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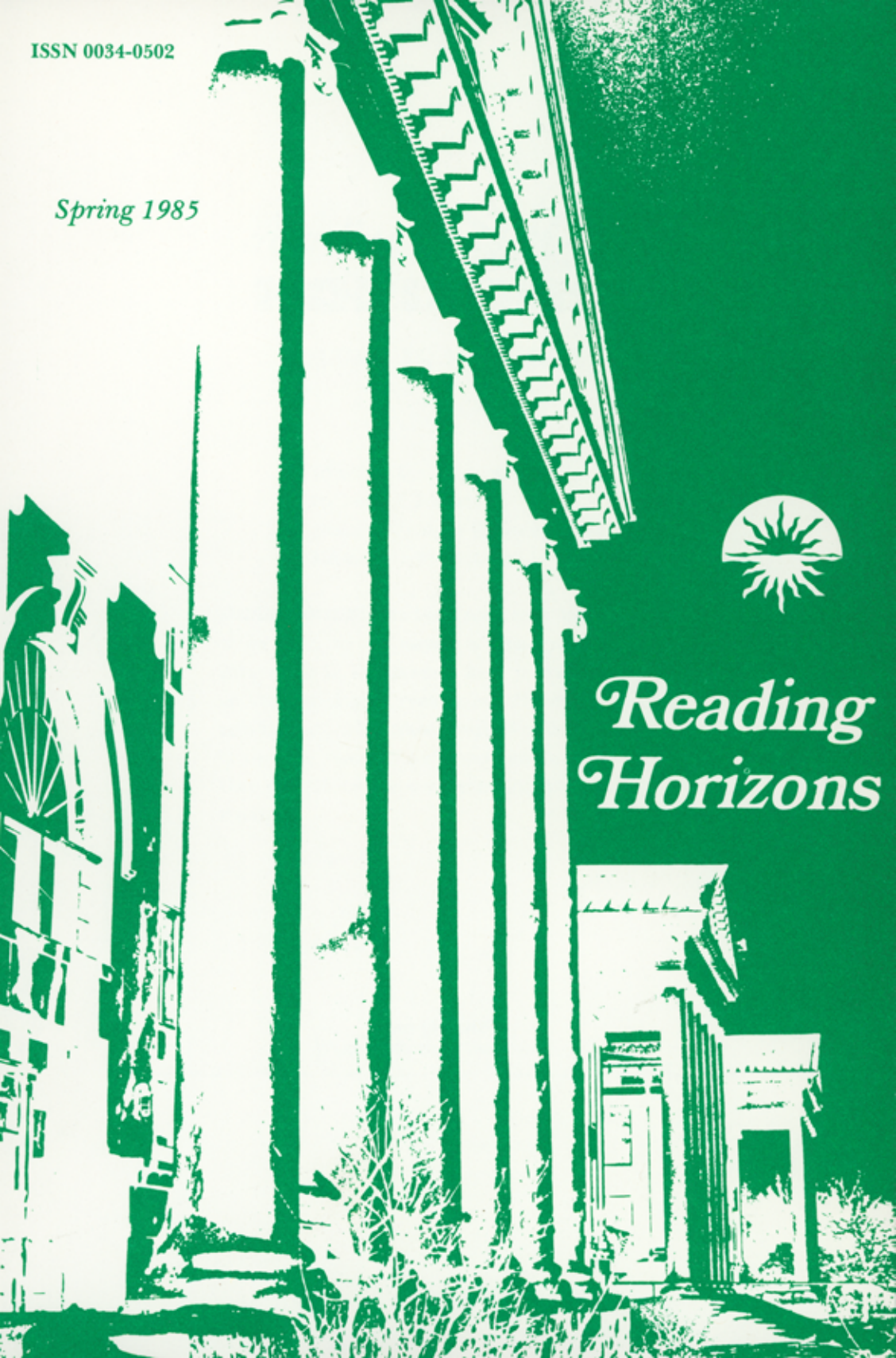

Reading Horizons

Reading HORIZONS

VOLUME 25, NUMBER 3

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READING HORIZONS has been published quarterly since 1960, on the campus of Western Michigan University in Kalamazoo. As a journal devoted to the teaching of reading at all levels, it provides all interested professionals with the ideas, reports, and important developments that constitute the ever widening horizons of reading.

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TEACHING STUDENTS TO USE TEXTBOOK-STUDY SYSTEMS

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The SQ3R method of textbook study has received widespread acceptance over the past 38 years. Not only is this system advocated and used extensively, at least 100 modifications for both general text study and specialized content field study have appeared in the literature. As a result of the acceptance of textbook study systems, a number of recommendations on how to teach the use of systems have appeared in methods texts. To a lesser degree, experts have discussed readiness factors for teaching students to use the textbook-study systems. This article will review the literature on: (1) prerequisite skills a pupil should develop prior to learning a textbook-study system, (2) teaching activities undertaken before introducing a system to a class, and (3) recommended procedures for teaching SQ3R. By carefully considering both readiness factors and instructional procedures related to textbook study systems, teachers can plan programs that support learners' successful mastery and long term use of these systems.

Prerequisite Skills

Several writers suggest that students must master certain skills before instruction with textbook-study systems can hope to be successful. Pauk (1979) points out that, though many teachers think a textbook study system is a magic door to mastery of expository materials, these systems do not provide the answer. Pauk says—"The lack—the missing link—is the omission of a cluster of skills that should be taught before the SQ3R is taught. The cluster deals with main ideas" (p. 87). The emphasis on identifying main ideas is a prerequisite to study systems, because the reader must extract the most important general concepts from each section of the text if the system is to operate properly. Consequently, Pauk advocates that practice sessions in locating both main ideas and supporting details and in clarifying structural patterns should precede any SQ3R instruction.

Trillin and associates (1980) also believes that instruction with SQ3R is appropriate only after students can select the essential ideas from a passage as well as synthesize the materials. Epstein (1968) puts forth an additional set of requisite skills: (1) reading by phrases, (2) recognizing and employing full and half signals, (3) understanding paragraph structure, and (4) identifying key words and phrases. Singer and Donlan (1980) take the issue one step further. They state that SQ3R should be taught only after students have learned how to read and learn from text through directed reading activities that emphasize and teach active

comprehension through formulating questions and then reading to answer them. Once these skills have been mastered, the use of a textbook-study system such as SQ3R can be taught. Given the similarities between the DRA and SQ3R (Dauzat & Dauzat, 1981, p. 232), the Singer and Donlan (1980) model appears quite logical.

Whether each of these prerequisite skills is necessary for successful mastery of SQ3R is, of course, subject to debate. However, Pauk (1979) points out a valid consideration. He suggests that when content field teachers or counselors are cast into the roles of reading specialists at either the secondary or the college level, there may be a tendency for them to latch on to well known techniques which have face validity. If the systems fail to promote better comprehension or test scores, the real problem may well be that the pupils were not ready to utilize a textbook-study system. Pauk's observation is particularly relevant in the case of underprepared college students. SQ3R will appear as a face-saving, adult-oriented study skill that is quite attuned to the rigors of college study. On the other hand, the remedial work that is actually required may be viewed as high school oriented, and therefore, undesirable or even degrading to the underprepared student. In striving to overcome negative attitudes which might still be lingering in the students, instructors may stress developmental rather than remedial content. Robinson (1950), however, noted the flaw in such a philosophy. He clearly believed that there is an important difference between providing students with remedial work and teaching them higher level skills such as SQ3R:

> In remedial work, the teacher looks for the cause of a disability, and the student is aware of this goal—getting up to the average preformance of those around him—but is embarrassed by his deficiency. In learning higher-level skills, on the other hand, the student is often not clear as to what he is trying to learn because even the best students around him usually do not have the skill; since his work is probably already fairly good, there may be little motivation to do better—indeed, there may be an unwillingness to do so well as to rise above the crowd. Thus there are two basic problems in teaching higher-level skills: making goals clear and motivating the students. (p. 574)

The implication, then, is that basic skills must be mastered before advanced study skills are introduced in the curriculum. One way to make the goals of instruction clear and to motivate students is first to make sure that the prerequisite skills are firmly in place, and then undertake a well planned set of preteaching or readiness activities.

Preteaching Textbook Study-Systems

Most students are routinely taught systems of study with little regard for their actual readiness for instruction. This situation is understandable since most methods texts to not tend to address the readiness issue. The issue then becomes what skills should the learner possess before undergoing training with a textbook study system? Skills and sequence charts in basal reading series might be consulted but any such recommendations are most

likely founded upon general tradition and opinion rather than a sound research basis. Hence, there are unanswered questions as to what readiness factors are of primary import in teaching SQ3R type systems to students.

The first such question pertains to the issue of when to introduce a unified study-skills system. They are often introduced at the middle school or junior high level. Tradition aside, there is no research which clearly points to an optimum age when instruction should begin. If the ability to read at a level of automatic response with a system is dependent upon developmental factors as much as requisite skills, then research should be conducted to determine the age or stage when the average student is ready to learn specific components or master an entire study system. Research might demonstrate that specific components of a system should be presented to students enrolled in different grades (e.g., surveying, eighth grade; questioning, ninth grade), with the entire system being given at an optimum age or developmental level.

In the same vein, another key to mastering SQ3R may lie in students' first mastering a less complex method of study. Teaching students to use less involved study methods may develop the foundation of necessary skills for mastering SQ3R. For instance, training students to outline or to map chapters (often a graphic form of outlining) might lead them to understand the activities and the rationale for the recitation and review steps of SQ3R. Likewise, training in underlining or highlighting followed by additional work with marginal gloss of summary statements or questions might be useful in promoting mastery of the question step in SQ3R. If research demonstrates that using easier study methods first is helpful, then study-skills specialists at high school or college levels might introduce selected techniques at the beginning of a semester and teach students how to use a unified textbook-study system during the latter part of the term.

A second readiness question pertains to the unique learning style of each student. The studies which attempt to determine the relationship of textbook-study systems to personality factors are at best inconclusive. As educators continue to demonstrate a growing interest in affective aspects of studying, and as more accurate instruments are developed to identify various styles of learning, further research should be undertaken to determine whether mastery and utilization of a particular study method is linked to personality type or learning style (e.g., introversion and outlining). If a correlation exists, it may be beneficial to use instruments such as the Meyers-Briggs Type Indicator (Meyers 1976) or the Learning Styles Inventory (Kolb, 1976) to match the student and method before instruction.

Although readiness factors are not generally addressed in the literature, there are several preteaching activities for introducing textbook-study systems. Hill (1979) suggests that the student's previous exposure to systems and mastery of any system must be measured before undertaking any additional work with textbook study systems. If the previously introduced method was not fully mastered, confusion may arise which leads to negative atti-

tudes toward study systems as a whole and the subsequent avoidance of their use. Hill therefore recommends that the instructor present an unknown system to the class rather than reintroducing one the students may have already encountered. In this way, any negative opinions formed about study systems in previous classes can be more effectively neutralized.

Teaching Textbook-Study Systems

Fry (1972) warns that students will usually not learn how to use textbook-study systems by lecture alone. He recommends that the instructor go beyond lectures by preparing practice exercises that are guided to completion through instructor-student interaction. These observations are supported, in part, by Delong's (1948) research demonstrating that college students receiving extensive study-skills practice in a lab setting out-performed peers in conditions that did not include practice. Courtney (1965) and Dauzat and Dauzat (1981) also believe that students must be guided in learning how to use the steps of the system. To this end, a number of methods for teaching SQ3R-type systems have been described in the literature (Alvarez, Colwell, Mechon, & Basile, 1979; Cunningham, Cunningham, & Arthur, 1981; Donald, 1965; Forgan and Mangrum, 1976; Hill, 1979; Orlando, 1982, Paulson, 1982; Staton 1959, 1964; Tinker & McCullough, 1975). Each method varies in the procedures utilized and the time expended in the teaching of the system. However, these suggestions can be classified into three categories (Hill, 1979): part-whole, problem solving or whole-part, and group instruction mode.

For the part-whole method, each part of the system is taught independently over designated periods of time. When students have mastered the individual steps, the parts are integrated into a whole system. An acronym is then taught to the class (e.g., PQ4R, POINT, PQRST, OROR) and followed by practice and application with meaningul materials. Robinson (1959,'61) basically supports the part-whole instructional paradigm. He states "In learning a skill such as the SQ3R method, instruction must be given on the separate steps before practice can be done using the whole skill" (1961, p. 33). In teaching the parts, he suggests that the teacher stress practice sessions in which the learners: (1) turn headings into questions, (2) refine their post-reading notetaking ability, and (3) review their notes by covering them and reciting. In combining the parts of the system, the students work both with passages provided by the teacher and with reading selections from the other courses in which they are enrolled. Informal measures can be employed to gauge the quality of notes and comprehension of passages. Robinson feels that a work rate of 150 words per minute serves as a minimum level of proficiency.

Wooster (1953) expands upon Robinson's recommendation with an eleven-part instructional plan that covers a four-to-five week period. After a brief survey of the system, the instructor teaches specific parts of the system. The latter parts of SQ3R are taught first (notetaking, reviewing, recite and review steps together, and reading followed by notetaking from memory). Next, the initial steps are introduced, still in reverse order (reading guided by

questions, questioning, combining the previous steps together in reading and surveying). Finally, all of the parts are ordered as a system, the SQ3R method of study is presented to the group and practice sessions are provided.

A second general teaching procedure summarized by Hill (1979) presents the system as a problem-solving method. Instruction is organized on a whole-part basis for the solution of a series of study problems. Initially, the teacher leads the pupils to see a personal need for a study system. This step is then followed by introducing (1) the overall system, (2) the acronym, and (3) the most significant aspects (i.e., nature and uses) of the ordered steps. The class is then guided through the procedure with a sample passage. Instruction and practice in the various components occur as a function of the students' needs or the suitability of each practice passage for teaching a step. Instruction is limited to the predetermined study problem. In order to develop greater flexibility and independence in the students' use of the system, additional study problems, each more complex and challenging, are assigned over a period of time.

In one variation of the whole-part method (Cunningham et al, 1981), students participate in an experiment designed to determine whether the textbook strategy is more effective than the commonly used read and reread strategy. Another variation of the whole-part method (Staton, 1959), encourages teachers to follow a specific plan outlined in the instructor's manual. Not only are the teacher's directions provided, but the anticipated student remarks are included as well. Thomas and Robinson (1974) also provide the instructor with detailed steps to follow in a similar procedure.

A third instructional method, somewhat related to the problem-solving method, presents the study system and its components to the students through a group-instructional mode. The pupils are guided through an unnamed system several times a week with the apparent objective of mastering the content of the assignment. When the students can accomplish this task, components of the system are practiced as independent activities. A lecture on the value of such systems may be presented. During this session, the class can evolve its own acronym for independent study. The general session may be followed by having students practice in pairs with class materials (Tinker & McCullough, 1975).

