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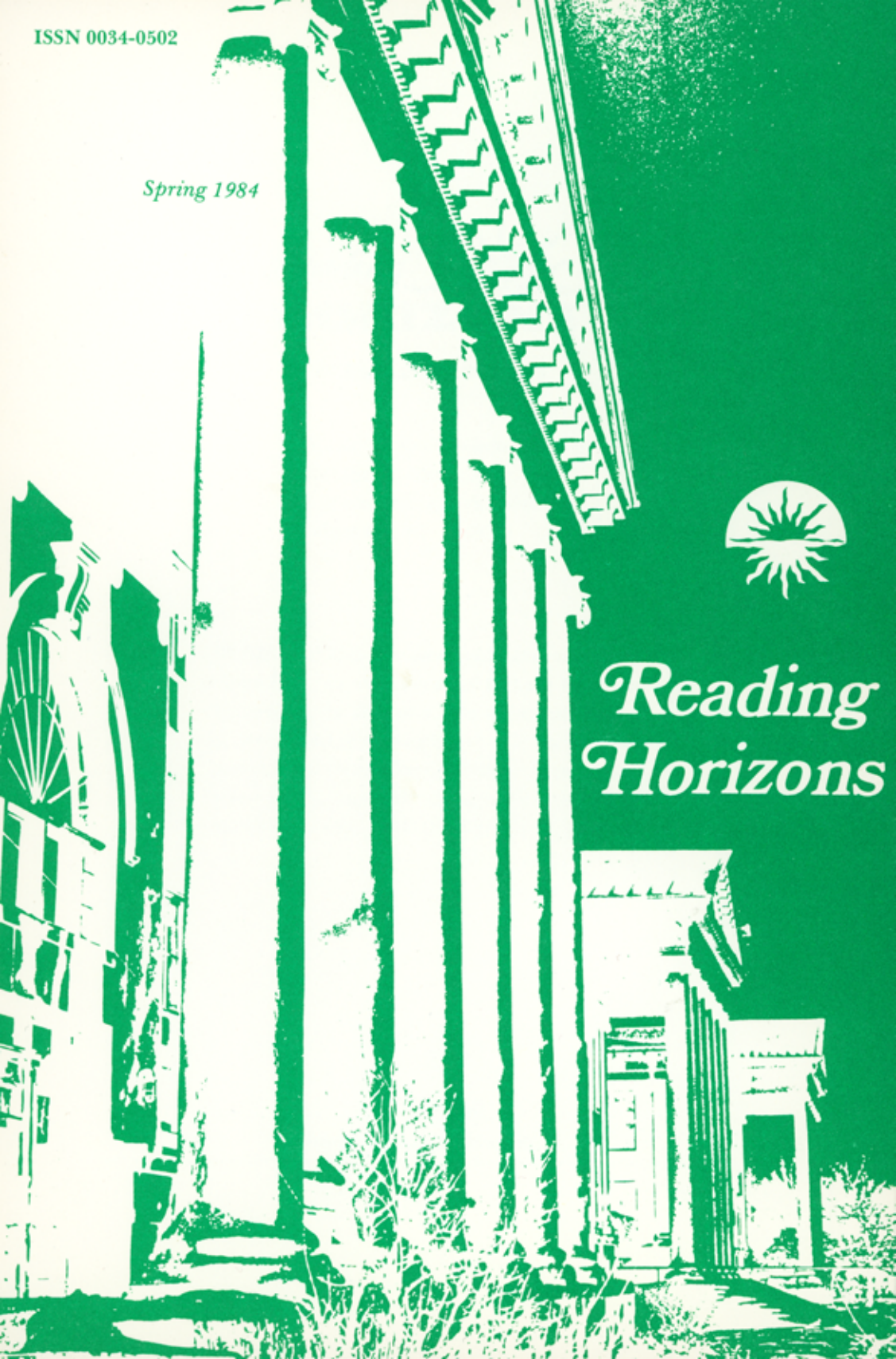


