Reading diagnosis aims at determining a student's present stage of development and how to help him toward his next stage of development. Reading diagnosis should analyze three things: what the student is expected to read, how the student handles these expectations, and how the student can be helped most effectively. Currently there are five areas of concern within the field of reading diagnosis: perceptual motor diagnosis, brain damage and reading, curriculum analysis, behavioral objectives and criterion referenced tests, and reading capacity. Research in the first two areas should continue, but they have no place in the current reading curriculum. Also there is no evidence that perceptually handicapped or minimally brain damaged students need special programs. Curriculum analysis puts emphasis on what is wrong with programs rather than what is wrong with students. Behavioral objectives and criterion referenced tests are positive developments in reading diagnosis in that they provide an analysis of what is taught and how it is taught. Finally, rather than being concerned with measuring reading capacity, attention would be given to what the student needs to read and what he can now read. (VJ)
Reading Diagnosis: Trends and Issues

Roger Farr
Indiana University

An examination of diagnostic reading tests and much of the literature that has been written in the area of reading diagnosis would lead one to conclude that there is little that has changed in reading diagnosis in the past 60 or 70 years. The general emphasis during the past half century has been on determining what is wrong with a child, with little or no analysis of the curriculum. An analysis of the diagnostic reading tests published today and those published in the past 50 years reveal very few changes: subtests, item types, scoring procedures and general test formats are very similar. Certainly there have been improvements in many of the technical aspects of test construction, but the definition of reading represented by these diagnostic tests has remained basically the same. The purpose of this paper is to suggest several areas that this writer feels are important issues in reading diagnosis. The paper will not present a set of steps on "how to do a reading diagnosis"; nor will it attempt to propose definitive answers to the issues raised, although the author's opinions on these issues will be included. The purpose is to raise the issues, present some of the arguments and evidence regarding the issues, and leave it up to the reader to continue the study of the issues and to apply his understanding of the issues to the practical problems involved in helping students become better readers.
Before embarking on a discussion of issues there should be some discussion of what is "reading diagnosis"? The general definitions of diagnosis in unabridged dictionaries include (1) determining the nature and circumstances of some diseased condition; and (2) determining the cause of a disorder or malfunction. For the classroom teacher and even the reading specialist these definitions of diagnosis are not helpful. Certainly the most important goal of a diagnosis is not to determine causes but to learn more about the nature of a child's reading behaviors in order to plan instruction. Perhaps our search for causes has been based primarily on the assumed relationship between education and medicine. Medical practice has emphasized the study and diagnosis of human body functions to determine causes of particular diseases. Most medical practitioners concern themselves with the cause of the disease to get at the heart of the problem. I believe this is not appropriate in educational diagnosis. An educational diagnosis ought to be aimed at determining the stage of development of a particular student now and how to provide him with appropriate instruction to help him toward his next stage of development.

It is quite possible to spend many hours in debate discussing whether or not there is such a disease or malfunction known as reading disability. From my own point of view, I consider disabled readers to be non-existent or at least non-existent in terms of how they have been normally defined. Consider these points: 1) A reading disorder cannot be classified by grade norms on a reading test. This is because 50% of a normal population is always expected to be reading below the midpoint of a test; thus, 50% of
of our readers will always be diagnosed as disabled readers. 2) Reading disability cannot be defined by discrepancies between mental age and reading age: First, our grade norm definitions of reading age or reading grade are not valid. Secondly, the problems of determining mental age and defining reading capacity have not been solved. 3) It is also not valid to define a student as a reading disability case by relating to his progress in learning to read because a change in curriculum often produces a dramatic change in a student's progress; in such cases, the disorder is not the student but the curriculum. 4) Reading disability cannot be defined by specific sub-skill deficiencies because it is almost impossible to measure validly different sub-skills of reading. 5) Reading disability cannot be defined by associating factors such as perceptual-motor development, or socio-economic status, or lateral dominance or any of a number of other factors because we can easily find many students with one or more of these problems who are quite adequate readers.

