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The Dolch Basic Sight Word List is a very valuable tool which can be effectively used by preschool and elementary teachers, (N, K-3), who are involved in the teaching of developmental or remedial reading programs. As may be observed, many inexperienced (and even experienced) teachers are failing to recognize the power of this rather simple but effective tool. It is powerful in that the basic sight word list includes 50 to 75 percent of the words which appear in print. The Dolch List should be readily available and used frequently by all teachers of early developmental and remedial reading programs.

In developmental reading the list can be used by lower elementary teachers in several ways:

1. to drill pupils to recognize these words instantly without the help of any other word attack skill
2. to assess the child's recognition of basic sight words
3. to determine the approximate grade level of pupils who are enrolled in these lower elementary grades
4. to provide teachers with factual information about the child's reading level without the use of highly technical assessment instruments in reading

This instrument can be similarly used by remedial reading teachers in the following ways:

1. to diagnose the word recognition of pupils who begin to show a lack of progress
2. to provide the diagnostician with the approximate instructional level for placement of young children in appropriate graded materials
3. to aid in the assessment of the type or types of miscues made by the pupil, e.g., list and classify all miscues according to commonalities of error in the pronunciation of words.

4. to determine what kinds of remediation are necessary to overcome or remove the child's weaknesses in word recognition, e.g., recognizing the difference between a vowel digraph and a diphthong and pronunciation of each.

5. to help the diagnostician to determine if the child is improving and attaining the grade level to which he is currently assigned or if the child is reaching the goal established by an individualized educational program (IEP).

Although the results of this instrument indicate only the grade level or entry level in years and not years and months, one can readily approximate whether the child is at the low end, middle, or high end of the grade level by employing the scale which was developed and published by McBroom, Sparrow, and Eckstein (Maude McBroom, Julia L. Sparrow, and Catherine Eckstein, Scale for Determining a Child's Reader Level, Iowa City: Bureau of Publications, Extension Division, University of Iowa, 1944, p. 11).

<table>
<thead>
<tr>
<th>Dolch Words Recognized Instantly</th>
<th>Equivalent Grade Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 75</td>
<td>Preprimer or PP</td>
</tr>
<tr>
<td>76 - 120</td>
<td>Primer or P</td>
</tr>
<tr>
<td>121 - 170</td>
<td>First Reader Level</td>
</tr>
<tr>
<td>171 - 210</td>
<td>Second Reader and/or above</td>
</tr>
<tr>
<td>above 210</td>
<td>Third Reader and/or above</td>
</tr>
</tbody>
</table>

One can readily interpret this scale in the following manner. Let us assume that the child made a score of 208. Using the scale, we conclude that the child is reading at the second grade level. Further, the child's score indicates that s/he is at the high end of the second grade. Again, one must recall that the score is an approximation of the child's instructional level.

Quite frequently teachers of developmental and remedial reading programs are in need of a simple assessment tool...
which is effective and adequate in determining the approximate instructional level of reading through word recognition for children enrolled in the lower elementary grades. The Dolch Basic Sight Word List is the answer to this need. A scale can be consulted to determine the grade level. The basic sight list of 220 words can also be used repeatedly for the same child.

Reference

After the children had silently read the selection assigned, the teacher launched them into a discussion. For a while it seemed that things would go well as the teacher began asking questions to guide the discussion, but only for a few moments. The ebb and flow of the discussion soon became more ebb than flow. The tide had turned and what originally promised to be smooth sailing turned into another voyage of the ill-fated craft—the discussion. The teacher, unnerved by the experience, abruptly ended the activity, deciding that discussions are hardly worth the effort. The teacher was tempted to try other activities, such as having the children write answers to written comprehension questions because they seem to require more thought and effort from children and do not involve the anxiety and discomfort of discussion.

What went wrong? What happened during the discussion to make the teacher feel this way? Several children simply did not say anything. They seemed to "clam up" or not respond at all to the teacher's questions or to what other children were saying. Then there were children who seemed to answer each question with a single word, or who gave trivial answers to the teacher's questions. There was also a high incidence of cliches and a low number of original comments. Some children appeared inhibited and self-conscious. When they made a contribution, they did not voice their true feelings and opinions. The discussion was also dominated by a few members of the group. These students monopolized the discussion, crowding out other children who might have something to contribute. And, some of the children were apparently not listening to what others were
saying, for their comments were unrelated to the point made by the previous speakers.

**Why Discussions Are Important**

Children first begin discussing things with others in small, informal family interactions at meals and other times. As they grow and experience wider social contexts, greater discussion skills are demanded. Pinnell (1984) believes these discussion skills will be required in almost all subject matter learning in elementary and secondary schools. She makes the point that beyond subject matter, there is embedded within each subject a "hidden curriculum," in which language itself is being taught. Children learn a subject and, in the process, they learn how to talk about a subject.

Classroom discussions also provide the opportunity for children to develop what May (1967) calls a listening attitude--that is, an attitude in which one is open to the ideas of others. Children learn not to tune out other children who express ideas that differ from their own. Discussions also provide for what Barnes (1976) calls "exploratory language" with an "intimate audience" as opposed to a "formal presentation" to a "distant audience." In a small group, children are working with peers whom they know
and trust. Language, therefore, can be less guarded and ideas can be expressed more freely. Moffet and Wagner (1983) emphasize the value of discussions in developing thinking and oral skills children will need for reading and writing. They believe discussions do this by requiring children to face the challenge of defining, clarifying, qualifying, elaborating, analyzing, and ordering experiences, concepts, opinions, and ideas. The direct value of discussions in promoting reading comprehension has also been suggested. Bruton (1977), for example, believes that discussing a reading selection fosters reading comprehension by reinforcing memory and teaching children to think about what they read in new and productive ways.

The ability to engage in discussions becomes even more important after schooling. According to Pinnell (1984), success in social, civic, and professional groups depends partly on the ability to speak in informal and formal settings. Skill in presenting ideas, backing them up with information, linking them to others' ideas, turning the discussion to a new topic, and persuading others are important for success in most of the professions and in business and industry.

Teacher Preparation for Success

How can teachers be prepared for this important classroom process? Teachers must develop a pattern of oral interchange, through questioning techniques, which engages children's minds and imaginations. The reading selection must be read prior to the discussion and questions must be prepared to stimulate children's thinking. The questions teachers formulate must help children operate on all levels of thought. Gallagher (1965) offers a useful questioning scheme with two categories of questions: narrow and broad.

Narrow questions are text-bound; their answers are always in the text. Gallagher identifies two types of narrow questions: cognitive-memory and convergent. Cognitive-memory questions require children to recall, identify, answer yes or no, define, name and designate information. They often begin with "Who," "What," "Where," or "When." Convergent questions are text-bound, but their answers require children to use information from different parts of the text and to explain, state relationships, compare, and contrast. They often begin with the words "Why," "How,"
"Explain," "Compare," and "Contrast."

Broad questions are reader-bound; the answers begin in the text, but end in the mind of the reader. Gallagher also identifies two types of broad questions: divergent and evaluative. Divergent questions require children to predict, hypothesize, infer, reconstruct, solve problems, and trace alternatives. They often begin with phrases and words like "What if," "Suppose," "How do you know," "How many ways," and "Predict." Evaluative questions require children to give and support an opinion, make and justify a choice, defend a position, or place a value. They often begin with phrases such as "What do you think," "Do you agree," "Can you support," or "How do you feel about."

Preparing Children for Discussions

How can teachers prepare children to engage in effective classroom discussions? Teachers must understand that a discussion is not a simple collection of listening and speaking skills, but a dynamic event which requires children to orchestrate simultaneously a number of language skills. Children must have a thorough knowledge of the reading selection, say what they think about it, listen to what others say about it, respond to what others say about it, and stick to the subject. These skills or conditions need to be stated and taught to children as rules. Several language educators (see Burns and Broman, 1983; Moffet and Wagner, 1983; and Temple and Gillet, 1984) suggest having a small group of children demonstrate through role playing effective discussion behavior.

There are three steps involved in using role playing to teach discussion skills. The first step calls for the teacher to select five or six children who are good at role playing and who have good discussion skills. The children are asked to demonstrate through role playing an ineffective discussion of a reading selection. After reading a short selection, the children are asked to model poor listening, the interrupting of others, irrelevant comments, single, one-word responses to teacher questions, monopolizing the discussion, and a lack of response to the teachers's questions or to the comments of other group members. After demonstrating a poor discussion, the same children are asked to demonstrate an effective discussion. The children will need coaching in effective discussion behavior. The following discussion rules adapted from Moffet and Wagner (1983) can be used:
1. Read the selection to be discussed.
2. Understand it: Tell yourself what it means.
3. Contribute: Give your own ideas.
4. Listen: Try to understand what someone else is saying.
5. Say "Excuse me" or "Pardon me" if you interrupt someone.
6. Be relevant: Stick to the subject.
7. Respond: Comment on what others have said.

In the next step, the teacher asks the class to compare the two discussions demonstrated through role-playing. Through teacher questioning, the class is helped to identify the differences between effective and ineffective discussions. The children will then generate their own rules for effective discussions. The teacher should write the student-generated discussion rules on the chalkboard. It is important to remember that these discussion rules come from students and not the teacher. The teacher's role is one of facilitator and recorder of the student rules for discussing selections.

The final step calls for the teacher to provide structured opportunities for children to apply what they have learned about discussions. The teacher conducts practice discussions with children. After each practice session, children evaluate their performance. The discussion rules generated by the children can be duplicated for use as criteria for evaluating discussions. The teacher should also give children feedback on their performance during the practice sessions. For children who need additional work in developing discussion skills, teachers can use a tape recorder to play back a discussion or to play an earlier discussion with a more recent one to point out needed areas of improvement.

