To effectively determine each student's ability to read and learn in each content area, reading teachers need a group inventory which will evaluate both the study skills and reading skills necessary for success in their content area. This paper presents a model for the development and implementation of a Reading and Study Skills Inventory (RASSI). The development of the RASSI should include readability analysis of instructional materials used in the content area, the construction of group and individual reading inventories based upon the skills required by the instructional materials and skills identified by instructors as being necessary for academic success in their content area, and the development of an examiner's manual and interpretation guide. The development, administration, interpretation, and implementation of a Reading and Study Skills Inventory demand the cooperation of content area teachers and reading specialists. Through this interdisciplinary communication and cooperation, a school faculty can develop an effective instrument to evaluate the reading and learning abilities of each student in each content area. (TS)
A MODEL FOR THE DEVELOPMENT OF A
READING AND STUDY SKILLS INVENTORY FOR EVERY CONTENT AREA

Robert T. Williams Ed. D
Department of Education
Colorado State University
Fort Collins, Colorado 80523

Mitchell A. Kaman, M.S.
Reading Instructor
Larimer County Voc-Tech Center
Fort Collins, Colorado 80521

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The teacher in the content area classroom should have a vital interest in his student's ability to read and understand the instructional materials used in his course of study. In order to evaluate each student's ability to read and understand the instructional material, the content area teacher must be aware of both the readability of his textbooks and the reading abilities of his students. It is not enough to say that a textbook is written for seventh grade students since the seventh grade teacher could expect to find reading abilities ranging from third to eleventh grade in a single classroom. Durrell (3) points out that the teacher of fourth grade pupils might expect to have a range of abilities about the same as she would find in all grades of a one-room rural school. Therefore, the classroom teacher needs an instrument to measure each student's reading ability in order to make some practical decisions as to the degree of success each student will have with the instructional materials.

The concept of readability generally refers to the success that an average individual experiences in reading a book. Generally, a readability analysis reports an average readability score or grade level. McGuaig and Hutchings (5) describe the variation of readability and
suggest that we must be concerned with the variation and not the average readability of instructional material. To further complicate the problem, we are finding that reader background and interest is highly influential in his reading performance and comprehension (6).

The teacher, then, has the problem of putting the right book in the right pair of hands, or, in this case with instructional materials, knowing where the students can be expected to experience difficulty when reading the textbook. The fact that this problem has not been successfully solved is reflected by Marksheffel's (4) observation that:

"... at least 40 to 50 percent of the secondary students in America's public schools are being forced to try to learn subject matter from books that are beyond their instructional reading level."

Several techniques of appraising reading ability are available to the classroom teacher. Standardized test scores, teacher observations, and informal reading inventories are but a few of the sources upon which the teacher may draw.

Standardized test scores give the teacher a picture of how the student interacts with the material that the test author deemed important. However, the results of these tests often serve to limit our understanding of the student's ability to deal with a variety of reading material because they do not account for all the factors involved in understanding or learning in a content area classroom.

Teacher observations have been shown to be a viable and accurate source for appraising student's reading ability but it usually takes months of observation and interaction with students before these observations would be valuable or accurate. The content area teacher should
not afford that long a time evaluating his students' reading ability.

The informal reading inventory has been shown to be an effective evaluation instrument used by content area teachers. However, the informal reading inventory alone does not give a complete picture of the student's ability to deal with all of the material he will encounter in a particular content area class. Furthermore, content area teachers do not have the thirty to sixty minutes per student needed to administer an individual informal reading inventory. The need for a new method of evaluating students' reading levels arises from the facts that standardized reading tests and teacher evaluation tend to overrate the student's ability at the instructional level, and informal inventories, while valid and reliable, are quite time-consuming. Sipay (8), Daniel (1)

To effectively determine each student's ability to read and learn in each content area, the teacher needs a group inventory which will evaluate both the study skills and the reading skills necessary for success in their content area. This reading and study skills inventory must be developed to represent all of the instructional material from which the student will be asked to learn and unlike the standardized test, it must be responsive to the teachers exact demands and input. The balance of this article presents a model for the development of a Reading and Study Skills Inventory (RASSI).

The Reading and Study Skills Inventory (RASSI) developed for a specific content area will allow the classroom teacher to evaluate each student's ability to read and learn in his content area, and to identify each student's specific strengths and weaknesses in the content area. Then the teacher can maximize the student's strengths while teaching to
areas of weakness.

To accomplish these goals the development of the RASSI should include readability analysis of instructional materials used in the content area, the construction of group and individual reading inventories based upon the skills required by the instructional materials and the skills identified by instructors as being necessary for academic success in their content area, and the development of an examiner's manual and interpretation guide. Each of these four components is developed in detail below.

