DOCUMENT RESUME

ED 1[illegible]310 CS 003 884

TITLE	Diagnostic Prescriptive Reading Instruction.
INSTITUTION	Florida State Dept. of Education, Tallahassee. Div. of Public Schools.
SPONS AGENCY	Office of Education (DHEW), Washington, D.C. Right to Read Program.
PUB DATE	[77]
NOTE	50p.
EDRS PRICE	MF-$0.83 HC-$2.06 Plus Postage.
DESCRIPTORS	Classroom Observation Techniques; Cloze Procedure; *Diagnostic Teaching; *Diagnostic Tests; Elementary Secondary Education; *Evaluation Methods; Guides; Informal Reading Inventory; Inservice Teacher Education; *Reading Diagnosis; *Reading Instruction; Screening Tests; Standardized Tests

ABSTRACT

This publication was designed as an aid to reinforcing and improving teachers' diagnostic/prescriptive capabilities. The main section examines characteristics of reading diagnosis and describes informal diagnostic techniques (including teacher observation, informal reading inventories, and the cloze procedure) and formal diagnostic techniques (including standardized tests and visual screening tests). Sample forms are provided to demonstrate the use of the cloze technique and observational techniques. Other sections of the publication discuss the concept of diagnostic/prescriptive reading instruction, show how prescriptions are developed, and explain how diagnostic/prescriptive reading instruction is evaluated. Strategies for presenting the material to workshop participants are listed for each section. (GW)

DIAGNOSTIC PRESCRIPTIVE READING INSTRUCTION

Florida Department of Education
Division of Public Schools
Bureau of Curriculum Services

For further information contact:

Florida Right to Read
Early Childhood and Elementary Education
Florida Department of Education
Knott Building
Tallahassee, Florida 32304
(904) 488-6046 or (904) 488-6769

The activity which is the subject of this report was supported in whole or in part by the U.S. Office of Education, Department of Health, Education and Welfare. However, the opinions expressed herein do not necessarily reflect the position or policy of the U.S. Office of Education, and no official endorsement by the U.S. Office of Education should be inferred.

DIAGNOSTIC-PRESCRIPTIVE READING INSTRUCTION

CONTENTS

INTRODUCTION

This packet is designed to serve as a guide for those persons wishing to conduct a workshop on the topic "Diagnostic-Prescriptive Reading Instruction," or for those who are merely seeking information on the topic.

The packet emphasizes the everyday, on-going, formal and informal diagnostic-prescriptive teaching techniques that teachers utilize daily in their classrooms. It attempts to reinforce and improve the regular classroom diagnostic-prescriptive capabilities that teachers already possess. No attempt is made to turn teachers into instant clinical diagnosticians; the emphasis throughout is on diagnostic-prescriptive reading instruction *as it relates to the everyday classroom.*

The packet is organized into four sections, each addressing one of the four major questions listed below:

1. What is diagnostic-prescriptive reading instruction?

2. What is reading diagnosis and how is it accomplished?

3. How are prescriptions developed?

4. How is diagnostic-prescriptive reading instruction evaluated?

Answers and information pertaining to each question are provided, as are activities and strategies for presenting the material to your target audience. Please note that these are *suggested* strategies and activities. They do not exhaust the realm of creative possibilities, nor are they intended to cramp your style. You are advised and *strongly encouraged* to add your own ideas, insights, activities, and strategies to those suggested here.

In most situations, you should expect to encounter a wide range of cognitive and attitudinal differences in your target audience. There will be those who have tried diagnostic-prescriptive reading instruction and know first hand that it can and does work. There may also be those who are convinced that diagnostic-prescriptive reading instruction will never work. Usually this comment comes from those who have never tried it.

One of your tasks, therefore, will be to reinforce the believers and convince the non-believers. The believers in your audience will be a valuable asset. But do not oversell. Diagnostic-prescriptive reading instruction is not a panacea, and it is not without problems. Do not be afraid to acknowledge this. However, make it clear throughout the workshop that diagnostic-prescriptive reading instruction has consistently

demonstrated its efficiency and its effectiveness when properly utilized in everyday on-going classroom situations.

An informal needs assessment is included in the packet. It simply asks the participants to check those topics (corresponding to the four major questions addressed in the packet) upon which they would like special emphasis placed. This will then allow you to emphasize those areas of expressed need. Strategy #1 under Section I will help determine the group's cognitive and attitudinal awareness concerning diagnostic-prescriptive reading instruction, and may therefore be considered as a type of needs assessment.

There are two closing recommendations. First, you are advised to read the entire packet before proceeding with any one section; and second, be very sure that you are comfortable with the topic "Diagnostic-Prescriptive Reading Instruction," *especially as it relates to the everyday classroom*, before agreeing to conduct the workshop.

WORKSHOP NEEDS ASSESSMENT

DIRECTIONS: *Please check those items on the list below for which you would like special emphasis placed during this workshop. Add any additional items you wish.*

____ What is diagnostic-prescriptive reading instruction?

____ Reading diagnosis and its purpose.

____ Sources of data and techniques for reading diagnosis.

____ The development of reading prescriptions.

____ The evaluation of diagnostic-prescriptive reading instruction.

Other areas I would like to see covered in the workshop are:

Elementary _____

_____

_____

_____

Secondary _____

_____

_____

_____

SECTION I

WHAT IS DIAGNOSTIC-PRESCRIPTIVE READING INSTRUCTION?

Diagnostic-prescriptive reading instruction is an instructional method whereby each student's major reading strengths and weaknesses are assessed (diagnosed) by both formal and informal means. Based on this assessment, instruction (treatment) is prescribed which enables students to work on their own specific needs at their own rate in a variety of appropriate materials.

Although diagnostic-prescriptive instruction is not a new concept, it is currently receiving a great deal of attention. Teachers have increasingly seen the benefits of such instructional methods. Also recent legislation has dealt with accountability and has supported diagnostic-prescriptive teaching techniques.

The concept of diagnostic-prescriptive instruction goes back to the days of John Dewey - or even before. In fact, a good teacher has always been one who knows each student individually and teaches each in the most appropriate manner. The well known dictum, "Take the students where they are and take them as far as they can go at their own pace," is still good advice. The problem, however, has always been in determining just where the students are, and how far and how fast they might go. Diagnostic-prescriptive teaching techniques can help solve the problem.

Four common elements of diagnostic-prescriptive instruction have been identified:*

1. Data for *evaluation and diagnosis* are gathered by frequent administration of standardized tests, specifically designed measures, or by informal reading inventories.

2. *Teachers know the sequence of important specified skills* and use this knowledge to interpret test results and devise or choose material to encourage optimal skill development.

3. Some degree of *individualization of instruction* is necessary to enable the teacher to fully capitalize on the information gained in the evaluation and diagnosis of each student's work.

---

* Adapted from: *The Diagnostic-Prescriptive Approach to Reading.* IRA Reports on the Right to Read Effort, Vol. 1, No. 3. Permission granted.

4. Careful *records are kept* of all tests and achievements so the teacher can accurately place students on the skills continuum and counsel them in setting appropriate goals.

(A condensed version of the above list is available as a transparency master at the end of this section.)