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READING HORIZONS has been published quarterly since 1960, on the campus of Western Michigan University, in Kalamazoo. As a journal devoted to the teaching of reading at all levels, it provides interested professionals with ideas, reports, and important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

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BREAKING THE EMOTIONAL BARRIER THROUGH THE BIBLIOTHERAPEUTIC PROCESS

Dan T. Ouzts

THE CITADEL, CHARLESTON, SOUTH CAROLINA

Success in school is usually measured by grades and test scores, and most people seem to believe that the well-educated person will achieve success in life. How often this has been a myth! Even the time honored belief that elementary school years are happy times for children is being questioned by statistics which indicate that suicide is on the increase among young people. The effects of the many social changes that have occurred in the last few decades have afflicted many students with such problems as family divorce, family mobility, sexual identity, cultural differences, handicapping conditions, and now the threat of nuclear war.

In today's classrooms the teacher is often confronted with students who are burdened with stress and depression, thus, teacher frustration becomes one of the results of these social and emotional attitudes which are found in classrooms. These social attitudes may be related to reading achievement or reading underachievement which is affecting many school systems. Poor self-concept is one phenomenon directly related to underachievement in school. Thus, it is detrimental to both the learner and the learning process to consider the intellect without consideration of the social aspect of learning.

Monteith (1981) has stated that a high degree of stress, whatever its cause, will alter children's behavior and ability to perform in the classroom. How can the teacher break these attitudinal barriers to learning and at the same time develop social and emotional abilities of those students who are experiencing personal difficulties?

First, the classroom teacher needs to be aware of Selye's Principle of Deviation, i.e., nothing erases unpleasant thoughts more effectively than conscious concentration on pleasant ones. Bibliotherapy is a technique or process that can be used in any classroom to enhance academic achievement and possibly break emotional barriers which impede learning for many students. Monteith suggests that teachers need to watch for specific kinds of stress as absentmindedness, nervousness, weariness, moodiness, withdrawal, declining grades, physical complaints, and acting out.

Bibliotherapy means therapy through books and is an effective technique which can be used to help children cope with their problems and thus promote mental health. And with this improved mental

health children should be better able to achieve in the classroom. Today one often hears of books being recommended to others when difficulties arise. On Death and Dying by Kubler-Ross has often been recommended for those experiencing death, recommended for both the terminally ill as well as those helping the terminally ill. The Bible has often been recommended to others.

Books may offer possible solutions to problems or even present the solution that could lessen a person's inner turmoil and thus break attitudinal barriers to learning. Reading about a situation has the potential to sharpen perception and deepen understanding. Intervention through a book's approach may make the difference between an emotionally well-adjusted person and one who may later develop mental anguish.

In a study conducted by Carter and Harris (1982) those characteristics which make a book popular were analyzed and students gave their reasons for favoring a certain title. Characterization was mentioned most as that quality of a book which made it popular. The students frequently asserted that a character in a book was "just like me." This suggests that self-identification in books is of paramount importance in providing books to children who have emotional barriers to learning. Teachers need to be aware of students' attitudes when planning instruction so that positive attitudes can be developed. It is important that the right book for the right child at the right time be used as the primary criterion for developing attitudes.

What, then, are the criteria for selection of books for the bibliotherapeutic process? Books should be written on the child's level of reading ability to avoid compounding an emotional problem with a reading problem if one already exists. Books should be about modern children or have a universal appeal, be realistic, and present solutions to problems. It is imperative that teachers expose children to reading activities beyond the basal text at the elementary level so that positive attitudes may be developed.

