A MODEL OF DIRECT INSTRUCTION APPLIED TO
TEST-WISENESS INSTRUCTION FOR READING
COMPREHENSION SKILLS

A Thesis
by
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A MODEL OF DIRECT INSTRUCTION APPLIED TO
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ABSTRACT

A MODEL OF DIRECT INSTRUCTION APPLIED TO TEST-WISENESS INSTRUCTION FOR READING COMPREHENSION SKILLS. (June 1984)

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This study was designed to determine: (a) the effect of test-wiseness instruction generated from a model of direct instruction on reading comprehension scores of university freshmen, and (b) to determine how test-wiseness instruction generated from a model of direct instruction interacts with the gender of university freshmen. Subjects were 42 Appalachian State University freshmen (22 males and 20 females) enrolled in four sections of College Reading and Study Skills. Each of the four sections was randomly assigned to either an experimental or control group. An analysis of the Nelson Denny Reading Test, comprehension subtest revealed that four reading skills were measured: (a) main idea, (b) recognition and/or recall of details, (c) inferring
supporting details, and (d) interpreting figurative
language. These four skills plus test-taking strat-
egies were taught to the experimental group. Test-
taking instruction for the skills identified employed
a modified version of Wood and Blanton's (1984) model
of direct instruction. Each of the treatment sessions
was approximately 50 minutes in length. Instruction
began in January and ended in March of 1984. The anal-
ysis of variance results for the main effects of treat-
ment were not significant. Similarly, the results for
the interaction between sex and treatment were not
significant.
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Particular thanks and appreciation is extended to my husband, Herbert, for always being there when I needed encouragement and for helping to make my dream a reality.
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Chapter 1
INTRODUCTION

Education in general and reading education in particular have placed an increasing emphasis on measurement and evaluation over the past few years. Students are tested from the onset of their school careers and major decisions evolve from the obtained test results. Recently the assessment of reading comprehension has received wide attention. This interest stems from the National Assessment of Educational Progress and the field of reading education. The results of comprehension tests may, in fact, not be a true measure of a student's comprehension ability. Perhaps one reason for this is that students lack prerequisite test-taking skills or just might not be test-wise (Thorndike, 1949; Ebel & Darmin, 1960; Millman, Bishop, & Ebel, 1965). Thus, educators have developed a keen interest in exploring the idea of teaching students to take tests.

Statement of the Problem

The purpose of this study was to explore the application of direct instruction as a method of teaching
reading comprehension test-tasking skills to university freshmen. The particular model of direct instruction used for generating instructional treatment was Wood and Blanton's (1984) model of direct instruction for teaching students to take reading comprehension tests.

Specifically, the present study was designed to determine: (a) the effect of test-wiseness instruction generated from a model of direct instruction has on the reading comprehension scores of university freshmen, and (b) to determine how test-wiseness instruction generated from a model of direct instruction interacts with the gender of university freshmen.

Background of the Study

The question of whether instructing students in test-taking techniques will increase their scores is not a new one. Research has explored instruction on test-wiseness skills using repeated exposure (practice) and programmed materials for sometime. Findings from these studies however, have provided equivocal results. Wahlstrom and Boersma (1968), Callenbach (1973), and Gross (1977) found significant evidence concerning the benefits of test-wiseness instruction; while Yearby (1974), Dillard (1977), and Costar and Gerler (1980) netted insignificant results from their studies. According to Wood and Blanton (1984), the mixed results may be due to the lack of a stable instructional model
for teaching test-wiseness. In their opinion, recent theory and research findings drawn from the fields of cognitive psychology and classroom reading instruction offer new insights into how to teach students to take reading comprehension tests.

**Test-Wiseness Instruction Utilizing Repeated Exposure (Practice)**

In addition to needing a stable instructional model for treatments, research on test-wiseness should evaluate the conventional notion of instruction. Barr's (1974, 1975) research on classroom practice makes the argument that teachers "pilot" students through practice. Most research on instruction and classroom practice continues to argue that "instruction is equated with practice" (Duffy & Roehler, 1982).

The repeated exposure model is based on the belief that students lacking in test-taking skills will benefit by repeated exposure to knowledge and skills used in test performance. Practice on skills such as item format, test directions, eliminating incorrect answers, use of time, test-taking vocabulary, and practice on different tests measuring similar content and skills have been used (Callenbach, 1973; Slakter, Koehler, & Hampton, 1970; Yearby, 1974). It should be noted, however, that this model does not provide for instruction from the teacher. Practice does not tell
the student "how." "How" is expected to be discovered by students (Wood & Blanton, 1984). The content knowledge and test-taking strategies are expected to be deduced by students as they are repeatedly exposed to learning materials.

To summarize to this point, test-wiseness instruction based on the repeated exposure model seems to have failed to teach students "how" to comprehend written material in order to increase their test scores. More importantly, although practice and more practice may, at times, result in increased test performance, students fail to acquire skills and understanding necessary for regulating their own test-taking behavior.

**Test-Wiseness Instruction Using Direct Instruction**

The construct of direct instruction has recently appeared in literature. From the perspective of this writer and others (Wood & Blanton, 1984; Bauman, 1983), direct instruction may be applicable to teaching students test-taking skills. Duffy and Roehler (1982) define instruction as instruction which focuses "directly on the task of learning to comprehend." Baumann offers the following procedural steps for direct instruction; telling, showing, modeling, teaching skill to be learned, questioning, "discovering," and student involvement. Reid (1981) suggests the following instructional outline for direct instruction:
(a) objective directives (a reason for doing and why it is important to learn), (b) modeling directives (teacher demonstrates how), (c) practice as modeled (students verbalize a description of the skill and practice directives in various print setting).

In a more recent model of direct instruction, Wood and Blanton (1984) outline four components of direct instruction and show how these components might be applied to test-taking instruction. Their model includes Explication, Modeling, Repeated Exposure via Guided Practice, and Transfer to Print Setting. As can be seen, the above models have some differences, but are also very similar in that they provide for the teacher to model the task to be learned (teaching of "how"). More importantly, each model includes performing a task. This component makes both the task and practice more meaningful and relevant for the student.

In summary, the idea of a direct instruction model is relatively new. Prior research suggests weaknesses in using a repeated exposure model for instruction in general and test-wiseness instruction in particular. In an effort to alleviate these weaknesses, Wood and Blanton (1984) developed a model of direct instruction that provides for practice the teaching of "how" to the students to take a reading comprehension test.
Significance of Problem

Teaching students to be test-wise is not enough. Students must not only be taught test-taking strategies but must also be taught in addition the "how" of reading comprehension (Wood & Blanton, 1984). Improvement in the results of reading comprehension test-taking ability will affect numerous areas. For example, students' test scores will be better measures of what they have learned. These more accurate scores will result in: (a) better placement of students, (b) more valid diagnosis, (c) more accurate test results for demonstrating accountability in reading instruction, and (d) a better explanation of problems such as not reaching reading potential.

Definition of Terms

Test-wiseness. Millman, Bishop, and Ebel's (1965) definition of test-wiseness will be utilized. They write that test-wiseness is, "a subject's capacity to utilize the characteristics and formats of the test and/or the test-taking situation to receive a high score" (p. 707).

Test-taking skills. This term is used to refer to the strategies used by successful test-takers. These strategies include behaviors which enhance overall performance when taking tests. In the past these behaviors have included recognizing item format, following
test directions, eliminating incorrect answers, using time efficiently, understanding test-taking vocabulary, and guessing. In addition to these behaviors, this study includes the building in of an awareness within the subjects of the mental processes exhibited when required to answer test questions.
Chapter 2
REVIEW OF RELATED LITERATURE

Research addressing five areas pertinent to this study will be reviewed in this section. The first area to be discussed is the general theoretical position for test-wiseness developed by Millman, Bishop, and Ebel (1965). This analysis of test-taking behavior is the seminal work. The second area reviewed explores the efficacy of teaching students test-taking skills to improve their scores on general achievement tests. Section three reviews research in the area of teaching students test-taking skills to improve their scores on reading achievement tests. The next section presents work in the area of generic direct instruction, focusing on a specific procedure for teaching reading comprehension. Last, Wood and Blanton's (1984) framework for applying a model of direct instruction to instruction on test-wiseness is discussed.

General Test-Taking
Testing has become an instrument that is utilized more and more in the field of education. Prior to 1965 little research was done in the area of students'
test-taking strategies. The research that was initiated avoided any discussion or analysis of the skills involved in test-taking. The seminal work in test-wiseness was generated by Millman et al. in 1965. Their theoretical analysis focused on the **taking of**, rather than **preparing for**, achievement and aptitude tests. After reviewing the literature they argued that reducing differences in test-wiseness among examinees to provide more valid estimates of their actual abilities and achievement levels was a desired outcome, indicating that educators should strive to reach the elimination of a student's lack of test-wiseness. The findings from this study birthed numerous studies in this area (e.g., Anastasi, 1981; Bajtelsmit, 1977).

**General Achievement Training Studies**

Building on the work of Millman et al. (1965), researchers have investigated the effects of training students on test-wiseness skills. However, the results of research in this area are unclear.

