evidence that "more than 90% of the majority-culture children of the nineteen twenties had their eyes fixed on their teachers or their work at any given time (Jackson, 1968). This contrasts considerably with estimates obtained from the contemporary classrooms that share in the early century style of the teacher directing all attention in the classroom. M. Deutsch (1963) has found that teachers in Harlem elementary schools spent more than half their day calling children to attention." In one of these settings, the children are attending to instruction about 90% of the time; in the other setting, less than 50% of the time. McDermott (1976) advances the hypothesis that minority group children who feel alienated develop patterns of selective *inattention*—they learn not to learn. This learning not to learn syndrome is related to Lecky's (1951) hypothesis for explaining why some boys do not learn to read: They do not learn to read because they do not want to learn to read, and they don't want to learn to read because the reading materials presented to them are too feminine (see Athey, 1976).

Another of Durkin's (1974, p. 189) conclusions is that "The assessment question posed by both educators and researchers has been, 'Is the child ready?' Unfortunately, such a question is the wrong one to ask because it is incomplete. It focuses only on the

child, thus omitting attention to an equally important variable: namely, the reading instruction that will be available.”

### *Flexibility in Reading*

Assessment procedures have generally not differentiated among different kinds of reading. If one accepts the view that there are many different purposes for reading, and that these different purposes require modifications in the nature of the reading process, then one is led to the view that there are many different kinds of reading readiness. The student may be ready to read for one kind of purpose, but not for another.

Reading readiness is a continuous process that takes into account numerous task and learner characteristics, including characteristics of the learner’s cognitive style. Farr (1969, p. 222) defines a readiness test as “a test that measures the extent to which an individual has achieved a degree of maturity or acquired certain skills or information needed for beginning some new learning activity.” Considering the diversity of viewpoints about which factors comprise reading readiness, it must be concluded that any single-factor approach to readiness assessment is inadequate. Durkin’s (1974, p. 228) approach provides an appropriate foundation for readiness assessment: “Reading readiness *is not one thing*. That is, it is not a single package of certain kinds and amounts of abilities. Consequently when we talk about readiness for reading, we are referring to different things in different children. We are really talking about readinesses—a rather awkward word—not a readiness.”

### Purposes and Principles in Reading Readiness Assessment

Eller and Farr’s view (1974b, p. 3) that the purpose of testing is to provide information for instructional decision-making is the broadest purpose for testing. They strongly object to testing procedures that are not related to instructional decision-making. Eller and Farr (1974a, 1974b) argue that current approaches to evaluating reading readiness tests (and other reading tests) fail to consider adequately the purposes for assessing reading readiness; evaluation of a reading readiness test should not start with the

question "What does this test tell us?" but with the question:

- (a) "What kinds of decisions do I make as a parent (or taxpayer, or teacher, or administrator, or teacher-trainer, or researcher)?" This question leads to
- (b) "In making each of these decisions, what kinds of alternatives do I have to choose among?" This leads to
- (c) "What kinds of information do I need to select the best alternative?" This leads to
- (d) "What is the best way of getting the information I need?"

Just as there is no single all-purpose test, there is no single all-purpose evaluation of a given reading readiness test. Consequently, test reviews such as those published in O. Buros (1968, 1972), Farr and N. Anastasiow (1969), W. Blanton, Farr, and J. Tuinman (1972), and other sources need to be looked at critically in terms of the specific decision-making situation that the test will have to serve.

M. Hoover's view (1974, p. 1) that one purpose of reading achievement tests is to make the schools accountable to the parents fits under the broad purpose put forth by Eller and Farr. Thus, tests enable parents and other members of the community to determine how well their children are learning in relation to children in other schools and communities. The appropriateness of holding the "educational delivery system" accountable needs to be considered with respect to teacher-training programs as well as for teachers and the schools (Wanat, 1972b). Related to the accountability function of tests, reading readiness testing may serve the purpose of providing an "outside opinion" about a child's progress or potential, thus providing some protection from a situation in which the teacher may have misjudged a child.