The method of instruction is only one facet of teaching a textbook-study system. The materials of instruction are of equal import, and they must be selected carefully regardless of the method. At first, students should encounter materials that are particularly well suited for use with a study system (Thomas & Robinson, 1974). Basile (1978) describes several pitfalls of selecting materials without due care. Epstein (1968) feels that the materials should be at or just below the students' independent reading levels and that the subject matter should present little or no vocabulary or conceptual difficulty. Initially, the students should learn the method in only one content field, and later, as they become more proficient with the system, the passages can

be more difficult and more diverse in subject matter. King, Stahl, & Brozo (in press) have suggested that students work with various college outline series, college catalogues, reprint series, and later, course textbooks.

Hill (1979), Maxwell (1980), and Thomas and Robinson (1974) all emphasize the importance of teaching pupils to be flexible in their use of textbook-study systems. Using the POINT system (Preview, Overview, Interpret, Note, Test) as an example, Hill (1979) suggests that pupils adapt it to meet their personal needs and current academic demands. This is accomplished simply by revising the acronym (e.g., POT, PON, PIT) according to the students' academic objective and then working through the variation to master the reading task. To help find the variation that functions best for them, students are encouraged to keep a chart of how long it takes to complete equivalent tasks with different variations. In addition, students should attempt to both objectively and subjectively monitor their success in meeting academic goals. Content field teachers can select a variation of a system and tailor it to the course content; however, the same basic system should be used throughout the institution.

Duration of treatment is another important instructional variable in teaching study systems. It does not appear any consensus has been reached on the amount of time required to teach the mastery of SQ3R-type systems. Donald (1965) recommends shortening general class lessons by five to seven minutes so that the new skills can be introduced to the students. Forgan and Mangrum (1976) suggest that instructors should spend three class periods teaching the system. During the following weeks, 15-minute sessions would be used in additional demonstrations and student practice. At least 20 follow-up sessions are recommended for the skill to be raised to the "automatic response level" (p. 246). Burmeister (1974) states that a content-field teacher should teach the system for the period of one month. At the conclusion of that time, another content-field teacher should assume responsibility in guiding the process. This should continue throughout the school year, rotating from subject to subject and teacher to teacher. One common point raised by each of these experts is that the system for studying should be taught with a series of lessons, rather than through one-time only lectures.

Inferences which can be drawn from the research on SQ3R seem to support the views of Burmeister (1974), Donald (1965), Forgan and Mangrum (1976), and Fry (1972), among others. The key to mastering any of the commonly advocated reading and study-skills systems seems to be intensive instruction with numerous opportunities for directed practice over an extended period of time (Stahl, 1983). Yet a recurring problem with the experiments on textbook-study systems in an insufficient training and testing period. In several cases (Garty, 1975; Hana, 1946; Holmes, 1972; McCormick, 1943; McNamara, 1977; Scappaticci, 1977; Willmore, 1966), the researchers delivered training programs of such a short duration and such limited intensity that mastery of the complicated and previously unknown study technique was improbable. In such cases the treatment groups undergoing training in the rather common

and uncomplicated approaches to study were at an unfair advantage. Other researchers (Foreman, 1982; Oakey, 1978) appear to have overcome the training issue, at least on the surface, by embedding the training component into a basic writing class and then working with the technique throughout the school term. Yet in these studies the time of direct presentation with a textbook-study system has tended to be limited and hence probably as unlikely to lead to mastery and internalization of a system as a short-term training program. In addition, the students may have viewed the study-skills training as tangential to other aspects of these basic writing courses.

Even though training procedures appear to be central to successfully teaching students to use a textbook-study system, to this date, there are no reports in the literature specifically addressing the effectiveness of the three general teaching procedures: part-whole, problem solving (whole-part), and group instruction. What is the optimum design, content, and duration of a training program that teaches pupils to (1) explain the system (2) master the individual steps of the system, (3) combine the steps into a unified whole, (4) automatically use the unified system in promoting active comprehension, and (5) monitor the aspects of the system which promote metacomprehension and ongoing review? It might be safely assumed from Delong's dissertation (1948) as well as the studies on textbook-study systems (see Stahl, 1983, for an analysis of 27 investigations) that neither blind training nor informal training (Brown, Campione, & Day, 1981) will lead to successful mastery of a textbook-system.

Posttraining Utilization of a Textbook-Study System

In addition to factors pertaining to a student's readiness to learn SQ3R and to the actual instructional methods used to present a system, post-training factors must be considered. Once students have completed the instructional components and the assigned activities designed to teach a textbook-study system, there is no guarantee that they will continue to use the unified system at a later date. While the observations of several noted authorities (Maxwell, 1980; Sheppard, 1964) have indicated that most students do not continue to use a system independently following training, there has never been a formal investigation to determine whether training with a textbook-study system may influence students' study habits or activities over an extended period of time. Even with the obvious difficulties associated with case studies, direct observations and self-reports, such a study would provide researchers and practitioners with valuable information. This research would suggest whether students (1) continue to use systems in their entirety, (2) adapt systems to fit personal preferences or course requirements, (3) utilize individual components as desired, or (4) disregard study systems in favor of less formal or tried-and-true methods of personal study. Two related questions which should be considered include: "Is any particular system more apt to be used on an independent basis than another system?" and "Does the nature of the training program or method influence the students' long-term acceptance and usage of a system?" In the long run, the posttraining factors are at the root of teaching

textbook-study systems. Success or failure of teaching methods is measured by students' use of systems after they are free of the instructor's influence or class assignments. Yet, it is at this very stage that research is sorely lacking.

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BASAL READING INSTRUCTION AND E.S.L. STUDENTS

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The number of English as a Second Language (ESL) students enrolled in schools across North America is increasing (Cummins, 1981). The increase means that more are enrolled in mainstream classrooms where they are taught to read using materials and programs designed for native English speakers. Eighty to ninety percent of the reading instruction in the United States (Aukerman, 1981; Austin & Morrison, 1963; Chall, 1967) and Canada (Pieronek, 1981) involves basal readers. Since L2 learners are being taught to read using basal readers (Gunderson, 1983) this paper presents an integrated Second Language (L2) lesson plan developed with their needs and abilities in mind.

Basal Readers and the D. R.A.

A basal reading series is generally designed within a skills model of reading, typically providing "...for developmental sequences of phonics skills, word recognition skills, comprehension skills, and so on" (Aukerman, 1981, p. 11). Basal vocabulary is controlled so that only words occurring at a high frequency in the general lexicon are used, only a few words are introduced at a time, words are repeated often to ensure they are learned, and words are not encountered in text until they have been introduced. The initial texts designed for L2 students contain vocabulary that differs from L1 basals. In L2 texts the highest frequency words are inflected "ing" forms of verbs (Rebane, 1983). Since they are the first grammatical morphemes learned in both L1 (Brown, 1973) and L2 (Dulay & Burt, 1974) it is appropriate to include them in initial L2 texts because they are a prominent feature of the language of beginning L2 learners. The vocabulary in initial L1 reading texts is inappropriate, however. Teachers should place beginners in texts designed for L2 students or use some other instructional approach such as Language Experience.

Basal reading series usually prescribe the Directed Reading Approach (D.R.A.) to teach individual lessons which involves; 1) a discussion of story background, 2) the introduction of new vocabulary, 3) guided reading, 4) story follow-up activities, and 5) related skills development activities. Pieronek (1979) developed the "ideal integrated reading lesson plan," a refinement of D.R.A., as a guide for classroom teachers. The L2 plan presented in this paper is a refinement of D.R.A. to be used with L2 students.

The D.R.A. and L2 Students

Text comprehension depends, in part, on one's background knowledge and experience (Bransford and Johnson, 1978; Thorndyke,

1977; Anderson, Reynolds, Schallert, and Goetz, 1977; Mandler and Johnson, 1977). Betts (1946) notes that "...the pupils should be prepared for the reading of a given selection" (p.430). D.R.A. provides for background knowledge by introducing historical features and concepts. Background knowledge is essential for L2 students (Johnson, 1981 & '82; Carrell, 1981; Hudson, 1982). However, they face the additional burden of not knowing a great number of the items of vocabulary associated with the background of a particular story. They lack a knowledge of mainstream customs, idiomatic terms, or genre-specific vocabulary. The standard procedure for basal vocabulary introduction is in isolation. Aukerman (1981) describes this as the "whole-word" method or "...providing pupils with the new words in each lesson in chalkboard work just prior to reading in their pupil books" (p. 11).

Step one

The first instructional step is the integration of vocabulary and background, a task best accomplished by assuring that 4 areas of vocabulary are covered: 1) new vocabulary, 2) context-dependent vocabulary (e.g., "pilot" in a story about ships means something different from "pilot" in a story about airplanes), 3) genre specific vocabulary, and 4) idiomatic vocabulary - within the structure of the story. It is important at this point to introduce words at a sight level as an aid for learning meaning. Stage one can be best understood with an example from a third grade classroom in which three students were being introduced to a basal story about a "fair". (Ruddell, Adams, & Taylor, Surprises and Prizes, 1978)

Before the lesson the story was mapped and an outline containing main narrative elements in chronological order was produced. The resulting structural units resemble typical story grammar elements (cf. Mandler & Johnson, 1977; Rumelhart, 1975; Stein and Glenn, 1979; Thorndyke, 1977). Vocabulary was ordered according to occurrence in the story providing a set of expectations to guide passage comprehension. Illustrations were collected for use as cues to the learning of meaning. Analysis resulted in the following outline:

1. Introduction - Family on its way to a fair.
2. Family arrives at fair, introduction of fair features.
3. Family buys tickets to the fair - buying features.
4. Family sees a high wire show - high wire features.
5. High wire incident - incident features.
6. Conclusion - Family gets to jump on net.

Thirty-four words to be introduced were identified: no, this, want, dad, Dave, miss, mom, fair, hurry, library, people, books, but, here, need, now, dime, win, Bell, Day, prize, ticket, jump, jumped, looked, Mrs., show, so, that, bike, fell, Ling, net, Rose. The order of introduction was determined by story structure. So, for instance, fair, no, Dave, miss, mom, dad, this, hurry, and want were associated with the introduction and were taught first.

The lesson was begun in a typical manner: "today we are going to read a story about a fair. (Holds up the word "fair" printed on an oak-tag strip and repeats it once, places it into a pocket chart.) "Do you know what a fair is?" (Reveals several illustrations of a fair.) During this portion attention is focussed on word meaning, however, each reference to a word is cue for the teacher to point to the related flashcard and say "yes, a fair is a place with rides, prizes, tents, and shows."

The first phase of stage one focusses on word meanings integrated into a story or passage structure. The "fair" introduction, for instance, began with a discussion of the word fair and continued with the development of the first story element, a family hurrying to a fair. "The story today is about a fair. Dave, (Shows flashcard) his dad, (shows flashcard) and his mom (shows flashcard) are going to a fair (points to the word fair). Can someone tell me what mom means? After meaning is learned the next word is introduced. "Dave, his mom, and his dad (points to each word) are going to the fair (points to fair) and Dave is in a hurry (holds up the word hurry). The student is made aware of the words as visual units. The subtle introduction of words as visual units often helps students remember word meanings. That is, the printed form helps them remember what the words are so they can concentrate on what they mean. Since teachers know their students' abilities they can judge how much of a story to teach at one time. The most meaningful units to teach are story elements.

The second phase of step one represents a shift in emphasis from the teaching of word meanings to the teaching of word recognition. Again, the procedure involves retention of the structure of the story, beginning with the first words to be encountered and progressing sequentially through story elements.

"Can anyone remember this word?"(shows fair) "Yes, this is fair." (Moves fingers from left to right under the word.) "We know this word means a place with rides, shows, tents, and prizes." "What is this word?" (Students repeat the word fair individually and in unison.) While the emphasis is now on learning to recognize the words by sight the teacher subtly refers to the meanings either by repeating them aloud or by saying, "Yes, you're right, that is fair, what does it mean?" When students have difficulty recognizing words, their meanings can be used as added cues, i.e., "This means a place with rides, tents, prizes and shows."

The teacher's task in step one is threefold: 1) to help students acquire word meanings, to help them place the words into their speaking vocabulary while subtly associating them with the printed forms, 2) to help students learn to recognize words by sight while subtly reinforcing their meaning, and 3) to provide the background or concepts to be developed through the repeated sequential introduction of vocabulary and story structure. In each case, the activity uses information from other sources to help students learn a particular skill. So, for instance, story background and concepts are retained by the order in which word meanings are introduced, learning word meaning is assisted by the presence of the printed forms of words, and so on.

Step Two

Guided reading is an important factor in comprehension since it provides goals for reading. Reading can be guided globally or in increments. It has been my experience that guiding reading in a global fashion is more appropriate for L1 readers than for L2 readers. When step one has been successful and the students have acquired essential vocabulary at a lexical as well as a sight level and have been introduced to the essential structure and concepts of the passage, they are generally aware of global issues. Guided reading should emphasize significant structural elements. The first element in the fair story describes a family hurrying to a fair. The teacher began the guided reading with the statement, "Read the first two pages to find out why Dave was in a hurry to get to the fair." The question does not represent any really new activity. During the introduction of background and vocabulary, and the sight-word practice, the students focussed on the story element and the background of the element, the meaning of the vocabulary of the element, and the recognition of the printed forms of the vocabulary related to this element. The guided reading allows them to integrate all these sources of information in a meaningful way. As students become more proficient they can read increasingly greater portions of a story.

Step Three

Oral reading often occurs after guided reading. It is essential that oral reading be meaningful. If they are involved in oral reading it is essential that it involves the best in pronunciation, intonation, stress, and phrasing. In this respect L2 students are inappropriaately placed in the lowest reading group where they repeatedly hear the worst oral models. When L2 studens constitute a reading group, they should not listen to their own unrehearsed oral reading. It is essential that L2 students be placed in the 'best' reading group, where oral reading is excellent or in activities that present the best oral models, e.g., following along as the teacher reads, following along in a textbook while listening to a tape, choral reading with good readers, etc.

Steps Four and Five

Steps four and five involve related skills and enrichment activities. Follow-up exercises should redirect L2 students to the vocabulary and content of the material they have read. All too often, it seems, follow-up activities are not significantly related to the ongoing reading activities. Follow-up exercises should involve vocabulary practice, comprehension exercises related to the particular story, etc. Enrichment material should be at students' independent reading level and should be similar to the instructional material being read. Indeed, enrichment material should be directly related to the primary story being read in order to reinforce skills and to promote better comprehension. They will, after all, be familiar with the structure and vocabulary of theme-related stories.