Oakland (1972) examined variables which apply to test-wiseness in assessing preschool and primary-grade children. After reviewing numerous readiness tests to determine which prerequisite skills were needed for taking readiness tests, he developed programmed
materials to train students on the required skills. Seventy-two children from four head start classes were randomly assigned to an experimental or a control group. The experimental group worked with teachers in the test-wiseness materials twice a week for 30 minutes, for six weeks. Before the experiment began, both groups were given the Metropolitan Readiness Test Form A. In addition, both groups were given Form B of the Metropolitan Readiness Test immediately following final treatment. The Metropolitan Readiness Test Form A was used as an additional posttest and was administered at the beginning of the following school year. An analysis of covariance was performed using pretest scores as a covariate. The results revealed that test-wiseness instruction failed to produce significant differences between groups.

Eakins, Green, and Bushell (1976) investigated whether there would be a difference between students who received sustained practice on test-taking as opposed to those who received just one practice session or no practice. One hundred and seventy first grade students from six classrooms in three different inter-city elementary schools were randomly assigned to six groups (two experimental, two control, and two placebo). The experimental group received the multiple practice treatment consisting of an instructional unit designed
to teach students basic test-taking skills (The Behavior Analysis Test); the placebo group received no practice treatment with the Behavior Analysis Test instructional unit; and the control groups received no treatment. A modified Solomon Four-Group design was utilized in measuring the effectiveness of all presentations of the Behavior Analysis Test instructional unit. Results of the data analysis revealed that students who received either multiple or single practice sessions on the Behavior Analysis Test unit scored significantly higher than control students. The investigators conclude that students receiving multiple practice sessions on a test perform better than those that receive single sessions or no sessions. More importantly, test-wiseness gained from practice appeared to transfer.

Gross (1977) expanded the work of Oakland (1972) and Eakins et al. (1976). He investigated the effects of test-wiseness instruction on a standardized test, along with a specially constructed criterion measure to determine the acquisition of test-wiseness skill. He selected three aspects of test-wiseness on which to train students: (a) risk taking—answering all items and not selecting "Don't Know" response, (b) deductive reasoning—elimination of known incorrect distractors and choosing one of the remaining, and (c) time using—
answering easy questions first and coming back to harder ones at the end.

Subjects for the study were 206 eighth graders. Three days were utilized for this study. One day the treatments were given. Whole classes were randomly assigned to receive differing treatments. Treatments were revised editions of two programmed texts that had been used previously. Two classes received the Risk Taking text, two the Deductive Reasoning text, and two received no instruction. On the second day, the Buffalo Test of Educational Achievement was administered to all groups. Two subtests of the Metropolitan Achievement Test were also given to all classes on the third day.

Data obtained with the Buffalo Test of Educational Achievement was subjected to t tests. The results revealed that the risk taking treatment was significant. The investigator concluded that middle class suburban students completing eighth grade have already incorporated into their schema of test-taking skills the test-wiseness principles offered in his treatments. Younger students on the otherhand, might show greater improvement on test scores as a result of test-wiseness instruction, since they have not developed rigid schema for test-taking skills.
Wahlstrom and Boersma (1968) contended that test-taking strategies could be effectively taught in a regular classroom setting. One hundred and seventeen ninth-grade students in four classes served as subjects. Classes were randomly assigned to one of three groups: control, experimental, or placebo. Treatment was divided into four 20 minute periods. During treatment the control group watched television, the placebo group read pamphlets which discussed occupational descriptions, and the experimental group received instruction based on a modified version of Millman, Bishop, and Ebel's wiseness principles: keying response options, relative length of option and changing of response on objective tests. The effects of treatment were determined by administering pretest and posttest in social studies to all groups.

Data were evaluated by a one-way analysis of variance and a correlated t test. Results showed that posttest mean scores of the experimental group were significantly higher than their pretest scores and the posttest scores of the other groups. These results, then, provide support for the assertion that it is possible to effectively teach test-wiseness principles in a classroom setting.

To summarize, researchers have explored the effects of test-wiseness training on general achievement
tests. Results seem to indicate a lack of consensus from one study to another. For example, one study working with eighth graders obtained no significant difference as a result of test-taking training. In contrast, research with ninth graders found significant differences favoring students who received test-taking instruction.

Reading Achievement

Branching out in another direction from Millman, Bishop, and Ebel's (1965) work has been research related to the effects of test-wiseness training on reading achievement test performance. Research in this area is not new.

A study reported by Callenbach (1973) investigated the effects of practice and instruction on test-wiseness and the resulting reading achievement test scores of second-grade students. His purpose was to determine immediate and long range effects of test-wiseness instruction on children.

Forty-eight parochial school second graders were randomly assigned to either an experimental group or a control group. Each group received eight 30 minute lessons over a period of four weeks. The experimental group received, in booklet format similar to the Stanford Reading Primary I Test, lessons providing materials for instruction and practice in following
oral directions, response marking, effective time use, and guessing. The control group treatment consisted of various worksheets and puzzles. Immediately after treatment the Stanford Reading Test, Primary II, Form W was administered. Long-range effects were measured by the Stanford Reading Test, Primary II, Form X four months later. A $t$ test was used to test significant differences between the scores of experimental and control groups. Data analysis for the mean scores on the posttest were significant and favored the experimental group. Callenbach (1973) concluded that test-naive second graders could significantly improve their test scores through instruction and practice in content-independent test-taking techniques.

A study reported by Yearby in 1976 examined the effects of test-taking skills instruction on the standardized reading test performance of white and black children. Two hundred and seventy-five third grade students attending six Indianapolis public schools were randomly assigned to either an experimental, placebo, or control group.

Using a repeated exposure model for three weeks, students were given an intensive, intervention program. Treatments for the experimental group was training in the following test-taking skills: listening, following oral directions, response to similar and nonsimilar
directions, and recognition and response to various kinds of marking procedures. The control group received no instruction, and the placebo group was read to. The Gates MacGinitie Reading Test, Primary C, Form I was administered at the end of treatments. A three-way fixed analysis of variance and a two four-way fixed effects analysis of variance were used to analyze test data. Results of these tests were not significant. Yearby (1976) concluded from her analysis that test scores are not significantly improved by special (repeated exposure model) test-taking instruction and that there is a lack of supporting evidence to warrant teaching subjects test-taking skills.

Costar and Gerler (1980) investigated the effectiveness of a program that teaches children achievement test-taking behavior using a model of programmed-practice. Two hundred and ninety fourth-grade students were randomly assigned to either an experimental or control group. The experimental group received the SHIR program, which is a reading program that is sequential and provides instruction on behaviors assumed to be needed to score high on reading achievement tests. These behaviors included following group directions, using test formats considering every answer choice, using sound clues to find the best answer, eliminating inappropriate answer choices, not changing first
response, identifying key words, and reasoning from facts or evidence. The control group received regular classroom instruction. Both groups took the Metropolitan Achievement Test subtests Word Knowledge and Reading as a pretest. Groups took the same subtests three months later. Data were subjected to a t test to test the significance between the experimental group and the control group. The differences between experimental and controls were not significant; however, certain trends were noted. For example, test anxiety appeared to be reduced among experimental students.

Dillard, Warrior-Benjamin, and Perrin (1977) also studied the effects of test-taking skills on standardized reading achievement tests. However, their study was limited to black subjects. Sixty sixth-grade students were randomly assigned to a control or experimental group. Prior to treatment, data were collected with the following: Hollingshead's Two-factor Index of Social Position; Metropolitan Achievement Test; Piers-Harris Children's Self-Concept Scale; and the Test Anxiety Scale for Children. Over a six month period the experimental group received 40 to 50 minutes weekly sessions dealing with test-wiseness skills and applied test-taking self-concept skills. At the end of this six month treatment period, all subjects were administered the Metropolitan Achievement Test. A two
sample independent t test was applied to the data, yielding the following conclusions: (a) there were no differences between sexes, (b) test-wiseness and applied test-taking self-concept skills seemed effective in reducing test anxiety, and (c) instructing test-taking skills proved effective in increasing standardized test results.

McPhail's (1978) study utilized a psycholinguistic approach to determine whether (a) test-taking strategies for reading comprehension tests can be taught by classroom instruction, (b) whether knowledge gained will enable a test-wise examinee to obtain a higher score on a standardized test than an equally knowledgeable examinee who lacks test sophistication, and (c) whether test-taking strategies for reading comprehension tests which include a consideration of psycholinguistic cue systems in the flow of language will enable examinees to obtain higher scores on standardized reading comprehensive tests than those they don't consider psycholinguistic cues. Fifty-four twelfth-grade students were randomly assigned to an experimental or control group. Five faults common to multiple choice tests were selected as instructional objectives and incorporated into specially constructed forms of the Iowa Silent Reading Test. These five faults were (a) association between stem and alternative, (b)
specific determiners used in distractors, (c) correct alternatives longer than other alternatives, (d) grammatical clues, and (e) similarity or oppositeness. Additional test-wiseness curriculum materials for the experimental group consisted of a six-part 99 page packet and psycholinguistic cues materials. Using two class periods, daily treatment sessions were broken down into the following instructional frames: (a) investigator's discussion, (b) small group discussions, and (c) practice tasks. All groups were administered the California Achievement Test as a pretest and a posttest. Statistical tests indicated that there were no significant differences between the California Achievement Test scores of the two groups.