Given the significant effect that teacher expectations can have on the child's level of success (Brookover, LePere, Hamachek, Thomas, & Erickson, 1965; Henderson & Long, 1971; Palardy, 1969; Purkey, 1970), the availability of an outside appraisal of a child's achievement and potential should be an asset. Teacher expectations about a child's future level of academic success are often made very early in the teacher's contact with the child, and are often based upon minimal information. In a study of classroom organization, R. Rist (1970) found that, by the eighth day of

school, teacher expectations for children's success or failure became the basis for the organization of the kindergarten classroom. This organization was maintained for the rest of the year. McDermott (1976, research in progress) has observed different patterns of teacher attention to, and interaction with, groups of children who differ in their expected levels of success.

The goal of accountability is served by the group-comparison function of tests mentioned by J. Mackworth (1974b, p. 1). It should be noted that Hoover sees this as a purpose of reading *achievement* tests; she is not in favor of reading *readiness* tests. One of her objections is that readiness tests tend to "sort" children, yet this is one of the purposes for tests enumerated by Tuinman (1974, p. 3). Since economic constraints usually rule out individual instruction, instruction is carried out on a group basis. The closeness of the match between the instruction and the needs of the children depends upon the homogeneity of the children in the instructional group. Grouping children for instruction is a central purpose of reading readiness testing.

Another purpose for reading readiness testing is to identify the children who may need extra assistance. In practice, this identification would result in a particular kind of instructional grouping. N. Mackworth (1974, p. 2) believes that available paper-and-pencil readiness tests can be used to screen "the 15% of the school population who are reading disordered. . . ." J. Mackworth (1974b, p. 1) assigns a somewhat broader purpose for testing—determining whether a particular child needs extra help. Although J. Mackworth is opposed to reading *readiness* tests, reading readiness tests can be used to perform this sorting task, but it is important to bear in mind their limitations.

The purpose for reading readiness testing that is least satisfactorily served by currently available tests is determining *where* a particular child's difficulties lie. In other words, some currently available tests may be able to predict, to a certain extent, how well a child will do in later reading achievement. However, reading readiness tests generally lack diagnostic power—they cannot isolate specific areas of weakness whose remediation would then increase the child's reading achievement.

Very broadly, then, the major purposes for reading readiness assessment include:

- (1) Comparing the performance of one group of children with other groups of children.
- (2) Assigning a student to a particular instructional group.
- (3) Identifying a child's specific difficulties.

One point needs special emphasis: one should not decide upon a strategy for reading readiness assessment by looking at a given test and unearthing the purposes it serves. Rather, one must examine one's own role in the instructional process and determine the instructional options that are open. One then determines the kinds of information that are needed to select the best option. Only then should one examine each available assessment procedure to see if the purposes that it serves match the particular instructional decision-situation. In order for this approach to reading readiness assessment to be used productively, Eller and Farr (1974b) note that educators must be aware of decision possibilities, they must be aware of alternative instructional practices, and they must be able to delineate information that will help make these decisions.

As has already been mentioned, both Hoover and J. Mackworth oppose reading readiness tests. J. Mackworth (1974a, p. 2) argues that "The whole concept of reading readiness is absurd. The child should be exposed to letters as early as possible in his life. If he is delayed a year or so he can only be the loser, whatever his potential learning ability may be. . . . The only criterion should be the progress made during the year. If the child is unable to keep up with his peers, then he needs extra help. . . ." In other words, try to teach the child some reading skill; if the child has difficulty learning that skill, modify the task so that he can master it, or else try to teach him another reading skill that is easier for him to master. In this context, readiness assessment is an inseparable part of the instructional process.

Hoover (1974, pp. 1-2) is also opposed to readiness testing. She believes that "Readiness tests should be eliminated. They are not particularly diagnostic and lend themselves to being used to 'sort' children." The sorting of children into groups is harmful if these groups are inflexible. The instructional effectiveness of a given "sorting" needs to be looked at again after a short interval of time to assure the best possible match between the child's needs and the activities of different instructional groups.

The observations and criticisms of Hoover and J. Mackworth on current approaches to reading readiness assessment lead to the following principles for the design and use of reading readiness tests:

1. Reading readiness assessment is a means for answering the question "What and how is the student ready to learn now in the area of reading skills?"