Measuring L2 Reading Ability

In order to place students in appropriate reading groups

and materials, it is necessary to assess their reading abilities. Two evaluation procedures have been found to be effective with L2 students, the cloze procedure (Oller & Conrad, 1971; Bowen, 1969; Darnell, 1968) and miscue analysis (Devine, 1981; Rigg, 1977; Clarke, 1981). Mainstream teachers, however, generally rely upon standardized test results to make reading placements (Barr, 1975; Shavelson and Borko, 1979; Shavelson & Stern, 1981; Johnston & Allington, 1983). Such a reliance is problematic with L2 students. Gunderson (1984) analyzed L1 and L2 reading scores obtained from individually- and group-administered standardized tests. Individually-administered L1 scores did not differ from group-administered L1 scores, while the L2 difference was statistically significant. L1 individual scores were predictive of group scores while L2 scores were not. Indeed, correlations between L2 individual and group scores were zero. The estimations of two reading specialists were compared with the individual and group assessment scores revealing that L1 scores were valid while L2 scores were not. L2 reading placement should be based on cloze scores or miscue analysis rather than standardized test results.

Conclusion

The integrated L2 reading lesson plan is repetitive, purposefully so. It is designed to provide L2 students with consistent and redundant feedback in order to assist their learning of word meanings, recognition of words, and comprehension. A preliminary study has shown that the L2 D.R.A. results in significant gains in comprehension. The use of basal readers and D.R.A. is not necessarily recommended for ESL students. However, since it is widely used across the United States and Canada, with both L1 and L2 students, the attempt has been made to make it as effective as possible for L2 students. We anxiously await research that will give us empirical evidence concerning the best methods for teaching L2 students how to read in mainstream classrooms. Until then we can use the L2 D.R.A.

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INTONATION IN ORAL READING AND READING COMPREHENSION

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Abstract

The purpose of this study was to investigate the relationship between intonation in oral reading and reading comprehension as measured by the cloze procedure. Subjects were 54 Black West Indies college students at the College of the Virgin Islands (1978-79), St. Thomas, U. S. Virgin Islands, who were United States Virgin Islanders. Each subject was recorded reading two passages. The recordings were analyzed to determine correct use of the three features of intonation, i.e., pitch, stress, and juncture, for United States Virgin Island Black West Indian speech. Bivariate correlations were computed to assess the relationship between each feature of intonation and reading comprehension. All possible combinations of pitch, stress, and juncture were subjected to multiple regression procedures to assess optimal weights for each variable. Results indicated no significant relationships. Implications of these findings suggest that additional research is needed to determine whether the dialectical difference or age of the sample may account for the non-significant results. Until these questions have been answered, measures other than the use of proper intonation must be used to assess reading comprehension. Suggested recommendations for future research include the use of content area material, the use of standard English speaking subjects of various ages, and the comparison of good and poor readers' use of intonation.

INTONATION IN ORAL READING AND READING COMPREHENSION

Is intonation in oral reading an indicator of reading comprehension? Some linguists and students of reading have suggested it is (Fries, 1963; Lamb, 1977; Lefevre, 1964; Tyler, 1961; Smith, 1973; Pival, 1968; Pearson and Johnson, 1978).

Others say that reading comprehension is the primary requisite to efficient oral reading. Good phrasing, effective expression, and appropriate emphasis all depend on the reader's grasp of the meaning (Dallman, Rouch, Chang, DeBoer, 1974; Tinker and McCullough 1968; Lloyd, 1962; Heilman, 1977; Smith, Goodman and Meredity, 1970; Wardaugh, 1970; Ruddell, 1968). And there are others who believe that the quality of oral reading and reading comprehension are not necessarily related (Spache and Spache, 1977; Moffet and Wagner, 1976).

Apparently the issue of intonation in oral reading and reading comprehension is not settled. Very few data are available to support either position. Some research that investigated the question of intonation in oral reading and its relationship to reading comprehension indicates that there appears to be a relationship between aspects of intonation and reading comprehension (Fagan, 1975; Clay and Amlach, 1971; Means, 1969; Ehri and Wilce, 1974; Dearborn, Johnson and Carmichael, 1949). But other results do not support this relationship (Ahlvers, 1970; Coady and Scott, 1977; Page, 1976). However, most studies used children as subjects and it is possible that with other subjects the results might have been different.

This study is an attempt to provide more needed information about the relationship of oral reading and silent reading comprehension. The question is of sufficient importance because of its possible implication for the assessment of reading to warrant investigation.

In order to determine whether intonation in oral reading can be used to assess the reading comprehension of college students the following problems were considered:

1. To what extent is proper or correct pitch in oral reading related to the reading comprehension of college students?
2. To what extent is proper or correct stress in oral reading related to the reading comprehension of college students?
3. To what extent is proper or correct juncture in oral reading related to the reading comprehension of college students?
4. To what extent are proper or correct pitch, stress, juncture in combination related to the reading comprehension of college students?

It was hypothesized that the features of intonation in oral reading, i.e., pitch, stress, and juncture, individually and in combination are significantly related to reading comprehension and that they are useful measures of reading comprehension of college students.

Subjects and Procedures

Fifty-four Black West Indian college students at the College of the Virgin Islands, St. Thomas, U.S. Virgin Islands, (1978-1979) were the randomly selected subjects of the study. All the subjects had been in residence in the U. S. Virgin Islands for at least seven consecutive years and had English as a first language. To ensure that on one in the sample was unable to understand the test passages because of an inability to recognize words, a word recognition test was given and those persons not achieving 100% accuracy were eliminated as subjects.

Subjects read two reading passages orally into a cassette

tape player and took two cloze tests to evaluate reading comprehension. (Cloze tests, narrative passages, and the word recognition test are available upon request from the author.)

Data were collected on three independent and one dependent variables: proper use of pitch, stress, and juncture in oral reading and reading comprehension. Proper or correct use of pitch, stress, and juncture was evaluated by analyzing tapes of the reading of two passages by the 54 subjects and scoring them with criteria provided by Sprauve (1974). Two cloze tests were administered to assess students' reading comprehension. The data were analyzed with a Xerox Sigma 7 Computer using the "Statistical Package for the Social Sciences" (SPSS) (Nie, Hull, Jenkins, Steinbrenner, and Bent, 1971). The Pearson Product Moment Correlation was the statistical method selected for assessing the relationship between the dependent and each independent variable. Coefficients were tested for significance and the coefficient of determination (r^2) was used in this study as an indication of the strength of the relationship between variables. Multiple regression was the statistical technique utilized to describe the relationships between reading comprehension and juncture. Multiple regression coefficients (R) were tested for significance and the coefficients of multiple determination (R^2) were analyzed for interpretive purposes.

Results

Table 1

Correlation Summary Table

Hypothesis	Dependent Variable = Reading Comprehension Independent Variable	r	r^2	Result
1	Pitch	.18	.03	NS*
2	Stress	.22	.05	NS
3	Juncture	.04	.00	NS

*Indicates Non-Significant correlation (p= .05).

Table 2

Multiple Regression Summary Table

Hypothesis	Dependent Variable = Reading Comprehension Independent Variable	R	R^2	Results
4	Pitch & Stress	.27	.07	NS
5	Pitch & Juncture	.19	.04	NS
6	Stress & Juncture	.24	.06	NS
7	Pitch, Stress & Juncture	.29	.08	NS

1. The bivariate coefficient of the relationship between correct use of pitch and reading comprehension was r=.18. This correlation coefficient of .18 when squared indicates that correct pitch contributes only 3% of the variance in reading comprehension.

2. The bivariate correlation coefficient of the relationship between correct use of stress and reading comprehension was r=.22. This transforms to a r^2 of .05 meaning only 5% of the variance in reading comprehension is contributed by correct stress.

3. The bivariate correlation coefficient of the relationship between the correct use of juncture and reading comprehension was r=.04 which produced an r^2 of .00.

4. The multiple regression coefficient between the correct use of pitch and stress in combination and reading comprehension was R = .27, which produces a coefficient of determination of .07. This R^2 statistic indicates that 7 percent of the variance of the use of correct pitch and stress in combination contributes only 7% of the variance in reading comprehension.

5. The multiple regression coefficient between the correct use of pitch and juncture in combination and reading comprehension was R = .19 and transforms to a coefficient of determination of .04, meaning that the use of correct pitch and juncture contribute only 4% of the variance in reading comprehension.

6. The multiple regression coefficient between reading comprehension and the use of stress and juncture in combination yielded an R = .24 which when squared, produced a coefficient of determination of .06, meaning that correct stress and juncture in combination contributed only 6% of the variation in reading comprehension.

7. The multiple regression coefficient between reading comprehension and the correct use of pitch, stress, and juncture in combination was R = .29, which produced a coefficient of determination of .08. This R^2 statistic indicates that only 8% of the variance of the use of correct pitch, stress, and juncture in combination with one another was associated with reading comprehension. None of the correlations met the established level of significance.

Conclusions and Discussion

The four problems that were investigated in this study yielded consistent evidence that the three features of intonation, i.e., pitch, stress, and juncture are not related to the reading comprehension of U.S.Virgin Islands Black West Indian college students who were the sample of the study. The results clearly and consistently indicate that measures other than the use of proper intonation must be used to assess the reading comprehension of like samples of students. The investigator can only speculate why the results of this study yielded consistently non-significant relationships between reading comprehension and all measures of intonation.

It is possible that the students who were the subjects of the study, because of their experience with English had a sufficient knowledge of the syntax and structure of the language, and

that this knowledge enabled them to read using proper intonation, regardless of their understanding of the material. Their knowledge of redundancy of the language and their ability to chunk (focusing on a group of words rather than individual words) could account for the results that were obtained.

Another condition which may have had an effect on the results is the fact that the subjects were dialectically different. It is possible that because these students were required to read orally in an academic setting, they may have tried to read in a manner which would imitate standard speech, therefore violating their natural speech patterns for pitch, stress, and juncture--for which they were judged. The researchers deleted cases from the study in which this was apparent. However, the presence of this effect must be taken into consideration even though attempts were made to control for it.

The two narrative passages selected for this study were chosen in part because of the students' lack of familiarity with the contents of either passage. In the future, researchers might choose passages known to be difficult for a college sample, e.g., content area material such as science, philosophy, etc., and narrative material such as that written by Camus or Faulkner. The difficulty and nature of the material would add an additional component that could be useful in a replication of the study.

In this study a random sample of college students was selected without assessing the students' reading level. In the future, a comparison of good and poor reading at different reading levels could yield important differences affecting research outcomes. And investigators might want to concern themselves with the number and quality of miscues and their relationship to intonation patterns and comprehension.

Because of the results obtained in this and other studies of reading comprehension and intonation, teachers must be careful not to stereotype a reader as being able or unable to comprehend the material from the way it is read orally. Additional investigations with different age groups, speakers and materials are needed to determine whether intonation is an indicator of reading comprehension and can be used to assess it.

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TEACHING CHILDREN TO USE A CONTEXT—PLUS—PHONICS STRATEGY

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In most basal reading programs, children are taught a variety of word identification strategies, including the use of context, phonics, and structural analysis. The intent of such instruction is to help children develop flexible repertoires of word identification strategies to be used singly or in combination to decode unknown words. However, in spite of the attention given to the development of these strategies, many children do not become successful in using them. Other children emphasize one strategy to the exclusion of others. As a result, their ability to identify words in connected text is often diminished.

The main purpose of this article is to describe in detail a procedure which teaches children to integrate two word identification strategies, use of context and of phonics. A study was conducted which tested the effectiveness of this integrative strategy, and a secondary purpose of this article is to present the results of the study.

Development of the Instructional Script

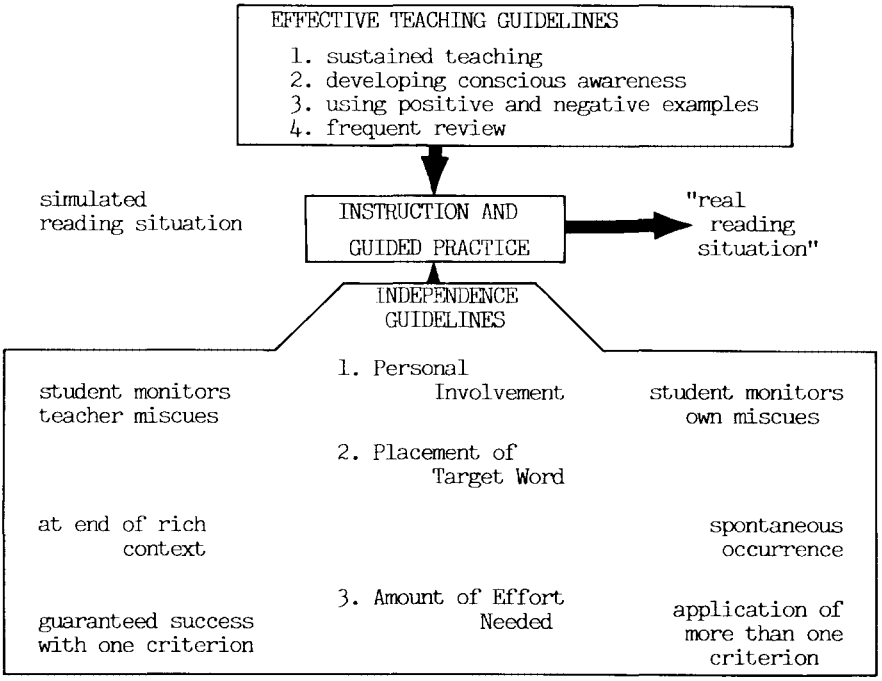
A script was written to provide three 20-30 minute sessions of instruction and two 20-30 minute practice sessions in using a context-plus-phonics strategy. The overall instructional script was designed with two sets of guidelines in mind. One set of guidelines involved effective teaching. The second set of guidelines was concerned with developing successful and independent use of the strategy during "real reading." (See Figure 1, next page)

Four guidelines were utilized in order to provide effective teaching of the process of using the context-plus-phonics strategy. The first guideline was to provide sustained teaching. In contrast to instruction as mere "mentioning" of strategies (Durkin, 1978-1979), the instruction in this study was designed to provide 20-30 minutes a day of sustained exposure to the strategy over several days.

The second guideline for effective teaching was to develop in the children an awareness of how the strategy was supposed to work. Work by Duffy and Roehler (Duffy, Book, & Roehler, 1983; Duffy & Roehler, 1984; Roehler & Duffy, in press) has shown the importance of this conscious awareness of the "how." In the present

Figure 1

Guidelines Used in
Designing the Script



study, children were taught a set of specific steps to follow in using a context-plus-phonics strategy, and charts delineating these steps were on display during all instructional and practice sessions.

The third guideline for effective teaching is to explore systematically why a right answer is right and why a wrong answer is wrong. In the instructional sessions the children were routinely asked to justify their selection of a particular word and their rejection of another.