As the teacher's experience in this article shows very vividly, good discussions do not happen automatically. Leading a group discussion is not easy. But discussions do not have to be abandoned. Teachers will, however, have to be prepared and also prepare children for this important classroom process. The suggestions in this article can help teachers accomplish this goal.
REFERENCES


METACOGNITION AND
CLASSROOM INSTRUCTION

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Recent research in the fields of education and psychology has focused attention on children's introspective knowledge about their own cognitive operations. The bulk of the research has centered on what readers do to understand and learn from text (e.g., Brown, Campione and Day, 1981; Hare and Smith, 1982; Paris and Lipson, 1982) and is presented from the perspective of metacognition. A definite distinction exists between cognition and metacognition. Generally speaking, cognition refers to the intellectual functioning of the human mind and the ability to use one's knowledge through such activities as remembering, comprehending, focusing attention and processing information (Babbs and Moe, 1983). Metacognition refers to awareness and conscious control over these skills (Stewart and Tei, 1983). Metacognition is the ability to monitor one's cognition and has been described as thinking about thinking (Babbs and Moe, 1983).

Investigators have recently concluded that metacognition plays an important role in oral communication of information, oral persuasion, oral comprehension, writing, and language acquisition. Metacognitive skills involve self-awareness and self-control and when employed, lead to efficient reasoning (Flavell, 1979).

According to Brown (1982), there are two forms of metacognition that have been extensively examined by researchers. First, there is the learners' knowledge about various aspects of their learning situations and about their own abilities as learners. If students are aware of what is needed to effectively handle a learning task, they can initiate the appropriate behaviors in order to adequately meet the demands of the situation. Conversely, students
who are unaware of their abilities and the intricacies demanded by the task at hand, can hardly be expected to complete the task in a manner that will increase their knowledge base.

The second form of metacognition involves self-regulatory behaviors used by active learners. According to Brown (1982), "These indices of metacognition include attempts to relate a new problem to a similar class of problems and to imbue the unfamiliar with the familiar, engaging in means end analysis to identify effective strategies; checking the outcome of any attempt to solve the problem; planning one's next move; monitoring the effectiveness of any attempted action; testing, revising, and evaluating one's strategies for learning and other strategic activities that facilitate learning" (p. 28).

When applied to the reading task, metacognition refers to the readers' ability to monitor their own comprehension of material and to invoke the appropriate skills and strategies necessary for comprehension. The purpose of this article is to review some of the recent research on metacognition and to present some implications for its use in classroom instruction.

Product to Process

Current studies reflect an emphasis on instruction aimed at improving students' self-control and self-awareness of their own learning processes. Indicating a general shift in interest from product to process, Santa and Hayes (1981) suggest that "comprehension is an idea whose time has come." Researchers no longer focus on just the awareness of knowledge phrase of metacognition, but are now just as concerned with control of that knowledge (Brown and Palincsar, 1982).

Brown (1980) describes "debugging" devices, which are skills of metacognition that can be tailored to the purposes of reading. Effective readers engage in a variety of tactics that will ensure efficiency of comprehension. They analyze information only to the depth necessary to meet their current needs. Under the heading "Reading Strategies," Brown lists the following activities:

1. Clarifying the purpose of reading, that is, understanding the task demands, both explicit and implicit
2. Identifying the aspects of a message that are important
3. Allocating attention so that concentration can be focused on the major content area rather than on trivia
4. Monitoring ongoing activities to determine whether comprehension is occurring
5. Engaging in review and self-interrogation to determine whether goals are being achieved
6. Taking corrective action when failures in comprehension are detected
7. Recovering from disruptions and distractions that interfere with learning (p. 456).

Likewise, a person who is deficient in these skills can be said to be lacking metacognitive strategies and appears to lack awareness and control of the cognitive demands of a task (Rinehart and Platt, 1984). Baker and Brown (1980) found that poor readers, young children, and learning-disabled readers demonstrated a lack of metacognitive skills in the following areas:

1. Understanding the purpose in reading
2. Modifying reading strategies for different purposes
3. Considering how new information relates to what is already known
4. Evaluating text for clarity, completeness, and consistency
5. Dealing with failure to understand
6. Identifying the important information in a passage
7. Deciding how well the material has been understood

Many young readers do not know when they have succeeded or failed in comprehending text (Baker, 1979). Younger and poorer readers seem to be less aware of reading as a meaning-getting process and often focus on decoding words rather than on the meaning inherent in the text. This is especially true of readers who have had a heavy emphasis on phonics in their reading instruction. When students read for meaning and view reading as a communication with an author, they are better able to
judge whether or not comprehension is proceeding smoothly. Reading material should make sense, and, if it does not, readers who understand the reading process can take steps to monitor their comprehension. A basic knowledge of the reading process appears to be a necessary part of being a fluent reader and of having control over one's reading (Garner, 1981; Johns, 1980; and Myers and Paris, 1978).

There are noticeable differences between children in second and sixth grades in their knowledge about reading and reading tasks. According to Myers and Paris (1978), sixth graders showed more knowledge of reading as a cognitive process and were more aware of the various aspects of reading. Researchers have documented a lack of knowledge in younger and poorer readers concerning control of four variables (Armbruster and Echols, 1983). These variables include text, task, learner strategies, and learner characteristics. Readers who are unaware of text structure and the demands presented by the task are better able to modify their own strategies and activate any prior knowledge or skills necessary to achieve their purpose in reading. Thus, both age and experience affect the development of metacognitive strategies and the ability to use them effectively.

Implications for Classroom Instruction

Flavell (1979) stated, "I find it hard to believe that children who do more cognitive monitoring would not learn better than children who do less. I also think that increasing the quantity and quality of children's metacognitive knowledge and monitoring skills through systematic training may be feasible as well as desirable" (p. 910). Students can be taught to be aware of what and how they learn (Stewart and Tei, 1983). Through explicit teaching, students can develop reading strategies which promote comprehension and techniques which will remedy comprehension failures. The key is to develop self awareness and control of learning.

According to Stewart and Tei, children need to learn that reading is a meaning-getting process and that the purpose of reading instruction is to provide them with tools for securing this meaning. The knowledge that text conveys important messages is basic to developing curiosity and motivation. Understanding the features of a text is
also an important aspect of comprehension. These features include reading across and down pages, the progression of stories through a book, and the fact that headings and subtitles highlight specific topics. A knowledge of paragraph formation is also essential. Students need to know that paragraphs usually contain a few sentences that convey the essential meaning and that some information is more important than other information.

Children need to be taught strategies to use when comprehension fails and text does not make sense. Stewart and Tei refer to a program of instruction conducted over several months by Paris and Lipson (1982). Using third and fifth graders, Paris and Lipson taught the children metacognitive skills and techniques to control their reading activity. Through explicit teaching, children were taught to be more aware of obstacles to comprehension and to use strategies like rereading and changing pace to improve comprehension. The children read specially-designed passages in which pictures of road signs were drawn. These signs served as reminders for different strategies—for example, "Reduce Speed" for difficult parts and "Yield" to unknown words. The researchers found that these signals helped children recognize obstacles to comprehension and become aware that they must take action when difficulties arise (p. 39-42).

As the ability to summarize material appears to be an effective method of testing one's level of comprehension and retention, Brown, Campione and Day (1980) have identified six basic rules essential to summarization. Their operations are very similar to the macrorules described by Kintsch and Van Dijk (1978) as basic operations involved in comprehending and remembering prose. The rules could be used as an instructional basis for teaching children to summarize and would extend their availability of metacognitive strategies. The rules include the following:

1. Delete unnecessary and trivial material
2. Delete material that is important, but redundant
3. Substitute a superordinate term for a list of items
4. Substitute a superordinate action for a list of components of that action (Ex.: "John went to London" for "John left home")
5. Select a topic sentence as this is the author's summary of the paragraph

6. If there is no topic sentence, invent your own (p. 17)

Other teacher-directed comprehension aids are also quite valuable for high school students involved in content area reading. Vacca (1981) describes constructing pattern guides for students. These guides serve to develop text structure awareness and aid students in interpreting the author's purpose. Students learn from one another as they piece together the relationships that exist within the predominant patterns of the text.

According to Vacca, the following teaching sequence works well in content classes and promotes the metacognitive construct that "knowing why leads to knowing how" (p. 11).

1. Examine a reading selection and decide upon the predominant pattern used by the author.

2. Discuss this pattern and how to interpret the author's meaning as part of the total lesson.

3. Provide guidance in the process of perceiving organization through a pattern guide, followed by small-group, whole-class discussion.

4. Provide assistance in cases where students have unresolved problems concerning either the process or the content under discussion, or both.

The pattern guide itself tears the text organization apart. The students' task, then, according to Vacca, is "really that of piecing together the relationships that exist within the predominant pattern" (p. 146).

A Caution Concerning Process vs. Product

An interesting caution about metacognitive training for children has been presented by Kendall (1982) who states that "teachers who believe that students' conscious awareness of the rules they are applying or strategies they are using will ensure success may misguide their students (p. 10). Kendall is concerned that in their enthusiasm over metacognition, teachers will, perhaps, teach students about metacognitive skills rather than lead students
to use these skills. Stated another way, process may become more important than product. This would not be an entirely new occurrence in education. As an example, an enthusiasm for phonics has often led teachers to overemphasize phonic rules and "sounding out" to the detriment of gaining meaning from the text. Requiring students to demonstrate conscious awareness of their comprehension strategies should not be necessary. Instead, according to Kendall, teachers should help students focus on meaning and, through modeling, provide guided practice and opportunities for using the various comprehension monitoring strategies. If these focuses are developed during the earlier grades, most students will become active, successful readers.

REFERENCES


THREE SPELLING MEASURES AS CORRELATES OF READING ABILITY IN UNDERPREPARED COLLEGE FRESHMEN

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Many new students entering post-secondary education are learners whose aspirations heretofore never included a higher education and who receive poor scores on college board tests (Knowles & Knowles, 1983). Students whose backgrounds included cultural or linguistic isolation are of particular concern to colleges which operate in areas of large minority populations. For these and other high-risk learners, colleges have been obligated to create support facilities, such as reading/writing labs and tutorial services, to diagnose and remediate those language deficiencies in reception and production which handicap learners' progress in all classes, but especially in basic skills English classes.