2. Try to teach the student a particular reading skill. If the student experiences success in working with this task, then he is ready to learn it. If the student has difficulty working with the task, then the task should be reformulated so that the student can approach mastery of it.

3. If the child's performance (either in learning to read, or on a reading readiness test) falls behind the performance of his peers, then he needs extra help.

4. Poor performance by a child on a reading readiness test is not a call to delay instruction, but rather a call to design and deliver instruction tailored to the needs of the child.

5. The instructional groups formed on the basis of a reading readiness assessment should be kept flexible, since children's learning rates differ, since reading readiness tests often provide undependable information, and since test scores are only estimates. (Farr [1971, p. 1] notes that "Teachers talk sometimes of 'second grade' reading level or 'fourth grade' reading level as if these labels represented well-defined and widely accepted standards. They do not.")

6. Reading readiness assessment needs to be a continuing process. An additional danger of a one-time assessment of reading readiness can be seen in a study which showed that "The error rate on the second day of testing was about half that on the first day (in Calfee, Chapman, and Venezky [1972, p. 160])."

7. Reading readiness assessment should be an inseparable part of the instructional process. Calfee (1974), Eller and Farr (1974a), Gleitman (1974), Singer (1970), and Sticht (1974) argue that reading readiness tests, as well as other kinds of school tests, need to be tied very closely to what is taught. In a 1939 study, Gates, Bond, and Russell found that the extent to which a variable correlated with later reading achievement was determined, in part,

by the type of instructional method used. Gates et al. (p. 43) recommended that "Reading readiness tests, therefore, must be chosen to fit the teaching method. In other words, one should test the reading abilities which the teaching program will attempt to develop in order to determine the needs of each pupil before instruction is begun and to predict the pupil's likelihood of becoming a successful reader." This 1939 study, as well as an earlier study by Gates and Bond (1936) are two illustrations of the failure of educational research to have an impact on educational practice, since practices contrary to these two research findings have been widespread in the forty years since these findings have been published. (In the 1936 study, Gates and Bond examined each child's mental age in relation to his reading achievement, and were forced to conclude that there was no critical mental age level above which relatively few students fail, and below which relatively many students fail.)

Commenting on the issue addressed by Gates, et al., Gleitman (1974, p. 1) states that "Many people in the field of reading display a baffling disdain for tests that measure what has been taught. For example, they are inclined to chuckle, knowingly or otherwise, when it is suggested that children who are given extensive training in 'phonics' do better than other children, ceterus paribus, on tests that emphasize phonics knowledge. . . . An achievement test ought simply to measure for acquisition of what was taught. . . ."

An implication of the principle that reading readiness assessment and other types of reading assessment should be tied closely to instruction is that the design and use of global or all-purpose measures of reading readiness should be replaced by "specific tests for specific purposes (Eller and Farr, 1974a, p. 17)." In order for this principle to be implemented, teacher-training programs must be designed to help teachers become better-informed consumers of reading research (Eller & Farr, 1974a; Wanat, 1973). One is led to the following principle:

8. The classroom teacher is in a much better position to select readiness probes than any test author (Tuinman, 1974). Tuinman (p. 3) goes on to state that "The only 'readiness' assessments that seem acceptable to me are teacher judgments based on close ob-

serving of performance on everyday tasks and the administration of test items that parallel the actual instruction to which the child is exposed.” While the present author agrees that the child’s classroom teacher is in a better position than any test author to develop readiness probes, it is still useful to have a valid outside check on the teacher’s appraisal of the child’s potential.

9. Reading readiness tests should help determine the most effective instructional strategies by helping teachers to observe and understand the children’s learning processes. Procedures for reading readiness assessment should make visible to the teacher the perceptual strategies that the student employs in extracting meaning from visible language. Of particular importance here are the kinds of perceptual strategies that an individual student uses—how he applies his knowledge, especially his knowledge of language, to the task of making sense out of visible language (Wanat, 1972a, 1976; Wanat & Levin, 1968, 1976). Currently available reading readiness tests provide measures of the child’s environment, since the items in them deal with the kinds of vocabulary, sentence structures, objects, and concepts that the child has been exposed to. A test which confuses the issue of the child’s readiness or reading ability with the child’s familiarity with a particular set of vocabulary items, sentence structures, objects, and concepts provides the teacher with misleading information.