Bibliotherapy consists of three fundamental processes between readers and literature: identification, catharsis, and insight. Russell (1970) called identification the holistic name for the process under which the other two processes are subsumed. It begins with the affiliation between the reader in a story, poem, or play. This may enhance one's view of self or reduce a sense of being different from others. Identification is most successfully achieved when the process of agreement or disagreement is accompanied by a strong emotional reaction. Schultheis (1972) stated that it is a means for children to identify with characters who have a similar problem to help the children understand themselves. When a reader shares a character's motivations and expresses emotions of the character, catharsis is said to occur. Cianciolo (1965) explained that the emotional situations in literature provide a purge of emotions for the reader. The third step, insight, occurs when readers see themselves in the behavior of the character.

Timing is of importance when providing books in the bibliotherapeutic process (Bernstein, 1978). Materials should be readily available, but the choice should be left to the individual. Time allowances and encouragement should be provided for the enjoyment of that particular book which may help reduce stress. While account-

ability in the reading class is important, the subjective reasons for providing books is equally important.

Many recent books for children deal with serious issues and the number of books appropriate for bibliotherapy has grown rapidly in recent years. The Book Finder: A Guide to Children's Literature about the Needs and Problems of Youth Aged 2-15 by Dreyer is an excellent source of information. The Book Finder lists books by subject or problem area, author, and title. Lists of books for use in bibliotherapy for loss, separation, and death have also been provided by Cianciolo (1965), Bernstein (1978), Arbuthnot (1957), and Schultheis (1972). Another source which provides a list of books for children is Children's Choices: Teaching with Books Children Like (Roser and Frith, 1983).

As with all types of therapy, bibliotherapy has its limitations. Zaccaria (1968) stated that some people tend to rationalize problems when reading about them, and in some cases, fears and anxieties about mental health are reinforced by reading about them. A recent study conducted by Newhouse and Loker (1983) has pointed out that there was no significant reduction in children's fear when reading about certain fears such as fear of animals, strangers, dark, or high places. It should be evident that reading Jaws would not reduce fear of the ocean. Shrank (1982) has stated that proceeding too quickly with a book suggestion or reading may subvert the process of bibliotherapy and Russell and Shrodes (1950) have stated that there is no guarantee that a particular piece of literature will influence a child or, if an influence exists, that it will operate in the desired direction. The reading teacher serving as bibliotherapist must be cognizant of the problem that exists and offer books which may enhance a child's personal, social, emotional, and, hopefully, academic development. The reading teacher should also be aware of the child's fears and dislikes as well as what the child appreciates.

In attempting to foster emotional health in a child, it is well to offer the teacher some guides or goals. According to Haring (1974), there is no clear-cut definition of mental health. However, professionals do agree on the following characteristics of a mentally healthy child, so the reading teacher should attempt to support these characteristics. A mentally healthy child is one who:

1. Maintains a realistic understanding of self and an acceptance of self as a worthwhile person (a positive self-concept);
2. Builds and maintains positive relationships with other people (interpersonal or social skills);
3. Perceives reality accurately, including setting goals which are obtainable;
4. Organizes thoughts and actions appropriately;
5. Achieves academically at a level which is reasonable for the child's abilities, and/or
6. Generally acts the ways a person the child's age and sex is supposed to act and is able to function independently.

Teachers need not be skilled therapists nor the child a

seriously maladjusted individual needing clinical treatment. Bibliotherapy is not the province of psychotherapists alone. Educators now accept the process and are using bibliotherapy in schools. Bibliotherapy conveys the idea that all teachers must be aware of the effect of reading on children, and must realize that through literature, most children can be helped to solve the developmental problems of adjustment which they face (Jalongo, 1983). Jalongo recommends that the reading teacher carefully select books in helping students with peer acceptance, family relationships, failures and disappointments, physical limitations and economic crises while Monteith (1981) recommends bibliotherapy to combat feelings of anger, guilt, and loneliness in dealing with children of divorce.