Placement in basic skills English classes is usually accomplished through a holistic rating of one sample produced by each entering student. Since recent studies indicate a significant correlation between reading and writing abilities, many placement procedures now include a standardized reading test as an additional screening device. These two measures provide little help for the staff of support facilities, who usually must wait until initial assignments are completed, graded, and returned by English instructors before specific remediation procedures can begin--often one month into the semester. In addition, essay evaluation can result in prejudicial judgments on major criteria when repeated spelling errors interfere with comprehension, especially when they are read as rapidly as they must be read in the screening process. Poor spelling, among good and poor readers alike, persists as an impediment to clear discourse production by college students.

While a spelling test might prove of value as an added instrument in the screening process, the choice of instrument would depend upon whether its results correlated
significantly with the special learner's spelling as manifested in his/her independent discourse production. Such information would enable the learning center staff to initiate spelling remediation at the onset of the semester. Although multiple-choice tests have become the most common format used in this computer age, there is no recent evidence that the two tasks required in standardized spelling tests (dictation and multiple-choice) reflect how the adult learner performs when writing his or her own words in a contextual setting, particularly the learner from a minority population.

If a significant relationship were found between spelling abilities using varied measures and reading levels using an easily administered reading test, a remedial program for spelling should have a positive effect upon reading skills as well by tapping common cognitive processes and by cultivating those language competencies which are common to both reading and spelling. Such information would be of particular value to support facilities in colleges which serve large minority populations.

Reading and Spelling

There is considerable lack of concurrence among researchers with regard to the relationships between reading and writing at the college level, and particularly between reading and spelling. While Applebee (1977) noted a reliability of .88 in predicting reading levels from students' writing samples, P. Smith (1980) noted primarily the differences between reading and writing, labeling reading a selection task and writing a production task.

Both reading and spelling abilities may be results of rule application. As a result of their study in rule application, Baron, Treiman, Wilf, and Kellman (1980) suggested
that learning to spell by rules had provided their subjects with practice in detecting segments (sounds associated with letters or groups of letters in varying positions) and had improved their phonemic perception while reading. In support of rule-application strategies, Marsh, Friedman, Welch, and Desberg (1980) demonstrated that there is considerable congruence between the development of strategies in reading and spelling. Also, Cheek (1979) found a positive significant relationship between sixth- and eighth-grade students' knowledge of graphemic options and their total oral reading accuracy. While F. Smith (1981) asserted that "We learn to spell by reading" (p. 167), Frith found that poor spellers who were good readers were proficient in going from print directly to meaning but were impaired at converting print to sound. Frith's good spellers who were also good readers showed mastery of both aspects of reading, converting print to meaning and converting print to sound.

The Purpose of the Study

The researchers were interested in discovering if the Principle of Associative Symmetry, wherein associations formed in one direction are usable in the opposite direction (Baron et al., 1980), is operative with regard to reading and spelling. This study was conducted to answer the following questions: (1) For basic skills college students, particularly minorities, are there statistically significant relationships between reading abilities as measured by vocabulary, comprehension, and total reading scores and spelling scores as measured by a dictation format, a multiple-choice format, and independently produced discourse, and (2) for these same students, are there statistically significant correlations among the spelling measures themselves?

Method

Subjects. The students in five basic skills English classes at the University of Albuquerque were used in this study: three English 100 classes (intensive remediation) and two English 102 classes (refresher). Only those students who were in class both days, during the writing of the controlled-topic essay and during the administration of the spelling tests, were used as subjects in the study, resulting in a sample of 71 subjects: 28 male and 43 female. The ages ranged from 16 to 60 years, the ethnicity was made
up of 25 Native Americans, 25 Hispanics, 12 Anglos, 6 Blacks, and 3 Asian and Middle Eastern students. While English was the first language of most (28), many spoke first languages other than English: 18 spoke Spanish, 20 spoke one of several Native American languages, and 5 spoke other languages.

Instruments. The four instruments used in this study were (1) Form C of the Nelson-Denny Reading Test (NDRT) (2) the multiple-choice spelling section of the Comprehensive Test of Basic Skills (CTBS), Level J, (3) the spelling dictation section of the Wide Range Achievement Test (WRAT) Level II, and (4) an independently produced essay of approximately 500 words using a classification pattern of exposition and entitled "Three Types of Students I Have Observed."

Procedure. During the month of August, prior to the start of the semester, all subjects participating in the study were administered the NDRT as part of the placement procedure required for all entering students. During the fourth week of the semester, on the same day, all students in the five English classes wrote in-class essays on the topic "Three Types of Students I Have Observed." All subjects were given a maximum of 75 minutes to complete the assignment. They were not advised of the specific nature of the study until after the essays were written in order to preclude extra precaution being taken with spelling that would not ordinarily be taken with an in-class assignments. No dictionaries were permitted.

The total number of spelling errors produced on each essay was ascertained, with duplicate errors counted only once. The total number of spelling errors was subtracted from the total number of words in each essay. The difference was divided by the total number of words written by each subject to arrive at a percent correct spelling score, carried to four decimal places. This positive score facilitated comparison with the positive scores expressed in the NDRT, WRAT, AND CTBS results.

Two days after the in-class writing assignments, during the regular 75-minute class sessions, the two spelling tests were administered to the five classes. In each class, the dictation test was administered first, followed by the multiple-choice test. Only raw scores, number of correct
responses, on the reading test and the two spelling tests were used in the analyses.

Results

Means, standard deviations, and ranges of the four tests used in the study are given in Table 1. To answer the first question in the purpose, multiple regression analyses were computed with appropriate post hoc tests. To answer the second question, Pearson Product Moment Correlation coefficients were computed.

The multiple regression analysis indicated that the three spelling variables share about 33% of the variance in the NDRT scores. The observed relationships were significant, $F(3,67) = 11.21$, $p < .01$. A secondary analysis was performed to look uniquely at the independent variables in order to ascertain the best predictor of reading vocabulary among the measures of spelling ability. Only the contribution of the CTBS is significant as a predictor of reading vocabulary, $F(1,67) = 9.50$, $p < .01$.

The analysis indicated that the three spelling variables share about 26% of the variance in the NDRT comprehension scores. The observed relationships were significant, $F(3,67) = 7.72$, $p < .01$. The secondary analysis indicated that only the contribution of the CTBS is significant as a predictor of total reading ability, $F(1,67) = 6.77$, $p < .01$.

Results revealed that the three spelling variables share about 36% of the variance in the total reading scores. The observed relationships were significant, $F(3.67) = 12.61$, $p < .01$. The secondary analysis showed that only the contribution of the CTBS is significant as a predictor of total reading ability, $F(1,67) = 10.83$, $p < .01$.

The Pearson Product Moment Correlation analysis revealed that all obtained coefficients among the three different measures of spelling ability were significant.

Conclusions

Several conclusions may be drawn from the results of this study. However, it must be emphasized that these conclusions apply only to populations of underprepared college freshmen similar to those enrolled in basic skills English classes at the University of Albuquerque. To general-
Table 1
Means, Standard Deviations, and Ranges of Nelson-Denny and Spelling Scores

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Stan. Dev.</th>
<th>Min.</th>
<th>Max.</th>
<th>Poss. Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>NDRT Vocab.</td>
<td>23.40</td>
<td>12.39</td>
<td>8.00</td>
<td>52.00</td>
<td>100.00</td>
</tr>
<tr>
<td>NDRT Compre.</td>
<td>30.34</td>
<td>9.29</td>
<td>14.00</td>
<td>52.00</td>
<td>72.00</td>
</tr>
<tr>
<td>NDRT Total Rdg.</td>
<td>53.75</td>
<td>19.76</td>
<td>24.00</td>
<td>102.00</td>
<td>172.00</td>
</tr>
<tr>
<td>WRAT Spelling</td>
<td>24.31</td>
<td>7.99</td>
<td>3.00</td>
<td>39.00</td>
<td>46.00</td>
</tr>
<tr>
<td>CTBS Spelling</td>
<td>18.70</td>
<td>5.50</td>
<td>6.00</td>
<td>30.00</td>
<td>30.00</td>
</tr>
<tr>
<td>ESSAY Spelling*</td>
<td>.97</td>
<td>.02</td>
<td>.86</td>
<td>1.00</td>
<td>1.00</td>
</tr>
</tbody>
</table>

* Scores on the independently produced essay are expressed as the proportion of total words written that were spelled correctly.

Table 2
Correlations Among Measures of Spelling Ability

<table>
<thead>
<tr>
<th>Variables</th>
<th>WRAT</th>
<th>CTBS</th>
<th>IPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>WRAT</td>
<td>--</td>
<td>.80889**</td>
<td>.72252**</td>
</tr>
<tr>
<td>CTBS</td>
<td>.65430</td>
<td>--</td>
<td>.56793**</td>
</tr>
<tr>
<td>IPE</td>
<td>.52204</td>
<td>.32254</td>
<td>--</td>
</tr>
</tbody>
</table>

** p < .01

Note: Correlations are in the upper quadrant, variance shared ($r^2$) in the lower quadrant.
ize these conclusions to students in other basic skills programs, one must assume a similarity in composition of the sample with regard to ethnicity and first language.

For the subjects used in this study, there is a significant relationship between reading and spelling ability; capable readers are better spellers than poorer readers. This seems to hold true whether the reading ability is measured by vocabulary, comprehension, or total reading score. Further, the three spelling measures used in this study would serve as predictive measures of general reading ability if used in a screening process for incoming freshmen similar to those in our sample. However, among the three spelling tests, the CTBS—a multiple-choice format—serves as the best predictor of reading ability.

Spelling measures, whether multiple-choice or dictation, do not correlate with spelling ability as revealed in the independent writing of underprepared freshmen, although the dictation test (WRAT) shares more variance with spelling performance in independent writing (52%) than does the CTBS multiple-choice format (32%). Therefore, the choice of a single spelling measure to be used in the screening process for incoming freshmen would depend upon which skill it is most necessary to predict; reading ability (the CTBS) or spelling performance in independent discourse (the WRAT).