A recent Florida Department of Education Inservice Training publication (1976) expands upon the preceding four common elements and offers a more thorough description. Specifically, the Diagnostic-Prescriptive Approach is

"a prescribed and specifically planned curriculum which:

1. *is based on a diagnosis of individual learning needs, abilities, talents and interests;*
2. *contains measurable objectives;*
3. *interrelates subject area disciplines as applicable;*
4. *engages the child in determining his own goals-objectives-activities;*
5. *is continually assessed;*
6. *is individually paced;*
7. *includes provision for early, appropriate identification and intervention;* and,
8. *provides for individual, small, or large group instruction as appropriate."* (p. 20)

As was mentioned earlier, diagnostic-prescriptive instruction also implies a systematic method of record keeping and progress charting for each pupil. And it is important to note that the record keeping responsibilities do not rest entirely with the teacher; *record keeping is the cooperative responsibility of both the teacher and the pupil.*

By way of diagnostic-prescriptive teaching, reading instruction is tailored to fit the needs of each student and is adjusted as needs change. As Schubert and Torgerson (1968) have written in their text:

> ...one is forced to conclude that failure to adjust material and instructional approaches to meet individual needs is undoubtedly a primary factor in reading disabilities. *It is a cause that often dwarfs all others.* (p. 32)

A key term in the diagnostic-prescriptive approach, and one closely associated with "identification" and "intervention" is "prevention." Diagnostic procedures must be aimed at prevention as well as correction. Prevention is best accomplished by an early identification of the symptoms of a beginning reading disability.

By way of summary, then, diagnostic-prescriptive reading instruction is merely an attempt to ensure that students do not spend a disproportionate amount of time working at skills they have already mastered, and likewise, that students do not spend an equally disproportionate amount of time struggling with skills which they are simply not ready to undertake.

STRATEGIES FOR SECTION I

1. Strategy 1 involves utilization of the "Diagnostic-Prescriptive Checklist Inventory," which appears at the end of this section. This checklist is a good starter or initiating activity. It lends itself to open-ended discussion, small group interaction, and encourages the participants to confront their attitudes and impressions about diagnostic-prescriptive instruction, thus making it a type of needs assessment.

As you have no doubt noticed, the checklist contains three sections. These three sections correspond to the three basic levels of comprehension - literal, interpretive, and critical/creative. And, as with the three levels of comprehension, each section requires a higher level of thought.

A suggested plan for using this checklist is as follows:

Provide each workshop participant with a copy of the checklist. Encourage them to react honestly to the various items in each section, and point out that although there are few clear-cut right or wrong answers, they should be able to defend their responses. After each individual has completed the checklist (15-20 minutes should be sufficient), place them into small groups by whatever means you feel appropriate. It would be worthwhile, however, to provide for a diversity of backgrounds, attitudes, opinions, schools represented, etc. in each group if possible.

Provide an unmarked checklist for each group. Direct each group to come to a consensus of opinion and mark their group's checklist accordingly. After an adequate amount of time, have a spokesperson report on the group's final consensus. It might be more effective to have the groups report on one section at a time. This will more easily allow for any discussion of varying opinions on each section.

Remember, this is only a starter - an activity to get the participants involved and discussing the topic. It will not be necessary, therefore, to resolve all differences of opinion, or to arrive at any overall group consensus, unless you consider it necessary.

2. *Another strategy which might serve as a follow-up to Strategy 1, or in lieu of Strategy 1, would be to have the participants, in small groups, develop a working definition of diagnostic-prescriptive instruction. This strategy might be more successful with a group that has some knowledge of the topic. Have each group utilize the following format:*

Brief definition (2 or 3 sentences):
Characteristics/attributes (list 5 or 6):
Example(s) (1 or 2):
Counter-example(s) (optional):

Have a spokesperson share each group's definition. Make a note on a chart pad or chalkboard of each group's definition. Combine and condense all of the definitions into one final comprehensive definition of diagnostic-prescriptive instruction.

3. *Another strategy, although the shortest of the three presented, can still generate thought and discussion. Have the participants individually, then in small groups, or simply in small groups, complete the following sentence:*

"Diagnostic-prescriptive reading instruction is _____."

Have the participants share their completed sentences; briefly record the comments, thereby developing a list of what diagnostic-prescriptive reading instruction is as perceived by that group.

DIAGNOSTIC-PRESCRIPTIVE CHECKLIST INVENTORY

Literal Level. Put a check in front of the items or activities which you might expect to directly observe or utilize in a diagnostic-prescriptive reading program. Add any others you feel appropriate.

____ anecdotal records
____ aides
____ skill kits
____ games
____ peer interaction
____ teacher lecture
____ standardized testing
____ learning stations
____ basal readers only
____ abundance of ditto mastered materials
____ interest grouping
____ behavioral objectives
____ learning contracts
____ ability grouping
____ personal reading
____ checklists
____ learning centers
____ straight rows of desks
____ peer tutoring
____ all students on same workbook page
____ skill grouping
✓ criterion-referenced testing
____ cassette tapes

Interpretive level. Put a check in front of those terms or concepts that you associate with diagnostic-prescriptive instruction. Add any others that you feel appropriate.

____ confusion
____ self-motivation
____ achievement
____ accountability
____ resistance
____ chaos
____ happiness
____ success
____ rebellion
____ boredom
____ failure
____ creativity

____ grade oriented

____ lock-step

____ noise

____ cheating

____ involvement

____ futility

____ competition

____ frustration

____ guidance

____ freedom

____ variety

____ round robin

____ time consuming

____ clinical

____ standard curve

Critical/Creative Level. Put a "yes" or "no" in front of each statement; be able to defend your answers. Add any others you feel appropriate.

____ Diagnostic/Prescriptive reading instruction sounds good on paper, but it doesn't work in the classroom.

____ D/P reading instruction interferes with my teaching.

____ D/P reading instruction provides for flawless operation of classroom procedures.

____ D/P reading instruction might work at the elementary level, but not at the secondary or adult levels.

____ D/P reading instruction is more trouble than it's worth.

____ The "back to the basics" movement is in direct opposition to D/P reading instruction.

____ Try it - you'll like it.

____ D/P reading instruction relegates the teacher to nothing but a paper shuffler.

____ D/P reading instruction eliminates the competitiveness of the classroom and, therefore, won't prepare students for the real world.

SECTION II

WHAT IS READING DIAGNOSIS AND HOW IS IT ACCOMPLISHED?

Diagnosis is a word that comes from the Greek roots *dia*, meaning *thorough* or *thoroughly*, and *gnosis*, meaning *knowledge*. Its literal meaning is *to know thoroughly*.

Diagnosis provides the foundation for the proper running of the everyday classroom. It is obviously possible to provide instruction without diagnosis, but such a plan usually wastes time both for the student and the teacher and is generally inefficient and ineffective in terms of actual learning. Teachers do not need to know all of the psychological terms to describe human behaviors, but it is important for them to know their students.

As Zintz (1972) has clearly indicated, "the regular classroom teacher is the key person who must accept the responsibility for identifying the child who is not making satisfactory progress" (p. 10). Zintz further states that "if classroom teachers do not meet the reading needs of most children, there is not the slightest hope that they will be met at all" (p. 11).

One can readily see why the teacher has consistently been identified as the most important variable in determining the overall success of any classroom situation.

The characteristics usually associated with diagnostic processes in reading are:

1. A systematic collection of data on language-reading achievement.
2. An analysis of the data to determine individual learner strengths and weaknesses.
3. A determination of the entry points for instruction of individual learners.
4. The identification of alternatives for the instruction of each individual.

The above characteristics can readily be accomplished in the regular everyday classroom, and are not intended to convey formality. For example, the "collection of data" in number one above includes any and all information gathered, be it through observation, parent conferences, cumulative records, attitude measures, formal and informal testing, etc. Data, therefore,

should not be associated only with information gained from standardized testing, as is often the case.