In summary, research evidence again points out the equivocal findings of the research on test-wiseness. Why does some research work and some does not? It may be explained by the dependence on repeated exposure for learning. Repeated exposure and programmed materials do not include the teacher teaching students "how" to comprehend written material or "how" to take a reading comprehension test (Wood & Blanton, 1984). It seems fair to suggest, then, that differences in the research may be accounted for by the varying amounts of instruction required by teachers from one study to another.
Direct Instruction

Recently the realization of a void in previous studies dealing with the instruction of test-taking skills has become apparent. This void is the lack of an instructional model (Wood & Blanton, 1984). Students are given either programmed materials or repeated exposure materials. Both programmed and repeated exposure methods of teaching test-wiseness lack a teacher-student relationship.

Comprehending this deficit, Baumann (1983) developed a generic comprehension instructional strategy. He based his methodology on established characteristics of effective reading comprehension instruction. His instructional framework consisted of five steps: (a) introduction, (b) example, (c) direct instruction, (d) teacher directed application, and (e) independent practice. The characteristics Baumann noted which were common in effective instruction were: Adequate time devoted to teaching comprehension, student attentiveness to comprehension instructional activities and tasks, significant amounts of direct instruction on comprehension skills, sufficient application or transfer tasks, feedback, and massed practice. In Baumann's opinion, generic instruction could possibly be applied in a "pure" form simply by having teachers identify comprehension skills needed to be taught and then
developing lessons following the steps. However, Baumann does not apply his instructional model to the application of teaching test-wiseness. Instead his is based solely on the teaching of comprehension.

Wood and Blanton (1984), however, concur that a need does exist for teaching reading comprehension test-wiseness. As an alternative Wood and Blanton have developed a heuristic model of direct instruction for test-taking training. The model teaches students not only "how" to take a test, but also "how" to comprehend written material. Not only does it include the vital step of transfer to print settings but it also enriches practice by adding teacher guidance throughout this step. Their model presents five steps: (a) Explication, (b) Modeling, (c) Guided Practice, (d) Transfer to Print Setting, and (e) Evaluation.

The instructional goal of the explication stage is to provide students with clear statements dealing with (a) reading comprehension skills and tasks to be learned, (b) recognizing kinds of comprehension tasks and questions that require use of particular reading strategies, (c) location of information for tasks or questions, and (d) how to use information and strategies in completing tasks and putting together answers to questions. Students are given the name of the skill
they are going to learn. The skill is defined and students are given the relevance of the skill for them.

The modeling stage goes beyond telling the student why or how. This stage takes the students through the process. The teacher thinks aloud the steps involved in the skill and demonstrates how to do the task. Modeling the skills or tasks for the students give them a deeper insight into the mental processes and their correct sequences.

Repeated exposure via guided practice permits students to practice what they have learned. At first the teacher and students do a few samples of the new skill together, discussing how they arrived at the correct answer and, equally paramount, how they put information together to arrive at an incorrect response. Interaction between teacher and students is ongoing and helps students gain awareness of the strategies for test-taking and comprehension.

Test-taking strategies addressed by Wood and Blanton (1984) are:

1. Location (on the lines, between the lines, beyond the lines) of information for answering questions;

2. Key words (happened first, next, or last, details, fact, best) which signal the location of information for answering questions;
3. Key words (reason for, due to, main idea, character feels) which cue kinds of questions;

4. Thinking strategies which may be used for putting together information to answer particular kinds of questions; and

5. Elimination of unlikely answers to questions (i.e., multiple-choice questions).

The step, transfer to print setting, will assure that a student is capable of performing the task under any given situation. Students need to be able to generalize the skills involved in a task and should practice the task in various settings, reading materials, test items, test formats, time, and individual and group performance.

In summary, direct instruction, unlike repeated exposure or programmed materials, provides for a procedural framework which insures that the teacher teaches. Baumann (1983) developed a generic model of direct instruction which focused on the instruction of comprehension. While agreeing that reading comprehension needs to be taught, Wood and Blanton (1984) also believe that it should be taught in addition to teaching test-wiseness skills. Their model provides a framework in which comprehension instruction and test-wiseness instruction are articulated.
Summary

Research findings on test-wiseness are equivocal. Repeated exposure models and programmed instruction have failed to yield consistent and significant results. The lack of consistency may be due to the failure of these models to provide teachers with instructional procedures about how to comprehend written materials or how to take a reading comprehension test. The Wood and Blanton (1984) model of direct instruction not only provides for teaching students how to take reading comprehension tests but, in addition, may be used to teach students how to comprehend written materials. It is, therefore, the contention of the present investigator that instruction generated from the Wood and Blanton model will facilitate test-taking performance.
Chapter 3
DESIGN OF THE STUDY

Method

Subjects

Subjects for this study were 42 Appalachian State University freshmen (22 males and 20 females) enrolled in four sections of College Reading and Study Skills. Each subject placed at or below the 33rd percentile on the Nelson Denny Reading Test, Form C (Nelson & Denny, 1976) administered approximately six months before the experiment.

The four sections of College Reading and Study Skills selected for this study represented 20 sections offered during the spring semester of 1984. This course is designed to afford immediate improvement of reading skills and study habits to enable students to carry out the academic requirements of college. Each of the four sections were randomly assigned to either an experimental or control group.

Development of Experimental Materials

The first step in developing material for teaching test-taking skills for reading comprehension was to
analyze the 36 questions asked on the Nelson Denny Reading Test, comprehension subtest. It should be noted that the Nelson Denny Reading Test is the exit criterion for students enrolled in College Reading and Study Skills. Thus, this test was used for analysis to determine what reading comprehension skills students were expected to perform. In turn, developing instruction targeted to these skills, increased the validity of instructional treatments.

Table 1 presents the results of the analysis of reading comprehension skills measured by the Nelson Denny Reading Test. As can be seen, the test measures eight skills from a minimum of 1 to a maximum of 18 times. For the purpose of the present investigation, skills measured two or more times were selected as target skills for test-taking instruction. Thus the following four reading comprehension skills served as instructional objectives: (a) main idea, (b) recognition and/or recall of details, (c) inferring supporting details, and (d) interpreting figurative language.

The second step in developing treatment was to outline instruction. Test-taking instruction for the skills identified above employed a modified version of Wood and Blanton's (1984) model of direct instruction for teaching test-taking skills as an instructional framework. Briefly, this model calls for the following
Table 1
Survey of Reading Comprehension Skills Measured by Nelson Denny Comprehension Test

<table>
<thead>
<tr>
<th>Skill</th>
<th>Frequency of Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Recognizing and/or</td>
<td></td>
</tr>
<tr>
<td>Recalling Details</td>
<td>18</td>
</tr>
<tr>
<td>2. Recalling Main Ideas</td>
<td>2</td>
</tr>
<tr>
<td>3. Inferring Main Ideas</td>
<td>8</td>
</tr>
<tr>
<td>4. Interpreting Figurative</td>
<td></td>
</tr>
<tr>
<td>Language</td>
<td>3</td>
</tr>
<tr>
<td>5. Inferring Supporting</td>
<td></td>
</tr>
<tr>
<td>Details</td>
<td>2</td>
</tr>
<tr>
<td>6. Inferring Style of</td>
<td></td>
</tr>
<tr>
<td>Writing</td>
<td>1</td>
</tr>
<tr>
<td>7. Judging Facts and/or</td>
<td></td>
</tr>
<tr>
<td>Opinions</td>
<td>1</td>
</tr>
<tr>
<td>8. Inferring Character</td>
<td></td>
</tr>
<tr>
<td>Traits</td>
<td>1</td>
</tr>
</tbody>
</table>
steps: (a) Explication - in this step the teacher tells students the following: name of skill, definition of skill, and relevance of skill; (b) Translation - students explain in their own words their translation of the teacher's explanation; (c) Model - the teacher shows, demonstrates, thinks-aloud processes used to perform the skill; (d) Guided Practice - teacher-directed feedback and discussion along with teacher/student interaction; (e) Transfer to Print Settings - application of the skill to alternative instructional materials, "real-world" materials; and (f) Evaluation.

Instructional material was presented to students by the investigator and students also responded in booklets. Lessons for each target skill are presented in Appendix A.

These two steps, then, provided input for seven lessons targeted to the four instructional objectives described earlier. Each lesson was comprised of a brief explanation of what the skill is, the skills definition, and the relevance of learning that skill. The lessons are written in such a manner that any teacher can utilize them as a guideline for implementing direct instruction.

Treatment

During the treatments each target skill was presented with lessons utilizing the above steps.
Subjects were first told the skill that they would be working with; the skill was then defined for them and they were given reasons why they would need the skill. Immediately following the above steps students verbalized what they had just been given. Next, the investigator verbally modeled the mental steps used when engaged in this skill, stating what thoughts and predictions were occurring mentally. In implementing guided practice, the investigator first worked with the students as they performed a practice exercise. Then subjects performed the skill on their own. The investigator then allotted time for the subjects to compare their work and discuss how and why they performed as they did to reach answers. After doing three or four more exercises in this manner, students were given the same task using a variety of printed material (i.e., magazines, textbooks, newspapers).