The fourth guideline employed to maximize the effectiveness of the instruction was to provide systematic and frequent review. Each lesson began with a review of earlier lessons and ended with a review of the strategies taught in the current lesson.

Three guidelines were utilized to move the children from the simulated reading situation of instruction to a situation more clearly resembling real reading. These will be labeled "independence guidelines." Each of the three independence guidelines was on a continuum and the guidelines were utilized across their own continuum at different rates across the five lessons. The first

of these independence guidelines was to increase gradually personal involvement in the use of the strategy. The initial emphasis on monitoring miscues involved the children in monitoring miscues of the teacher, not their own. In this way, instruction began in a non-threatening atmosphere because the children themselves were not the ones making the mistakes. However, in "real reading" children need to learn to monitor their own miscues. Thus, after the children monitored the teacher's miscues in the three instructional sessions, they transferred their attention to their own miscues during the two practice sessions.

The second independence guideline was to vary the placement of the target word. This placement changed from the simulated to the "real" reading situation. At the very beginning of instruction, the target word (i.e., the word assumed to be the unknown word) was placed at the very end of the sentence, so that the readers had a full context from which to draw clues by the time they reached the target word. However, in "real" reading, unknown words don't occur only at the end of context-rich sentences. Therefore, the placement of the target word was gradually and systematically varied among all positions in the sentence. Finally, in the two practice sessions which were designed to be most similar to real reading, no target words were identified. Thus, unknown words appeared spontaneously in all positions in the sentences and without being identified as potentially troublesome.

The third independence guideline was to change systematically across instruction the amount of effort needed to identify the correct word. At the beginning of instruction, success was guaranteed because of the rich context used and the placement of the target word. (See Day 1 of the script for an example.) Gradually the children were shown how to choose from several meaningful guesses by employing the additional criterion of beginning sound. Finally, the children were given passages to read in which no control had been exerted over the difficulty of the task (other than to give the children a passage at their instructional word recognition level). This was done to approximate "real" reading.

The script which follows is described in detail in order that the reader can identify the use of the seven guidelines described above.

The Script

Day 1

The children are told that sometimes reading can be "magic" and that sometimes they will even be able to "read" invisible words. They are then shown sentences, each of which has a word near the end covered by a card. The sentences have been constructed so that only one particular word is likely to be the "invisible" word (e.g., "At Bob's birthday party, we had cake and ice [cream]"). Then a child and the teacher read the sentence together, with the teacher allowing the child to provide the missing word. The covering card is then removed and the group confirms that the child's guess has been correct.

After the children practice identifying several "invisible" words at the ends of sentences, they are told that sometimes they will come to a word they don't know at the beginning of a sentence. They are assured that the "magic" will work then, too. They will need to skip the word they don't know, finish the sentence, and then return to the unknown word to see if the magic has worked by trying to put in a word that now makes sense. A sentence is shown in which a blank might be filled by more than one meaningful guess ("The bad dog _____ at me"). The teacher reads the sentence to the children, saying "blanked at..." The children's suggestions for words that make sense in the sentence are recorded on the chalkboard and discussed.

Next, the teacher shows the children how they can use the first letter or letters of an unknown word to guess at the exact word. The teacher writes the initial letter of one of the guesses on a card (e.g., b) and clips it at the beginning of the blank in the sentence. The children are asked to tell which of their guesses make sense and start with that sound. The correct word is written on a card clipped over the blank in the sentence and the sentence is then read in its entirety. The process is repeated for several more of the children's guesses.

The Magic chart (see Figure 2) is then introduced and the children are reminded to use the "magic" steps on the next set of sentences. These sentences are similar to the dog sentence, in that a word has been replaced by a blank near the beginning of a sentence and several different words might be appropriately supplied for that blank. After several meaningful guesses have been written on the board for a sentence, the beginning letter(s) of one of them is put in the blank and the children are asked "How do you know the word wasn't _____?" suggesting a word that begins with that letter but is semantically inappropriate. For example, for "My _____ has a pretty new dress," m may be chosen and the suggested word may be marshmallow. Then the children are asked the same question, but this time the word begins with the right letter but is syntactically (as well as semantically) inappropriate, such as marching. The question is asked a third time, with the suggested word being a meaningful guess but one that begins with the wrong letter (e.g., sister).

After several sentences have been explored in this manner, the magic chart is reviewed.

Figure 2 – The Magic Chart

1. Skip the word.
2. Read the rest of the sentence.
3. Go back to the word.
4. Look at the first letter.
5. Think of a word that makes sense. Try to think of a word that starts with that letter too.
6. Try that word in the sentence. Does it make sense?

Day 2

The chart is reviewed and the three "How do you know it wasn't _____?" steps from Day 1 are applied to several new sentences. Then a second chart is introduced to remind the children of the three things they should always think about:

A. Does that make sense?

B. Could you say it that way?

C. Does that word begin with the right first letter?

D. Did you say "yes" to all 3 questions?

Next, the children are told that they will be working on sentences that have real words in them instead of blanks, just like they will find when they are reading by themselves and come to a word they don't know. They are warned that they will only get one "out-loud" guess at a word, so they should be sure to use "magic" and think hard before they guess.

The practice sentences have been written to include an underlined word near the beginning or middle of the sentence that should be easy for the children to identify correctly if they use context and beginning sounds (e.g., "Dr. Weiss, the principal, visited our class"). After each word is successfully identified, the three "How do you know it wasn't_____?" questions are asked, to encourage the children to test their guesses semantically and graphophonically. As a final step for Day 2, the Magic chart is reviewed again.

Day 3

On this day the children are asked to determine if the teacher is using "magic." They are instructed to watch and listen to the teacher read a sentence, to wait until the teacher has finished the sentence, and then judge if she has read it correctly. If the teacher has hade a mistake, the children are to say "Does that make sense?", "Which word didn't make sense?" and then, "Think of a word that makes sense and starts with the same first letter." The teacher then elicits the correct word from the children.

For the first set of sentences, the teacher will make mistakes by supplying guesses that are semantically and/or syntactically inappropriate, such as "My broom [for brother] has a new bike" or "The bet [for big] cat said 'meow'."

For the second set of sentences, the children are reminded that sometimes they put in words that make sense, but they forget to look at the letters of the word. Errors such as these are made by the teacher in this set of sentences: "First [for then] I went to the store" and "Jack ran [for went] to school."

For the last set of sentences, the teacher will make errors by failing to skip a word and to read the rest of the sentence before guessing or by skipping the word but never returning to it. For example, for "The bird was flying in the sky," the teacher will pause 3 seconds before bird, with puzzled expression, then

provide brown for bird and finish the sentence. The teacher will not go back to correct the mistake. The children are asked if the teacher has used "magic" correctly and to tell why or why not.

The chart is reviewed and the children are urged to use the procedure when reading by themselves.

Days 4 & 5

The two days of practice are essentially identical. In an effort to personalize instruction, groups are smaller, with each group subdivided into two groups, and the children, rather than the teacher, do the reading.

While half of each group works with the teacher, the other three or four children play a context-based game with an assistant. Then the two sub-groups are switched. Before beginning the practice sessions, both sub-groups review the Magic chart.

The children who are working with the teacher read orally 100-word passages at their own instructional level. (In the study, this was determined by oral reading performance after the third day of instruction.) As one child reads aloud, the others in the group follow along silently on their own copy of that child's passage. If the child appears to use the "magic" context-plus-phonics strategy, praise is given. If the child fails to make use of the strategy, the teacher will wait until the child finishes a sentence and then directs the child's attention to the relevant portions of the Magic chart.

Children working with the assistant play a board game in which success is determined by the child's ability to identify an underlined word in a sentence context. The assistant follows the same reinforcement procedures as the teacher, praising the use of the target strategy and calling the child's attention to failure to make use of the strategy.

The Study

A study was carried out to determine the effects of the instruction described above on instructional word recognition level, context usage, persistence in using context, use of phonics, and substitution of real words as miscues.

Methods

Subjects. Forty-seven second grade children were screened in order to identify children's use of context. Fourteen children (nine males and five females) were identified as using context the least effectively.

Procedures. Pre-treatment scores on the five dependent variables (two scores for each variable, totaling 10 scores) were obtained from the oral readings of the two instructional word recognition level passages used during screening. The children were randomly assigned to experimental or control group. After three instructional sessions, interim testing took place. The

children read orally a new set of 300-word passages to determine their instructional word recognition level, use of context, persistence in context usage, use of phonics, and substitution of real words. After this interim testing, the experimental subjects took part in the two practice sessions described above. Final testing then took place after the practice sessions with a third set of leveled passages.

Measures. In order to identify the instructional word recognition level, the subjects read aloud on two successive days 300-word stories at varying readability levels (as determined by the Fry [1977] readability graph.) The stories had been adapted from basal selections. Rewriting was done so that each 100-word segment of a story was at the desired readability level. The children's oral reading was tape recorded and transcribed, and two instructional word recognition level passages (using Betts' [1946] criterion of 91-98% word recognition accuracy) were identified for each child, one each day. Two passages were used in order to provide a sufficient number of oral reading miscues for a reliable analysis of the use of context and so that the results would not be specific to a single passage.

In order to determine context usage, each child's miscues on the two instructional level passages were analyzed. A modification of Goodman and Burke's (1972) miscue analysis was used, in which a miscue was given a score of 2 if it were corrected or if it were semantically and syntactically appropriate. A score of 1 was given if the miscue were sytactically but not semantically appropriate, and 0 was given if the miscue were neither semantically nor syntactically appropriate. The mean score of a child's miscues was used to determine context usage. (Interrater reliability was .91.)

Persistence in using context throughout an entire selection was determined by the difference between a subject's context usage score on the first half of his or her miscues on a passage and the context usage score of the second half of miscues. A low score would be indicative of high persistence. (Interrater reliability was 1.00.)

Use of phonics was determined on the basis of phonemic agreement of initial sounds between the word pronounced by the child and the text word. (Interrater reliability for use of phonics judgments was .94.)

Substitution of real words, rather than nonsense words, as guesses for unknown words was measured, and the interrater reliability was .98.

Reading achievement level was measured by the total reading percentile score on the Prescriptive Reading Inventory (CTB/McGraw-Hill Staff, 1972).

Instruction. Both the experimental and control groups received instruction on three consecutive days in 20-30 minute sessions.

The experimental group received instruction according to the context-plus-phonics script described above. In order to control for the effect of oral reading practice, the control group read chorally the same sentences that the experimental group did and then listened to the teacher read them a story. During the two practice sessions, the control group children again read chorally with the teacher.

Results

Four repeated measures analyses of covariance were performed. Each analysis included a control for reading achievement level, treatment as an independent variable, and instructional word recognition level, context usage score, persistence in context usage score, use of phonics score, and substitution of real words score as the dependent variable.

The major finding was that by the end of the instruction, the context-plus-phonics instruction effected an increase in instructional word recognition level, when compared to the control group instruction. (See Table 1.) A significant treatment by time effect for instructional word recognition level was found

$$F\,[1,11] = 5.46,\ p = .04.$$

On the final set of passages, the mean instructional level of the experimental group for the two stories was significantly higher than that of the control group ($T = 3.27$, Studentized Range Statistic $[2,12] = 3.08$). However, at the interim testing, there was no significant difference ($T = .46$).

There was one other significant effect. For the substitution of real words, rather than nonsense words, the experimental group had a higher mean score on Interim Story 1 (.863) than did the control group (.781) ($T = 3.61$, Studentized Range Statistic $[2,12] = 3.08$).

Table 1

Means (Stan Dev) for Instructional Level of Passage

	Pre		Interim		Final	
	Day 1	Day 2	Day 1	Day 2	Day 1	Day 2
Exper. Group	3.57 (1.40)[a]	3.86 (1.22)	4.14 (1.35)	4.57 (.98)	5.29 (.95)	5.57 (.79)
Control Group	4.00 (1.41)	4.14 (1.46)	4.00 (1.83)	4.43 (2.15)	4.43 (2.15)	4.43 (2.15)

[a] 1 = Low first grade level 2 = High first grade level
5 = Low third grade level

Although the children in the experimental group had a post-treatment word recognition level one-half grade higher than that of the control group, the instruction did not affect their overt use of context (see Table 2) or their use of phonics. No significant

Table 2

Means (Standard Deviations) for Use of Context Scores

	Pre	
	Day 1	Day 2
Experimental Group	1.11 (.19)	1.24 (.27)
Control Group	1.25 (.19)	.91 (.23)

	Interim	
	Day 1	Day 2
Experimental Group	1.33 (.27)	1.25 (.38)
Control Group	1.06 (.35)	1.15 (.29)

	Final	
	Day 1	Day 2
Experimental Group	1.27 (.26)	1.45 (.18)
Control Group	1.41 (.30)	1.36 (.32)

effects on context usage or use of phonics were found

A likely explanation for the positive effect for instructional word recognition level without a concomitant effect for use of context or phonics is that the children were using the context-plus-phonics strategy silently and successfully. This silent use of context-plus-phonics to identify troublesome words would lead to higher accuracy at lower reading levels (thus the effect for instructional level). But because the strategy was often used successfully silently, the out-loud miscues (used to determine use of context) might have been for words for which the strategy did not work quickly. If the use of the context-plus-phonics strategy had not yet been developed to the automatic level, the children may have reverted to their initial ineffective strategies when the context-plus-phonics strategy did not work quickly. Extending the number of either the instructional or practice sessions might have developed the use of the context-plus-phonics strategy to the automatic level.

Summary

The script detailed above can be used by teachers in two ways. First, it can be used relatively easily to provide effective instruction in integrating two word identification strategies. It has been shown to have a positive effect on word recognition level. Second, the script can be used by teachers as a model for designing instruction intended to help children develop the ability to apply a strategy independently. Instruction needs to be thoughtfully and meticulously designed, and attending to the seven guidelines described in this paper may provide instruction which will prove to be more effective.

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MINI-ASSESSMENT: A PRACTICAL APPROACH TO CLASSROOM IDENTIFICATION OF LEARNING DISABLED READERS

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Do I have a learning disabled reader in my class? Should I make a referral for a special education evaluation? How should this child be instructed between the time I make the referral and the assessment results are available? These are the kinds of questions that teachers in all schools ask themselves, especially in the intermediate grades, when the developmental range of children's abilities has begun to narrow, and a few children are still lagging far behind.

This article will present a classroom method by which teachers can answer those questions, and make a better decision about whether or not to refer a child for an evaluation of learning disabilities.

Two types of readers

Not all children with reading problems are learning disabled. Children with severe reading difficulties, i.e., more than a two year delay, can be divided into two categories: primary remedial readers , who have reading disorders as a result of learning disability, and secondary remedial readers, who have difficulties for other reasons (Kaluger and Kolson, 1978).