Jalongo states that there are three criteria to be used in selecting books for bibliotherapy: potential for controversy, accuracy or credibility, and value to literature. Sanacore (1982) has noted that many censorship crises in public education are related to language arts material and has urged discretion in the selection of material. The seven most controversial subjects that Sanacore has pointed out are those of politics, religion, ethnic groups, alcohol, drugs, strong language, and sex. He has given special attention to the subjects of alcohol and sex, emphasizing that careful consideration must be given, as these are very controversial subjects.

Bibliotherapy can be of value to a child's overall development and may help in breaking emotional barriers to learning. Even though studies on bibliotherapy have not always indicated positive significant results, it would appear that to the teacher who is willing to become familiar with children's literature and who is willing to work within the framework of a normal classroom to develop character, morals, attitudes, and self worth, bibliotherapy would be worth a try. Books cannot replace the teacher, but can provide an added dimension of sharing thoughts and feelings. The reading teacher occupies a strategic position in the development of emotions of children and it is through this development that the teacher is able to help shape the future of children who are experiencing stress and crises in their lives.

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THE USE OF TELETHERAPY IN THE MAINSTREAMING ERA

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TEACHING THE LEARNING DISABLED

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Once there was a little boy who was different from any of his classmates. This boy did many strange things which made other children laugh at him and call him names. The little boy was always upset when this happened. After all, he couldn't help being clumsy and slow at games. He was handicapped—why couldn't they understand?

A modern day fairy-tale? you ask; perhaps, although the story and especially the little boy's plight are all too common in our public schools today. Since the enactment of Public Law 94-142, the mainstreaming of handicapped and non-handicapped children in the same educational setting has become a widespread practice. Despite adherence to this mandate, many handicapped students still struggle to gain understanding and acceptance among their non-handicapped peers. Peer acceptance of a handicapped child, particularly for elementary level students, is especially difficult. Name-calling, ridicule, or segregation by one's peers is a frequent occurrence. Inasmuch as the handicapped child is already burdened, his problems will in fact be compounded by peer rejection.

Results of research appears to indicate that peer acceptance is vital to a successful mainstreaming process. Peer acceptance involves teaching students both the cognitive and affective aspects of understanding a handicapping condition. If understanding is to be fostered in children, teachers must provide class members with opportunities for building acceptance. One highly effective and inexpensive method of building empathy and increasing the probability of peer acceptance is the use of Teletherapy. As a preventive approach, Teletherapy is a technique in which a teacher attempts to solve a child's problem by bringing the class a similar experience vicariously through stories retold from appropriate books. These stories provide children with vicarious emotional experiences through character identification. In this instance, retelling stories dealing with handicapping conditions that enable children to empathize with the handicapped child, thus increasing the probability of peer acceptance.

As an educational strategy, Teletherapy is not new to the

classroom; for decades classroom teachers have been retelling stories to students. What is unique about Teletherapy, however, is its effectiveness in building students' empathy for one another (Camplese & O'Bruba, 1979).

The first step in utilizing Teletherapy is to select a story which best meets the emotional needs of pupils. If the mainstreamed youngster has a speech impediment, for example, a story which focuses on a child with a similar problem might benefit all students. While the non-handicapped child relates to the problems of the central character—thus learning empathy, the handicapped child benefits from the knowledge that he is not alone with his problems.

As with any methodology, careful planning and story selection are vital to success. However, unlike Bibliotherapy, Teletherapy allows the teacher to select books or stories beyond the vocabulary and comprehension levels of students. For example, the teacher can retell the story keeping in mind both the vocabulary and comprehension levels of the class. An additional advantage of Teletherapy would allow the teacher to restructure or recreate different cultural backgrounds, settings or experiences. For example, it is doubtful that children from rural areas could understand and relate to the special problems of a physically handicapped individual coping with mobility problems in New York City. In addition, utilizing Teletherapy allows the teacher to change the setting and the sex of the individual to meet special classroom needs and increase the probability of building empathy through character identification.