Throughout the lessons evaluation was an ongoing process. At the completion of each lesson students corrected their own lesson packets and gained immediate feedback on their effectiveness in skill acquisition. Discussion time was made available for students. Packets were then turned into the investigator, providing the investigator the opportunity to evaluate students' understanding of the skill.
Treatment for the experimental group was administered by the investigator every Wednesday for seven weeks. During each session, the experimental group received a booklet and direct instruction on a target skill. In addition, experimental subjects received the same instruction as did all students enrolled in the College Reading and Study Skills sections. Each treatment session was approximately 50 minutes. Instruction began in January and ended in March, 1984.

Subjects in the control group received regular classroom instruction offered for all students in College Reading and Study Skills classes. The investigator, however, would occasionally visit the control group and just briefly observe the class instruction.

Instrumentation

The Nelson Denny Reading Test, Form C (Nelson & Denny, 1976) was selected as the criterion measure for the study. Since this study was concerned with reading comprehension, however, only the comprehension subtest was administered. In addition, this test is required of all students taking the College Reading and Study Skills course.

Norms for the Nelson Denny Reading Test were established with high school and college students. Relevant to the present study, 3,558 students from two and four year colleges were used. In most cases this
population was similar to subjects used in the present study.

Test Validity

The Nelson Denny Reading Test measures reading comprehension by having subjects read paragraphs and answer 36 questions based on the material presented in each passage. The test manual presents face validity for the test. As such, this evidence must be judged by analyzing the test content and skills in relation to the purpose for testing to determine whether it provides relevant information. Examination of the test by the researcher (Table 1) indicated that the test was a reasonable measure of reading comprehension. At least for the present study, treatment was designed to be valid with skills measured by the test.

Test Reliability

Reliability for the test was determined with the test-retest procedure. The test manual reports a test-retest reliability coefficient of .84 for the comprehension subtest. Thus the reliability of the test was judged to be within acceptable limits for this particular study.

Other Instruments

In addition to using the Nelson Denny Reading Test as a criterion instrument, the Scholastic Aptitude Test and the Nelson Denny Reading Test, Form C were used as
independent measures to determine whether significant differences existed between experimental and control subjects at the beginning of the experiment. This was deemed necessary because subjects were not randomly assigned to treatment group or control group, although classes were randomly assigned.

**Design and Statistical Analysis**

The design for this study was a two-way analysis of variance. Factor A (Treatment) had two levels (Experimental and Control). Similarly, Factor B (Sex) contained two levels (Male and Female). This design enabled the investigator to test the main effects of treatment (A), sex (B), and the treatment by sex interaction (A x B).

All test scores and other data for this investigation were collected, scored, and coded by the investigator. The data was then processed by the Office of Computer and Management Services Center at Appalachian State University. The statistical package used to perform the analysis of variance was the SPSSV9 Program.
Chapter 4
PRESENTATION AND ANALYSIS OF THE DATA

This chapter presents the results of the experiment. Included here are descriptive statistics, procedures for determining whether significant differences existed between groups prior to the experiment, and the analysis of variance results for the experiment.

Descriptive Data

The means and standard deviations for variables included in the study are presented in Table 2. As can be seen, prior to the experiment, the treatment group had higher mean scores on the SAT-Verbal (373.33) and SAT-Math (437.62) than did the control group on the SAT-Verbal (365.24) and the SAT-Math (418.57). In contrast, the control had a higher mean (54.29) on the Nelson Denny Reading Test than the experimental group (52.43).

Analysis of Pretest Data

Given the differences described above, the investigator performed two analyses to determine whether these initial differences in ability might have an influence on the outcome of the experiment. The first
Table 2
Descriptive Statistics for Experimental and Control Subjects

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean Treatment (N = 21)</th>
<th>S.D. Treatment (N = 21)</th>
<th>Mean Control (N = 21)</th>
<th>S.D. Control (N = 21)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAT-Verbal</td>
<td>373.33</td>
<td>47.47</td>
<td>35.44</td>
<td></td>
</tr>
<tr>
<td>SAT-Math</td>
<td>437.62</td>
<td>83.36</td>
<td>63.58</td>
<td></td>
</tr>
<tr>
<td>Nelson Denny (Pretest)</td>
<td>52.43</td>
<td>9.31</td>
<td>7.07</td>
<td></td>
</tr>
<tr>
<td>Nelson Denny (Posttest)</td>
<td>39.33</td>
<td>7.49</td>
<td>8.50</td>
<td></td>
</tr>
</tbody>
</table>
analysis performed was the calculation intercorrelations among the SAT-Verbal, SAT-Math, Nelson Denny Reading Test (Pretest), and Nelson Denny Reading Test (Posttest) scores. As can be seen in Table 3 the correlation \( r = .22 \) between the SAT-Verbal and the Nelson Denny Reading Test (Posttest) was not significant. Similarly, the correlation \( r = .25 \) between the SAT-Math scores and the Nelson Denny Reading Test (Posttest) scores failed to reach significance. Likewise the correlation of .29 between the Nelson Denny Reading Test (Pretest and Posttest) was not significant. Consequently, the first step suggested that differences in verbal, qualitative, and reading ability existing between experimental and control groups at the beginning of the study were not significantly correlated with the criterion measure.

In the second analysis, analyses of variance computed on the SAT-Verbal, SAT-Math, and Nelson Denny Reading Test (Pretest) scores to determine whether differences between the experimental and control groups were significant. The results for these analyses are presented in Tables 4, 5, and 6. As can be seen in Table 4, the obtained \( F \) values for main effects and interactions were not significant. Table 5 presents similar results for SAT-Math scores. Again, the obtained \( F \) values for main effects and interactions were
Table 3

Intercorrelations Among SAT Scores and Nelson Denny Reading Test Scores (N = 42)

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. SAT-Verbal</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. SAT-Math</td>
<td>.29</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Nelson Denny Reading Test (Pre)</td>
<td>.36</td>
<td>.05</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>4. Nelson Denny Reading Test (Post)</td>
<td>.22</td>
<td>.25</td>
<td>.29</td>
<td>1.00</td>
</tr>
</tbody>
</table>

\[ r > .30 \text{ significant at .05 level} \]
### Table 4
ANOVA Results for Differences Between Experimental and Control Groups on SAT-Verbal

<table>
<thead>
<tr>
<th>Source of Variance</th>
<th>SS</th>
<th>df</th>
<th>ms</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>70878.36</td>
<td>41</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Main Effects</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sex</td>
<td>29.90</td>
<td>1</td>
<td>29.90</td>
<td>.02</td>
<td>n.s.</td>
</tr>
<tr>
<td>Group</td>
<td>654.88</td>
<td>1</td>
<td>654.88</td>
<td>.36</td>
<td>n.s.</td>
</tr>
<tr>
<td>Sex by Group</td>
<td>135.17</td>
<td>1</td>
<td>135.17</td>
<td>.07</td>
<td>n.s.</td>
</tr>
<tr>
<td>Error</td>
<td>70025.19</td>
<td>38</td>
<td>1842.77</td>
<td></td>
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</tr>
</tbody>
</table>
Table 5
ANOVA Results for Differences Between Experimental and Control Groups on SAT-Math

<table>
<thead>
<tr>
<th>Source of Variance</th>
<th>SS</th>
<th>df</th>
<th>ms</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>223646.56</td>
<td>41</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Main Effects</td>
<td>4320.86</td>
<td>2</td>
<td>2160.43</td>
<td>.38</td>
<td>n.s.</td>
</tr>
<tr>
<td>Sex</td>
<td>511.34</td>
<td>1</td>
<td>511.34</td>
<td>.09</td>
<td>n.s.</td>
</tr>
<tr>
<td>Group</td>
<td>3514.61</td>
<td>1</td>
<td>3514.61</td>
<td>.61</td>
<td>n.s.</td>
</tr>
<tr>
<td>Sex by Group</td>
<td>194.68</td>
<td>1</td>
<td>194.68</td>
<td>.03</td>
<td>n.s.</td>
</tr>
<tr>
<td>Error</td>
<td>219131.00</td>
<td>38</td>
<td>5766.60</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 6

ANOVA Results for Differences Between Experimental and Control Groups on Nelson Denny Reading Test (Pretest)

<table>
<thead>
<tr>
<th>Source of Variance</th>
<th>SS</th>
<th>df</th>
<th>ms</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>2769.64</td>
<td>41</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Main Effects</td>
<td>73.15</td>
<td>2</td>
<td>36.85</td>
<td>.52</td>
<td>n.s.</td>
</tr>
<tr>
<td>Sex</td>
<td>37.49</td>
<td>1</td>
<td>37.44</td>
<td>.53</td>
<td>n.s.</td>
</tr>
<tr>
<td>Group</td>
<td>43.22</td>
<td>1</td>
<td>43.22</td>
<td>.61</td>
<td>n.s.</td>
</tr>
<tr>
<td>Sex by Group</td>
<td>2.11</td>
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<td>2.11</td>
<td>.03</td>
<td>n.s.</td>
</tr>
<tr>
<td>Error</td>
<td>2693.88</td>
<td>38</td>
<td>70.89</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
not significant. Last, the results presented in Table 6 reveal a similar trend for differences in reading ability between groups. The $F$ values for main effects and interactions were not significant.