Discussion

Although the CTBS multiple-choice test and the WRAT dictation test had 65% variance shared, their relationships to reading scores provided contradictory information. While a higher CTBS score resulted in a higher reading score, negative Beta weights in the secondary analyses indicated that a higher WRAT score resulted in a lower reading score. From this, one may conclude that the significant relationship between the WRAT and independent spelling and the significant relationship between the CTBS and reading scores imply that the measures are tapping different processes (production versus recognition) as Croft (1982) suggested. The WRAT dictation test and spelling in one's own writing may be measuring production tasks, while the CTBS and the NDRT, both multiple-choice formats, may be measuring recognition tasks. Also, it might well be that a spelling task which requires the subject to select a
correct spelling from four alternative spellings of the same word is more a measure of reading ability than of spelling ability, especially in older learners.

Hanna, Hodges, and Hanna (1971) noted that the task of encoding phonemes into graphemes is made more difficult because English has a "surfeit of graphemic options" (p. 39). If this is so, the multiple-choice format of the CTBS narrows the options for the testee to only four possible alternatives, which is considerably fewer than the number of options that may come to mind as one is involved in the act of writing.

One possible explanation for the significant relationships between reading and spelling as a question of options was noted by Perin (1982). Her study showed that better readers completed spelling tasks of words and nonwords with not only fewer errors but with qualitatively better attempts, more plausible graphemic options. This suggests that better readers have been exposed, through more experience with print, to the repeated and acceptable patterns of English orthography and, therefore, have a "better grasp of the rules relating sound and letter" (p. 11).

The bi-directionality of spelling and reading instruction needs to be tested and, if verified, treatments need to be devised and studied to see if improving scores on one variable (the CTBS, for example) increases reading scores, and vice versa. The influence of spelling instruction on reading scores of good and poor readers might be determined through an experimental design employing a path analysis approach in a covariance framework.

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Frith, U. 1978. From print to meaning and from print to sound, or how to read without knowing how to spell. Visible Language, 12, 43-54.


Failing SAT scores and lawsuits by illiterate high school graduates against the school systems that failed to educate them have become hallmarks of "A Nation at Risk." President Reagan has reacted to his commissioned report on education by suggesting the American panacea of more, better, faster. In this case, more required courses, longer school days, and more computers. Whether or not these solutions will provide us with a generation of readers remains to be seen; there is certainly no dispute that reading remains the key to all learning, the basic skill that must be mastered from the very beginning.

Where that beginning is, however, has become a basis for dispute. Some children seem locked out from the start, those who wear the label "disadvantaged." In recent years there has been a deluge of programs to help children learn to read. The federal government has provided funding for research, tutorial programs, preschool programs, and television programs. Piles of data are available on how children learn to read and what factors account for reading readiness. The government has even acknowledged that reading readiness may well start in the womb, and supports a nutritional program for pregnant and nursing mothers.

But it's not just the disadvantaged children that are coming to school educationally at risk— it appears to be a growing problem in all segments of our society. Whether it's a symptom of the modern age of television, divorce, and music videos, the reality is that more and more children are coming to school unprepared to learn.

Thus, 'Reading Readiness' has become a specialty in itself, complete with tests, programs, workbooks, supporters,
and critics. Kindergarten assessment programs aim for early identification of children lacking reading readiness, and a substantial part of most kindergarten programs is directly aimed at developing reading readiness skills. Given the amount of research done and the emphasis placed on reading readiness and the teaching of reading, one would expect that all children would become fluent readers. Why is this not true? One factor may well be that the emphasis of traditional reading readiness programs neglects perhaps the most important prerequisite of all—motivation. From the child's perspective, one must ask, "why should a child want to learn to read?"

Many children already possess a strong desire to master the written word. What is the key to their eagerness? What factors exist in the home and/or cultural environment that directs a child's natural curiosity of the world around him/her into the arduous task of tearing apart and rebuilding language to allow written as well as vocal communication?

For many children, their first contact with school is in a preschool, and even at this early stage, it quickly becomes obvious that some children love books, and other children have no interest in them. In an attempt to identify
some factors that may account for early motivation toward reading, we conducted the study that follows. We believed that preschoolers demonstrating a spontaneous and natural interest in books come from homes where parents engage in positive reading behaviors.

A review of the research on preschoolers' interest in books found that no studies have specifically addressed the issue of early motivation in learning to read. Previous studies on reading motivation have primarily dealt with instilling motivation after the child has failed, or analyzing the motivation after the child has succeeded. Many, however, did recognize the importance of books in the home before children encountered books at school.

"When books have always been a part of the child's natural environment to manipulate, to share, to experience, and to cherish, the child has ample opportunities to develop concepts of what a book can be. Children know there is wonder in the art of illustration and magic in the printed word" (Engel, 897).

Since research does support the idea that motivation is an important factor, programs aimed at rousing children's interest in literature are abundant, from "Reading Rainbow" to "Reading is Fundamental" to "Scholastic Book Fairs." In the classroom, an abundance of resource material on making stories come alive for children through literature extensions is available. Creative dramatics and art projects help to enliven the written word and spark a hunger for reading in many previously turned-off children. Making reading interesting and fun is certainly a valid motivating factor for many children who saw it only as a task before. But what of the child who has not yet experienced failure, what about the preschooler? A great deal of materials is available on reading readiness techniques for preschoolers, little has been written specifically on motivation—instilling in the young child the desire to read. Because it's difficult to evaluate motivational factors in children who haven't yet failed or succeeded in a future task (reading), a body of research has been directed toward "early readers," those children who "spontaneously" taught themselves to read at a preschool age. Durkin (1966) conducted comprehensive parental interviews and child studies of two groups of early readers and concluded "...early readers are not
some unique species capable of being identified and sorted by tests. Rather, it would seem their preschool achievement in reading is the combined expression of themselves, their parents, and the kinds of environment provided" (p. 110). In an earlier study, Durkin (1966) compiled a list of sources identified by the parents as those factors which motivated their children's interest in reading. The three most frequently cited from a list of ten were: being read to at home; eagerness to keep up with older siblings; and availability of reading material in the home. These factors reflect the children's realization that reading was a natural part of their daily lives - something that they wanted for themselves. How a few such children can somehow decode the secret of letters is still a mystery, but their motivation is not exclusive; thousands of children come to school thirsting for that same knowledge. And thousands more start school with no interest in books whatsoever. It's not a matter of material possessions or social class, it's a matter of environmentally instilled motivation. Durkin concluded:

"...research findings show no simple connection between early reading and the socioeconomic status of a family. What is much more important, the research data indicated, is the presence of parents who spend time with their children; who read to them; who answer their questions and their requests for help; and who demonstrate in their own lives that reading is a rich source of relaxation, information, and contentment" (p. 136).

Clark (1976), in a similar study of early readers in Glasgow, supported the idea that early parental involvement with children and literature is a key factor in the child's later motivation. An exhaustive report on reading in the British school system, conducted by Sir Allan Bullock (1975) at Her Majesty's request, took three years to complete and repeatedly emphasized that the further extension of language into reading is something that must not wait until school is ready to teach it. Reading is not a discrete skill, but a part of a child's general language development and dependent on meeting appropriate experiences.

"The best way to prepare the very young child for reading is to hold him on your lap and read aloud
to him stories he likes--over and over again...
The printed page, the physical comfort and security, the reassuring voice, the fascination of the story--all these combine in the child's mind to identify books as something which holds great pleasure" (Bullock, 1975, p. 897)

Butler and Clay (1979) cited a study by Norris which "...showed again, beyond all doubt, (withal) the dedication of teachers and the use of modern methods, books, and equipment, the vast majority of good readers were made before the children started school...before teachers start their work at all" (p. 8).

McKenzie (1977) also contended that language and reading cannot be separated from home experience. She believes that children need to listen to stories, talk about stories, and retell stories. The retelling of stories or "pretending" to read is a behavioral trait that Holdaway (1979) feels is a natural and necessary step in learning to read. He has studied reading-like behavior in children and has found it to be highly motivated, self-correcting, syntactically complex and self-satisfying for the child. Holdaway also supports the idea that children with a background of book experience since early infancy have developed what he calls a literacy set, a host of prereading skills (listening ability, recognition of the use of symbols, understanding of direction and sequencing, etc.) that serves them well all through their school years and beyond.

While the preceding studies have discussed all children, boys are frequently referred to with the term "biological unreadiness;" in light of the studies discussed, is it possible that home/cultural implications are being ignored? Are fathers reading to sons? Are fathers reading? Are fathers smiling approval when they see their sons looking at picture books? Downing and Thackery (1976) pointed out that--

"if a preschool girl spends a lot of time looking at books, that behavior would be very acceptable socially. But if an American father sees his son with his nose in books to the same extent, he is more likely to think that his son ought to be doing something 'more boyish,' like running after a ball outside the house...This socially determined
discrimination against boys could well be sufficient to explain why American boys are less ready to learn to read than American girls" (p. 20).

Entwisle (1971) pointed out that mother-child interactions are studied more frequently than father-child interactions and that actions of fathers may be more important in reading. Rubin (1972) found that boys and girls not only differ in language and readiness skills before kindergarten entrance, but also that kindergarten programs have a differential impact on the growth of these skills in the two groups. Although girls were more advanced before kindergarten, boys derived greater benefits from kindergarten. Perhaps boys derived greater benefit from kindergarten because they found cultural experiences (approval for looking at books, arts and crafts activities, singing, etc.) that had not been as abundant for them in the home as they had been for their sisters.

These reviewed studies of reading behavior in young children recognize that the home serves as a source for attitudes and that the child with a rich experiential background of involvement with words and books is more likely to develop the desire to read for him/herself.

Study

The present study was conducted in response to the issues of early reading motivation and the nature of the home environment. The hypothesis to be examined was that a strong literary environment in the home (i.e., a variety of books constantly accessible, parents reading for themselves and for their children, constant encouragement of literature based behavior, etc.) would be indicative of a child who had a natural interest in books, and could thus be assumed to have a high motivation toward learning to read. Since the sex of both children and parents would be taken into account, it was also hoped that any sex differences in children's reading motivation would become evident.