Not surprisingly, R. Williams and L. Rivers (1972) found that when test items and instructions were presented to a group of children in the language style most familiar to them, the children’s level of performance was higher than when another language style was used. One approach, then, would be to “translate” available reading readiness tests into the language variety of the children to be tested. Hoover (1974, p. 1) suggests that “Tests should include vocabulary that not only gives all ethnic groups a chance but that gives students taught by different methodologies a chance.” Another approach to this problem is to construct reading readiness tests containing, to the greatest extent possible, items taken from the child’s own speech (Miller, 1974; Sticht, 1974).

10. Reading readiness tests should be accompanied by appropriate interpretive scales, since a set of test items does not, by itself, make up a test that is meaningful to the teacher (Woodson,

1973). Thus, local norms as well as national norms should be used. Indeed, a number of different kinds of norms may be called for, each sensitive to different kinds of learner characteristics (e.g., language background, suburban versus urban versus rural context, high income versus middle income versus low income family background).

While the student's performance should be interpreted using norms based on the performance of students with similar characteristics, assessment of an educational system's success in improving the student's level of reading readiness should be based upon a national or international standard. In this way, poor performance by a local educational unit can be identified, and inequities in the allocation of resources to different educational units, or to different populations of students, can be identified.

11. It is inefficient for the assessment procedure to provide more detailed information than is necessary for deciding upon a particular instructional strategy (Tuinman, 1974).

12. It is inefficient for the assessment procedure to be used with a larger number of students than is necessary for deciding upon a particular instructional strategy.

The principles discussed above deal mainly with the use of reading readiness tests. The types of factors that should be included in an assessment of reading readiness are included in the summary which follows. All of the factors listed would not be included in one reading readiness assessment. Rather, a subset of those factors would be included in a particular test, depending upon the specific decision-situation to be served.

### Summary

The research outlined above indicates that there is a wide variety of viewpoints on the kinds of factors that should be included in an assessment of reading readiness. Following is a synthesis of the research on factors that should be included in an assessment of reading readiness. The factors listed below are based, in part, on the deliberations of a research seminar directed by S. Wanat, and including W. Eller, R. Farr, M. Hoover, N. Mackworth, R. McDermott, R. Shuy, and T. Sticht.

1. Present general level of reading performance.
2. Ability to understand and follow directions to be encountered in the readiness assessment and in the instructional program.
3. Physical efficiencies which might obstruct learning.
  - A. Visual acuity.
  - B. Auditory acuity.
  - C. Other physical efficiencies.
4. Learning skills.
  - A. Attention span.
  - B. Modality strength.
  - C. Learning rate.
  - D. Proficiency in all language varieties to be encountered.
5. Linguistic awareness.
  - A. Understanding that visible language is related to spoken language.
  - B. Sensitivity to language sounds (e.g., rhyme).
  - C. Ability to deal with words and sounds as objects.
6. Level of comprehension of spoken language, including factors such as vocabulary development and concept development.
7. Decoding skills. Facility with :
  - A. Letter discrimination.
  - B. Letter order within words.
  - C. Sound-spelling correspondences.
  - D. Spelling patterns (groups of letters which are functional perceptual units).
  - E. Syllabic units.
  - F. Structural analysis.
  - G. Sight word recognition (reader can identify a word visually, without having to “sound it out”).
  - H. Applying his knowledge of syntax and semantics.
8. Child’s attitudes.
  - A. Towards school.
  - B. Towards learning to read.
  - C. Towards different language varieties as media of instruction.

9. Teacher's attitudes.
  - A. Towards the child's ability to learn.
  - B. Towards the child's culture.
  - C. Towards the child's language.
10. Teacher's understanding.
  - A. Of the child's ability to learn.
  - B. Of the child's culture.
  - C. Of the child's language.
11. Teacher's proficiency.
  - A. With the varieties of language, culture, cognitive style, personality, and ability present in the instructional setting.
  - B. With the instructional varieties present.
12. Factors external to the classroom.
  - A. Administrators' attitudes and understandings.
  - B. Parents' attitudes and understandings.
  - C. Community's attitudes and understandings.