Characteristic two, "analysis of the data," is an important one. Data collection concerning student performance will point out *strengths* as well as *weaknesses*. It will indicate what the students know as well as what they don't know. Students with reading problems are, unfortunately, bombarded with their weaknesses and shortcomings. It is therefore necessary to accentuate the positive and make every effort to incorporate or utilize a student's strengths in an effort to overcome the weaknesses.

Another important characteristic of diagnosis is the "determination of entry levels for instruction." Disabled readers are often asked to complete tasks for which they simply are not ready, or to perform at levels beyond their present capabilities.

The "identification of instructional alternatives" can easily be accomplished in the everyday classroom providing teachers are aware of the various materials they have available which can be used to teach or reinforce specific reading skills in relation to the appropriate reading levels and interests of the students.

We do not wish to convey the notion that diagnostic-prescriptive instruction is for the slow learner or problem reader only. Diagnostic-prescriptive instruction should be utilized for all students, from the slowest learners to the very gifted. However, problem readers tend to receive the most emphasis in a discussion of this nature, since they are the most adversely affected by a program lacking in individualized methods.

STRATEGIES FOR SECTION II

The following strategies might be appropriate before preceeding with an exploration of the sources of diagnosis.

1. Display a transparency, "Pointers for Teachers on Diagnosis," and discuss the items with the group. A copy of these "pointers" from which a transparency can be made is included at the end of this section.

2. Display the four characteristics usually associated with diagnosis (via transparency, chalkboard, or chart pad), either as they appear in the preceeding discussion or in condensed form; e.g., (1) a systematic

collection of data, (2) analysis of data, (3) determining the entry points, and (4) identifying instructional alternatives. Discuss each item with the whole group.

Information used for student diagnosis comes from many sources. These include both formal and informal tests, teacher observation, parent conferences, and school records. Sources of data for diagnosis are generally categorized as informal or formal sources. The following discussion provides a review:

INFORMAL DIAGNOSIS

There are many sources of data readily available for informal diagnosis. These include teacher observation, school records, anecdotal comments from previous teachers, interviews with students and parents, and home visits. Most of the time, the teacher would use a few of these sources, but in some cases all of these sources might be consulted.

Teacher Observation

Teacher observation is, in most cases, adequate for a quick check on the students. Within the classroom the teacher should note such obvious factors as the facial expressions of the students while reading, body position and unconscious habits such as twitches and jerks or using their finger as a crutch that might indicate problems in reading. The best time to observe is when the student is interacting with other students.

The teacher should make regular, systematic records of the student's reading skills, behavior, and surroundings. These should be the actual recording of what the student did. The interpretation will come later, after several recordings. It may reveal to the teacher how the student is progressing or what patters of behavior are developing.

Teacher observation may be quick notes jotted down on a 3" X 5" card or an actual checklist of observable behaviors.

Informal Reading Inventory

Another informal means of diagnosing problems is the Informal Reading Inventory (IRI). An IRI can be prepared by the teacher using a series of graded paragraphs with comprehension questions, or commercially developed IRI's can be purchased. Commercial IRI's include the Sucher-Allred *Informal Placement Inventory* and the *Classroom Reading Inventory* by Silvaroli. Many basal series have an IRI included as part of the program.

However, because the IRI can be used for continuous diagnosis, teachers may prefer to develop their own in order to have a greater number of selections from which to choose. These steps should be followed in developing an IRI:

1. Select at least two passages, one for oral and one for silent reading, at each readability level. Verify the readability levels using a readability formula.

2. Develop comprehension questions for each passage. Some questions should test literal comprehension skills, some interpretive skills, and some critical reading skills. None of the questions should require a simple yes-no answer.

The following table will give you an indication of the *approximate* number of words and questions for each level:

FORMULA FOR THE I.R.I.

Grade Level	No. of Words (approx.)	Types of Questions
Pre-Primer	25	2 Factual 1 Inferential 1 Vocabulary
Primer	25	2 Factual 2 Inferential 1 Vocabulary
First Grade	50	3 Factual 3 Inferential 1 Vocabulary
Second Grade	50	3 Factual 3 Inferential 1 Vocabulary
Third Grade	100	4 Factual 4 Inferential 2 Vocabulary
Fourth Grade	100	4 Factual 4 Inferential 2 Vocabulary
Fifth Grade	100	3 Factual 5 Inferential 2 Vocabulary
Sixth Grade	100	More Inferential
Seventh Grade	150-200	
Eighth Grade	150-200	

3. The passages with the questions at the bottom of the page should be duplicated so that the teacher can record errors on the paper. The student may read the passage from the original source or from a paper or card which has only the passage typed on it. It is imperative that the student have a *neat*, *clear*, *bold* copy from which to read!

Once developed, the IRI is administered individually to students to determine their independent, instructional and frustrational levels. These steps should be followed in administering the IRI:

1. Choose a selection which the teacher believes to be about a year below the student's reading level. If the teacher has no idea of the student's level, it is beneficial for the student to progress upward.

2. After establishing a rapport with the student, ask that the passage be read orally.

3. The teacher must record all errors made by the student. This includes omissions, repetitions, hesitations, words pronounced, words mispronounced, and substitutions.

4. If the student makes more than one error for every twenty words, the passage is too difficult. The teacher then moves to a lower level passage. If the student misses less than one in every twenty words, the teacher moves to a more difficult passage provided the student performs satisfactorily on the comprehension check.

5. Following the oral reading of the paragraph, the teacher uses the questions to check the student's comprehension.

6. The following standards are most commonly used in the IRI:

   a. Independent Level - No more than one error per 100 words. 90%-100% comprehension.

   b. Instructional Level - No more than one error per 20 words. At least 75% comprehension.

   c. Frustration Level - More than 10 errors per 100 words. Comprehension less than 75%.

7. A capacity level can also be determined. The highest level at which the students can understand a selection which is read aloud to them individually, and score 75% correct on the questions asked is the Capacity Level. This is the projected level at which students could read and understand if their word recognition barriers were overcome. A reading capacity test is actually a listening comprehension test.

8. The teacher can use the second passage for the student to read silently. This allows for a diagnosis based on a realistic reading situation (reading silently) and allows for a comparison between the silent and oral reading experiences.

It should be noted that not all reading authorities agree as to exactly what types of errors should be counted, although there is more agreement than disagreement. Likewise, there is some debate about the percentage determining the various reading levels, although those represented here are the most widely used. For more specific information beyond that presented here, a good source is: "A Critical Review: Informal Reading Inventories," by John Pikulski in the November 1974 *Reading Teacher*. A bibliography of other good sources pertaining to IRI's is included with the Pikulski article.

Cloze Procedure

The cloze procedure is being widely used as an informal means of determining a student's reading level and also as a diagnostic instrument. A selection entitled "The Use of Cloze as a Diagnostic Technique" at the end of this section describes the construction, administration, and scoring of the cloze process.

As is indicated in the "cloze" selection, only exact words are used as the scoring criteria. However, for those students whose scores are at frustration level, the scorer may choose to count acceptable synonyms.

A direct match basis accounts for the student's original score of 29.1%, or frustration level, on the "Hats Off to the Daring Trappers" selection on page 21. However, considering acceptable synonyms raises the score (termed "adjusted score") to 45%, or instructional level. Types of diagnostic information that a cloze passage might yield are indicated under the "comments" column.

The cloze procedure is elegant in its simplicity. It can be easily constructed, easily scored, and easily administered to a large group or an individual. The information obtained can be used for determining reading levels or for diagnostic purposes.