Subjects

The subjects of the study were 23 children (and their parents) who attended a preschool in a small midwestern community. Six children were dropped from the sample due to absences or failure of parents to return the survey.
The final sample included 11 males and 6 females, who ranged in age from 39 months to 70 months, with a mean age of 60 months. All the children were white, middle class, and lived with both parents.

**Procedures**

To determine which children possessed a 'literacy set,' an observation check list was used to record instances of book related interaction and behavior while in the preschool setting. The subjects were observed in a free play situation and at story time over a three week period (preschool was in session three mornings a week). Their two regular female teachers alternated each session in recording observations of the children's book related behavior. The observation list included ten areas: chooses books at free play time, looks at books front to back and turns pages correctly, pretends to read, looks at books with a group of friends, looks at books alone, plays with books (ramps, houses, etc.), obviously attentive during story hour, makes spontaneous remarks about books being read during story time, responds appropriately during teacher directed story discussion, reflects either story line or visual images in later play or art.

The observer placed a check each time the child demonstrated one of the above behaviors any time during the one hour free play or half hour story time. The length of time a child spent engaged in an observed activity was not recorded, but if a child left such an activity for more than five minutes and then returned to it, another check mark was noted. Those children who received the most check marks were considered to be the ones most involved with books, and thus the ones with 'literacy set.'

**School Environment**

The books available to the children were on display in a three tiered magazine rack so that the book covers were clearly visible, and the books were easily accessible at all times. Because the preschool program was literature based theme teaching, the 20 to 30 books were changed weekly to reflect the current topic. The three or four books read aloud each day were chosen from this selection, both by the teacher and at the suggestions of the children. Both free play and story time took place in the same room, a
large open area playroom, with tables and window seats where a child might sit alone or in a group.

Home Environment

To form an indication of each child's home literary environment, a questionnaire was developed and distributed to both mothers and fathers. The purpose of the questionnaire was to determine if parents were frequent readers themselves, if reading materials were available in the home for different age groups, if parents took their children to the library, if parents ever gave their children books as gifts, and if parents read to their children. The format of the questionnaire was multiple choice with some yes/no questions. While there was a total of 20 questions, not all were directly relevant to the purpose and were taken into final tabulation; thus, 17 was the highest score possible for any one parent.

Table 1

Correlations (r) of subjects' scores, mothers' scores, and fathers' scores

<table>
<thead>
<tr>
<th></th>
<th>Mother</th>
<th>Father</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subject</td>
<td>.507*</td>
<td>.466*</td>
</tr>
<tr>
<td>Mother</td>
<td>--</td>
<td>.781**</td>
</tr>
</tbody>
</table>

* p < .05  **p < .001

Results

Pearson product-moment correlations were computed to determine the relationships among the subjects' observation score and the scores of the subjects' mother and father on the parent questionnaire.

As the table indicates, significant correlations were found between subject-mother, subject-father, and mother-father. In addition, when correlations were computed for boys and girls separately, significant correlations were found between the scores of boys' mothers and fathers (r = .692, p < .01) and the scores of girls' mothers and fathers (r = .803, p < .05).
To determine whether boys or girls demonstrated more reading behavior, a t test was computed between the mean score for boys (13) and the mean score for girls (20.5). The results indicated a significant difference, \( t(15) = -2.67, p < .02 \) with girls demonstrating more reading behavior than boys.

**Discussion**

The results of this study clearly support the hypothesis and the findings of Durkin, Clark, Norris, and the Bullock report regarding the importance of home influences in early reading behavior. This study revealed a significant positive correlation between the literary environment of the home and the 'literacy set' of the child in a preschool setting. While a direct causal relationship cannot be concluded from the results, it seems reasonable to assume that the parentally directed home literary environment accounts for one factor in the young child's motivation to read. If the child is read to, sees others reading and has frequent access to books, he/she will "naturally" consider books as part of the world the child wants to learn about. A child can only draw from his own realm of experience. What he sees at home becomes the basis for building self, and learning to read.

In terms of sex differences, a positive correlation was found between the scores of the mother and the father in response to the questionnaire. This finding lends further support to the recent research which has investigated the important role of the father in child rearing. An examination of the children's scores shows support for the work of others regarding sex differences in early reading behavior. The preschool girls in this study showed significantly more reading behaviors than their male counterparts when observed in a natural environment.

**Implications**

Motivation must be considered a key element in the reading process. Traditional reading readiness programs that address only the issues of auditory and visual perception, dexterity, and discrimination, and are not sufficient. Assessment programs that contain no box on the score sheet for motivation are inadequate. We need to ask "Does this child want to learn to read? Has experiential back-
ground in the home instilled within the child the desire to understand those familiar yet secret written symbols?"

If the answer is no, then the teacher must realize that school alone cannot provide the motivation; teachers must work with parents to help them understand the importance of the home literary environment. Teachers must provide support for parents to enable them to recognize that parents are the first teachers of their children, and are always powerful role models. Teachers can encourage parents to read aloud to their children, suggest appropriate titles and literature related activities that children and parents can do together. The first school for the child is the home--there s/he sees what is important for him/her to know, and reading should be one of the most important of all.

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PREVIEWING: A DIRECTED READING-THINKING ACTIVITY

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Previewing is an effective reading strategy that has been examined by researchers (Perry, 1959; Smith, 1985; Stauffer, 1969) as a technique to help students to retain textbook material. In previewing, students learn to establish purposes for reading and to make accurate predictions, actions which reinforce and enhance the learning process. Yet, many students do not bother to preview. Students open their textbooks and just start reading from page to page—an unstructured activity which severely limits the amount of learning accomplished.

Perry (1959) conducted previewing research with 1500 Harvard freshmen. Of the students surveyed in this study, a mere 15 previewed the assigned 30-page chapter in a history book and read the summary at the end of the chapter. Interestingly, only these 15 students were able to write a brief summary of the extremely detailed factual material. They—unlike the 1,485 students who read without purpose and word-by-word—understood what the material was about as opposed to simply recalling details (Smith, 1985). They alone demonstrated superior reading comprehension.

Apparently, many students do not see the value of previewing before reading. They disregard this effective reading strategy and do not obtain an overview of the material to be read. The need is, quite obviously, to awaken our students to realize the importance of using this simple learning construct. How can we, as classroom teachers, graphically demonstrate the effectiveness of previewing? How can we motivate our students to use this strategy in their own textbook reading?

As one answer to these relevant questions, I have designed an instructional model which incorporates the
designed an instructional model which incorporates the Stauffer (1969) directed reading-thinking activity for teaching students to preview. This innovative model, hopefully, will encourage your students to preview their textbook material. Three steps are involved: Step I, Before Reading; Step II, While Previewing; and Step III, After Previewing. They are as follows:

Step I, Before Reading

Define the term "previewing." Previewing, according to Wassman and Paye (1985), is a sorting technique which allows the reader to read selectively and locate the important ideas of the passage. In this reading strategy, the readers asks and answers three main questions before reading--(a) "What is my purpose for reading?" (b) "How is the material organized?" and (c) "What will be my plan of attack?" (Smith, 1985)

Give each student a copy of the previewing model (at end of article). Explain that before reading a selection, students must observe, think, and ask questions about the specific sections of a textbook, such as its preface, table of contents, introduction, and diagrams.

Define these specific sections and have students locate them using their science or social studies textbooks. Ask students such questions as, "What kind of information does the table of contents provide?" "Why are diagrams important?" "What is a summary?" Asking these questions will enable you to determine your students' understanding of the function and relationship of these textbook sections.

Step II, While Previewing

Encourage students to use their own experience to reconstruct the author's ideas through hypotheses (Stauffer, 1969). Pertinent here are the constructs of predicting or defining a purpose for reading, reading and selecting relevant data, and evaluating and revising predictions based on the acquired information (Tierney, Readence, & Dishner, '85).

In implementing this step, choose a reading selection from the science or social studies text. Divide it into parts and have the students read the title. Ask them three questions: (a) "What is this selection about?" (b) "What do you think might happen in this section?" and (c) "Which of these predictions do you agree with?" (Stauffer, 1969). Encourage responses and let the students share
their predictions with the class.

Step III, After Previewing

Have students silently read the first page of the selection to check their predictions. Comprehension questions—such as "Were your predictions correct?" and "What do you think will happen now?"—will assist students in evaluating their former questions and formulating new ones. Let students prove their predictions by reading aloud a specific sentence as evidence. Have them make predictions about events in the next segment of the selection. Ask students to review their reading strategies. They can continue to read with the same purposes or establish new ones.

Repeat Steps I, II, and III with the next reading segment and provide enrichment activities to enhance learning. For example, let students act out the reading selection, have them put events described in the passage in sequential order, write reviews of the selection, summarize the passage.

This three-step previewing model can be easily adapted for classroom use with elementary to college levels. It can be used with almost any reading selection. It enables students to develop and to be aware of their own purposes for reading and making predictions. Most important, the teacher, rather than set in the traditional role of questioner, is now cast in the innovative role of facilitator or guide of the reading-thinking process.

References


Previewing Model

Step I, Before Reading

OBSERVE

THINK

ASK

Step II, While Previewing

ASK 3 Questions

Step III, After Previewing

ASK Questions

PROVE Predictions

REVIEW Previewing Strategies

Were my predictions correct?

Read aloud a sentence from the selection which supports your prediction.

Continue to read with the same purpose or formulate new ones.

What will happen next?

Repeat Steps I, II, and III with a new selection.

* Stauffer, 1969
Almost all children throughout the elementary grades respond positively to being read to (Mendoza, 1985). Many teachers consider reading aloud an important part of their daily routine, primarily so students can enjoy a good story. Being read to provides students with an opportunity to be transported across distance and time, to imagine, and to vicariously take part in experiences beyond the realm of the listener. Through such positive reading aloud experiences a variety of additional benefits are often achieved with little overt instructional support; reluctant readers may be "turned on" to reading, students may be exposed to literature beyond their reading ability and outside their typical reading interests, aural exposure to more complex and formal written syntactic patterns prepares listeners to predict these structures in future print experiences, schema is expanded through vicarious experiences, and vocabulary is increased. For the pure enjoyment derived, and these
additional benefits, reading aloud to students is an invaluable activity.