After selecting an appropriate story, the second step in the Teletherapy approach is to retell the story to fit the emotional needs of students. Storytelling can be done in a variety of ways; the teacher may retell the story from memory to suit the comprehension levels of students or, she may read the story aloud. After retelling the story, the teacher can lead a class discussion focusing on the feelings and problems of the central character. Questions such as, "How would you feel if your classmates laughed at you?" or "How do you feel when you have trouble doing something?" can help focus student thinking on the feelings of the handicapped person.

While retelling a story is easily adaptable to most classrooms, Teletherapy can be implemented in other ways. One may use creative dramatics, a method especially successful when working with the older elementary level child. After selecting and retelling a story to the class, the teacher can assign students to role-play story characters. Student selection should be done with caution to avoid creating further behavior problems during the role-play. For example, while intending to build better understanding and acceptance in the Class Tease, the teacher may assign him to the role of the handicapped character. While the student's empathy may increase from this experience, characteristics of the experience may reinforce his craving for attention and increase his negative behaviors. In a situation such as this, the teacher must be willing to adopt an assertive no nonsense posture concerning any possible negative characterizations.

When utilizing the creative dramatics approach, the teacher can present the story in two ways. If the children lack reading skills, the teacher can briefly explain the story and roles to the children and have them role play their parts. In addition, the story can be cast into a script format with one child or the teacher serving as narrator and others "acting" their roles. Many primary age children enthusiastically respond to creative dramatics. While actively involving students in the story-telling process, creative dramatics allows students an experience in seeing characters "come alive". Later, class discussions can focus on the feelings and perceptions of the students' roles.

Another approach incorporating Teletherapy is the use of finger plays, which are commonly used in preschool and kindergarten classes for presenting rhymes and mini stories to children. In the early primary grades, finger plays can be used, as the teacher first selects a story involving a handicapped child, and then tells it to the class using individual finger puppets as story characters. Students can also be encouraged to combine finger puppet usage with role-playing. As children actively engage in the story, understanding and positive peer acceptance are both likely to increase.

Teletherapy as a preventive approach is highly adaptable to a wide variety and level of classrooms. Its focus is threefold: awareness, understanding, and finally acceptance. Students enjoyably learn that being handicapped is not so awful. They become more aware of the similarities with themselves—and not of the differences. While students grow in their understanding of their handicapped peers, the teacher will grow as well. As in learning, the spark of understanding is the beginning of growth. Utilization of these techniques not only increases the probability of peer acceptance, but will also communicate to the class a proactive positive teacher attitude toward the mainstreaming process. This positive teacher attitude is the KEY to a successful mainstreaming process.

BEGINNING READING: MORE THAN TALK WRITTEN DOWN

Dr. Janice A. Dole

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Reading teachers who have worked with beginning readers sometimes are witness to that moment of "Aha!" when a child first makes the connection between talk and print. At such a moment the child stops reading, looks up in surprise and says, "Oh, I get it! It's just talk written down!" This wonderful comment reflects several important learning for the child, who has come to understand the relationship between speech and print. Further, the child understands that reading serves a communicative function, that reading is part of the larger language process, and that reading is not merely "barking at the words".

These important learnings seem to be essential to children's growth as readers. The irony is that we, as teachers, must not make the mistake of assuming that reading is just "talk written down". Teachers need to understand that written language differs from spoken language in important ways.

Psycholinguists have contributed to our understanding of the relationship between spoken and written language, and have much to tell teachers about this relationship. Rubin (1980), Smith (1982) and Schreiber (1980) are three theorists whose works have important practical application for teachers of beginning readers. In this article I will discuss their observations and ideas about spoken and written language, and present some teaching strategies for beginning readers based on the theories presented.

DIFFERENCES IN CUES

There are some important differences between speech and print which, at first glance, we might overlook. Spoken language consists of sounds. These sounds are translated into symbols, often letters, in written language. Children learn this sound-symbol relationship fairly easily. In spoken language, however, meaning is conveyed through other phonetic cues as well as sounds: intonation, the rise and fall of the voice; stress, the accenting of words and syllables; and pause, the momentary lapse between sentences and phrases.