The second remedial reader is the child whose reading problems are caused by elements other than those related to his or her central learning system. These problems may be emotional, educational, cultural, and are often found in combination. A broad, simplified generalization is that the secondary remedial reader lacks skills. He may have had poor instruction, poor attendance, lowered motivation, cultural differences, or a host of other factors interacting with each other and impinging upon his acquisition of basic reading skills. The integrity of the learning mechanism in a secondary remedial reader is intact, however.

The primary, or learning disabled reader, unlike other poor readers, suffers from particular conceptual, perceptual and cognitive difficulties when faced with the reading task in addition to potentially having all the emotional, attendance, cultural and educational problems of the secondary remedial reader. The primary child has some learning difference that is presumed to be neurological, and which interferes with his or her ability to acquire and maintain skills, in the presence of normal intelligence. In short, the primary remedial reader has not learned basic skills because of some internal difference that, even under the best of educational circumstances, interferes with normal reading

development. Unfortunately, many children having difficulty learning to read have not had the best of educational circumstances offered to them. And, all too often, they develop coping strategies such as acting out, truancy, clowning and feigning incompetence that further impede the acquisition of basic skills in the early years. The interaction of the secondary behavioral problems with the already existing primary neurological differences creates a learner who has very poor skill development, poor learning habits PLUS an inability to process information easily and retain it. Without insightful identification and (ultimately evaluation procedures), it will be difficult to distinguish one learner from another. It is crucial that we do so, however, because the therapeutic placement and/or treatment, whether in the classroom, resource room or clinic, will differ for each type of learner.

Learning disabled readers require a highly structured program, with a limited number of associations taught at one time. The program must require mastery of each learned letter or sound, and proceed in such a way as to minimize the practicing of mistakes (Bryant, 1978). Secondary remedial readers will also need individualized instruction and carefully planned lessons, but the truancy, language difference or other factor involved in the development of the problem must also be addressed, and will go far in correcting the reading difficulty when appropriate instruction is provided (Kaluger & Kolson, 1978). The classroom teacher cannot simply refer ALL problem readers for a full evaluation to discover whether the reading problem is primary or secondary, because evaluations are costly, both in dollars and emotional distress to the parents and child. It also takes time. Teachers need to have some answers today.

If only those we truly suspect of learning disability are to be referred, then a better understanding of the characteristic behaviors a primary (learning disabled) reader displays in the classroom is necessary.

In reporting on his investigation of dyslexia, another term for primary remedial reading problems, supported by the Public Health Service and Association for the Aid of Crippled Children, N. Dale Bryant (1978) cited specific behaviors of primary remedial readers which can be observed in their reading performance, and which may be helpful in identification and diagnosis. These include

1. Reading haltingly, with simple errors often made.
2. Ability to recogniqe a word in one sentence and not know it in the next.
3. Guessing at words based on initial letter, length, insufficient cues.
4. Typically knowing names of letters and the sounds of most consonants, but confused when giving vowel sounds—especially within a word.
5. Reading skills and errors very similar to those of the young reader. Often learns words at higher grade levels, but still makes errors like

a beginning reader—especially on function words.

6. Inefficient in associating sound with abstract visual symbols.
7. Appears to have poor perception of details within a complex and abstract whole (word). (Bryant, 1978)

In addition to the above, several other characteristics, compiled from clinical and classroom experience, can be added to the list.

8. Difficulty in writing, but somewhat better facility in copying letters (problems in revisualization of letters and words).
9. An ability to produce letter combinations on a dictation task that bear no resemblance to English patterns or constructions.
10. An ability to forget a lesson learned to the 100% level so completely that he/she may not even recall that the material was studied!

Making the Identification of a Primary Remedial Reader in Your Classroom

As a result of daily contact and monitoring, the classroom teacher is in an excellent position to identify the child who should be referred for an evaluation. The fact that the teacher is considering making such a referral indicates that the child is having great difficulty in the classroom; indeed, s/he must be at least two years behind to be considered "remedial" (Kaluger and Kolson, 1978). Because the child may be having behavioral problems as well as reading difficulties, the teacher must determine if the child has a learning differen e that warrants a full special educational evaluation. When considering such an evaluation, keep in mind that to be a primary remedial reader the child must:

have normal or better I.Q. Slow learners often have reading problems that are not considered "primary".

have been experiencing problems right from the beginning of his school career. Learning differences typically appear when formal school starts.

be able to understand classroom information at a much higher level than he can read.

have had adequate opportunity to learn.

have difficulty generalizing learned skills to new reading material.

get confused rather easily when learning reading skills.

appear to understand a lesson, only to forget it (sometimes totally) in a day or so.

When most of the above describe your student, it is appropriate for you to consider a special education evaluation request. To confirm your decision to request an evaluation, the ten minute pre-referral identification instrument which follows may be helpful. All that is needed are some simple tools, which you may already

have on hand. The materials are:

* A sheet of paper with all the consonants typed in primary letters approximately one inch apart.
* A page with the 5 vowels in isolation and three, three-letter words for each vowel, making sure the initial consonant is the same for each list.

a	e	i	o	u
rid	did	let	nab	bet
red	dab	lab	not	bun
rug	don	lob	nip	but

* Three sample paragraphs from the reader in which he/she is currently placed; one from the beginning, middle and end, each at least fifty words long. Child reads these from the book.
* Five spelling words from the grade level list, or from any spelling text used for the grade. Words should be from the middle of the book.

(NOTE: If the school has a Brigance Comprehensive Inventory, or Inventory of Basic Skills, both published by Curriculum Associates, 5 Esquire Road, N. Billerica, MA, it can be used instead the above.)

Some teachers will be concerned that there are no samples of reading comprehension included in this mini-assessment. Obviously, reading comprehension is very important to the evaluation of reading disabilities. This pre-referral identification procedure however, is not an evaluation. It is a quick look, taken in the presence of a number of symptons, which will help the teacher determine if the problem is poor skills in reading, or poor learning skills FOR reading. Most primary remedial readers in the elementary school are "stuck" at reading levels below third grade, therefore this assessment focuses on the acquired association and decoding skills that such readers usually lack.

Procedure

Ask the child to read the first paragraph. Do not correct or interrupt. On your own copy, indicate what he says as he reads. An easy way to do that is simply to mark through letters or words not said, and write above the word what was said, or added. If the child has few errors, give him the next paragraph and do the same thing. If he is having difficulty, stop after the first one, or after five minutes total.

Next ask the child to read the consonants. Then point to a consonant and ask for the sound it makes. (Omit q and x.) Be sure to ask for both sounds of g and c. Now give the student the sound and ask him to point to the consonant.

Now, repeat the procedure with the vowels, first asking the child to read each vowel. Do not ask him for the sound each makes,

however. Ask him to read each column of words. Note the ease or difficulty the child has, switching from one short sound to the next, and whether he starts confusing initial consonant sounds in the words. When he has finished reading the words, explain that you will say one word from each of the five columns, and he must point to it as quickly as he can.

Finally, have the child write the five spelling words. Do not let the child be concerned about errors, even though your goal is to make this a difficult task. Do not let the child work on any word more than thirty seconds.

Total testing time: 10 minutes.

Reviewing Results

Fill out the following checklist. Check those characteristics observed.

Paragraph Reading

1. Student read haltingly, missing simple words and reading harder ones _____
2. Student read at least two words in sentences that he missed later on in his reading _____
3. When student did not know a word the guess was based on initial letter, word length or other insufficient clue, rather than the context _____

Consonants

4. Student could read fewer than 15 of the consonants _____
5. Student knew fewer than 15 consonant sounds _____
6. Student did not know alternate consonant sounds for g and c _____

Vowels

7. Student confused the vowel sounds and was typically correcting himself or knew he was wrong _____
8. Had difficulty decoding the three-letter words _____
9. Had difficulty finding the word teacher called from each list _____
10. Seemed to get tongue-tied or rubbed eyes _____
11. Confused initial consonants within the same column _____
12. Could not easily discriminate the short vowel sounds in words _____

Spelling Words

13. Child took almost full 30 seconds to write each word _____
14. Child's spelling mistakes were not "phonic" _____

15. Child put letters together that were not possible in English; i.e., fphm, blc, tm _____

Scoring

Each of the items scores 1 point. A child who scores over ten should be considered for a referral to special education.

Sample Case Study

Steve, fourth grade, age 9, has been having difficulty in reading since kindergarten. He has fallen farther and farther behind, despite the best efforts of his teachers and of Steve himself. Now, in the fourth grade, his teacher has him in a 2-1 reader, and his progress is slow. He seems to forget everything he learns within a short time; if he learns a new word today he will probably not recognize it tomorrow, or from a source other than the textbook. It seems to take Steve many, many exposures to a word before he knows it. His sight word vocabulary is inadequate. Phonic skills are even less developed. He can recognize all the letters by name, but doesn't associate all the sounds with the letters; vowels utterly confuse him. He was given the mini-assessment, with the following results.

Paragraphs

(Beginning of book)

Buttons was not in the closet. Buttons was not under the bed-not in the hall-not in the attic.

At last Nell saw Buttons. "Ha,ha," said Nell. "Is Buttons a doll?"

"Pick him up," said Nick. "Buttons is not a doll."

Nell and Nick were glad. Buttons was not lost after all.

(Middle of book)

Once, in the spring of the year, the wicked fox smiled at his wife and said, "Put the big black pot on the fire. This time I am going to catch Little Red Hen and bring her home. We will have her for dinner."

"Here is a sack," said Old Mother Fox.

(From: Basic Reading, Book E, Lippincott Company, Philadelphia, 1975)

End of book paragraph not given, as student had used up a five minute period and was frustrated. Very slow on second paragraph. Read word-by-word. Guessed at words.

Consonants

Knew all by name. Knew sounds for all the consonants except g(hard sound only), c(hard sound only), w, y, z.

b	c	d	f	g	h
j	k	l	m	n	p
q	r	s	t	v	w
x	y	z			

Vowels

Was able to read each vowel name correctly

a	e	i	o	u
rid	did	let	nab	bet
red	dab	lab	not	bun
rug	don	lob	nip	but

Missed 8 of the words on the initial trial, corrected himself on 3. Appeared very confused. Needed to keep his finger on the words to read each column. Said bad for dab in second column; dad for dab on second try. Could point to words red, did, let, bet and not, when asked, but slowly and deliberately. Was not positive he was pointing to the right one.

Spelling

Words given:	Words written:
circle	
oatmeal	
pinch	
vanish	
escape	

(Words taken from Basic Goals in Spelling, Book 4, McGraw-Hill,NY)

Steve was very slow and had difficulty forming the words. His errors did not approximate English spellings. Handwriting poor.

Steve had 13 of the 15 indicators, and his teacher would be wise to make a special education referral for him. She would, of course, include all of this infomation along with the referral form, which would give the screening committee a very good idea about the kinds of problems Steve is having in reading. This classroom information will also help the evaluator determine the instruments that would best uncover his learning problems. Ultimately, a program will be planned for him that meets his learning strengths and weaknesses. In the interim, however, Steve will still be in

the teacher's classroom, needing assistance every day. How can the mini-assessment give the teacher some direction?

The teacher knew before this assessment that Steve was really struggling to learn, and that he was taking a long time to master basic skills. She now knows that

1. he specifically doesn't know alternative sounds for c and g; doesn't know w, y, and z sounds in isolation

2. he needs help in short vowel discrimination

3. he must learn a spelling strategy and some rules

4. he must develop the habit of reading in phrases so that his reading will be smoother and more meaningful.

This information should be very helpful in planning instruction for this child immediately, so that instruction during the period between referral and evaluation will be maximized. In addition, having this information makes communication with the resource teacher more productive, as there are now specific issues, like spelling strategies, that can be discussed prior to thae evaluation.

Conclusions

Teachers need a data-base upon which to make decisions about if and when to refer students, and what to do in their classrooms before the evaluation takes place. Use of this mini-assessment enables teachers to develop that data-base quickly and efficiently, without extensive equipment or materials. It will give the teacher an answer to the question of when to refer, and if the referral should be made. It will give direction about needed instruction before a formal evaluation is completed.

This mini-assessment is not designed to replace a full evaluation if one is indicated; rather, its best use is for the teacher to understand the extent of the learning problem, and as a professional communication aid. It will serve to augment the referral form and provide the means for more thoughtful referrals to special education.

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P-R-E-V TEACHING PREDICTIONS AND CONCEPTS SIMULTANEOUSLY

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Students are expected throughout elementary and secondary grades to read and comprehend content materials. However, too often content area teachers expect students to be able to comprehend material read without being taught the skills necessary to process information with understanding and retention.

Researchers have shown that students can be taught learning strategies which will result in improved comprehension (Raphael, 1982). If content area teachers implement learning strategies in addition to important concepts, improved comprehension should be the end result.

A Dictionary of Reading (1981) defines prediction as the act, or result, of making a forecast or prophecy; specifically, in scientific method, a statement of what is expected from observation or experiment. Predicting is not and should not be thought of as "guessing". Guessing is an important strategy that people use constantly throughout their lives. It negatively implies a random, unstructured, and wild attempt to hit upon the correct answer. Predicting is not wild guessing. It is systematically evaluating alternatives and selecting those that match the reader's expectations of the author's meaning (Hittleman, 1978). Smith (1975) simply explains that making predictions is the act of eliminating any unlikely alternatives.

Prediction as a strategy is defined as a person's use of knowledge about language and the context in which it occurs to anticipate what is coming in writing or speech (A Dictionary of Reading, 1981). Prediction strategies can be implemented during the teaching process by encouraging students to predict. Some students predict intuitively, while others have learned not to predict. Instruction has instilled within them the idea that only the "right" answer is valued, therefore, the students usually withholds any attempt to predict for fear of giving the "wrong" answer (Hittleman, 1978).

Several good reasons are evidenced as to why making predictions prior to reading seems to be effective. One important aspect of the prediction strategy is that it establishes a purpose for reading which is reader-centered rather than teacher or text-centered (Hittleman, 1978; Shanahan, 1983). Prediction requires the reader to make use of prior knowledge relevant to material read (Hittleman, 1978). This is supported by Daines' (1982) views:

> Prediction requires the use of prior knowledge relevant to daily events. The knowledge and experience a student brings to what he reads will determine in part how well he can make accurate predictions and comprehend the material (Daines, 1982, p. 3).

Prediction making allows the teacher to informally diagnose what the reader knows or does not know about the textual material to be read and allows the teacher to prepare accordingly. Prediction strategy not only alerts the teacher to the reader's existing prior knowledge of the text, but also makes the student become attentive to his own metacognitive insights.