Reading aloud to students also provides the teacher with an excellent instructional opportunity to develop listening comprehension, although teachers rarely take advantage of it. Perhaps the importance of developing listening comprehension is not clearly understood. Since listening and reading are complementary communication skills, time spent on the development of listening comprehension directly benefits the development of reading comprehension (Pearson & Fielding, 1982). The student who becomes an effective listener is more likely to become an effective and fluent reader.

Teachers may not recognize the need to guide comprehension when the student is the listener and not the reader. Just as direct instruction is necessary to the development of reading comprehension (Durkin, 1978-79), listening comprehension must also be guided. When teachers demonstrate their concern for comprehension only in formal reading instruction situations, students may get the message that reading and listening to print require different levels of involvement and understanding. Certainly, teachers expect students to comprehend what is read to them. A few minutes of guided instruction may enhance the quality of the listening experience.

Perhaps teachers do not want to infringe on the pure pleasure of the listening experience. Guiding comprehension can occur in many subtle ways which do not detract from the enjoyment of being read to. Some comprehension strategies can be as much fun as the listening experience itself. Every passage of print, whether read or listened to, should not and does not need to be elaborated or dissected. Nor do we suggest that everytime you read aloud you need to implement a listening comprehension strategy. But, when concepts are difficult or ideas bear thinking about, when appropriate, it is your obligation to guide the comprehension of the literature you select to read aloud to your students.

Developing Comprehension Through Questioning

Teachers use many strategies to develop comprehension. However, since the time of Socrates, questioning has remained the most common means of extending the thinking
process. Walk into any classroom and you will witness the ritual teacher-question, student-response format. Although questioning is second nature to teachers, many teachers are not effective questioners.

In most questioning situations, teachers automatically focus the majority of questions at the literal level, eliciting only superficial understanding and overemphasizing trivial detail (Guszak, 1967; Gall, 1970). When reading aloud to students, perhaps more common than recall questions, teachers ask listeners for affective responses to the story (e.g., Did you like the story? Which character did you like best? What was your favorite part of the story? etc.). Neither literal nor affective level questions are sufficient by themselves to extend the listener's understanding of the text.

Knowing how to ask effective questions is an essential teacher skill. Effective questions focus and extend thinking to higher cognitive levels. Such questions elicit longer oral language responses in which students "collect their thoughts" (Smith, 1976). Lindfors (1980) suggests that oral language is a powerful tool to be used in the development of comprehension and learning. Good questions stimulate language interaction from which "our theory of our world grows and changes as we encounter others' experiences, interpretations, and ideas." (p. 246)

The following guidelines for developing effective questions are appropriate to use before, during, and after reading literature aloud to students. Implementing one or more of these techniques occasionally when you read to your students should facilitate the listening/thinking process and extend comprehension through oral language exploration.

Questioning Prior to Reading Aloud

Psycholinguists believe reading comprehension is directly related to what the reader brings to print. All information is comprehended by relating new information to that which is known (Goodman, 1967; Smith, 1975). Concepts derived from past experiences are organized in a kind of filing system in our heads called schema. Schema which is unique to the individual plays an integral role in comprehension (Strange, 1980). Prior knowledge aids in making inferences as the story unfolds (McIntosch, 1985). This is true for the listener as well as the reader. Students should be able
to relate to and predict what is read to them more easily when schema is well-developed and called up prior to readings.

Before reading literature aloud to students, the teacher must prime the schema. Questions which elicit what students know about a topic, the story grammar, and the author can be helpful in predicting print. For example, before reading *Julie of the Wolves* by Jean Craighead George --appropriate schema-orienting questions to ask the students would be:

-What do you know about wolves?
-What might a story entitled *Julie of the Wolves* be about?
-What kind of conflicts might be found in this book?
-Has anyone read anything else by Jean Craighead George? What were those books about?

These are the same kinds of questions fluent readers subconsciously ask themselves when selecting books from library shelves. Such background information facilitates comprehension as the listener interacts with the story. It is important to remember that each student's schema will be different. Sometimes there may be little or no schema, especially when the listener's cultural background differs from the story (Strange, 1980). By asking schema-orienting questions, the teacher helps students to call up schema, to realize what each student individually knows, and to develop through oral language interactions a collective knowledge of the subject and author. The teacher also has the opportunity to fill in schema that is sketchy, or correct misconceptions before the reading. Listeners will be able to make appropriate predictions about the story based on this schematic understanding.

Questions After Reading Aloud

Questions which follow reading should stimulate thinking about the relevant concepts found in the text. Because the level of the question asked has a direct effect on the extent and thinking level of the response (Wixson, 1983), questions must be carefully asked to elicit the desired levels of thought.

Literal level questions focus on textually explicit information. Because the answers are found in the text,
literal questions offer little opportunity for discussion. Inferential questions focus on textually implicit information which is only implied within the text. There is latitude in answering inferential questions, for there is generally a range of correct answers. The same clues may lead to different conclusions by the listener. Evaluative questions call for interactions to be made between textual information and the schema of the reader. Answers are formulated by making judgments based on the reader's knowledge and attitudes of the world as well as the comprehension of the story. Answers to evaluative questions vary and are correct as long as the listener can justify the answer. Creative questions are the "What might happen if..." questions which change the text in some way, going beyond the author's conceptions. When responding to creative questions, the listener changes roles; the listener becomes the storyteller. Each student develops a scenario, and every answer is equally acceptable. Creative questions provide an excellent vehicle to elicit oral language in a totally unevauated context.

Most students generally can answer literal questions with ease. Inferential questions pose serious comprehension blocks at any age level. However, even young children (Hansen, 1981) and poor readers (Hansen & Hubbard, 1984) can be guided to make inferences. Guiding comprehension to critical thinking levels requires that the teacher sequence questions in such a way as to promote success (Smith, 1976; Carr, 1983). Developing questions in question clusters builds critical thinking on a literal understanding of the concept (Alexander, 1979; Taba, 1965).

A question cluster composed of a literal, inferential, evaluative, and creative level question asked after reading a chapter of an episodic book can be effective in extending listening comprehension. Such an LIEC question cluster takes one concept of the story, focuses thinking, then raises thinking to the next level. In the question cluster concept, all levels are important. Literal questions generate factual understanding upon which inferences are based. Evaluative questions provide listeners with the opportunity to evaluate concepts on text-based and/or schema-based criteria. Creative questions provide essential listener to author connections.

This excerpt taken from *A Gathering of Days* by Joan
April Fool's Day, 1831!

Matty and I played a great prank on our father this morning. Yesterday on conceiving the trick, I pared down a firm ripe turnip to resemble the end of a candle. After we all had retired last night, and making sure he preceded us in sleep, we tiptoed down and, with our "candle," replaced the one he uses daily to start the morning fire.

As soon as we'd heard a noise below--we'd scarcely slept a wink all night for fear that we should miss it--Matty and I wrapped up in quilts and crept to the foot of the stair.

He applied the flint for the longest time. But the "candle" would not burn. It happened that the early dark helped preserve our secret. Altho' he peered at it several times he did not detect the replacement! Now indeed did he lose his temper, calling on spirits of every sort, and cursing the damp of a Springtime morning which made the wick--or so he thought--so stubborn and refractory to the flint's persuasion. (page 59)

Literal - What was Catherine and Matty's April Fool's joke?

Inferential - What did their father think had happened?

Evaluative - Was this a good April Fool's joke? Why?

Creative - What might have happened if their father had observed Catherine and Matty replacing the candle the night before?

Questioning While Reading Aloud

In most questioning procedures the teacher questions and the student responds. However, when students generate questions, both general questions about story grammar and story-specific questions, comprehension has improved (Singer & Donlan, 1982). Such strategies allow for increased student activity and can be used at all grade levels. Even students in the primary grades have been successfully trained to ask questions at higher thinking levels (Cohen, 1983). Re-Quest and inQuest are two student-questioning techniques that can be easily adapted for use during the reading aloud process.
The ReQuest Procedure (Manzo, 1969, 1985) has two distinct parts. It is from the first part, Reciprocal Questioning, that the procedure derives its name. Students are asked to listen and to formulate questions they can ask the teacher after each page is read aloud. In this role reversal situation, the student tries to stump the teacher. As the teacher answers each student's question, reinforcement of higher level questions occurs in two ways. The teacher overtly reinforces critical thinking questions with praise ("Good question!" or "That really made me think!" etc.). A second more subtle reinforcement is tied to the length of response. Longer explanations required of higher level questions are more reinforcing to the questioner. After student questions have been exhausted, the teacher may ask the students any other questions about the text. As questioner, the teacher models only higher level thinking questions.

After using these reciprocal questioning procedures for several pages, students are asked to predict the outcome of the story as the second part of the procedure. The teacher records all guesses about possible scenarios. Then students vote for the ending they think is most probable. Each student's concept of story, developed through many listening/reading experiences with print, provides the basis for accurate prediction and establishes the criteria for evaluating each scenario as realistic/unrealistic. After ReQuest, students listen as the teacher reads the rest of the story to determine which of the predictions was most accurate.

ReQuest provides a strategy for listening/reading. Guiding students to ask higher level thinking questions and to make predictions and evaluate them stimulates complex cognitive processing.

The InQuest Procedure (Shoop, 1985) combines student questioning with spontaneous drama to develop comprehension. In the first phase of this procedure, students learn the art of Investigative Questioning by viewing and evaluating questioning techniques of television news reporters. Videotapes of local/national newscasts or presidential newsconferences can be edited to demonstrate "good" investigative questioning procedures. Students use these models to construct similar questions that elicit not only information from the person being interviewed, but also
projections and evaluations.

This questioning skill is then used by students while the teacher is reading aloud in the application phase of the procedure. At a critical incident in the story, the teacher asks a volunteer to assume one of the character parts in the story. While maintaining the character role and using the information based only on the plot, the character must answer questions posed by other class members. At other points in the reading aloud process, different characters may be interviewed. In this manner, events are analyzed from different characters' viewpoints.