To summarize, at the beginning of this study, there were differences in SAT-Verbal, SAT-Math, and Nelson Denny Reading Test scores between treatment and control subjects. However, these differences were not significant, according to the analyses of variance results. In addition, the correlations between these variables and the criterion measure of reading ability were not significant.

Analysis of Posttest Data

Following treatment, an analysis of variance was run on the Nelson Denny Reading Comprehension subtest scores of both groups. The results of this analysis are presented in Table 7. As can be seen, the obtained $F$ value of 0.47 for treatment was not significant. As might be expected, then, the $F$ value of 0.10 and the $F$ value of 0.89 for sex were not significant. Last, the interaction between group and sex was not significant ($F = 0.68$).

In conclusion, the analysis of variance results for the main effects of group and sex were not significant. Similarly the results for the interaction between sex and treatment were not significant.
Table 7
ANOVA Results for Differences Between Experimental and Control Groups on Nelson Denny Reading Test (Criterion)

<table>
<thead>
<tr>
<th>Source of Variance</th>
<th>SS</th>
<th>df</th>
<th>ms</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>2569.62</td>
<td>41</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Main Effects</td>
<td>59.64</td>
<td>2</td>
<td>29.82</td>
<td>.47</td>
<td>n.s.</td>
</tr>
<tr>
<td>Sex</td>
<td>57.26</td>
<td>1</td>
<td>57.26</td>
<td>.89</td>
<td>n.s.</td>
</tr>
<tr>
<td>Group</td>
<td>5.09</td>
<td>1</td>
<td>5.09</td>
<td>.08</td>
<td>n.s.</td>
</tr>
<tr>
<td>Sex by Group</td>
<td>71.65</td>
<td>1</td>
<td>71.65</td>
<td>1.12</td>
<td>n.s.</td>
</tr>
<tr>
<td>Error</td>
<td>2438.32</td>
<td>38</td>
<td>64.17</td>
<td></td>
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</tr>
</tbody>
</table>
Chapter 5
CONCLUSIONS AND RECOMMENDATIONS

Conclusions

In an attempt to teach reading comprehension test-wiseness skills, Wood and Blanton (1984) developed a heuristic model of direct instruction. This model provided a framework for teachers to base their instruction upon. It was assumed that this model of direct instruction would aid students in increasing their mean scores on reading tests. The results of this study indicate that there is no evidence to support the contention that instruction subjects in reading comprehension test-taking skills using the Wood and Blanton model will result in significant gains in reading test performance at the college level.

Admittedly, the present study was exploratory. Consequently, a number of factors should be considered along with the above conclusion. Among these factors are:

1. Reading comprehension test-taking treatments were confined to 50 minutes, once a week for seven weeks. It is possible that treatments 50 minutes in
length are too lengthy to hold the maximum concentration and interest of the subjects. Some test theorists believe that shorter training sessions are preferable over longer training sessions. On the other hand, 50 minutes may not have been long enough.

2. Results might also be explained by the fact that treatments were not close enough together. Once a week allows a great deal of time to lapse between treatments. Perhaps treatments should have been two or three times a week; or possibly much shorter in length but given everyday. In any event, treatments being far apart made it difficult to control for events between treatments.

3. There may also have been circumstances within instructional treatment that affected the data. For example, the investigator rather than the regular instructor gave subjects the treatments. This meant that subjects had to respond to a new instructor's teaching style. Possibly, the results might have been different had the regular instructor given the treatments.

4. It was assumed that treatments were such that they would blend into regular classroom instruction. Treatments, however, may not be workable when given in addition to regular classroom instruction. In short, providing additional instruction might create a setting wherein instruction lacks coherence.
5. Next, the materials utilized in the treatment packets were drawn from a number of College Reading and Study Skills textbooks, some content area texts, magazines, and newspapers. It is possible that the material used was not novel enough to maintain student interest.

6. The age of students may have been a large factor contributing to results. It may well be that the experimental treatment was not powerful enough to change test-taking behaviors developed over a period of 15 or more years. The model itself may be a constraint to the treatments at this age level. College students apparently have obtained the skills in the treatments to some degree and appeared to feel degraded at having to go through these processes again. Also the model is 100% declarative, leaving subjects little area to discover.

7. Finally, the degree to which this was a fair test of the Wood and Blanton (1984) model rests with the accuracy of the investigator's interpretation of the model. Similarly, the interpretation had to be operationalized into instruction. Since there are no existing analyses for developing treatments of this kind, the validity of instructional treatment to a model must be evaluated carefully.
Recommendations

The present investigation represents an initial effort to explore the facilitory effects of direct instruction on test-taking. As a result, additional research is warranted.

1. Based on the conclusion that the treatment sessions were too lengthy to maintain maximum concentration of the students, one modification would involve shortening each treatment session and moving treatments closer together.

2. Another modification would be to utilize the regular classroom instructor as the implementor of treatments. This eliminates the investigator's effects on the data and permits subjects to work with an instructor they are familiar with already.

3. One might also investigate the Wood and Blanton (1984) model of direct instruction and draw his/her own interpretation of this model. Utilization of a different interpretation may possibly yield different results at this level.

4. A fourth possibility is that this model would be much more effective with younger children. Younger children need more direction and supervision which this model provides. It might also prove extremely effective with Educable Mentally Retarded, Learning Disabled, and/or slow learners.
5. A fifth suggestion would be to tailor the treatment packet materials more to coincide with the Nelson Denny Reading Test. Materials in this study were matched to target skills, but were not always tailored to the Nelson Denny format.

Future investigations into teaching reading comprehension test-taking strategies are needed to assure that students' academic testing performances are not biased by their lack of test-wiseness. By giving students tests we want to learn what academic knowledge they possess, not a clouded view of their knowledge due to their not being test-wise.
REFERENCES
REFERENCES


Moore, D. W., Cunningham, J. W., & Rudisill, J. J. (in press). Reader's conceptions of the main idea. In J. A. Niles and L. A. Harris (Eds.), Searches for meaning in reading/language processing and


APPENDIX A

Lesson Plans
TEST-WISENESS

Explication:

Name of skill: Test-wiseness is the area we will be covering today in our first session.

Definition of skill: Test-wiseness is a three-step process that will assist you in reading and answering comprehension questions. The process's three steps are: (a) determining the location of answers, (b) using key words to identify types of comprehension questions and how to answer them, and (c) putting together answers and eliminating unlikely responses.

Relevance: Test-wiseness is a survival skill which all students need. Anytime you take a test which requires you to read and then answer a question this skill comes into demand. When you took the Nelson Denny Reading Comprehension Test you needed this skill. Lacking test-wiseness can cause you to labor twice as hard on answering questions and can make the difference between passing or failing.

NOTE: This lesson and the others literally adhered to the Explication step as given in the text, however, the other steps served only as an outline and were not rigidly followed due to interactions between the investigator and the student.

Translation:

Students define test-wiseness in their own words.
Modeling:

**Step 1: Location of answer.** I'm going to show you what I think when I am given a question to answer. After reading the sentence and the question, the first thing I do is ask myself what is this question asking me to do? Question 1, on the overhead, is asking me to identify what businessmen do on the subway; it is asking me a detail. I now ask myself where can I find the answer to this question. I know that answers to questions are found in one of three places: (a) on the lines--right there in the sentence, (b) between the lines--piece together parts of given information in the passage (it is implied but not specifically stated), or (c) in the learner--information within myself, as a result of learning and living. For Question 1, I look in the sentence to see if it tells what businessmen do on the subway. I see that it clearly says that "businessmen read the newspaper." This is the only thing the sentence says they do. This must be the answer, and it is "on the lines." So, I will put one line under the words "read the newspaper."

For Question 1, I can see that the sentence does not tell the time of day. So, the answer to the question is not "on the lines." It must be in another location. The sentence tells me two things: The people are "businessmen," and they ride "to work."
know that businesses usually open in the morning and close at the end of the day. Since these businessmen are going to work, I know that the time of day is probably in the morning. This answer is not found "on the lines." I figured it out by reading "between the lines." I will put two lines under the words "businessmen" and "to work."

To answer Question 3, I must find where the event is taking place. As I read the sentence, I do not find any words that tell about where it could be happening. However, the sentence does say that the businessmen "ride the subway." If I know where subways are used, I know the answer to the question. I remember that subways are used in big cities like New York. I have learned this from reading and watching television. On a trip to New York, I almost rode one but then I chickened out. So, the answer to the question is within me "in the learner." The event must be taking place in a big city. I will put three lines under "subway." This word suggested an answer that I already knew.