The term metacognition refers to what and how a person knows about learning strategies (Raphael, 1982). Simply stated, metacognition refers to a person's knowledge about what he knows and/or does not know about the text and what he will do about it. Metacognitive insights bring the reader to the level where he is self-motivated to read in order to confirm his prediction or acquire new information.

Roehler (1974) identifies three prerequisites which must exist for a student to comprehend what he reads. These variables are: (1) his ability to decode, (2) his background experience, and (3) his interest in the content. The teacher should be able to control these variables by making sure the reading material is on his instructional level and by teaching prediction strategies prior to and/or during text reading. A question of concern among content area teachers is - Will making predictions prior to text reading increase a student's comprehension of material read?

CLASSROOM DATA

Subjects

The subjects consisted of seventeen rural second-semester fourth grade students. Each subject was reading at a third grade level or above according to the Harper-Row basal placement test administered at the beginning of the school year. None of the subjects were labeled as remedial readers.

Regions and Social Needs (Laidlaw Brothers, 74) was the social studies textbook used by the subjects. No special text nor changes in the textual material occurred.

The text unit was entitled, Living on the Plains, and was subdivided into four chapters. The second chapter, "The Pampa" was chosen for implementation of PREV, the prediction strategy.

PROCEDURE

Prediction Strategy

P—R—E—V

DAY 1	Pre-Test
DAY 2	Predict/Silent Read

DAY 3 Eliminate False Predictions

DAY 4 Verify Predictions

DAY 5 Post-Test

Implementation of Strategy

On Day 1 of the investigation prior to reading the chapter, The Pampa, a cloze pretest was administered. A random passage was selected from the chapter and a cloze test was constructed. (The subjects were familiar with completing cloze exercises since they had practiced several exercises of this sort in their reading class.) They were given the entire forty-five minute class period to complete the cloze pretest.

On Day 2 the teacher, using a transparency and overhead projector, wrote the word "pampa" and encouraged subjects to predict what they thought the word meant. Since their previous knowledge with this term was limited, the teacher had to guide the students' thinking and encourage predictions to be made. This was done by pointing out that this was the chapter following the North American Plains and the word pampa means plain. The subjects were then able to relate to the information gained from the previous study. Now with some background knowledge, the students were able to make predictions.

The teacher's role was to record all predictions made by the subjects, stay completely neutral as predictions were being made, guide the students to predict about information they would be reading, and bring the students to the point where they were not sure what they knew or what they did not know, but they could not wait to read to find out. Students were then instructed to read silently to prove or disprove their predictions.

On Day 3 the teacher, using the transparency with the recorded predictions, reviewed with the subjects. They shared the information acquired through their silent reading. Together, the teacher and subjects went through their list of predictions and used the text to either support or eliminate their predictions. During this class discussion, the subjects recorded in their notebook predictions made that were not stated in the text.

Day 4 was devoted to verification day. Several sets of encyclopedias and ten current almanacs were made available in the classroom. Arranging the subjects in small groups, the teacher asked them to utilize the reference materials to verify predictions made on Day 2 that were not located in the text. False predictions were then eliminated during a culminating discussion.

INTERPRETATION

The average score from the cloze pretest was 38% which shows the class as a whole functioning at the instructional level according to the reading levels suggested by Barrett. The average score on the cloze posttest shows a positive increase to 41%. Twelve out of seventeen subjects scored higher on the posttest than on the pretest.

Figure 1 indicates how the subjects scored with respect to Barrett's reading levels on the cloze pre- and posttest. Figure 2 reveals the subjects' individual pretest and posttest scores.

	Frustrational Level Below 36%	Instructional Level 36% to 56%	Independent Level Above 56%
Pretest	6	9	2
Posttest	5	9	3

Figure 1. The chart above shows how the subjects ranged with respect to Barrett's reading levels.

Even though five subjects scored within the frustration level on their posttest, it seems that the end results from this study were favorable. One less subject fell in the frustration range while one more subject moved up to the independent level.

Several factors could have negatively affected the subjects' posttest scores. Since the posttest was compiled from a passage at the end of the text (even though randomly selected), the subjects may not have finished reading the assigned material, though ample reading time was allotted. Knowing the subjects and their previous class performance leads the writer to conclude that this was probably the case for three of the five subjects. Other unknown variables could also have affected test scores, i.e., environmental factors, fatigue, peer distraction, etc.

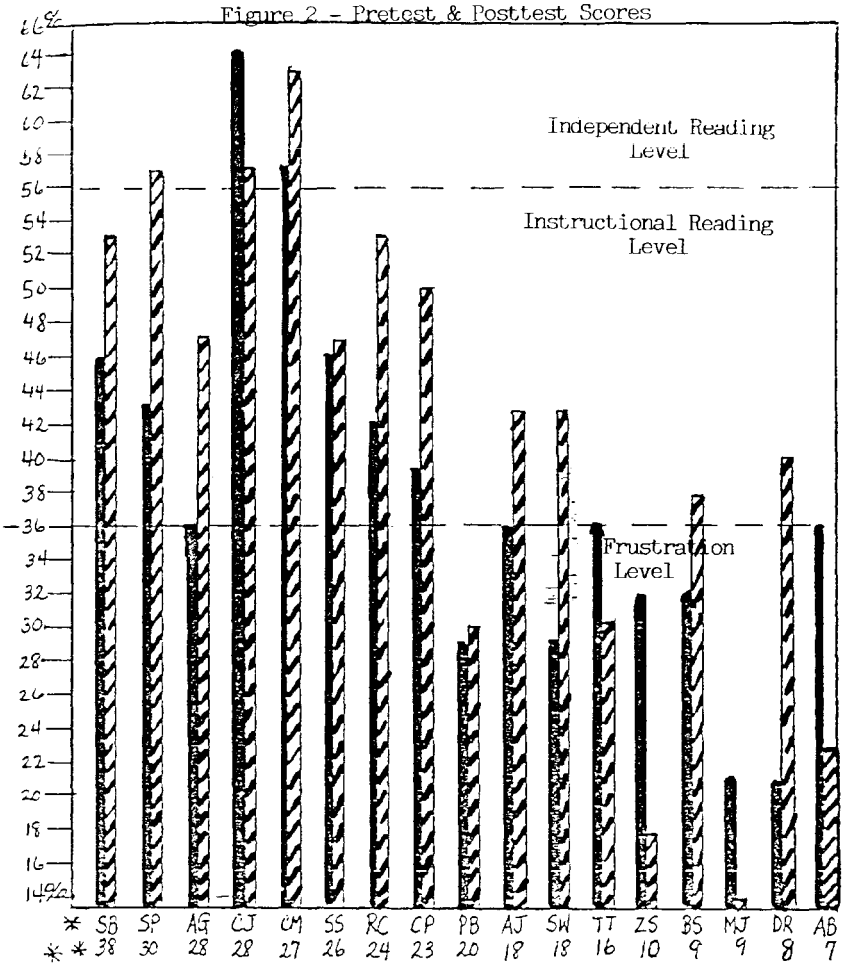
What should not be overlooked after studying the test scores are the positive implications of this study. The fact that the average score increased three percent is an achievement by itself. Another interesting and exciting observation which should be emphasized is that twelve out of seventeen subjects' scores improved on the posttest and out of these twelve scores, five increased ten percent or more.

Some positive results which were difficult to support through testing, but were quite evident in the classroom should not be ignored. The subjects' motivation and interest in their predictions being made were extraordinary. The most reluctant readers (usually because of poor reading skills) seemed to be the most active participants in the predicting, as well as the reading processes. Two of these students in particular went from frustration level to instructional level and made from a fourteen to a nineteen percent gain. Results like these are exciting for any classroom teacher to observe.

CONCLUSION

Prediction making should not be used solely as a teaching strategy, but instead should be taught as a learning strategy. This is the key to its success. Students need to be informed and taught the purpose for making predictions. They need to be

Figure 2 - Pretest & Posttest Scores



Solid line = Pretest Scores Striped lines = Posttest Scores
* = Students' Initials ** = Harper Row 4th Grade Placement Test Results

shown its usefulness as a learning strategy. The ultimate goal of the prediction strategy is to bring the students to a level where they can predict and read for verification independently. This goal cannot be achieved if the teacher uses prediction making as a secret teaching strategy.

Classroom teaching experience and application using the prediction strategy as a learning strategy has consistently provided the classroom teacher with a positive feedback and is strongly recommended in classroom application.

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MOVING INTO LITERACY: THEN AND NOW

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How children learn to read has intrigued parents, teachers, and psychologists as well as reading authorities and researchers for many years. The question of when children should learn to read has been debated extensively since the 1930s. The attention to this question may have resulted in a lack of acknowledgement that learning to be literate begins long before the formal introduction to reading in a school setting. In this article prereading and beginning reading are examined from both a historical and a current perspective with emphasis on implications of recent findings on children's literacy learning for instruction.

A Look Back

The concern with readiness began in the late 1920s as evidence of the high failure rate in first grade accumulated as standardized tests became widely used. Another factor contributing to attention to the readiness concept was the child study movement that stressed individuality in all aspects of development. The "whole child" notion had a number of positive effects such as examining child growth and development and recognizing individual variations in achievement and learning patterns. Concern for a successful start in reading is an old idea that is still full of merit today.

There were, however, some negative results from the considerable attention to readiness. Easy explanations of failure abounded. Statements such as "This child is 'not ready' because he/she is not socially adjusted" or "This child does not have an adequate background of experience" were common. Perceptual problems, cultural disadvantage, nutritional deficiencies, social maladjustment, physical immaturity, and other factors—although certainly concerns to be acknowledged and understood—were too often cited as excuses for children's difficulties in coping with beginning reading. Adjustment of the instructional program to individuals' strengths and weaknesses did not always result from an examination of children's "readiness." Too much stress on prerequisites continued for many years.

In response to the needs of the "not-ready child," reading readiness materials were developed to prepare children for reading. These materials, however, contained little print and did little to develop the written language awareness needed for success in reading (Hall, 1976). The use of readiness materials was often overstressed. This overuse was caused in part by the notion that initial reading instruction should be delayed beyond the beginning of first grade except for thos children who scored quite high

on readiness tests. The delay was attributed to the widely publicized finding of the Morphett-Washburne (1931) study that the best time for introducing reading to children was when they had attained a mental age of 6½. The significant finding of Gates (1937) that it was adjustment of the instructional program to individuals and not the mental age that was the key factor for success in beginning reading was largely ignored.

Readiness tests were frequently used as a sole measure of children's readiness. The misuse of these tests was evident in the practice of grouping children entirely according to their test scores and in the labeling of children—even if only in the sense of the self-fulfilling prophecy of teacher expectation. The diagnostic use of the readiness tests to determine strengths and weaknesses was helpful but insightful, observant teachers could determine needs of children without relying on tests.

In the years between 1930 and the late 50s, readiness materials and tests were used widely and revised periodically. Research on readiness factors continued, and a number of studies substantiated the correlation between achievement and such factors as socioeconomic status, sex, language development, and perception. The erroneous assumption that correlation meant a cause-and-effect relationship was often made.

The Russian triumph of Sputnik in 1957 and the publication of Why Johnny Can't Read in 1955 along with evidence of the considerable cognitive development in the preschool years resulted in new attention directed to the old questions of when and how children should and do begin to read. Durkin's (1966) longitudinal examinations of children who learned to read at home began in the late 1950s. She followed these studies by one in the 1970s of children who were in a preschool and kindergarten program developed to offer reading to four- and five-year-olds (Durkin, 1974-1975). This work showed once again individual differences among children but that many children can and do learn to read at ages four and five.

The finding that some children learn to read easily in the preschool years was cited by some as evidence that the optimum time for initiating reading instruction was four or five (or even three and younger). Instruction in readiness and beginning reading then became a stressed component of some preschool and kindergarten programs. In contrast to this zeal for early formal reading instruction was the extreme position that kindergarten should be devoid of pencil and paper activities. "Hands off" was the policy in regard to reading and writing in many kindergarten settings since first grade and age six were still the most common time for beginning reading.

Through the 1960s and the 1970s the pressure for early reading in preschool and kindergarten settings accelerated. A major concern about early reading was that the instructional programs were often narrow ones with heavy stress on letter names, sound-letter correspondences, and basic sight words. In a number of early childhood

classrooms, young children were introduced to reading with the beginning basal materials ordinarily considered first-grade level. Yet, the instruction programs for prereading and beginning reading for young children are often lacking the naturalness which characterized the early readers of the studies previously mentioned. The introduction to written language as an integral, functional part of pre-school and kindergarten activities was recommended by authorities but in many instances the classrooms did not offer opportunities for the natural literacy development that can occur through meaningful use of print.

A Current Perspective

The terms reading readiness and prereading are still standard parts of the reading lexicon. Although the readiness concept has been and is still viewed as a broad one with consideration of a number of dimensions of child development and program content, the words readiness and prereading may still denote a marked distinction between readiness and beginning reading. The newer term "emergent reading" (Holdaway, 1979) does not focus on prerequisites for reading but instead on children's gradual acquisition of a "literacy set" through extensive and active experience with books, with immersion in the print present in the environment, and also with their remarkable mastery of oral language. Holdaway reminds us that the emergent literacy behavior is not a set of skills but instead "a formidable range of behaviours indeed" (p. 56). He goes on:

> When we apply a term like "pre-reading skills to such behaviours we demean their real status as early literacy skills, for they actually display all the features of mature strategies already achieving sound and satisfying outcomes beyond what could be called embryonic--or pre-anything.

The research on both oral and written language acquisition has substantiated that language learning is intrinsically functional and that the social and situational context is a key influence on the use and learning of language. Halliday's (1973, 1975) research shows "learning how to mean" is the essence of oral language learning. Hiebert's (1981) research showed that the print awareness of three-, four- and five-year-old children was clearly related to the environmental context of the print. Children performed better on visual discrimination tasks and on questions about the purposes of written language when the items were related to familiar print such as that on road signs and commercial packages and labels than when confronted with traditional readiness measures.

Studies of young children's writing efforts (Clay, 1976; Hall, Moretz, & Statom, 1976; Dyson, 1981; Ferreiro & Teberosky, 1982) coupled with accounts of "natural" early readers (Durkin, 1966; Torrey, 1969; Clark, 1976) have shown that children's awareness of print is acquired through meaning-based experiences with print. Harste, Burke, and Woodward (1982) reported that all the preschool children in their sample "demonstrated an expectation

that written language would make personal sense" (p. 109). Just as the pleasurable experience of having been read to at home helps to create powerful motivation for learning to read, so does early experimentation with writing result in children's continuing interest in producing their own written messages.

A key ingredient in early literacy learning now appears to be written language awareness. This awareness involves both the functions and forms of print. Reid (1966) and Downing (1969) pointed out young children's confusion about such concepts as word, letter, sentence, and sound. Downing claimed that it was the abstract nature of written language that caused children to flounder in beginning reading instruction. Yet, the studies of the natural learners demonstrate how personal and relevant their early experiences with print are. The early writers and readers do apparently understand that print is meaningful. The need then is to have instructional programs that also demonstrate the functions and conventions of written language with personally relevant print.