In the evaluation phase following the interviewing, students evaluate the question-answer exchanges and are guided to understand that a successful interviewer delves beneath the surface events. "Good" investigative questioning leads to interpretations of the character's motivations and feelings as well as predictions of future actions.

Procedures such as ReQuest and InQuest in which students ask questions promote more than overt oral language interactions. When students ask questions, they also process their own answers in their heads. Students talk to themselves, asking and answering questions and evaluating the quality of the questions. Interiorizing the question-answer-evaluation interchange is the essential tool of metacognitive processing which enables the listener/reader to develop control of the comprehension process.

Beyond Questioning

Perhaps the most critical point made by Durkin (1978-79) regarding comprehension instruction is the importance of teaching students how to comprehend. Questions are asked to stimulate thought. However, it is often the answer that is the focus of the teacher's concern, rather than the thinking that led to that answer. It is the product that receives the teacher's attention and not the process. To teach comprehension is to demonstrate, to model, to show the thinking behind the answer—the process as well as the product. When the answer to a question is the end in and of itself, then the question is used as a tool of assessment to determine how well the student can comprehend. A question is a tool of instruction only when the process of getting the answer is as much a concern as the answer itself.
When using an LIEC question cluster, after the question-answer interchange, a teacher can assist students in verbalizing this "inside the head" process by asking, "How did you get your answer?" or "What made you think that?" This sparks the "think aloud" process that elicits the thinking behind the answer. In the ReQuest Procedure, the teacher is afforded an opportunity to model metacognitive processing while answering student questions that require inferring. As a fluent reader/listener the teacher demonstrates by "thinking aloud" how clues are pulled out of the text for inferential thinking and what is known and what is not known at different points within the text. By phrasing answers with "I think that..." or "I'm not sure I know enough yet, but I would guess..." etc., the teacher models the process of analyzing and predicting print (Fitzgerald, 1983; Collins & Smith, 1980). Teacher and student modeling of the thinking/comprehending process is a necessary part of comprehension instruction.

Reading literature to students is an important part of a total reading program. Teachers need to realize that students can listen to enjoy a book and at the same time be guided to better comprehension. Just as reading comprehension must be taught, so must listening comprehension. The development of listening skills may provide a necessary scaffold for the development of effective reading skills. By occasionally selecting a questioning strategy to use when literature is to be read aloud to students, meaningful thinking/listening experiences will be fostered.

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Interest in the teaching of writing has dramatically increased in the last few years. Teachers who have often had little formal training in writing education find themselves searching for ways to assist their students to become better writers. The Desirable Teaching Behaviors described below were identified by the Parent Education Follow Through Program (Ware, 1980). They can help teachers provide effective instruction in writing and deal with all three stages of the composing process: precomposing (prewriting or planning), composing, and post-composing activities (revising and editing).

1. Before starting an activity, explain what you are going to do.

Too often, teachers have children sit down and write simply because it's Friday afternoon or because their curriculum guide suggests that children should receive writing instruction for 60 minutes a week. In such cases, writing may be perceived by both the teacher and the children as an activity one does in order to fill a particular time slot. Smith warns that such an approach to writing may reduce this process to "ritual and triviality" (Smith, 1983, p. 566).

DTB 1 can help both the children and the teacher develop a more productive view of writing and the writing process. The "you" in DTB 1 is the children and what they are going to do is develop a polished piece of writing for an audience of their own choosing.

Before beginning any writing activity, the teacher should explore with the children just what "writing" is going to involve. First, the children need to come to the
awareness that writing is not a "one-shot deal" but an effort that will most likely extend across more than one day and will involve an extensive time commitment. The students should begin to understand the recursive nature of the writing process (Flower & Hayes, 1979; Tierney & Pearson, 1983). Writing is not something that is finished when an individual has made one try at it but a task that will often require reworking. That reworking must be perceived as a natural, integral part of the writing process.

Second, the children must understand that writing is not trivial and automatic but is a purposeful act of communication. An author has something to say to a particular audience and is writing to communicate those thoughts, not just because the teacher said "Write." This sense of audience is one factor that differentiates good writers from poor writers (Stallard, 1974). Unfortunately, even at the college freshman level, many writers still consider the teacher the only audience (Crowley, 1977). Such individuals are writing only because someone told them to.

The importance of DTB 1 is related to the power of purposeful reading. Just as having a purpose and a sense of the overall task enhances comprehension, having a purpose and sense of audience enhances writing.

2. Before starting an activity, give the learner time to familiarize himself or herself with the materials.

This precomposing step is probably the most important part of writing, just as it is for reading. And, as with reading, this introductory step has several features.

Before beginning to write, the novice needs to be familiar with the materials of writing. In this case "materials" does not mean the physical materials with which the writer will write. Rather, in DTB 2 materials should be interpreted as the ideas about which the author intends to write and the words with which to express these ideas.

As part of his or her familiarization with these materials, the writer should also begin thinking about ways of organizing these materials before trying to begin to write. This familiarization with the concepts and words to express those concepts, before any attempt to begin writing, will help ensure that the writer has a fluent, thorough, and somewhat organized fund of information with which to start the task.
Murray (1978) has found that this prewriting familiarization stage is especially important for experienced writers. He describes four stages of pre-writing through which experienced writers travel: 1) resistance to writing; 2) concern about having enough information or ideas about the topic; 3) awareness of audience and of any time constraints; and 4) rehearsal. Only after going through these four stages do experienced writers then write. Similarly, Stallard (1974) found that good writers spend more time in contemplation and other prewriting activities than do poor writers.

There are many ways in which the teacher can familiarize the child with the concepts and the vocabulary necessary to communicate those ideas to others. The language experience method is one way. The language of the writing is based on a common experience and the children write or dictate their writing after they have participated in and discussed their shared experience fully.

For already familiar topics, brainstorming activities may be sufficient for bringing to the students' awareness what they already know about the topic and for getting them to explore the topic fully, not cursorily. Regardless of the familiarity of the topic, it is imperative that the relevant vocabulary be highlighted. Words that the children suggest or use during the discussion should be placed on semi-permanent visual display. This display serves two purposes: It relieves later spelling anxiety and, more importantly, it serves as a device for retrieving ideas later while the child is actually writing.

Once the ideas and the associated vocabulary have been brought to the children's awareness, they should spend time organizing the ideas. Experienced adult writers are aware of the need to "tame" their mass of information before attempting to write, and they spend more time organizing their thoughts than do beginning adult writers (Atlas, 1979). Tyros of all ages need to learn the value of time spent in pre-writing organization. This organizational step also aids the writer in judging if enough information is available to begin writing (Murray's second stage).

One activity that can assist children in organizing their thoughts and thinking about related vocabulary before writing is Hanf's (1971) Mapping technique. Hanf introduced Mapping as a reading technique, but it is equally
appropriate as an approach to pre-composition. Mapping taps all three aspects of the pre-composition stage; concepts, vocabulary, and organization. To use Mapping as a pre-writing exercise, place the topic of the composition in the center of the chalkboard (or the center of the page). Identify sub-topics next, and extend a spoke from the topic box for each sub-topic. Vocabulary that might be used to convey information about each sub-topic on lines radiating from that sub-topic, related words clustered. When the map is complete, it serves as an outline for the writer and a visual organization of the ideas and words with which to express the ideas.

Another effective way is to use the time-honored notecard technique. A small topic is identified and the children put one brainstormed idea on each card (which can be 3" x 4" pieces of excess construction paper, or a paper product which has a band of "restickable" adhesive at the top of each sheet). The children then move the cards around until they like the organization of the ideas. The use of cards reduces the amount of writing needed at this stage. Thus, the children will be more likely to complete this stage. Furthermore, the use of easily movable ideas means that each attempt at organization is temporary and easy to change. Therefore, the children will learn to be more flexible and explore a variety of organizations.

These "pre"-composing familiarization activities are not, of course, limited to preparing for the first draft. Given the recursive nature of the writing process, these activities might indeed be used before revisions as well.

3. Ask questions which have more than one correct answer.

On occasion, the teacher may wish for a class of children all to write about the same topic. At these times, DTB 3 can have three important effects on writing. It can promote creativity, increase risk-taking behavior, and encourage revision.

Asking questions that have more than one right answer releases children from the burden of creating (and the teacher from seeking) the one right way to convey an idea. The emphasis should not be on what is the right way to approach a particular piece of writing, but on what are reasonable ways. Instead of using emotional and physical energy on trying to match someone else's prescription of
how a topic should be approached, children should be using this energy to explore their own creative instincts.

A related outcome of DTB 3 may be increased risk-taking behavior. When children are not likely to be penalized for diverging from the suggested or usual model, they will be more likely to try new strategies, new words, new genre, and even new ideas. When the teacher does have one right answer in mind, only the most confident (or blithely unaware) child will risk the penalties of divergence.

One way to promote creativity and risk-taking in writing is also borrowed from a reading technique; Semantic Webbing (Freedman & Reynolds, 1980). In Semantic Webbing a story or even a piece of expository writing is read up to the point at which several different endings might be possible. For example, with Keats' Peter's Chair, the children would read or listen to the story of Peter's dismay as he discovers that his cradle, high chair, and crib have been usurped for the new baby and painted pink, but that his chair has yet to suffer that fate. At that point, reading stops and the children are asked "What might Peter do next?" All remotely reasonable suggestions are written on the board around that question. (For Peter's Chair the answers might range from "sit in it", "break it", "run away", "give the baby away" to "paint it for the baby himself" or "ask his parents not to paint it.")

The children's responses are then categorized in some way, such as in Peter's case, "nice things to do", "so-so things to do" and "nasty things to do." At last, the rest of the story is read and the children compare their ideas to the way the author has chosen to end the story.

Semantic Webbing might be used as a reading activity until the children gain confidence in their ability to produce good ideas. At that point Semantic Webbing could become a writing activity, with each child choosing one suggested middle and/or ending to the story (or making up an original element) and finishing the piece of writing.