Guided Practice:

Now let's do a couple of these and as we do them let's verbalize, to ourselves, the thinking process we are doing. (Paragraphs on overhead.) NOTE: If there is a disagreement of answers the class will discuss the
rationale used for both conclusions and decide which is correct.

Modeling:

Step 2: Identifying key words and kinds of questions. Let's look at the questions on Sheet A1. From these questions we can gain a lot of information as to their answers by knowing how key words signal kinds of questions and their purposes. The first question deals with sequence of events, or the order in which events occur in a story. I can tell this because of the word first in the question. Usually, answers to sequence-of-event questions are found directly in the reading material or "on the lines." Therefore, as I read the selection, I will know to focus on the event that happens first in the story.

The second question deals with characterization. I know this because of the words describe and king. Since the question also says "best describes" I feel that the answer may not be stated directly "on the lines." The possible answers also suggest that I will have to "piece together" information from "between the lines." If the answers were something like "the king wore a red cape" or "the king wore a yellow cape," I would likely look for the answer right "on the lines," however, the question also asks "which words best describe," suggesting that the answer will not be found
precisely stated in the story. Also, the word beginning tells me not only that I will likely find this answer in the first part of the story, but that the king will probably change by the end of the selection.

Guided Practice:

See overhead and Handout A2.

Modeling:

Step 3. Putting together answers and eliminating unlikely choices. This is how I put together answers to questions: (Handout A1) I know that the first question is a sequence-of-events question. It asks for what happened first. I also know that answers to questions of this kind are usually found "on the lines."

I will read the question and each possible answer and tell you why I did or did not choose that response. At first when I read "a" I thought that could be a possible answer, but I went on to read the other choices and realized that another event happened before the king wanted to weigh the elephant. It was easy to eliminate "b" because that happened much later in the story. When I came to "c" I was pretty certain that that was the answer, but "d" was a possibility because he could have called his councillors together first. I then decided on "c." Looking back in the story, the answer is located in the first sentence of the story.
(on the lines) so I'll put one line under that part of the story.

For Question 2, I read all four of the answers and went back to the beginning of the story. I knew immediately that "d" could not be the answer because the king, while he was curious, was not mean. The answer "c" was not possible because nothing in the story indicated that he was sad. It was between "a" and "b" since the king had just received a present and was obviously not angry or sad about anything. I decided on "a" as the correct answer because it said that "the king had never before seen an elephant, not had any of his people." In the second paragraph he wondered about the weight of the elephant and how they could go about weighing it. The answer is found between the lines. Using information from the sentences just described, I will put two lines under each part which contributes to the answer.

Let's take a look at some of the questions on the other sheets and verbalize to ourselves how we would put together answers and eliminate unlikely choices. (Allow each student a chance to verbalize through at least one question.)

Guided Practice:

In the passage on Handout A3 we are going to practice what we have learned about how to answer test
questions. In doing this we are going to employ the following steps: (a) Prereading - read the question, find key words which signal kind of question and possible location of answers; (b) Reading - use the information gained from prereading to develop purpose for reading and read the passages; and (c) Postreading - reread each question and put together answers and eliminate unlikely alternatives, go back over the selection and check your answers. Finally, let's share with each other how we used the steps to arrive at the answers. (Students do this individually using their own words.)

Transfer to Print Setting:

Let's look over some of the questions asked on the following comprehension test of a history chapter (see Handout A4). Again let's look at some other examples of comprehension questions using questions that are asked us in our own textbooks.
Explication:

Name of skill: Today we are going to discuss Main Ideas.

Definition of skill: Who can define main idea for us? (Write students' responses on blackboard.) The main idea is basically what all the rest of the sentences in a paragraph or story tell us about. (Go over Handout A.) We have all seen at least one or two of these since our early school years. There are various versions of what the main idea truly is--on this sheet we will find seven similar yet varying versions. Main ideas are not always called by this name. (Go to Handout A1.) Here we have a list of seven different names for the main idea, their varying definitions and by taking a closer look we can see their similarities. Now let's compare these with the ones we put on the blackboard earlier. On the next handout, "A2," we see several other terms for the main idea. (Class reads over these and discusses.) The generic terms at the bottom of Handout A2 give us some ways that we might be asked to identify the main idea.

Relevance: Main ideas are everywhere in our society. Advertising agencies find the shortest and quickest ways possible to get their main ideas across to us
so we will buy their product. Anything that is written or drawn has a main idea. Spoken language possesses main ideas in order for us to communicate with each other; without a main idea sentences would be jumbled together and make little sense.

Translation:
Student defines main ideas in their own words.

Modeling:
Listen and follow along while I read the first paragraph on Handout A3. After reading this paragraph I ask myself what is it about? Which sentence is my topic sentence or my main idea? The first sentence is my topic sentence because all of the other sentences tell about it. It is a summary of the entire paragraph.

Guided Practice:
Now read the following paragraph to yourselves and circle the best answer of the two choices (A4) provided below.

- After students finish, go over in class. We know after reading this paragraph that all of the sentences are describing what?
- Allow students time to answer.
Yes, it is describing the unusual way in which the banana plant grows. Our topic sentence is at the beginning of this particular paragraph.
Transfer to Print Settings:

The following handouts will provide opportunities to use the skill "main idea" in various settings, if you have any difficulty ask me for assistance.

Evaluation:

Students are given a simulated test on locating main ideas. This test will be given at the beginning of the following treatment.
Explication:

Name of skill: We are going to look at recognition of details and recalling details.

Definition of skill: Recognition of details requires us to locate or identify facts. For example, names of characters, time of story, place of story. Recalling details is somewhat different as you are required to produce facts from memory, i.e., name of characters, time of story, or place of story.

Relevance: Both of these skills are vital to your survival in the college world, but even more important they are required of you everyday, in your day-to-day routine, on your job--any job in our society requires this to some degree--just walking down the street may all of a sudden require you to recall details; you witness a car wreck and are a witness to the events.

Translation:

Students explain in their own words.

Modeling:

Listen while I read the following paragraph:
(See overhead/Handout C.)

The question asks me the name of the explosive invented by Nobel. It is asking me a fact. I am also allowed to look back into the material to find the answer
so this is recognition of details. I know that facts are "on the lines" from our past lessons. Therefore, I know to go back and scan the paragraph for an explosive's name. Nitroglycerin is the first explosive name I reach, but upon quick survey of that sentence I realize that he only experimented with this and I need to know which one he invented. Continuing my scan of the article I soon see that he produced (invented) dynamite.

Now let's look at this in another light. What if the question prohibited my looking back into the material? With this question I must recall details—answer the question from memory. Fill in the blanks are good examples of this.

**Guided Practice:**

Let's do the next one together. Overhead Cl.

Read the following paragraphs and write your answers beside each of the following questions.

**Transfer of Print Setting:**

Students read sections from History, Biology, and Psychology text and answer questions for each.
INFERRING SUPPORTING DETAILS

Explication:

**Name of skill:** We are going to look at inferring supporting details.

**Definition of skill:** When a question calls on you to infer supporting details it is asking you to conjecture about additional facts the author might have included in the selection which would have made it more informative, interesting, or appealing.

**Relevance:** Often we are given information in parts rather than holistically. Numerous details are given us in whatever we read, but many are left for us to infer—come up with on our own. Many things we read as college students leaves a lot for us to infer. If we were unable to do this skill, our reading of textbooks, etc., would be very bland since our ability to infer details adds some spice to otherwise dreary reading and enhances even the most exciting story we might encounter.

**Translation:**

Students explain in their own words.

**Modeling:**

See Overhead. Listen while I read the above paragraph.
After reading the question and the three choices given for my answer I can immediately eliminate "C" since the paragraph didn't once discuss the soldiers' diets. I can also eliminate "A" since salt was given for pay because it is so important and salt was not compared in value with gold. Therefore, I realize that "B" is the correct answer. The first sentence gives a clue to this in that it mentions "interesting origins."

NOW LET'S DO THE NEXT ONE TOGETHER.

Guided Practice:

Read each of the following short stories and circle the correct inference in each of the questions. (Paragraphs 1 and 2.)

On the following paragraphs let's work not only inferring supporting details but also on main ideas and recognition or recall of details by answering each of the questions after each of the following stories. (Stories 3, 4, and 5.)

Transfer to Print Setting:

1. Read the following paragraph and write at least one detail you could infer from it.

2. In this last story, answer all the questions that follow it.
INTERPRETING FIGURATIVE LANGUAGE

Explication:

Name of skill: We will be looking at way of interpreting figurative language.

Definition of skill: Ask you to infer literal meaning from the author's figurative use of language. It is a comparison used to make things more vivid.

Relevance: Figurative expressions are found in numerous reading materials. They spice up the humdrum of written and spoken language by adding character and exaggeration. Certain comprehension tests require you to infer literal meaning from the passages of figurative expressions.

Translation:

Students explain in their own words.

Modeling:

Figurative language is the use of imaginative language skills. Such expressions include: idioms, figurative speech (unusual secondary meanings), similes, metaphors, personification, and hyperbole.

Let's take a look at each of the mentioned forms of figurative language.