Certainly the confusion over the definition of what is a reading disorder is one that ought to receive a great deal more attention. For my own purposes, I believe those students who demonstrate the greatest discrepancies between what they need to read and what they are able to read are most in need of our assistance. This means that a reading diagnosis must relate very closely to the reading demands of a student's life rather than to some arbitrary judgments of what good reading for a particular age or grade level should be. When an employee cannot read the manual for his particular occupation, when a student cannot read the textbooks for his classroom in order to learn in those classrooms, or when an applicant for
a driver's license cannot read well enough to pass the driver's test—then these persons are all disabled readers. Our job in reading education is to determine and to help those who are most in need.

In order to determine who is most in need of help our reading diagnosis should be directed at analyzing three things. First we should determine what a student is expected to read, including the probable increase in these reading demands as the student encounters new situations. Secondly, we should determine how he is now able to function in his reading environment, i.e., how he is now able to handle the materials that he is required to read. And thirdly, we should determine how we can help this student most effectively.

The definition of a reading disability is therefore a very functional definition. This definition will perhaps be useful to you to remember as you consider the five issues that follow:

1. Perceptual motor diagnosis
2. Brain damage and reading
3. Curriculum analysis
4. Behavioral objectives and criterion referenced tests
5. Reading capacity

Perceptual motor diagnosis is a very popular, but certainly not new approach to reading diagnosis. Perceptual motor programs and perceptual motor tests are being used and developed in many school districts. Perhaps the crucial issue is whether or not these diagnoses are needed. There is ample evidence to support the conclusion that very small individual differences in perceptual motor skill can be measured, but I question whether
or not they should or need to be. It is possible for very minimal differences to be measured by a test but it is quite possible that those minimal differences are not the crucial issues in whether or not a student will be able to read. Some research evidence and much practical experience leads me to believe that there is a minimal perceptual motor development level which is necessary for reading, but most students have probably passed these by the time they are 4 or 5 years of age. Merely because we can measure small differences in perceptual motor skills does not mean that those skills should be taught in order for a student to be able to learn to read.

The history of perceptual motor diagnosis is perhaps older than the history of any other single aspect of education. One of the earliest to write about perceptual motor diagnosis was Kussmaul, who in 1877 wrote about word blindness. From Kussmaul until today researchers, educators and medical people have been interested in perceptual motor diagnosis and its relationship to reading ability. Most of this research has centered around the development of the dominance of the right and left side of the brain. Balow and Balow conducted a number of studies with first and second grade children to determine the relationship between hand and eye dominance and reading ability. They concluded that neither hand or eye preference, same side dominance, crossed dominance, mixed eye-hand dominance, knowledge of right and left hand, nor diencephalonic eye-hand interactions were related to reading readiness or to end of first or second grade reading achievement.1

Closely related to the issue of perceptual motor diagnosis is that of brain damage and reading disability. Reed reviewed the research for a ten year period, from 1960 to 1970, and concluded:

1 "Perceptual-Motor Activities in the Treatment of Severe Reading Disability," Minnesota Reading Quarterly. 13 (October 1968) 2-15.
"As presently understood the syndrome consists of children with near average, average, or above average intelligence who present learning and/or behavior disabilities associated with deviations of function of the central nervous system. These deviations are manifested by various combinations of impairment of perception, conceptualization, memory, language, motor coordination, and control of attention and impulse. The neurological signs of this syndrome are highly variable and include some combination of the following: abnormalities of eye movement, head-eye dissociation, articulation, alternating supination and pronation of the extended arms and hands, serial apposition of fingers, heel-shin tapping, walking on heels and toes, hopping on one foot, and tandem walking. In addition, short attention span, easy distractability, and difficulties with visual-motor tasks can be found. These disabilities have several qualities; first, they are often classifiable as disabilities only when compared with a rough age dependent standard, i.e., the seven-year-old may perform like a four-or five-year-old; second, as the child grows older, abilities to perform tests of integration of movement improve; third, there is no known brain pathology associated with these aberrations and none can be implied by correlation with knowledge of "classical" neurology; and finally some children have behavior or learning disabilities without these signs and some children with poor performance in the motor tests have no clear learning or behavior abnormalities."