A third important but very different reason for asking questions which have more than one right answer is that it encourages revision. Writing is not seen as producing the correct piece of writing but as making an effort at composing and communicating one's thoughts and then seeing if one can do it even better. Simply because there
is not a right way, the task can be seen as always "under way" or "in progress."

Revision should be viewed as an activity of improvement rather than of correction. With this focus in mind, teachers can encourage the "in progress" approach to writing by having children concentrate on just one aspect of their writing to improve upon for a particular lesson. That aspect (such as producing more interesting sentences or using more descriptive words) becomes the topic of a group lesson. After the teacher-directed lesson, each child can take his or her own current piece of writing and apply the just-taught techniques to improve it.

A final reason for asking questions which have more than one right answer is that it is certainly more interesting for the teacher, who may have to read 35 pieces of writing on the same topic.

4. Ask questions which require multiple-word answers.

This DTB will aid the teacher in helping children to select topics which are broad enough and interesting enough to ensure that there is something to write about that is worth writing about. There is something to say, to convey. In the absence of a topic of sufficient breadth and interest, young writers (and others who failed to do sufficient research) may resort to filler-- "...and then...and then..." When this happens, the writer has lost a sense of audience, has abandoned any intent to communicate a message, and has begun to view this writing task only in quantitative terms. Pre-writing activities such as Mapping will help the student determine is there is anything worth saying about the chosen topic.

A second aspect of "multiple word answers" is that of richness in the language used. A writer may have a wealth of information to tell about a topic but may lack the skill to express those thoughts other than in short, dull, adjectiveless sentences. A vigorous vocabulary development program, with special emphasis on adjectives and adverbs, is essential for enriching students' writing vocabularies. To improve the ability to produce more sophisticated sentence structures, sentence-combining exercises have been found effective (Daiker, Kerek, & Morenberg, 1978). Word and phrase cards can be used by students at their desks to explore various ways of combining and expanding
sentences. Using cards rather than having the students write their efforts on paper has at least three advantages; First, the manipulation of the cards is more physically involving simply writing. Second, it is more novel and more interesting. And third, and most importantly, the students will be able to explore and practice a great deal more in the same amount of time with the movable cards than if required to write everything.

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COMPREHENSION:  
PROCESS OR PRODUCT?  

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In terms of the measurement of comprehension in school, in most instances we look at the product when we question students and hear their answers. More concern should be directed to the process, however, as we can make changes in the process through instructional techniques.

In viewing comprehension as a product, we cannot be sure of whether a reader did not understand because of lack of prior knowledge, not making use of prior knowledge possessed, or using inadequate strategies. This can only be determined by obtaining a view of the process (i.e., how the reader arrived at her/his responses). This can be accomplished by measurement of a reader's comprehension monitoring strategies. If readers have no background for reading or if they do not relate what they know about a topic to what is new, there will be no comprehension. Children must know that the purpose of reading is to gain understanding of the text, and that it is necessary to use what they already know to do this. In some cases readers may be simply adding new information obtained from reading to that which they already know. In other instances, what is read may lead to an adjustment in schemata held. In this latter instance the reader moves into critical analysis.

As we assess children's understanding, we must also be aware that there is not necessarily one correct answer to a question. Teachers must recognize that children will not all arrive at the same meaning for a text, but rather that their meaning will be founded on the basic structure formed by their schemata.

Responsibility for assisting readers to make use of prior information rest mainly with three individuals. First of all, the author of the text, the reader her or himself, and the teacher. Next we will take a look at how each of these individuals can make a contribution to comprehension.
Task of the Author

The first person contributing to this process is the author as s/he is responsible for making sure the text is understandable to the reader. After making a decision as to what it is s/he wishes to communicate, s/he must then decide how to communicate it. In order to do this effectively, s/he must be able to anticipate what sorts of background her/his intended readers have and write so that they will be encouraged to draw on this background knowledge, thus helping to ensure comprehension.

Inclusion of an introductory paragraph to summarize what the chapter will be about, provision of pre-reading questions, and/or instructional objectives can be beneficial in helping the author achieve this objective.

Task of the Reader

Readers must relate what they anticipate the passage will be about to what they already know. While mature readers are aware that reading is in a sense an interactive communication process between author and reader, and that what one knows about a topic prior to reading can assist in the interpretation of the author's work; poor readers are not able to recognize this. Thus, they have difficulty in viewing the broad picture which the author represents in his work.

Mature readers are able to conduct an active dialogue with the author through the establishment of purpose for reading, their background as framework, and their ability to relate that background to the author's message. This interaction leads to comprehension.

Task of the Teacher

One of the very easy procedures that teachers may and do follow beginning at the earliest levels is that of reading to children. This helps move the listeners from the spoken language to printed language and assists them in gaining broader knowledge of the world and in developing appropriate schemata.

One of the difficulties most children face in school is that of learning to read content materials effectively. If we look at history as one example, students cannot possibly have first hand experience with everything they are asked
to read about. If they are asked to read about the War Between the States, a mature reader with an interest in history will undoubtedly have much prior knowledge concerning the initiating event, where the war was fought, the parties in the war, the important battles, important leaders, and victor. S/he will likely possess a general schema for war so that the above particulars can be filled in for the designated war. Poor readers, on the other hand, may have few or no schemata for war and few specific schemata to plug in for the War Between the States.

For teachers who teach reading in any of the content areas, it is necessary to determine whether students have the general background or experience to understand what they are reading, as well as how to use it. Beyond that it is necessary to draw as many parallels as possible to real life situations so that students can become more readily involved. Students also need to learn that some of their previously held attitudes or beliefs about the subject can influence their interpretation of what is read. Their interpretation may or may not be that which the author had in mind when s/he wrote it.

It is crucial that teachers recognize that there is a gap between the knowledge of the student and the author of the text, as well as a gap between the knowledge of the student and that of the teacher. Most teachers are teaching a particular subject because they have a great interest in it and also know a great deal about it. Thus, it behooves them to recognize that their students not only will not have as much knowledge about the subject, but additionally some of those students may have no interest in it whatsoever. One of the requirements then is to relate the material as much as possible to the students' lives so that they may want to learn more and develop an interest in doing so. There is probably an even greater gap between the knowledge and interest of an author of a text and that of the students. Thus, another of the teacher's tasks is to help bridge the gap between the text and the students. The teacher serves as a bridge joining author and student. Whether the student sinks or swims is heavily dependent upon what the teacher does in the classroom.

Many presently implemented practices are designed to help children develop relevant schemata even though teachers may not have viewed them this way in the past. The first
of these is something which is done in all basal reading lessons--preparation for reading. It is even more important for this to be done in content areas where students have less background than for reading narrative material.

A second area is that of assisting in word recognition and vocabulary development. In both instances new words should be presented in meaningful context, and students should draw on their personal experiences (existing schemata) to arrive at meanings of new words.

In measuring comprehension, it is essential for teachers to go beyond the literal level in questioning. Students must be able to make inferences and should be encouraged to do so.

At the literal level students are asked to either recognize or recall. Making inferences requires that the students make some hypotheses about meaning based on what is actually stated in the text. More is required of the reader at this level. If we move to a next level, the reader is now asked to critically analyze both facts and inferences. In so doing the reader's background enters in, as s/he is now looking at the views presented by the writer and comparing them with her/his own. At the highest level we have creative reading in which the readers now make use of what has been learned as it applies in their own lives.

Langer's PReP(Pre Reading Plan, 1981) can be of benefit in assisting the teacher to determine what the student knows about a given topic. This three step procedure is as follows:

Phase I--In this phase the teacher asks the student to tell anything that comes to mind when a particular term is mentioned. This helps to review what, if anything, a student knows from prior experience. If the student has much prior knowledge, her/his response will be a definition, synonym, or analogy. If the student has some prior knowledge, the response will be an example or characteristic. If the student has little prior knowledge, the response will be very sketchy, giving no picture of what the term means.

Phase II--Now the teacher asks such questions as "What made you think of your response?"
Phase III--Students are finally encouraged to contribute any information or ideas gained through the class discussion. This gives the teacher an opportunity to note how students acquire and organize information prior to reading.

The structured overview (Earle 1969) is another technique which can be employed by teachers in assisting their students to understand content material. Let us take the example of the First World War and see how a structured overview could assist in developing understanding. To do this key vocabulary and important terms must be listed first. The overview is constructed by the students through a process of trial and error until a satisfactory arrangement is reached.

**Key Vocabulary**

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<thead>
<tr>
<th>Allied Powers</th>
<th>Central Powers</th>
<th>Battles</th>
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<tr>
<td>Participants</td>
<td>Leaders</td>
<td>Sarajevo</td>
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<tr>
<td>June 8, 1914</td>
<td>Britain</td>
<td>Germany</td>
</tr>
<tr>
<td>United States</td>
<td>Austria-Hungary</td>
<td>Russia</td>
</tr>
<tr>
<td>France</td>
<td>Culmination</td>
<td>Victor</td>
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<tr>
<td>World War I</td>
<td>Lloyd George</td>
<td>Woodrow Wilson</td>
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<td>1914-18</td>
<td>Kaiser Wilhelm II</td>
<td>Nicholas II</td>
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<tr>
<td>Georges Clemenceau</td>
<td>Somme</td>
<td>Ypres</td>
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<tr>
<td>Emperor Franz-Joseph</td>
<td>Marne I</td>
<td>Verdun</td>
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<tr>
<td>Argonne</td>
<td>Jutland</td>
<td>Gallipoli</td>
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<tr>
<td>Tanneburg</td>
<td>November 11, 1918</td>
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An illustration of a structured overview is to be found on the facing page.

As should be evident at this point, readers make use of schemata prior to, during, and after reading. The pre-reading procedures in which we ask students to contribute what they know about a topic and in which we introduce a new set of vocabulary words and concepts are examples of use prior to reading. The structured overview and questioning at various successive levels require students to remember what has been read, to organize, and to sift out the irrelevant, leaving the meaningful core.
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