Previous Records

Previous records on the students from other teachers may prove to be of assistance as an additional means of diagnosis. These records may be cumulative folders, notes from the teacher, or a reading profile on the student. Regardless, each record on each student must be reviewed carefully for any clues to present reading problems or potential problems.

Teachers, however, must be careful not to allow the records to influence them too greatly since they quite often contain more of the opinions of the previous teacher than actual facts. These may or may not be accurate! These records must be used with other diagnostic information - never alone.

Parent Conferences

Parent conferences provide an excellent source of information which may aid the teacher in student diagnosis. The parents can often supply the teachers with information on problems which the student may have had in earlier educational experiences. The teacher may also receive information on home problems such as a divorce, death in the family, birth in the family, or some other incident which is affecting the student and interfering with the learning process. Periodic parent conferences are essential for teachers to learn about the family life of the students. This knowledge of a student's family life is an integral part of a total diagnosis. Thus, teachers must establish an open communication with parents which invites them to be involved in the school program.

In some cases, the parents of students who need the most thorough diagnosis will be hesitant to come to the school for parent conferences. If the conference cannot be arranged, the teacher should make an attempt to have a home visitation in order to learn more about home situations which may contribute to the student's learning problems. To become more familiar with techniques which should be used in home visitations, the teacher should work with the school guidance counselor and social worker.

A good source for working with parents is Zintz, *Corrective Reading*, 2nd Edition (1972), Chapter 8.

Informal diagnosis for reading occurs each day. It is usually not planned but is the result of an astute teacher who is concerned about the students and has a knowledge of what to recognize as indicators of reading strengths and weaknesses. Informal diagnosis is an art which is developed and mastered through constant use.

FORMAL DIAGNOSIS

The formal diagnosis of reading strengths and weaknesses may be conducted through the use of standardized tests, criterion or objective based tests, and individualized diagnostic reading tests. In addition to tests a formal diagnosis must include a visual and auditory screening as well as a physical examination by a medical doctor to determine if there are any physical causes for the reading problem. Teachers must be involved in the formal diagnosis but in many cases the assistance of the school reading specialist, guidance counselor, school psychologist, and social worker are needed.

Standardized Tests

The most common form of formal diagnosis utilizes standardized test scores. The *Glossary of Reading Terms for Florida Educators* (1975) defines a standardized test as:

> *"a test which has been given to a large and representational sampling of the population and analyzed to establish reliability, validity, and norms, which then can be interpreted in a comparative manner if the specific directions for administration are followed. The scores obtained from a standardized reading test compare a student with others at his grade level, but do not indicate his specific reading skills weaknesses." (p.3)*

Most classroom teachers can administer a standardized test. All that is necessary is to have a sufficient number of test booklets, answer sheets, and pencils. Directions for testing that are given in the manual must be read carefully. Directions should be followed exactly, as any changes will destroy the validity of the test scores. Tables for interpreting scores are also provided in the manual.

Some uses for information derived from standardized tests are:

1. Comparing a class or student with others independent of teacher judgement.

2. Determining progress made during a certain period of time.

3. Comparing achievement in one area of learning with other areas.

4. Placing students in special classes or programs.

5. Predicting academic success.

6. Determining a need for further testing.

Standardized tests are quite limited in the diagnostic information that they provide, since the scores usually reflect total scores rather than scores on specific skills such as main idea, details, etc. Teachers must realize that standardized tests cannot be used alone for diagnostic information.

The results of standardized tests should not be used:

to determine accurate, satisfactory levels of achievement,

as a basis for grading students, or

to judge effectiveness of teachers.

Test scores should always be interpreted with caution. For example, scores for culturally different students may not be valid. Such groups are sometimes not part of the representative group used in the norming process.

Two types of standardized tests commonly used in the classroom are survey and diagnostic tests.

Survey Tests

In the *Glossary of Reading Terms for Florida Educators* (1975), a survey test is defined as:

> *"a test of achievement usually measuring vocabulary and paragraph comprehension, although it may include measures of rate of comprehension, word-attack skills and study skills, designed to evaluate group status rather than to diagnose a student's specific reading skills deficits." (p. 4)*

Survey tests used in Florida schools could include *The California Achievement Test*, the *Gates-MacGinitie Reading Tests*, *California Test of Basic Skills*, *Stanford Achievement Test*, and the *Metropolitan Achievement Test*.

Results from standardized tests must be carefully analyzed and can be used to place students in instructional materials only if grade placement is reduced to place students in material at their instructional reading level. An estimate is that this is usually about one year below the score on the achievement test. For example, if a second grade student obtains a grade equivalent of 4.5 on a reading test, it does not mean that the student has mastered all of the vocabulary and comprehension that is taught up to the fifth month of grade 4. The grade equivalent means only that on this test the student answered correctly the same number of items that the students in the norming group answered correctly at the fifth month of grade 4.

Diagnostic Tests

Diagnostic tests are designed to provide a more detailed analysis of silent and oral reading problems. Diagnostic tests are:

> *"designed to measure achievement in a narrow subject field such as a detailed analysis of silent and oral reading problems to determine specific weaknesses and strengths of an individual so that he may have an individually prescribed program to meet his needs."* (*Glossary*, 1975, p. 5)

These tests contain many sub-tests and are usually administered by trained reading specialists under controlled conditions. Several days may be required to administer the tests, interpret the data, and prescribe remediation procedures. Based on the analysis of the results, the reading specialist in conjunction with the teacher then decides the specific areas which need remediating.

Several diagnostic reading tests more commonly used in Florida include the *Durrell Analysis of Reading Difficulty*, the *Diagnostic Reading Scales*, *Stanford Diagnostic Reading Test*, and *Gates-McKillop Reading Test*. All of these tests are individually administered except the *Stanford Diagnostic Reading Test*, which can be administered to a group. For additional information, Buros, *Reading Tests and Reviews* (1968) is an excellent reference.

In addition to these diagnostic tests which assess many areas of reading skill deficiency, there are oral reading tests. An oral reading test is defined as:

> *"an individual test designed to assess the reader's ability to recognize and pronounce words in their natural context and to assess word recognition, word analysis, and reading habits; it may be a standardized or informal inventory-type of test."* (*Glossary*, 1975, p. 6)

The most common oral reading tests are the *Gilmore Oral Reading Test* and the *Gray Standardized Oral Reading Paragraphs Test*. These tests are individually administered. The norms range from grades 1 through 8.

CRITERION-REFERENCED TESTS

Criterion-referenced or objective based tests are one of the most recent developments in testing.

Criterion-referenced reading tests measure what a learner knows or can do relative to a specific reading objective. Criterion-referenced reading tests, unlike the survey reading tests, do not compare one learner's performance with that of another. The student is judged by his ability to perform a particular skill, regardless of how well anyone else performs. Two other advantages are that

1. the criterion-referenced reading tests isolate the skills the learner has not mastered, and

2. the tests can explore a very narrow range of skills.

A contrast of norm-referenced (standardized) tests and criterion-referenced tests suitable for making a transparency is provided at the end of this section. A good reference for criterion-referenced testing is Frank B. Womer's article, "What is Criterion-Referenced Measurement?" found in Blandon (1974).

OTHER DIAGNOSTIC TESTING PROCEDURES

As mentioned earlier, formal diagnosis must consist of more than reading tests. Auditory and visual testing is often important.

Visual screening can be done with the following instruments:

Keystone Telebinocular
Bausch and Lomb Ortho-Rater
American Optical Company Sight-Screener

These tests aid a teacher in identifying possible vision problems which should be referred to an ophthalmologist or optometrist. One of the more common visual screening devices used in our schools is the Snellen Chart. This device is most invalid for determining vision problems which inhibit reading because

1. it measures vision at a far point rather than a near point, which is necessary for normal reading,

2. it seems to miss the visual problems of many students; quite often students pass the Snellen Test only to have visual problems noted by the professional eye specialist,

3. it is administered to each eye separately.