The preceding list of factors that should be included in an assessment of reading readiness, and the earlier analysis of research into reading readiness factors lead to this definition: "Reading readiness is the presence, in the learner and in the learning environment, of the skills, information, and attitudes that enable the learner to begin acquiring a new reading skill." This definition speaks of the condition of the learning environment as well as the condition of the learner. Thus, an assessment of reading readiness based upon this definition would have to take into consideration characteristics of the teaching methods and materials to be employed, characteristics of the teacher, and other components of the learning environment (e.g., the attitudes of the learner's peer group towards reading). A reading readiness assessment based upon this definition could lead to attempts at modifying the learning environment and the nature of the reading skill to be acquired, on the one hand, as well as attempts at modifying the learner, on the other hand. A further implication of this definition is that it does not treat reading readiness (or reading) as a single thing. Readiness, according to this definition, can be assessed only in terms of a specific reading skill. Given this orientation, assessment of reading readiness does not relate just to the child or adult

who has not yet been taught to read, but assessment of reading readiness is also an appropriate educational procedure for people who would already be considered mature readers. For example, one might ask if a particular college student is ready to read—or ready to learn to read—a psychology (or mathematics or chemistry or law or medical) textbook of a certain level of difficulty. Or one might ask if a particular soldier is ready to read—or ready to learn to read—an equipment repair manual, or a cooking and baking procedures manual. In order to answer such questions, one must be able to provide a detailed analysis of the task to be performed. While this point may seem obvious and trivial, many commercially produced tests of reading readiness approach reading and the task of learning to read as a global and undifferentiated skill.

An assessment of reading readiness can take place only after the assessor has specified the nature of the new reading skill that is to be acquired in sufficient detail so that prerequisite skills, information, and attitudes can be described. An assessment of reading readiness within this framework will take the following form: “Are there present, in the learner and the learning environment, the skills, information, and attitudes that enable the learner to begin acquiring a new reading skill?”

In conclusion, this paper on the nature and assessment of reading readiness has considered subskill categories in extant reading readiness tests, and subskill categories derived from research on reading readiness, reading acquisition, and reading achievement. This examination provided evidence that there is lack of overall consensus as to which skills should be included in reading readiness assessment. Also, this paper identified “aiding the process of instructional decision-making” as a major purpose for reading readiness testing. This broad purpose was further analyzed into (1) comparing the performance of one group of learners with other groups of learners, (2) assigning a student to a particular instructional group, and (3) identifying where a learner’s specific difficulties lie. Twelve principles to guide the use of reading readiness tests were presented. Finally, a synthesis of the research on factors that should be included in an assessment of reading readi-

ness was developed, along with a comprehensive definition of reading readiness, and a comprehensive definition of reading readiness assessment.

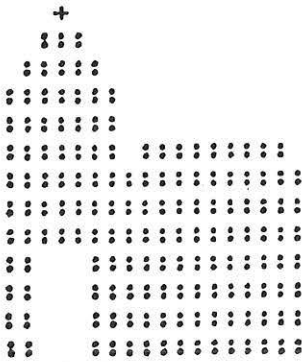
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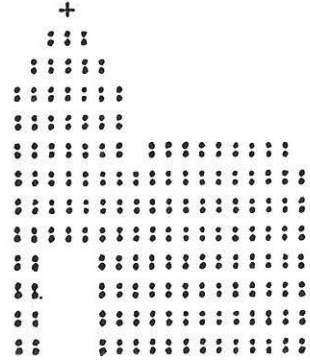
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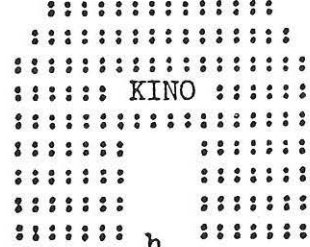
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“Sunday” by Helmut Zenker (1971), reproduced with kind permission from *Typewriter Art*, edited and with an introduction by Alan Riddell (London: London Magazine Editions, 1975. £10)—a visual record of the artist at the typewriter keyboard since Flora Stacey’s first drawing of a butterfly in 1898.