The present state of the art concerning these first two issues leads me to the following conclusions:

1. Research should be continued. The research should be exemplified by clear definitions, well described symptoms, and replicable procedures.

2. The two areas at the present time have no place in the curriculum as additions to the reading program.

3. There is no evidence that perceptually handicapped students or minimally brain damaged students need special educational programs different from the regular program.

4. The heart of a reading diagnosis should be determining a student's reading ability.

The third and fourth topics on my list of trends and issues are curriculum analysis and behavioral objectives. I believe that efforts in these two areas can have a very positive impact on the teaching of reading. Curriculum analysis means that we are beginning to look at what is wrong with the curriculum rather than what is wrong with the child; it means being concerned with misadjusted programs rather than misadjusted children.

Teachers' attitudes concerning students' reading abilities are quite different from their attitudes toward almost all other student behaviors. Certainly this difference is caused in part by the tremendous emphasis society places on reading ability. But this great interest often results in reading programs which do not allow for individual development, are not adjusted to individual differences, and mandate arbitrary grade level scores on standardized reading tests as criterion levels to be achieved by all students.

To make this point more specifically, consider the following situation in a swimming class. Suppose a particular youngster was barely able to swim the width of a pool and the swimming instructor developed a lesson in which he asked the students to swim ten lengths of the pool in a specified period of time. Probably we would suggest that the lesson is inappropriate for the youngster who is only able to swim the width of the pool, and we might also suggest to the instructor that children develop at different rates and that he ought to learn to adjust his instruction to
these differing maturation rates. We certainly would not accept from the swimming instructor the excuse that he had thirty-five students in the class and that he couldn't develop individual lessons for each student. If reading is more important than swimming, why do we allow misadjusted curriculums to continue?

Behavioral objectives and criterion referenced tests can also be a positive development in the area of reading diagnosis. The efforts to define and describe the behavioral outcomes we are attempting to develop should provide insights into an analysis of what we teach and how we teach it. However, there are several cautions that should be considered in developing behavioral objectives:

1. Analyze your objectives to see that they are consistent with your definition of reading.

2. Don't establish arbitrary criterion levels for specific objectives merely because a behavioral objective is supposed to have a criterion level.

3. Don't develop sub-objectives, and sub-sub-objectives until the behavior you are interested in trying to develop is so badly fragmented that it is no longer recognizable.

4. Don't let your instructional procedures become your objectives.

The final topic on my list of trends and issues is reading capacity. This issue is one that I will be unable to explain fully in this brief paper, but I would like you to consider the following points:
1. If there is great confusion among researchers and psychologists about what intelligence is and what intelligence tests measure, how can reading teachers so glibly accept the results of intelligence tests as measures of reading capacity?

2. Many studies have substantiated the fact that if a child's reading performance is improved there will be an improvement in his intelligence test scores.

3. Formulas, graphs, and other procedures which attempt to relate a reading achievement test score to some intelligence test score have several psychometric and logical fallacies. First, these scores should only be compared if they have been normed on the same population. Secondly, the scaling units of the tests are not valid for the usual formulas in which they are used.

4. Why should capacity be measured anyway? We generally agree that everyone can improve his reading achievement and that there is great difficulty in measuring capacity. I would suggest that the criterion to be used in working with any student is not his capacity or any discrepancy between capacity and achievement but an analysis of what he needs to read and what he can now read. Those students with the greatest discrepancies between these two would be the ones most in need of help.

In this paper I have only been able to touch very briefly on five topics which I consider to be trends and issues in reading diagnosis. I am sure that much more discussion is needed on each of the issues; I am absolutely sure that there are differing opinions concerning each of these issues, and
that there are certainly issues which others would add to my list. However, it is only as professionals in the field study these questions that they will be able to find answers. No definitive answers are possible from experts; nor should they be. As professionals each of us has the responsibility to examine the issues, to reach tentative conclusions, and to re-examine issues. Perhaps this is what being a professional means.