Auditory acuity can be informally screened through the use of several instruments. These include the audiometer and Watch Tick Test. These can be administered with little training and used for referral to a specialist should a problem seem to exist.

Formal diagnosis can provide information as to the specific skill areas in which students are having reading problems. However, the information from a formal diagnosis must be used in conjunction with the information gleaned from informal diagnosis in order to be most beneficial. Teachers must recognize that diagnosis is continuous with varying amounts of diagnostic information required for different students. However, some diagnostic information is necessary for all students regardless of their performance level. The student who is having difficulty with reading is the candidate for more in-depth diagnosis while the student who is progressing at an appropriate pace may need a less comprehensive diagnosis.

STRATEGIES FOR SECTION II

1. Provide copies of an Informal Reading Inventory (IRI). Provide a taped recording of a student reading the passage. Have the participants mark and score the IRI on the basis of a pre-determined scoring key.

2. Provide copies of a pre-marked IRI. Have the participants, in small groups, determine the reading levels - independent, instructional, and frustrational (and possibly capacity). Have the groups identify patterns of errors that would yield diagnostic information. Have each group share its information.

3. Provide IRI passages and have the participants, in small groups, write questions for the passages. Have each group share its questions.

4. Discuss the participants' impressions of the IRI in terms of administration, scoring, and information provided.

5. Provide copies of informal inventories (Silvaroli, Sucher-Allred, etc.) for participants to examine whenever convenient.

6. Provide a cloze selection for the participants to complete and score. Have them discuss their impressions.

7. Provide a cloze passage (either real or simulated) that has been completed by a student. In small groups, have the participants score and interpret the passage, using exact match and adjusted score methods, to determine the reading level. Have the groups identify patterns of errors that would yield diagnostic information. Have each group share its findings.

8. Have small groups discuss their concerns over the use of cumulative folders and previous records. Have the groups develop ideas for improving the use of cumulative folder records and share their findings with the large group.

9. Have small groups discuss "parent conferences." Topics such as "what to say and what not to say," "how to get parents on your side," "techniques that work in parent conferences" can be addressed. Have the small groups share their answers. A discussion of personal experiences in this area might be appropriate.

10. Provide a series of standardized tests (especially those used commonly in Florida). Have the tests displayed on tables, a few to a table. Have small groups rotate to each table reacting to each test on the basis of personal experience and examination. After all groups have rotated, briefly discuss the pros and cons of each test as perceived by the various participants.

11. Display the transparency contrasting criterion- and norm-referenced tests. Discuss with the group.

12. Provide samples of criterion-referenced tests for examination and reaction by the groups. The Florida Diagnostic-Prescriptive Reading System would be a good source. Other commercially prepared systems would also be appropriate.

13. Discuss other diagnostic procedures as mentioned previously. If at all possible, provide vision and auditory testing equipment for demonstration.

THE USE OF CLOZE AS A DIAGNOSTIC TECHNIQUE

I. Construction

1. Decide on the text or related reading material that you want to use as the student's instructional material.

2. Select a passage of 250-300 words in length from the instructional material that students have not yet read.

3. Leave the first sentence of the passage intact.

4. Beginning with the second sentence, delete every FIFTH word, replacing the word with a blank of uniform length.
(Exactly fifty deleted words will yield the greatest validty, and will ease the scoring process.)

5. Leave the last sentence intact.

II. Administration

1. Instruct the students to fill in the blanks with the words that they think make the most sense.

2. There is no time limit.

3. Guessing is encouraged.

4. Instruct students that spelling errors do not affect the score.

III. Scoring

1. Let the students correct their own papers, accepting ONLY the EXACT words that were deleted. (This is VERY important. Synonyms, while correct as far as general meaning, are not acceptable in figuring the correct computations. However, subjective judgment may be used.)

2. Ask the students to compute the percentage of answers that are correct. (placing the correct number of responses over number total of responses 37 (correct responses)/50(total number of responses).

IV. Interpretation

1. Divide the papers into three categories.
   A. Scores of 0 to 40% correct
   B. Scores of 41 to 60% correct
   C. Scores above 60% correct

2. Research indicates that these scores correlate to reading levels as follows:
   0 - 40% - Frustration Level (too difficult for student)
   41 - 60% - Instructional Level (can read with help)
   61% & up - Independent Level (can read without help)

HATS OFF TO THE DARING TRAPPERS!

There was always a reason where (1) men pushed westward into a (2) country. In America, in the (3) 1820's, one reason was so* (4) curious. Frontiersmen poured into wild* (5) wilderness chiefly because of the (6) men's hats! For some reason (7), rich men had worn them (8) that were handmade from fox (9) fur. Then somebody invented a (10) machine that could turn fur (11) the material for these things (12) by the thousands. Suddenly, they (13) wanted a beaver hat. And (14) demand for beaver pelts very (15) enormous. In the Rocky mountains (16) fortunes lay, just waiting to (17) be caught. So trappers went* (18) out for the Rockies, and (19) only a handful of the (20) men had ever been. Many* (21) of them went in to (22) parties, hired by large exploring (23) companies. Others were "free" those (24), who worked on their animals (25) and sold their furs got (26) the highest bidder. One of (27) the earliest and most greatest (28) of the fur trappers was (29) a fearless man named John (30) Colter. On one of the (31) trips, Colter took a short (32) cut through new country and (33) he saw sights that excited* (34) and thrilled him. Great rivers* (35) of water spurted up in (36) of the earth. In this (37) place Colter saw a pot (38) of boiling mud. In there (39) he saw springs hot enough (40) to cook meat. Later, then (41) he told people what he (42) had seen, they smiled and (43) tapped their heads and (a)vug (44) of "Colter's Hell." It was (45) years before anyone believed that (46) he wasn't either lying down (47) crazy. What Colter had done (48) was the place we now (49) call Yellowstone National Park. A (50) few months after his adventure (51), Colter set out again after (52) another man named Potts. This* (53) trip was to bring then (54) the most dangerous adventure in* (55) his life.

*possible synonyms

Direct Match: 15/55

Adjusted Score: 23/55*

SUBJECT 12, Grade 5
Student

Hats Off to the Daring Trappers
Cloze Passage Title

Direct Match: 29.1%

Adjusted Score: 45%

5
Level

55
#of Deletions

Expected Response	Observed Response	Comments
1. why	1. where	
2. new	2. a	
3. the	3.	
4. very	4. so*	
5. the	5. wild*	
6. hats	6. the	Disregards comma
7. time	7. reason	
8. hats	8. them	Reads to deletion only
9. beaver	9. fox	Does not utilize passage redundancy
10. a	10.	
11. out	11. fur	Reads to deletion only
12. hats	12. things	Does not utilize passage redundancy
13. everyone	13. they	
14. The	14. and	Disregards period
15. became	15. very	Subs different class form
16. Mountains	16.	
17. to	17.	
18. set	18. went*	
19. where	19. and	19. & 20. part of common dialectal phrase
20. white	20. the	
21. Some	21. Many*	
22. big	22. to	
23. fur	23. exploring	
24. trappers	24. those	Disregards comma; "who" signal
25. own	25. animals	

Subject 12

Student

E. R.	O. R.	COMMENTS
26. to	26. got	
27. of	27.	
28. famous	28. greatest	
29. was	29.	
30. John	30.	
31. his	31. the	
32. short	32.	
33. where	33. and	
34. amazed	34. excited*	
35. fountains	35. rivers*	
36. out	36. in	
37. one	37. this	
38. pool	38. pot	
39. another	39. there	
40. enough	40.	
41. when	41. then	
42. he	42.	
43. and	43.	
44. spoke	44. laugh	Disregards tense of preceding verbs
45. was	45.	
46. that	46.	
47. or	47. down	Reads to deletion only; disregards "either" signal
48. discovered	48. done	Reads to deletion only
49. now	49.	
50. A	50.	