The readability analysis of instructional material may be made using the 1958 revision of the Dale-Chall Readability Formula (7), (9). This analysis is concerned with establishing the relative difficulty of passages taken every tenth page within the instructional material.

The group reading inventory should include a passage from each level of difficulty identified by the readability analysis. Four choice multiple choice questions including factual, inferential, and vocabulary use questions evaluate comprehension of these passages. Reading rate for each passage should be measured.

An individual reading inventory should include a passage from each level of difficulty identified by the readability analysis. The individual inventory, passages are read orally to the examiner who codes oral reading errors to make an analysis of specific reading deficiencies. Comprehension should be evaluated by factual, inferential and vocabulary use questions read to the student. Oral reading rate should be measured.

The study skills inventory should include items to measure the student's ability to accomplish tasks such as using the parts of a book,
reading a chart, graph, diagram or illustration, using reference materials or skills and tasks identified by instructors as being necessary for academic success in their content area.

Finally, the examiner's manual and interpretation guide must include administration instructions, scoring procedures, and interpretation guides with implications for classroom instruction for each section of the RASSI. The RASSI should be able to be administered and evaluated by the content area teacher. The reading specialist and content area teacher should develop student and class profile sheets to help the instructor plan individual and group learning activities. Figure 1 below is a flowchart to help the reader conceptualize the RASSI administration and interpretation procedures and to synthesize these various procedures.

Initial screening inventories are administered to all students by the content area teacher as a group inventory. Stage I diagnosis involves the evaluation of the RASSI using the interpretation guides and RASSI profile. The Stage I conclusion identifies those students who can and those students who cannot learn independently from the instructional materials.

Stage I remedial procedures for reading skills include a procedure for classroom practices (assigning only materials from which the student can learn) and the referral procedure (refer the student to the reading specialist for individual diagnosis). The Stage I remedial procedures
FIGURE 1
RASSI ADMINISTRATION AND INTERPRETATION PROCEDURES

**INITIAL SCREENING INVENTORIES**

- Administer Content Area Group Informal Reading Inventories

**STAGE I DIAGNOSIS**

- Interpret Inventories (using RASSI Profiles & Interpretation Guides.)

  - Student Can Learn Independently From Materials. No Special Help Necessary
  - Student Can Not Learn Independently From Materials
    - Assign Only Materials From Which The Student Can Learn. Refer For Individual Diagnosis

**STAGE I CONCLUSION**

- Student Can Not Learn Independently From Material
  - Refer For Individual Diagnosis
  - Administer & Interpret Individual Informal Reading Inventory
    - Remedial Procedures Effective
      - Continue To Monitor Classroom Progress
    - Remedial Procedures Ineffective
      - Refer For Comprehensive Clinical Evaluation

**STAGE I REMEDIAL PROCEDURES**

- Individual Instruction In Area(s) Of Skill Deficiency
  - Mini Class In Area(s) Of Skill Deficiency

**STAGE II DIAGNOSIS**

- Administer & Interpret Individual Informal Reading Inventory

**STAGE II REMEDIAL PROCEDURES**

- Group Remedial Work
  - Individual Remedial Work

- Remedial Procedures Effective
  - Continue To Monitor Classroom Progress

- Remedial Procedures Ineffective
  - Refer For Comprehensive Clinical Evaluation

- Individual Instruction
for study skills provides for either individual instruction or mini-
classes in the specific area(s) of skill deficiency.

Referral to Stage II diagnosis for reading skills involves the
administration and interpretation of the individual informal reading
inventory. The results of this inventory would call for either group
or individual remedial work (i.e. Stage II remedial procedures for read-
ing skills).

If the Stage I remedial procedures for study skills proved effec-
tive, the student could return to regular class work while the teacher
continues to monitor his progress. If the Stage I remedial procedures
for study skills proved ineffective, the student would be referred for a
comprehensive clinical evaluation and individual instruction (Stage II
remedial procedures for study skills).

The development, administration, interpretation and implementation
of a Reading and Study Skills Inventory demands the cooperation of the
content area teacher and the reading specialist. Through this inter-
disciplinary communication and cooperation the faculty of a school can
develop an effective instrument to evaluate the reading/learning abili-
ties of each student in each content area. Furthermore, inter-discipli-
nary communication and cooperation is necessary to remediate problem
areas. If this model of identification and remediation were initiated,
we would be well on our way to insuring that students would not be leav-
ing our content area classrooms without the skills and the desire neces-
sary to read to their fullest potential.
The authors are in the process of implementing a RASSI for the Basic Electricity Core at the Larimer County Vocational-Technical Center, Fort Collins, Colorado. Special thanks should be extended to Mr. David Smith, Coordinator of Supplementary Services, and Mr. Harry Matsunaka, Instructor in Radio/Television Repair, of Larimer County Vocational-Techical Center, Fort Collins, Colorado, for their assistance in developing this RASSI.
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