REFER TO OVERHEAD

Go over overhead and discussion afterwards. Now follow along while I read and then demonstrate the
processes I use to determine the figurative language's meaning.

In the second sentence the simile is used to describe how crowded the people are by saying, WE ARE LIKE SARDINES IN CANS. If you have ever seen an opened can of sardines you can appreciate this simile. The last sentence also contains a simile: The crowd is waving back and forth while the people in the front row act as a flood wall trying to keep the river from spilling over. By closing your eyes you could envision this scene; in other words the author is drawing you a vivid picture of the parade route by using figurative language.

Guided Practice:

Now let's read the next one together and locate the figurative language used and determine what it means.

In the following paragraphs, underline any forms of figurative speech you find and tell what it is saying.

As we have discussed today, figurative language spices up everyday topics. Choose one of the following topics and in one to four sentences create your own figurative language picture.

A. chewing taffy
B. stroking a longhaired cat or dog
C. feeling fine rain or snowflakes hit your face
D. sitting on a mountain side in a field of wild flowers
E. smelling the rich scent of a pipe.

Transfer to Print Setting

Go through any of the magazines, papers, or texts in this classroom and write down five phrases you find that contain figurative language used.
APPENDIX B

Experimental Material
Test-wiseness

Lesson Packet 1
The businessmen read the newspaper as they ride the subway to work.

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. What do the businessmen do on the subway?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. What time of day do you think it is?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Where do you think this event takes place?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Once there was a king who received a present from a far country. It was an elephant. The king had never before seen an elephant nor had any of his people. Everyone was surprised at its great size.

The kind wondered how much this strange animal might weigh. "Good sirs," he said to his councilors, "tell me how to weigh the elephant."

1. What happened first in the story?
   a. the king wanted to weigh the present.
   b. the king's son had an idea.
   c. the king received a gift from somewhere.
   d. the king called his councilors together.

2. Which words best describe the king in the beginning of the story?
   a. curious, puzzled.
   b. cheerful, happy.
   c. sad, unhappy.
   d. mean, curious.

HISTORY COMPREHENSION QUESTIONS

1. In what ways were the Knights of Labor too idealistic?
2. Who was the first Republican President?
3. Who was the last Democratic President?
4. What was the last mode of travel to come under federal regulation?

After locating a History text randomly select a passage and write five multiple choice questions.
(Do the same using a Biology and Geography text.) Switch questions and articles and answer the questions given you for all three text passages.
Main Ideas

Lesson Packet II
Definitions of Seven Main Idea Types

**Topic Sentence** = The single sentence in a paragraph which tells most completely what the paragraph as a whole states or is about.

**Gist** = A summary of the explicit contents of a passage achieved by creating generalized statements that subsume specific information and then deleting redundant information.

**IRP** = A statement produced by selecting and combining the most superordinate and important words and phrases from a passage.

**Topic** = A single word, term, or phrase labeling the subject of a passage without revealing specific content from the passage.

**Topic Issue** = A single word, term, or phrase labeling a conceptual context for the passage.

**Interpretation** = A summary of the possible or probable implicit contents of a passage.

**Theme** = A generalization about life, the world, or the universe that the passage as a whole develops, implies, or illustrates but which is not topic or topic-issue specific.

Taken from Moore, D. W., Cunningham, J. W., & Rudisill, S. S. (in press). Reader's conceptions of the main idea. In J. A. Niles and L. A. Harris (Eds.), Searches for meaning in reading/language processing and instruction (Thirty-second Yearbook of the National Reading Conference). New York: The National Reading Conference,
1. The banana plant grows in an unusual way. It can reach anywhere from 15 to 30 feet high and measures from 9 to 16 inches in width at the bottom. Sometimes it is called a tree. This is wrong, since the plant has no wood in it. The main stem of the banana plant is made up of thick leaves wrapped tightly together in overlapping layers.

What is the paragraph about?
(a) The banana plant grows in an unusual way.
(b) The main stem is made up of thick leaves.

Underline that same sentence in the paragraph.

In the following paragraphs below underline the sentence that answers the question: "What is the paragraph about?"

A. The Northwest Ordinance was the beginning of an important policy for the United States. It provided that when new states were admitted to the Union they came "on an equal footing with the original states." The law also allowed for rights and encouraged education.

B. There are many places where dinosaur bones can be found. The place with the largest known deposit of bones is in Dinosaur, New Mexico. Some say that the bones were washed downstream by flood waters and were buried in the sand.

C. It is generally believed that the President of the U.S. has great power. However, a passive President in time of crisis may do little. He may simply delay important decisions. An active President, on the other hand, can greatly change the course of events. The President's personality determines the limits of this power.

READ THE FOLLOWING PARAGRAPHS AND UNDERLINE THE MAIN IDEA OF EACH.

1. A sudden increase in robberies has hit New York City. Robbers, mostly heroin addicts, steal whatever can be quickly converted into cash. Apartment buildings are their biggest targets. Tenants across the city have become aware of this problem and are searching for new methods of protection.

2. Hibernation means a period of inactivity. The temperature of the animal drops and its metabolic processes are reduced to a minimum. Some rodents that hibernate are completely inactive; their heart and breathing rates go so low that they barely stay alive. They get the energy they need from stored fat.

3. The interview method is used to see what an individual's personality is like. A rating scale is also used to judge personalities. A personality inventory or questionnaire also gives information about people and the way they act toward others. Personality can be measured in several different ways.

4. The definition of accounting requires that you record economic information carefully. One must know the kinds of information, how to record, and how to use it. Accounting is defined as a way of identifying, measuring, and using information in order to make decisions.

5. There are several myths related to African origins. Some of these are: (a) Africa was a dark continent; and (b) no African civilization could be original. The first came from the idea that light came out of the East, and the second was due to the 17th century discoveries in the Near and Middle East.

THE FROGS WHO WANTED A KING

by Aesop

Some frogs who lived in a pond were bored with freedom, so they sent a petition to Zeus and asked to be given a king. Although the god thought the frogs better off as they were, to oblige them he hurled a log into their pond. Hearing the splash, the frogs were terrified, and scurried to the pond's far corners. But by and by, seeing that the log lay motionless, they approached, and growing bolder said to one another, "What, is this our powerful king?" Soon they were jumping out of the water and squatting on the log, croaking in contempt.

After a while they tired of this sport. Again some of them went to Zeus and asked him to get rid of such a lazy, do-nothing king and send them a more forceful one. Annoyed, Zeus caused a great stork to descend to the pond. Frogs were his favorite food.


THE KOOl-AID WINO

by Richard Brautigan

When I was a child I had a friend who became a Kool-Aid wino as the result of a rupture. He was a member of a very large and poor German family. All the older children in the family had to work in the fields during the summer, picking beans for two-and-one-half cents a pound to keep the family going. Everyone worked except my friend who couldn't because he was ruptured. There was no money for an operation. There wasn't even money to buy him a truss. So he stayed home and became a Kool-Aid Wino.

One morning in August I went over to his house. He was still in bed. He looked up at me from under-neath a tattered revolution of old blankets. He had never slept under a sheet in his life.
"Did you bring the nickel you promised?" he asked.

"Yeah," I said. "It's here in my pocket."

"Good."

He hopped out of bed and he was already dressed. He had told me once that he never took off his clothes when he went to bed.

He went into the kitchen, stepping around the littlest children, whose wet diapers were in various stages of anarchy. He made his breakfast: a slice of homemade bread covered with Karo syrup and peanut butter.

"Let's go," he said.

We left the house with him still eating the sandwich. The store was three blocks away, on the other side of a field covered with heavy yellow grass. There were many pheasants in the field. Fat with summer they barely flew away when we came up to them.

"Hello," said the grocer. He was bald with a red birthmark on his head. The birthmark looked just like an old car parked on his head. He automatically reached for a package of grape Kool-Aid and put it on the counter.

"Five cents."

"He's got it," my friend said.

I reached into my pocket and gave the nickel to the grocer. He nodded and the old red car wobbled back and forth on the road as if the driver were having an epileptic seizure.

We left.

My friend led the way across the field. One of the pheasants didn't even bother to fly. He ran across the field in front of us like a feathered pig.

When we got back to my friend's house the ceremony began. To him the making of Kool-Aid was a romance and a ceremony. It had to be performed in an exact manner and with dignity.
First he got a gallon jar and we went around to the side of the house where the water spigot thrust itself out of the ground like the finger of a saint, surrounded by a mud puddle.

He opened the Kool-Aid and dumped it into the jar. Putting the jar under the spigot, he turned the water on. The water spit, splashed and guzzled out of the spigot.

He was careful to see that the jar did not overflow and the precious Kool-Aid spill to the ground. When the jar was full he turned the water off with a sudden but delicate motion like a famous brain surgeon removing a disordered portion of the imagination. Then he screwed the lid tightly onto the top of the jar and gave it a good shake.

The first part of the ceremony was over.

Like the inspired priest of an exotic cult, he had performed the first part of the ceremony well.

His mother came around the side of the house and said in a voice filled with sand and string, "When are you going to do the dishes?...Huh?"

"Soon," he said.

"Well, you better," she said.