Subject 12
Student

E. R.	O. R.	COMMENTS
51. discover	51. adventure	
52. with	52. after	
53. That	53. This*	
54. him	54. then	Spelling error (then/them)
55. of	55. in*	

Direct Match Total: 15/55 Percent 27.3

Adjusted Score Total: 23/55 Percent 41.8

Summary:

____ High number of syntactically acceptable responses indicates Subject 12 has good knowledge of language structure and context of this passage.

____ This level is not appropriate for instructional purposes. It is too difficult.

____ Recommendations for instruction:

1. Teach skill of reading language before and after deletion - contextual cues, previewing
2. Discuss passage redundancy as a means of getting cues from context
3. Teach how punctuation signals certain language structures
4. Teach either, who as signal words

INSTRUCTIONS

At the bottom of this page is a sample of a new kind of test. Today you will take several of these tests. Each of these tests was made by copying a paragraph or two from a book. Every fifth word was left out of the paragraphs, and blank spaces were put where the words were taken out.

Your job will be to guess what word was left out of each space and to write that word in that space. It will help you if you remember these things:

1. Write only one word in each blank.
2. Try to fill every blank. Don't be afraid to guess.
3. You may skip hard blanks and come back to them when you have finished.
4. Wrong spelling will not count against you if we can tell what word you meant.
5. Write neatly.

SAMPLE TEST. Below is one of these tests. Fill each blank with the word you think was taken out. When you have finished, check your paper by looking at the answer at the bottom of the page. Write neatly.

INSERVICE ACTIVITY WITH THE CLOZE TECHNIQUE

The results will indicate the child's independent reading level, instructional reading level, or frustration reading level. Scores are found by dividing the number of correct words by the number of blanks. 61% is the independent level; 60%-37% is the instructional level; 36% or less is the frustration level.

ALMO'

Almo was a seeing-eye dog.. He had been 1._____ to look after his
2._____ who was blind. Almo 3._____ his Master and the
4._____ wife were staying on 5._____ top floor of a 6._____
hotel. They were resting 7._____ the afternoon, for that 8._____
the Master was to 9._____ a talk on the 10._____ of seeing-eye
dogs.

During 11._____ afternoon, the Master smelled 12._____ in the
hall. The 13._____ could hardly breathe because 14._____ the
smoke. He heard 15._____ calling, "Fire! Fire!" He 16._____
that his wife's eyes 17._____ not help. So he 18._____ to Almo,
"To door 19._____."

The dog went down 20._____ hall through the smoke. The 21._____
had hold of the 22._____ and the wife had 23._____ of the Master's
arm.

Suddenly 24._____ stopped and barked. The 25._____ put out his
hand. They 26._____ come to a window. "Almo 27._____ brought us
to the 28._____ escape," he said to 29._____ wife. He opened

32

the 30._____. The Master wanted Almo 31._____ go out first. "Outside," 32._____ said. But Almo would 33._____go. Then the Master 34._____ that Almo would not 35._____ him. So the Master 36._____ through the window and 37._____ on to the part 38._____ the fire escape before 39._____ window.

Almo went with 40._____. Then the wife climbed 41._____. Now they could breathe 42._____ the window.

The 43._____ climbed down the fire 44._____. It did not go 45._____ the way to the 46._____. So when the Master 47._____ to the end of 48._____ he fell the rest 49._____ the way. But he 50._____ not hurt.

Adapted from *Selected Techniques and Activities for Right to Read Teachers*, New Jersey Right to Read, Helen L. Musemeci, Editor.

ALMO ANSWER KEY

1. trained
2. Master
3. and
4. Master's
5. the
6. small
7. in
8. night or evening
9. give
10. work
11. the
12. smoke
13. Master
14. of
15. people
16. knew
17. could
18. called
19. outside
20. the
21. Master
22. dog
23. hold
24. Almo
25. Master
26. had
27. has
28. fire
29. his
30. window
31. to
32. he
33. not
34. knew
35. leave
36. climbed
37. out
38. of
39. the
40. him
41. out
42. outside
43. Master
44. escape
45. all
46. ground
47. came
48. it
49. of
50. was

A Contrast of
Norm-Referenced and Criterion-Referenced Tests

Point of Comparison	Standardized	Criterion-Referenced
PURPOSE:	Determine a student's grade level achievement.	Determine extent to which student objectives are being achieved.
TESTING PROCEDURE:	Each student takes a complete test.	Items may be randomly assigned as purposes dictate.
ACHIEVEMENT STANDARD:	Compares to other students of same age.	Performance of specific behavior (yes or no)
REPORTING OF RESULTS:	Grade-level achievement norms for individuals or groups.	Percentage score on number of items correct for a specific objective.
IMPLICATIONS FOR TEACHING:	Teaching for the test constrains classroom activity and invalidates the test.	Teaching for the objectives is desirable and expected.

POINTERS FOR TEACHERS ON DIAGNOSIS

DIAGNOSIS IS NECESSARY FOR ALL READERS--GOOD AS WELL AS POOR READERS.

THE TEACHERS MUST IDENTIFY FACTORS OR POTENTIAL FACTORS WHICH MAY INTERFERE WITH THE LEARNER'S READING PERFORMANCE.

DIAGNOSIS MUST TAKE PLACE CONTINUOUSLY.

THE LEARNER SHOULD BE AWARE OF THE PURPOSE OF THE DIAGNOSIS.

THE LEARNER SHOULD BE ENCOURAGED TO GET INVOLVED IN SELF-EVALUATION.

DIAGNOSIS SHOULD BE BRIEF AND TO THE DEPTH NECESSARY TO GET AT THE PROBLEM.

TEACHERS SHOULD KNOW THE LIMITS OF THEIR DIAGNOSTIC CAPACITY.

THE TEACHER'S DIAGNOSIS SHOULD BE USED TO THE MAXIMUM TO PROVIDE PRESCRIPTIVE INSTRUCTION.

SAMPLE TEACHER OBSERVATION

Teacher Observation of a Reading Situation

Johnny------Grade 4------9 years old

OBSERVATION I
September 7

Johnny played with a spool which had an elastic band wound around a match stick at each end. The spool moved slowly across Johnny's desk until it bumped into the closed workbook. Johnny quickly snatched up the spool and slipped it into the desk. The workbook was quickly opened. Johnny slowly raised his hand then slowly put it down. "Hey, Sam, what page are we supposed to do?" he yelled.

OBSERVATION II - Class time
September 13

Teacher--*Where do you think the story took place?*

Johnny--*In the woods by a brook.*

Teacher--*Find where it tells you that in the book.*

Johnny looked at the picture then moved his finger along the lines of print slowly moving his lips. Johnny did not find the answer without help.

OBSERVATION III - Silent Reading
September 28

Johnny does not seem interested in reading. He spends much of his time playing with a spool and looking into space. Sometimes he does not even answer questions. He seems to be talking to himself but he told me he was talking to his friend.

OBSERVATION IV
October 5

Johnny did not do his reading workbook.