Another dimension of children's emergent reading behavior is their development of a "sense-of-story" (Applebee, 1978). The acquisition of this schema for stories is developmental as children have continued and numerous experiences in hearing stories both read and told. Hansche (1981) found that good readers had more elaborate story knowledge than did poor readers at the end of first grade. If, however, the reading materials used for beginners are ones that violate the elements of predictable story structure, a base for making reading predictable and meaningful is ignored.

New developments in the evaluation of emergent reading behavior also reflect the significance of written language awareness. The Concepts About Print Test by Clay (1972, 1979) is one example of a measure that uses a reading-type situation to evaluate children's knowledge about conventions of written language such as word, letter, left-to-right order, and punctuation. The work of Evans, Taylor, and Blum (1979) documented that tasks which tap children's understandings about the relationship of oral and written language were the most significant predictors of success in beginning reading. Formal tests need not be employed if teachers are aware of and knowledgeable about children's interactions with written language (in both reading and writing) that indicate children's degree of understanding of both the functions and conventions of written language.

The programs for the introduction of reading should not be the stilted readiness and beginning reading programs that have characterized so many first grades for so long. Readiness materials have had so little written language that their use has not resulted in the development of the written language awareness needed for reading. The basic nature of reading as communication is usually lacking in the beginning reading materials that have rigid vocabulary control, stilted sentences, and skimpy stories.

The place to start with reading and writing instruction is with children's oral language, with their writing, and with mean-

ingful experiences with print in a classroom context with opportunities to interact with print. Taylor and her colleagues at Catholic University (1982) have investigated the factors that influence classroom language learning environments. They reported that at the kindergarten level children of the "high-implementing" teachers outperformed children of "low-implementing" teachers on tests of written language awareness and on conventional measures of readiness. The classrooms of the high-implementers were characterized by numerous and high-quality experiences with written language, relevant situational context for reading and writing, units of language larger than single words, and more child language than teacher language. The language was functional and integrated with on-going classroom activities. These print-rich classrooms had many books and functional display of children's products.

The old concerns of not forcing reading for three-, four- and five-year-olds must be remembered. Offering extensive opportunities for observing print and for encouraging writing must not become sequenced presentations of handwriting lessons or deteriorate into worksheets drilling on letter-sound correspondence and so-called basic words. What is indeed basic is the natural acquisition of literacy in a setting in which both oral and written language are incorporated into all learning.

Conclusion

In the decade of the 80s the attention to prereading and beginning reading will no doubt continue. The need to develop instructional programs for young children that are congruent with the nature of emergent reading and writing must be addressed. The acquisition of written language awareness exhibited by successful young learners provides clues for school programs that can promote successful literacy learning for all children.

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USING STUDENT PREDICTIONS TO TEACH CONTENT AREA VOCABULARY

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When content area teachers get together and talk about helping their students learn, the discussion usually comes round to the importance of key vocabulary and concepts needed for the subject matter. Often, content teachers express frustration because their students do not succeed in learning and using the specialized technical vocabulary in their fields. They receive little support from investigations related to reading (Weintraub et al, 1980,1981, 1982) since less that 1% of the studies on vocabulary deal with meaningful acquistion of content related terms.

No article can constitute a panacea for teaching terminology. However, a process that may alleviate some of the frustration experienced by both teaches and students is called predictions. In it, students make active contributions under the guidance of the teachers. We believe teachers should incorporate predictive behaviors into vocabulary instruction, using three strategies that promote such learning involvement, described below.

Rationale for predictive behaviors

Any reading involves the active construction of meanings based on anticipations of incoming words (Adams and Collins, 1979; Smith, 1982; Stanovich, 1980). Indeed, knowledge of word meanings and the ability to manipulate words and concepts have been found to be the two most important factors in reading comprehension (Davis, 1944, 1968, 1972).

Since anticipation and meaning construction require that words be embedded in a text, it is natural that context would prove to be the greatest facilitator of acquiring both vocabulary and concepts (Crist and Petrone, 1977). Similarly, it has been found that although specialized terms may be more unfamiliar to learners than general terms, specialized terms actually provide more information about their meanings (Finn, 1978).

Even with predictions based on context, readers would suffer from information overload if they could not somehow focus their attention (Smith, 1982). Teachers can give direction to students' attention by setting purposes for reading. Purpose setting improves the kind, level, and degree of comprehension (Stauffer, 1975). Having intentions for one's reading is important for students of all ages especially with expository texts (Just & Carpenter, 1980; Kintsch & van Dijk, 1978).

Strategies for enhancing prediction

The following strategies encourage the predictive behaviors of students attempting to acquire new vocabulary. The strategies involve the kinds of thinking associated with anticipating meaning, using context, and relating text to a purpose. They stimulate learners to make connections between old and new information. A sample lesson for each strategy is described.

Contextual Redefinition asks students to predict the meanings of words presented in isolation and then to verify the meaning from the words' use in context. Figure 1 illustrates the procedure with key vocabulary from a geometry class.

Sample Lesson for Contextual Redefinition
(Geometry Class)

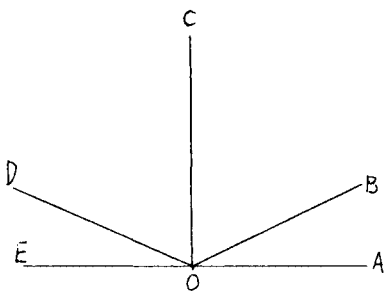
Words to be introduced—

Complementary Angles Obtuse Angles Right Angles
Supplementary Angles Acute Angles

Sentences presenting words in context—

Complementary Angles always total 90 degrees.
Supplementary Angles always total 180 degrees.
Street corners are usually at Right Angles.
Obtuse Angles are larger than Right Angles.

Illustration presenting words in context—



Right Angle COA or EOC

Acute Angle AOB, BOC
COD, OR DOE

Obtuse Angle AOD, BOE, or
BOD

Complemetary Angle

AOB and BOC

Supplementary Angle

AOB and BOE

The steps for contextual redefinition are:

1) The teacher selects new key vocabulary terms. They should always be important to understanding the concepts being introduced.

2) The teacher writes a sentence which provides context clues that the students may use to determine the meanings of the terms. Different types of context clues can be used (McCullough, 1958; Ames, 1966), such as comparison/contrast clues, linked synonyms, other words that set the mood or tone of the sentence, or simple definitions. Ideally, these sentences are taken from course work.

3) One at a time, the terms are presented to the students in isolation and students discuss what the terms might mean. All

their suggestions are recorded on the board. Then, as a group, the class decides what are the best possible meanings. Though some of the students' definitions may seem bizarre, it is amazing how many times an off-the-wall answer leads to the appropriate responses.

4) Next, the teacher presents each word in context, and students speculate on their meanings. Students should be ready to defend their answers. Not only does this cause students to think more about the context clues provided, but it also allows poor readers to see how their more able peers use context to determine word meanings.

5) In the final step students use another source to verify their word meanings. A dictionary, the glossary of the students' textbooks, or some other reference materials (charts, graphs, or illustrations). At this point it is interesting to refer to the students' original predictions to see whether any were close to the actual meanings of the terms.

Besides providing practice in using context clues and reference sources, contextual redefinition serves several other functions. Most important of these is that of creating interest in the terms to be studied. Students are enthusiastic, finding out whose predictions are correct. Because the terms are unfamiliar to most students, there is little fear of being wrong. They feel free to get involved in the predicting parts of the lesson. Finally, the procedure encourages students not to stop reading when unknown words are encountered. Contextual redefinition promotes the attitude that guessing about the meanings of unknown words is desirable.

Possible sentences (Moore and Arthur, 1981) is another strategy designed to help students independently determine the meanings of unknown words through prediction. Instead of simply giving students definitions of words prior to reading, teachers have students create sentences containing two or more of the new terms. Through this process, students are encouraged not only to speculate on word meanings, but also on the interrelationships between concepts. Figure 2 shows the possible sentences procedure used to introduce terms in a biology class.

Figure 2
Sample Lesson for Possible Sentences
(Biology Class)

Words to be introduced—

protoplasm	chloroplasts
mitochondria	cell wall
nucleus	cell membrane

Student generated sentences—

The protoplasm was in the cell membrane.

The nucleus has chloroplasts.

Mitochondria need protoplasm to live.

The cell wall and cell membrane are the same thing.

The steps in possible sentences are:

1) The teacher selects key vocabulary terms from the text. These should be words that are defined adequately by their context, because students will later use the text to verify or refute the predicted meanings. Words are then presented to the class and pronounced several times.

2) Next, students create sentences using two or more of the new words as the teacher records each sentence verbatim on the board or overhead transparency. This process continues for a given period of time or until a certain number of sentences have been created. Words may be used more than once, but an effort should be made to use every word.

3) Now, students read the text selection to check their prediction as students critique the sentences. The following questions should be asked: Which sentences are correct? Which need modification? What are those modifications? Are there any sentences which cannot be verified? The teacher plays an important role in guiding a discussion and requiring that students' answers must be supported using information from the text.

4) After all modifications have been made and recorded, students are called upon to generate new sentences. These sentences may be evaluated as they are dictated. Students should modify these sentences to clear up misconceptions or to elaborate on each other's ideas.

Using prediction in possible sentences piques students' curiosity, question-raising behaviors, and self-checking ability. Students should ask themselves: Are my ideas right? Are the terms related in the way I have guessed? Motivation and purpose for reading are established as students read to verify the predictions. Finally, teachers are given an opportunity to assess their students by the quality of their sentences.

Analogical Previewing. "Analogical previewing (Martin, 1980) uses the time-honored notion of relating the new to the known. In this procedure, students use analogies to explore the meanings of unknown words by investigating how these terms are related to familiar ones. Figure 3 shows how the procedure was applied to vocabulary being introduced in a social studies class.

Figure 3
Sample Lesson for Analogical Previewing
(Social Studies Class)

Words to be introduced—

Samuel Gompers Haymarket Riot Molly Maguires

Analogies presented to students—

Samuel Gompers : Labor Union :: George Washington : United States

Working conditions : Haymarket Riot :: Pearl Harbor : WWII

Molly Maguires : Employers & Strike Breakers :: KKK : Blacks

The steps to analogical previewing are as follows:

1) The teacher selects important terms. These should be words that relate to important concepts and that can be explained through analogies. For instance, the term habitat could be introduced using the analogy—people : neighborhood :: animal : habitat. Students can use their knowledge of familiar terms and the relation among the terms to predict the meaning of new words.

2) An analogy is then written which gives students a clue to the meaning of the new term. It is important that students are familiar with the other terms used in the analogy, as in the example just presented on habitat.

Depending on the ability and background of the students, teachers may wish to make the relations presented in the analogy very explicit—electron : nucleus :: moon : planet; or more open to interpretation and discussion—stonewall : Watergate :: dam : river. The analogies which are presented also may refer to material which has been previously studied, e.g., Pharoah : Egypt :: Caesar : Rome.

Throughout analogical previewing, different types of relationships should be explored. Students should be given practice in exploring part-whole, synonym, antonym, and similar function analogies (Bellows, 1980; Ignoffo, 1980).

3) The analogies are presented to the class, using the chalkboard or overhead projector, and students brainstorm possible meanings of the new terms. As they respond, their answers are recorded on the board. Students should be encouraged to describe all aspects of the concepts as well as the relations among the terms in the analogies. Formal definitions are not required as the idea is for students to discover as much as possible about the new concepts and how those new concepts relate to what students already know.

During this part of the lesson, the teacher directs discussion of the analogies by asking questions which guide students' thinking processes. For example, using the Watergate analogy presented above, the teacher might raise these questions: What would happen if the dam broke? What happens to a dam when it develops a small leak? What are the advantages of holding water behind a dam? What are some of the problems? Answers to these questions are then related to the analogous relationship of stonewalling and Watergate.

4) Finally, the analogies are reexamined through discussion of the predicted meanings and answers to the questions. Further discussion may revolve around answers to the following: Which ideas were correct? Which needed modification? Can some of the earlier ideas be elaborated? Teachers should try to bring out aspects of the meanings and relations of the new concepts that were not discussed previously.

By exploring analogies to learn new terminology, students are able to activate and use prior knowledge of concepts and their interrelationships. Besides providing review of previously learned material, an active process is being taught that directly involves the students in a search for meaning. Interest is created and

an inquiring attitude toward vocabulary learning results.

Summary

Prediction is an inherent and important feature of reading. This article has suggested three strategies teachers can use to capitalize on students' predictive behaviors to facilitate the acquisition of content area concepts and vocabulary. Each incorporates the notion of predicting, reading, and verifying under the guidance of a skilled teacher. By using these steps, teachers are not only effectively introducing new words to their students but are also teaching them a process by which they may become more independent readers.

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DEVELOPING AN UNDERSTANDING OF LITERACY THROUGH PRODUCTION OF POP-UP BOOKS

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Saying that many children do not understand the nature of literacy, researchers suggest that this confusion contributes to children's difficulty in learning to read and write (Canney and Winograd, 1979; Graves, 1983; Johns and Ellis, 1976), and others attribute it to the type of instruction children receive during regular lessons (Brown, 1978; Deford and Harste, 1982; Postman, 1979). These lessons require children to react to commercial materials and teacher's and deny them opportunities to practice what they have learned in a meaningful way. Olsen (1977, 1983) maintains that opportunities to use literacy, to organize thought in order to produce explicit meaning, are essential for children to understand literacy. He argues that the present practices are insufficient and proposes that emphasis during lessons be placed on production because "It is really the act of production —speaking, writing, drawing, and so on, that organizes thought... What you really want to have is children capable of expressing what is on their minds" (p. 230, 1983). This article presents a series of activities with pop-up and other movable books which allow children to produce meaning and should further their understanding of literacy.

While picture books, magazine, and even advertisements could provide the stimuli for production activities, pop-up and movable books offer some unique features which make them well-suited for early group literacy instruction. First, they are popular with children. In a follow-up study to the 1982 Children's Choice Program, Abrahamson and Shannon (1983) reported that two pop-up books were among the top 50 favorites despite odds of over 100 to one. Second, pop-up books are engaging, and they hold children's attention. Moreover, these books present interesting cognitive challenges for students because they often use two dimensional devices to simulate three dimensions. Readers must interpret two dimension representations presented on two and sometimes three geometric planes. When examined from these perspectives, pop-up books are more than just novelty items, as their critics often claim (Karlin, 1982). They provide useful tools with which children can develop and practice their literacy and begin to understand its nature —the production of meaning.