When she left, it was as if she had never been there at all. The second part of the ceremony began with him carrying the jar very carefully to an abandoned chicken house in the back. "The dishes can wait," he said to me. Bertrand Russell could not have stated it better.

He opened the chicken house door and we went in. The place was littered with half-rotten comic books. They were like fruit under a tree. In the corner was an old mattress and beside the mattress were four quart jars. He took the gallon jar over to them, and filled them carefully not spilling a drop. He screwed their caps on tightly and was now ready for a day's drinking.

You're supposed to make only two quarts of Kool-Aid from a package, but he always made a gallon, so his Kool-Aid was a mere shadow of its desired potency. And you're supposed to add a cup of sugar to every package
of Kool-Aid, but he never put any sugar in his Kool-Aid because there wasn't any sugar to put in it.

He created his own Kool-Aid reality and was able to illuminate himself by it.

SUCCESSFUL JOGGING

by The National Jogging Association

Recognition and Recalling Details

Lesson Packet III
Alfred Nobel was a Swedish inventor. He is famous today as the father of the Nobel Prize. His fortune was left to provide prizes for those who made the greatest contribution to the five fields of physics, chemistry, medicine, literature, and peace. He was also the inventor of dynamite. He first experimented with nitroglycerin, which was a very dangerous chemical explosive. Finally he developed a safer explosive which was called dynamite. He originally produced dynamite for peaceful uses and was disappointed that the substance he had created was used to cause death and destruction.

What was the name of the explosive invented by Alfred Nobel?

a. nitroglycerin
b. dynamite

The Nobel Prize awards were first made in 1901. Since that time the majority of the prizes in the fields of medicine, physics, and international peace have been awarded to Americans. Two former presidents, Woodrow Wilson and Theodore Roosevelt, have received the Nobel Peace Prize. One of the most recent winners of the peace prize was the late Dr. Martin Luther King. Dr. King, a leader in the civil rights movement,
received the prize in 1964. In the field of chemistry Germans have been the chief winners, and most awards for literature have gone to the French.

Who have received the most Nobel prizes in chemistry?
   a. Germans
   b. French
   C. Americans

Without looking back, which two former U.S. Presidents have won the Peace prize?

QUESTIONS

1. It was three o'clock in the morning when the winds and rain began. They were the greatest winds and rains to sweep the county in over 50 years. Gusts of wind over 100 miles an hour whipped about, while the rain fell in torrents over buildings, parks, and homes. The winds and rains caused extensive damage, leaving families homeless and putting many retail merchants out of business.
   a. What time was it when the winds and rain began?
   b. What caused extensive damage?
   c. Without looking back, how fast did the winds go an hour?

2. Travelers in the South after 1865 were shocked when they looked at the destruction caused by the war. Much of the personal property of the Southerners had been lost with the lost cause.
   a. What shocked travelers after 1865?

3. The Vikings were Scandinavian sailors. They traveled in order to catch fish and make long trading and raiding expeditions. Their neighbors were richer and more highly civilized than they. During the 9th, 10th, and 11th centuries their boats traveled extensively to places such as the British Isles, France, and Italy.
a. Without looking back: What were Scandinavian sailors called?
b. Where did their boats travel extensively to in the 9th, 10th, and 11th centuries?

4. By June 1942 the Germans gave up their plans for an invasion because of their ability to control the skies over the Channel.

a. In what month did the Germans give up invasion plans?

QUESTIONS

"The Act to Regulate Commerce"

1. What year was the act passed?
2. What does Section 2 outlaw?
3. How many members were to be on the ICC?

"Immunity"

1. What is an antigen?
2. What is the definition of "immunity?"
3. What are antitoxins?

"Confounding of Variables"

1. What is spontaneous remission?
2. What is meant by the "placebo effect?"
TAMAROU: ENDANGERED BUFFALO OF THE PHILIPPINES

by D. W. Kuehn

TRAVELING SEEDS

by Cheryl Morgan

THE ACT TO REGULATE COMMERCE

CONFOUNDING OF VARIABLES

Inferring Supporting Details

Lesson Packet IV
CHAPTER SUMMARY

The experimental method began when men looked at things in nature systematically. In 1879, William Wundt began the first psychology laboratory in Germany. In Vienna during the late 1800s Sigmund Freud developed psychoanalysis and studied man's inner mind. At about the same time Watson systematically described observable behaviors and did experimentation in animal laboratories. In the 1900s Kohler described Gestalt psychology. Historically there have been various movements in psychology. Each focused on a different aspect of psychology, and all have contributed to the field.

LEARNING TO BE FUNNY IS NO JOKE

by Fran Carpentier

SUPERSTITIONS: JUST WHISTLING IN THE DARK

by Don Boxmeyer

ONE DEATH IN WAR

by Ernie Pyle

MIEKO HARA: CHILD OF HIROSHIMA

by Mieko Hara

Interpreting Figurative Language

Lesson Packet V
Idioms - An expression which is peculiar to a language; properly used, however it cannot always be explained by logic or grammar.

Example: A run of bad luck looked up to his father

Simile & Metaphor - A simile creates a word picture by comparing what is being described to something else. In a metaphor, the thing described becomes the object with which it is being compared. Both involve comparisons of two unlike things. A simile is indicated by some connective, (like, as, than, or perhaps a verb such as resembles). A metaphor states that one thing is something else, which, in a literal sense, it is not. Occasionally the term metaphor is used for both.

Example: Simile - Writing is like making love--it is astonishing how far pure instinct (if it really is pure) will carry you. Paul Engle

Metaphor - I took one swallow and immediately a swarm of devils started chasing each other with red-hot pitchforks down my throat.

Figures of Speech - These are fairly advanced and lend themselves to excellent illustrations.

Example: He was on his last leg.
I'm in a jam.
He flew down the stairs.

Personification - Placing human characteristics to an animal or anything else that is nonhuman.

Example: The motor coughed once, then died.
The trees whispered in the evening breeze.

Hyperbole - Is an extreme exaggeration, it intensifies.

Example: The sink held a mountain of dishes.
To say your six inch fish is eight inches long is a lie; to call it a yard long is a hyperbole.
The crowd waits anxiously; the parade is already an hour late. We are like sardines in cans—so close together that we can smell the alcohol on each other's breath. The crowd is waving back and forth while the people in the front row act as a flood wall trying to keep the river from spilling over.

Like a multicolored centipede inching its way, the jammed traffic crawls through the choked, rain-drenched streets. Furiously dancing rain ricochets off everything in sight. The dark and menacing sky, seen through blurred windshields, rests on the tops of buildings like a filthy layer of gauze. Swirling wisps of gray, shaved off the billowing clouds by the buildings' granite edges, spill over into the deep concrete canyon. In the floor of the canyon, amber taillights ignite brilliantly all along the curving spine of the centipede. Blaring horns add a shuddering wail of protest to the already clamorous language of the city. Undaunted, the wet, sluggish mechanical creature continues its methodical journey home.

In the following paragraphs underline any forms of figurative speech you find and tell what it means.

1. THE WIND

James Stephens (1882-1950)

The wind stood up and gave a shout.  
He whistled on his fingers and  
Kicked the withered leaves about  
And thumped the branches with his hand  
And said he'd kill and kill and kill,  
And so he will and so he will.


2. I plunged into the forest of words of my first manuscript. My weapons were a sturdy eraser and several batteries of sharpened pencils. My armor was a thesaurus. And if I should become lost, a nearby public library was a landmark, and the Encyclopedia of Social Sciences on its reference shelves was an ever ready guide.


3. The wind rushes again almost like the surf. The air feels like a rainstorm but the sun won't let me down. I wish I were a leaf, tossing about, free and flying. Up, up, up from the ground into the blue and white sky, and then I'd float back, touching on a jeweled lake. I guess I shouldn't ask myself what it's all about so often. I feel the wind coming up stronger now. It's almost dark—I'll have to work tomorrow.

As we have discussed today, figurative language spices up everyday topics. Choose one of the following and in one to four sentences create your own figurative language picture.

A. chewing taffy
B. stroking a long-haired cat or dog
C. feeling fine rain or snowflakes hit your face
D. sitting on a mountain side in a field of wild flowers
E. smelling the rich scent of a pipe

Go through newspapers, magazines or books contained in this room and write down 5 figurative language uses you find.
VITA

Cheryl Lynn Mark Day was born in New London, Connecticut. She attended Coastal Carolina Community College, Jacksonville, North Carolina and graduated in 1981, with an A. A. degree. In 1983 she graduated from The University of North Carolina at Wilmington. After graduating she taught for a summer at Creative World Preschool in Wilmington, North Carolina. While working on her Master's degree she served as a graduate teaching assistant in the Reading Department at Appalachian State University. Her degree was awarded in August, 1984 in Reading Education.

The author is a member of the International Reading Association (IRA), the Council for Exceptional Children (CEC), the Association for Supervision and Curriculum Development (ASCD), and served as the Secretary-Treasurer for the Graduate Senate.

She is married to Master Gunnery Sergeant Herbert L. Day III. They will reside in Barstow, California for the next three years and she plans to teach and continue her studies.