CHECKLIST RECORD OF CLASSROOM OBSERVATIONS ON PUPIL'S READING *

Observation as a Diagnostic Technique

NAME _____ GRADE _____ TEACHER _____

DIRECTIONS: Tally significant observations day by day. Space at bottom of each section can be used for noting specific errors, interpretations, general impressions, evidence or progress, and recommendations.

I. ORAL REPORTING AND DRAMATIZATION BEHAVIORS

Vocabulary

___ Rich

___ Words mispronounced

___ Meager

___ Meaningful

Speech

___ Distinct, clear enunciation

___ Inaudible

___ Stuttering

___ Incorrect sounds

___ Monotonous

___ Expressive

Language Patterns

___ Complete sentences

___ Simple sentences

___ Complex sentences

___ Good organization

___ Repetition of ideas

___ Interpretation of ideas

___ Imaginative insights

Reactions of Peers

___ Interested

___ Uninterested

___ Sympathetic

___ Friendly

___ Critical

___ Hostile

II. ORAL READING BEHAVIORS

Word Recognition

___ Reverses letters

___ Reverses words

___ Reverses phrases

___ Omits words

___ Substitutes words

___ Attempts to apply word analysis skills

___ Uses context clues

___ Makes wild guesses

Comprehension

___ Gives sensible reasons for thought answers

___ Gives fantastic, irrelevant reasons on thought questions

___ Relates reading to experiences

___ Unable to relate reading and experiences

Poise

___ Enjoys reading orally in front of others

___ Is able to read orally in phrases

___ Has good expression in oral reading

___ Observes punctuation marks

___ Reads with expression

___ Uses appropriate speed

III. SILENT READING BEHAVIORS Independent Reading Level (Free Choice Reading)

Location of Material

___ Finds suitable book quickly

___ Has teacher help

___ Depends on other children

Attitude

___ Enjoyment evident

___ Independent--does not want to be told to find something to read

___ Uninterested

Physical Factors

___ Holds book up

___ Holds book close to face

___ Lip movement

___ Squints

___ Blinks eyes

___ Eyes red or watery

___ Complaints of headache

___ Complaints of dizziness

___ Bends over book

___ Poor posture

___ Easily distracted

Interests

___ Animals

___ People

___ Science

___ History

___ Adventure

___ Fairy tales

___ Sports

___ Art

___ Music

___ Cars, planes, trucks, boats

___ Rockets

___ Armed services

IV. LISTENING BEHAVIORS

___ Listens attentively to stories

___ Listens attentively to lectures

___ Listens attentively to directions

___ Easily distracted in any type of listening situation

___ Responds appropriately to questions or directions

V. SOCIAL-EMOTIONAL BEHAVIORS

___ Poised

___ Relaxed and happy

___ Tense and anxious in directed group situations

___ Tense and anxious in undirected situations

___ Self-confident

___ Shy--easily embarrassed

___ Antagonistic

V. SOCIAL-EMOTIONAL BEHAVIORS (continued)

___ Gets along well with girls

___ Gets along well with boys

___ Respects others

___ Disturbs others

___ Works alone only

___ Works well in small groups

___ Accepted and liked by peers

DIRECTIONS FOR USING OBSERVATION AS A DIAGNOSTIC TECHNIQUE

The teacher should have a copy of the chosen checklist for each student. Then the teacher should select a time when he can observe the student's behavior in terms of this structured checklist. Most observations can and should be done during regular school activities, not in isolated, unrelated situations.

While making student observations, the teacher should look for patterns of behaviors. Observation of one particular deviant behavior is insufficient information on which to draw a conclusion.

---

* Adapted from *Diagnostic Teaching of Reading* by Ruth Strong, copyright 1969, McGraw Hill Book Company, New York, N.Y.

SECTION III

HOW ARE PRESCRIPTIONS DEVELOPED?

The teacher makes a decision based on the data received in diagnosis to select activities for the students. The prescription is defined as:

> *"those assignments written for an individual and directly related to his or her specific deficits."* (*Glossary*, 1975, p. 7)

Quite often so much time and emphasis is placed on diagnosis that the development of prescriptions is forgotten. Without diagnosis, prescriptive teaching is not possible, but if prescriptive teaching is not done following diagnosis, then the time spent in diagnosis has been wasted. Thus, diagnostic-prescriptive instruction depends on an adequate diagnosis followed by careful teaching.

As Durkin (1976) has indicated, "Diagnosis is meaningful only to the extent that what it uncovers affects instructional decisions" (p. 375).

Prescriptive teaching has often been put down by those believing that it must be done only on a one-to-one basis and arguing that teacher time does not permit such. This is an erroneous belief since prescriptive teaching can be

one to one instruction,

a small group working on a single skill, or

an entire class working on the same skill with materials on different levels.

Usually prescriptive instruction utilizes all three of these organizational formats dependent on the students' needs on a given day.

In thinking about diagnostic-prescriptive instruction, consider a visit to a medical doctor. After a physician diagnoses the nature of a person's illness, a prescription is written.

The prescription tells what medication the person is to take, how much and how often to take the medication, plus any other information the doctor and the pharmacist feel is important for the patient to know.

Reading teachers could learn something from the medical prescriptions. Usually they are brief! When teachers argue that writing prescriptions takes too much time, they are usually writing more than is necessary.

In order for prescriptions to be developed, the teacher must first review and organize the diagnostic information. This may be done using a card file system or a folder for each student. As diagnostic information becomes available for each student, the teacher should develop a class chart which indicates the reading strengths and weaknesses of each student. This chart facilitates class grouping for specific skill instruction in addition to serving as a handy reference which can be used for parent conferences.

To facilitate prescriptive teaching, it is wise to determine what materials are available in the classroom and school and to inventory them as to what skills each material addresses. If a teacher is using a basal program, a skills index is available in most teachers' manuals or can be obtained from the publisher. The teacher would then inventory only those supplemental materials available to them. The materials index serves two basic functions:

1. to assist the teacher in developing appropriate prescriptions using a minimum of teacher time

2. to identify areas in which necessary material is not available to develop skills.

A materials index would be categorized by skills with a sample card containing the following information as a minimum. Other information could be added at the teacher's discretion.

Main Idea

Title Page Number Reading Level

The next step is the actual development of a prescription for the student. The teacher could use a variety of techniques for organizing the prescriptions. Some techniques include an individual folder for each student, a class chart containing each student's name and directing each to the task to be done for the day, or the teacher could informally direct each student to the activity for the day.

Prescriptions may be written for a week or longer and may include one skill or several. This is only an initial plan and must be adjusted daily based on recognized adjustments which must be made for proper instruction. More often, prescriptions are for several days and include activities on which the student works alone as well as varying group activities directed by the teacher. Teachers must realize that diagnostic-prescriptive instruction does not remove the teacher from the instructional process, but instead involves the teacher as a coordinator of the instructional tasks.

In developing prescriptions, the teacher should consider these questions:

1. Based on the diagnosis, what instruction does the student need?

2. What resources are available to meet the student's identified needs?

3. Using the diagnostic information and the identified resources, am I providing instruction to meet the needs of the student?

The time spent in developing prescriptions is decreased if the teacher uses a code system of abbreviations to communicate the prescriptions to the students. The students quickly learn the code and recognize that BL/FD^{B} means to use Barnell Loft - *Following Directions*, Level B. In fact, this code system often adds interest to the learning environment as well as saving time for the teacher. See the prescription provided on the following page as an example.