The production activities are organized into a four step sequence: Oral Reading and Analysis of Pop-up Books, Conversion of a Picture Book To a Pop-up Book, Writing and Rewriting Text

for Pop-up Books, and Construction of an Original Pop-up Book. Each successive step requires the children to accept more responsibility for the development of their literacy. Because the tasks become progressively more difficult, the children receive two types of support. First, part of the production tasks are completed for them during the first three steps. The students use their production to extend rather than to invent books. Second, all tasks are completed within groups so that children can provide moral and intellectual support for one another. The role of the teacher is to observe children carefully to determine if a group is experiencing too much difficulty and to intervene before they begin to lose interest. Furthermore, the teacher must decide when the group is ready for the next step. These steps do not form distinct categories and some steps should overlap. For example, teachers should continue to share pop-up books with groups for pleasure even after the groups begin artistic and written production.

Step One: Oral Reading and Analysis of Pop-up Books

Researchers point to the importance of reading aloud to children as a first step in their development of literacy (Chomsky, 1972; Durkin, 1966; Taylor, 1983; Teale, 1981). In step one, the teacher reads and rereads pop-up books to groups of children. These readings should be social events in which children are free to converse with the teacher and each other. During an interview (Park, 1982), Holdaway captured the spirit and intent of these readings. "Gathered around a book as a natural, sharing community, children learn more from actual participation than from direct instruction: They learn from the teacher's model, from their own sensible involvement, and from each other, without any sense of competition or pressure."

The response to these "shared book experiences" should include discussion of the ideas and concepts in the text and illustrations, predictions about what might come next, and reactions to authors' and illustrators' choices for text and illustrations. Initially, the teacher takes responsibility for much of the oral production, serving as the reader and discussion leader. Over time, the focus should gradually change until emphasis is placed on children's explicit verbalizations. As children become familiar with the stories and formats of pop-up and other movable books, they should be encouraged through the teacher's questioning to speak precisely and to reflect upon the logic behind their answers. The goal of step one is to familiarize children with the structures of pop-up books to the point where they can articulate hypothetical but real reasons for authors' use of text and illustrators' reasons for movable pictures.

Consider Carle's acclaimed The Honey Bee and The Robber. In this pop-up book, Carle tells the story of a honey bee as she gathers nectar, escapes from a bird and then a frog, dances to communicate the location of the flowers to the other bees, and saves the honey by stinging the robber bear. Discussion during the several readings should include: analysis of the author's message (What in the story tells you that Carle admires the bee?"

or "Why are there predators?"), prediction questions ("Where is the bee going next?" or "Who might be the robber?"), issues central to the pop-ups ("What different ways are used to create movement?" or "How are these movements engineered?"), and evaluation of the author's choices ("Why does Carle choose to have the bird move?" or "Why do you think the robber was a bear instead of a person?"). When children consider these types of questions and the possible variations of both text and illustrations, they confront the fundamental questions that authors and illustrators must answer.

Step one exposes children to the pleasures of reading pop-up and movable books. While the teachear provides initial direction, the books furnish visual incentive for children's oral production. Through the shared book experience, children organize their knowledge concerning literacy to speculate and to judge authors' and illustrators' attempts to produce meaning. Although children cannot be pushed to this reorganization of their knowledge, teacher can help by asking good questions, encouraging a supportive environment and providing insightful feedback to help children begin to appreciate the difficult choice that authors and illustrators must make. It is important that most children in a group can articulate explicitly some of the uses of movable illustrations and hypothesize about the construction of these movable forms before they move on to step two.

Step Two: Conversion Of A Picture Book To A Pop-up Book

Oral and artistic production are combined during the second step to transform a picture book into a pop-up book. The group of children must select an appropriate picture book, decide upon which parts of the illustrations should move and which type of pop-up will best interpret the meaning and tone of the text, make the pop-ups, transcribe the original text, and assemble the book. Since the entire task requires prolonged attention from all group members, the book should be a consensus choice.

For example, Sendak's Where the Wild Things Are is a likely and good choice because it is a children's favorite, its illustrations are lively, and it has a modest amount of text to transcribe. Different pop-ups would be needed for the passive action of Max sailing in and out of days and the violent action when he commands the wild rumpus to begin. These decisions deserve careful deliberation and should be made on a page by page basis. Models for the oral production required in this process may be found in the discussion among teacher and students during step one.

The technical aspects of making pop-ups are not as complicated as they might seem. Abrahamson and Stewart (1982) describe simple and useful designs and others are presented in Appendix 1. The actual construction might be a group project in which everyone helps to make each pop-up or after decisions are made for all the pop-ups, the labor might be divided among group members. Lowenfeld (1952) cautions that the process of artistic production is more important than the product to most children. Emphasis during this step should be on the process rather than the outcome of children's pop-up construction. The teacher's concern is with

the cognitive aspects of the tasks—the organization of children's thought and their understanding of different ways to represent meaning—not with the artwork, per se. The teacher should spend time inquiring about the logic behind the group's choice of a particular type of pop-up to be used to interpret a certain passage from the picture book. These inquiries will be most useful for students if they take place prior to the actual construction of the visuals. A complementary role for the teachaer is to model more sophisticated ways to plan and construct pop-ups. Students will emulate the process if not the product. Since the construction will involve mistakes, the group should be encouraged to be patient and to expect failures before completing their book.

During this step, children are translating the concepts they developed in step one into oral and artistic production. While the text from the picture book supports this production, children become story editors and illustrators and the responsibility which accompanies these roles requires them to examine their own literary preferences, author's intentions, and the role of illustrations in books. The group has experienced a different way to produce meaning through the construction of movable illustrations and the pleasant connotation of literacy started during step one has been extended and refined through step two. Children have become involved in the production of literature rather than having it taught to them. Before they begin step three, children should be able to state why they selected certain pictures for translation and why they chose particular pop-ups. That is, they should be able to speak as illustrators.

Step Three: Writing and Rewriting Text for Pop-up Books

Having accepted responsibility for oral and artistic production in the first two sets of activities, the group now takes the next logical step, written production. They rely on illustrations of movable books and write or rewrite the text to produce another book. The children can use the book's illustrations as a storyboard to organize, discuss and reorganize their text to fit their interpretation of the story before they commit themselves to formal written production. For instance, a reproduction of Meggendorfer's antique book, The City Park, has 14 die cut pages, each capturing part of a 19th century park. This textless, stand-up book can be set up in a variety of ways to produce different three dimensional panoramas of the park. The story depends on the observer's imagination; the book provides only the roughest of outlines and the children must produce the storyline. Moreover, this book can be used as a stimulus for a seemingly infinite number of different stories.

As children become aware of the relationship among text, ilustrations and movement and as they assume the author's chair (Graves and Hansen, 1983), they will recognize that there is a mismatch between text and illustrations in some current movable books. Since pop-up books are often a better visual than literary experience, children can become "ghost writers" and rewrite the text to interpret the excitement of the illustrations without ruining a classic. For example, Pienkowski's book, Robot, winner

of the Kate Greenway Medal in 1979, reveals remarkable movable forms on each page. However, the plot of Robot is limited. Written as a letter from a robot son, the text barely hints at activities in the movable illustrations. The group might amplify Pienkowski's story or opt to write an entirely new plot based solely on the pop-ups. In either instance, the children produce explicit written language to explain to the reader what is happening in and beyond the illustrations and why it is happening. They can make the text as interesting as the illustrations.

During step three, the group collaborates with the illustrator of a movable book to create a new book. This requires them to translate their oral and artistic production techniques learned during the first two steps into a different set of symbols using a different set of rules. Moreover, the children must recognize the need to be more explicit in the organization of their thoughts than they were in the artistic production phase because they must produce the text that will carry most of the meaning. While the remarkable illustrations may help them in that process, the pop-ups also challenge their writing ability. The teacher's role at this point is to facilitate the group's writing by asking questions and occasionally making suggestions. Perhaps, the most difficult part of this role is to achieve that delicate balance between aid and interference. The children must control the production process if they are to learn to express themselves. While teacher intervention may improve a particular text, it will not help the children to develop strategies to cope with their production problems. The children are ready for the fourth step when they can present rationale for their decisions concerning the relationship between their text and the book's illustrations.

Step Four: Production of an Original Pop-up Book

Step four is the culminating activity in which the group produces its own pop-up book. Experience with the first three steps will prepare the children for this task, and they should have a fairly sophisticated understanding of the relationship between text and illustration that characterizes these books. In fact, only two activities are entirely new in step four: The group picks its own topic for the book and the children coordinate the oral, artistic and written production. While these may seem insignificant in comparison to learning the production processes, in previous steps children had part of each project completed for them—teachers read the books, authors wrote the text, and illustrators created the movable pictures. Under these conditions, the children could base their work closely on the work of others. In step four, their work will be truly original, the group may consult pop-up books to investigate how its author solved a particular problem, but the overall design, production and construction must be the group's own.

In the fourth step, the children may experience some difficulty combining explicit speech, artistic construction, and precise writing. Each type of production while practiced previously will appear slightly different from before. The oral language will

have to be more explicit because there will not be text or illustration to serve as referent; artistic production will require conception rather than interpretation; and the written text will have to carry even more of the meaning for the book because few children will match the commercial illustrators' artwork. The teacher must observe groups closely to recognize if intervention into group activities is needed and when it is desired. With the completion of their own pop-up book, the children should be able to analyze what it means to be an author and illustrator. They should be able to explain their decisions concerning text and art and how they had to compromise between their planning and the actual production of the book. Basically, they should be able to describe the nature of literacy within the context of pop-up book construction.

Pop-up and other movable books provide stimuli for oral, artistic, and written production. These types of production arranged in this four step sequence will help children understand the nature of literacy and will allow them to practice and refine their abilities to organize their thoughts to produce explicit meaning. Each step requires the children to articulate their understanding of some aspect of literacy and each succeeding step challenges and extends that knowledge. Through this cognitive struggle between understanding and production, children learn that they have power over their language—they have become truly literate.

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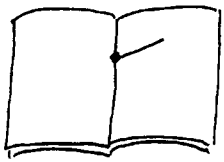
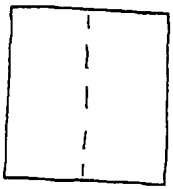
APPENDIX I



1. Place a dot on the centerline about 1/3 of the way down from the top. Draw a line at some angle between 90 and 45 from that dot.

2. Measure the dot to the bottom of the page. This will be the outside dimension of your pop-up. Cut a square from a piece of construction paper with this dimension and fold the square in half.

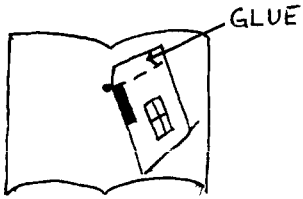


3. Draw one outline of half of the object that will pop-up. Be sure to live a one inch space at the bottom of the outline to serve as tabs. Cut out the pop-up shape and tabs. Be sure to cut a small right triangle at the folded edge of the tabs.

4. Unfold and decorate the front side of the pop-up. Crease the tabs back under the pop-up shape, then unfold the tabs.

5. Refold the pop-up. Put glue on the tabs and attach the pop-up to the line on the book page. Make sure that the bottom of the pop-up meets the dot on the centerline. Close the book and apply pressure to affix

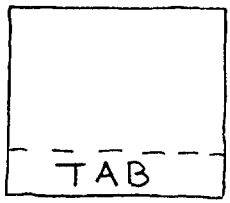
(continued next page)



the pop-up to the page. Did you apply glue to both tabs so that the pop-up will stick to both pages and pop up when you open it? Allow 5 minutes for the glue to set.

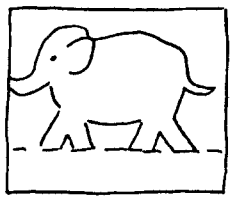
6. Open the book and inspect your pop-up.

SECOND POP-UP



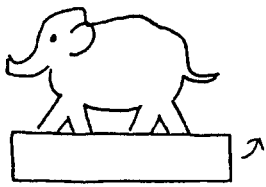
1. Cut a square the intended size of the pop-up. Fold the bottom in of the square to serve as a tab.

2. Draw the outline of the pop-up object. Be sure that the outline meets the tab at several points.



3. Cut out the pop-up and tab. Fold the tab back.

4. Decide on the type of background for your pop-up. The background could be a. the second page, b. a coversheet, or c. another pop-up. The example will demonstrate the use of background a.



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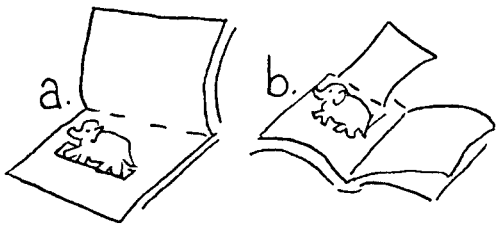
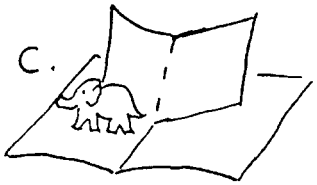
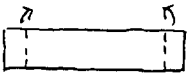




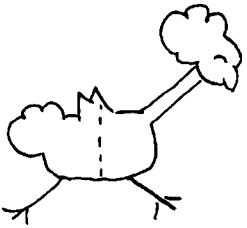
5. Locate the pop-up on the page and glue the tab to the page. Be sure that you leave enough room for the pop-up to lie flat and not hang out of the book.



6. Measure the distance from the base of the pop-up to the background. Add one inch to that distance and cut a one inch strip from a piece of construction paper. Fold a 1/2 inch tab at each end of the strip.

7. Glue on tab to the back of the pop-up and the other end to the back ground. Fold the book closed and apply pressure. Let it set for 5 minutes, and then your pop-up is ready.

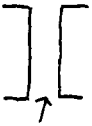
THIRD POP-UP



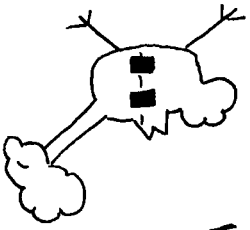
1. Draw and decorate the figure that will pop up and cut it out.

2. Fold the figure in half.

3. Cut at least 8 strips 1 inch long and ½ inch wide. You may need more strips is your figure is large. Always cut an even number. Fold a ¼ in tab at each end of each strip.



4. Make at least four pairs of strips by glueing two strips together. The tabs should point in opposite directions.



5. After those have dried, glue one strip pair near the top of the figure by putting glue on the tabs and pressing them against the figure. In the same way, glue a second strip near the bottom of the figure. The center of the tabs shoiuld be on the center fold of the figure in each case.

6. Glue the other end of the strip pairs to the centerline between the pages. Make sure that the center of the tabs is on the centerline between the pages.
7. Use the remaining strip pairs to support the rest of the pop-up figure. Close book for 5 minutes.