SAMPLE

PRESCRIPTION SHEET

Name: *Jim Smith* Date: *Jan. 7 - Jan. 18*

Initial Blends	*EPC - Level 1 - 9A1, 9A2, 9B2* *Target Red: 33, 34* *Durrell Ph. Kit: 27,28,29,30,31,32,33,34* *GWEP (5): 4,5,6,7*
Compound Words	*Try this: 63,64,82,93* *GWEP (5): 80,81,82,83,84,85* *Cut compound words out of the newspaper. Paste on a piece of construction paper.*
Following Directions	*B-L (A): 6,7,8,9, 10* *R for MS (A): 8* *Work at "Following Directions Center"*
Creative Writing (at writing center)	*Write and illustrate a story for the library center.* *Work with Sam. Write and illustrate haiku verse to share with our class.*
Books	*Things in Space*

Some characteristics of good prescriptions include:

- Prescriptions are related to previous learning.
- Prescriptions are clear and definite.
- Good prescriptions indicate sources of information and materials to be used.
- Prescriptions are interesting to the students.
- Prescriptions guide learning and stimulate thinking.
- Prescriptions are written to satisfy student and teacher-directed objectives.

Among those teachers who have tried a diagnostic-prescriptive approach there are some who have not had success. One of their usual complaints is that the students could not follow their prescriptions without help. One way of making diagnostic-prescriptive instruction work is to use a "silent alarm" system where a student puts up a signal for help, and if the teacher is busy, the student switches to easier work or another activity pre-arranged by the teacher until the teacher or aide can come to the student's desk. This allows the teachers to continue whatever they are doing and to know to whom to go first after the present activity is completed.

Teachers must organize diagnostic-prescriptive instruction to meet their individual teaching styles. The information contained in this packet can be used to assist them in beginning and to provide some additional ideas for those already involved in diagnostic-prescriptive instruction. However, the specific problems associated with this instructional procedure can best be dealt with by the individual teachers determining the best procedures for themselves.

STRATEGIES FOR SECTION III

1. Based on data collected from previous strategies, i.e., scoring and interpreting IRI and/or cloze exercise, have participants, in small groups, develop prescriptions appropriate for the information they have. These prescriptions should be based on their personal knowledge of materials in their classrooms or schools. They may develop a code system if they wish.

2. Provide small groups of participants with a brief thumb-nail sketch of a student's scores (real or hypothetical). Information should include: IQ, survey and/or achievement test scores, reading levels from IRI or cloze test, some indication of a pattern of errors, interests, experiential background. Small groups should then develop a prescription for this student from their own working knowledge of materials and methods. It may be possible to use information on only one student (possibly displayed on an overhead projector). Then the groups could compare their prescriptions for the same individual.

3. Have participants share prescription writing techniques and shortcuts from their own classroom experiences, or those they have heard or read about.

4. Display via overhead projector, the six characteristics of good prescriptions as previously outlined. Discuss each with the participants.

SECTION IV

HOW IS DIAGNOSTIC-PRESCRIPTIVE INSTRUCTION EVALUATED?

Evaluation is a necessary part of diagnostic-prescriptive instruction, but it is often overlooked. Some teachers and reading specialists spend a lot of time on diagnosis, a little more time on writing prescriptions, but little or no time on the evaluation of the diagnostic-prescriptive process. What usually happens is that the pressures of time force the teachers and students to keep moving. Perhaps the teacher and students could reflect upon what has been accomplished - what skills have been developed, what objectives have been met - and come up with some ideas for improving the diagnostic-prescriptive process in the future.

Here are some decisions the teacher and students could make together:

- What are the most efficient methods and materials?
- What adjustments need to be made or what procedures should be continued?
- What instrument will be used to measure the students' progress or completion of specific objectives?
- Are students improving in reading?
- Are students reading for enjoyment?

Evaluation of the students' reading ability is fundamental to diagnostic-prescriptive instruction. The specific technique employed will vary according to what is to be evaluated. For example, one technique is more useful for evaluating skill in word attack, another for comprehension, another for a specific study skill, and still another for an inventory of reading interests. The effective teacher will use a variety of techniques to conduct an evaluation that will provide insights into ways of making diagnostic-prescriptive instruction more meaningful to those involved.

Some tips to remember in initiating a diagnostic-prescriptive program include:

1. Start slowly with several students, then expand gradually.

2. Use all available information - don't re-invent the wheel.

3. Have at least one person with whom you share your successes and failures - this helps to release frustration.

4. If you are frustrated for the first six months that you try diagnostic-prescriptive instruction, you are normal!

STRATEGIES FOR SECTION IV

1. *Display transparency of "decisions that the teacher and students could make together" and discuss each item.*

2. *Display transparency of "tips to remember" and discuss each item.*

3. *Allow participants who have worked with a diagnostic-prescriptive system to share some "pitfalls" they encountered, so that others can avoid the same problems.*

BIBLIOGRAPHY

Blanton, William E., et al. (Eds.). *Measuring Reading Performance.* Newark, Delaware: International Reading Association, 1974.

Bond, Guy L., and Tinker, Miles A. *Reading Difficulties: Their Diagnosis and Correction.* New York: Appleton-Century Crofts, 1967.

Buros, Oscar K. (Ed.). *The Mental Measurement Yearbook.* Highland Park, New Jersey.

_____. (Ed.). *Reading Tests and Reviews.* Highland Park, New Jersey: The Gryphon Press, 1968.

Dechant, Emerald V. *Diagnosis and Remediation of Reading Disability.* West Nyack, New York: Parker Publishing Co., 1968.

_____. *Improving the Teaching of Reading.* Englewood Cliffs, New Jersey: Prentice Hall, 1963.

Della-Piana, Gabriel M. *Reading Diagnosis and Prescription: An Introduction.* New York: Holt, Rinehart, and Winston, 1968.

Durkin, Dolores. *Teaching Young Children to Read.* Boston: Allyn and Bacon, 1976.

Florida Department of Education. *Inservice Training Suggestions for Training Teachers in the Recognition of Language Arts Needs and in the Application of Prescriptive Techniques in Meeting Such Needs.* Tallahassee, Florida, 1976.

Florida Department of Education, Right to Read. *Glossary of Reading Terms for Florida Educators.* Tallahassee, Florida, 1975.

Hafner, Lawrence E., and Jolly, Hayden B. *Patterns of Teaching Reading in the Elementary School.*

Harris, Albert J. *How to Increase Reading Ability.* New York: David McKay Co.

Harris, Larry A., and Smith, Carl B. *Reading Instruction Through Diagnostic Teaching.* New York: Holt, Rinehart, and Winston, 1972.

Leibert, Robert E. (Ed.). *Diagnostic Viewpoints in Reading.* Newark, Delaware: International Reading Association, 1971.

Miller, Wilma H. *Reading Diagnosis Kit.* New York: The Center for Applied Research in Education, 1974.

_____. *Reading Correction Kit.* New York: The Center for Applied Research in Education, 1975.

Pikulski, John. A critical review: Informal reading inventories. *The Reading Teacher.* November, 1974, pp. 141-151.

Smith, Carl B. *Correcting Reading Problems in the Classroom.* Target Series Book Four. Newark, Delaware: International Reading Association, 1969.

Spache, George. *Investigating the Issues of Reading Disabilities.* Boston: Allyn and Bacon, 1976.

Wallen, Carl J. *Competency in Teaching Reading.* Chicago: Science Research Associates, 1972.

Wilson, Robert M. *Diagnostic and Remedial Reading for Classroom and Clinic.* Columbus, Ohio: Charles E. Merrill, 1967.

Zinty, Miles V. *Corrective Reading.* 2nd edition. Dubuque, Iowa: William C. Brown, 1972.