Some of these phonetic cues are translated into written language through punctuation, capitals or italics, but other phonetic cues have no written counterpart. For example, Schreiber (1980) notes that there is a subtle pause in spoken language between the subject and predicate of the sentence: "Our dog's bark sometimes frightens people." This sentence is not unique. Indeed, as we speak, we automatically group words into phrases, and hesitate or pause between these phrases.

Schreiber argues that young children may rely on these types of phonetic cues to gain meaning in spoken language more than adults do. In order to gain reading fluency, children need to learn to compensate for the lack of these phonetic cues in written language. When confronted with the sentence:

"A man and a woman are juggling things in the air."

children must group or "chunk" the words into meaningful phrases without any spoken or written cues to help them. Thus, part of learning that reading is "talk written down" involves learning to read in phrases in the same way we speak in phrases.

DIFFERENCES IN CONTENT AND STRUCTURE

A second important difference between speech and print involves the contextual constraints placed on each system of language. Before young children enter school, most of their experiences with spoken language are conversation in which they are active and knowledgeable participants. In these conversations, both listener and speaker usually have a shared knowledge base, and a common, immediate environment or context. The structure of spoken language, in turn, reflects these commonalities. A child says "Give it to me," knowing that the listener knows exactly what "it" refers to, and who "me" is. I recall our five-year-old neighbor ringing my doorbell and saying to me, "Is she here?" He knew that I knew that "she" referred to my five-year-old daughter. Smith (1982) provides a good adult example of these types of truncated conversations in spoken language:

"Coffee?"

"Please!"

Because of a shared context and environment, speaker and listener need to say little, and yet have no difficulty understanding one another.

An additional aspect of this shared context in the spoken language of conversations is the availability of feedback and correction. Young children are aided in their conversations by the opportunity of listeners to ask questions and receive clarification when they don't understand. Children know that they have the resources to understand and to make themselves understood.

Written language opens up an exciting new world to children, but a world which poses uncertainties as well as opportunities. Rubin (1980) describes the written world as one which is more abstract and less personalized for children. Perhaps for the first time in their lives, children are exposed to unfamiliar objects and events. Or, they may be exposed to someone, the writer, who may not have a shared knowledge base with the reader.

Furthermore, the language encountered in written form may be largely unfamiliar to children. Sentence structure is different; sentences may be longer and more complex. Vocabulary is often different; new and unfamiliar words may be encountered. Unfamiliar expressions may be used. Story structure and organization may be new and different from anything children have previously exper-

ience. All of these components are potential sources of difficulty for children.

Then, as if these differences were not enough, we need to remember that written language does not offer the opportunity for feedback and correction between the message-giver and receiver. In this one-way communication, children cannot ask questions when they don't understand.

Children need to adjust to contextual and structural differences between spoken and written language. They need to learn to call up information from their background experiences and also from the written context of print to make up for the lack of a shared context between the writer and the reader. They need repeated exposures listening to and reading stories with varied sentence structures and story organization to become familiar with the nature of the written language. Lastly, they need to learn strategies to use when they encounter something in their reading that doesn't make sense.

DIFFERENCES IN PURPOSE AND FUNCTION

A third and final source of difference between spoken and written language lies in the purpose and function of each. Rubin (1980) argues that young children engage in conversations for specific purposes—to have their needs met, to gather information, to persuade and cajole. Halliday (1975) describes similar functions of spoken language for young children.

Written language, however, may serve different functions. Books are often written to entertain, to inform or to describe and explain. They are not written to satisfy children's immediate needs, nor are they child-initiated. It takes time for children to learn the purpose and function of written language, and how print is and is not related to spoken language.

TEACHING STRATEGIES

Reading is much more than "talk written down". Children need to make fairly sophisticated adjustments in their understanding of language, its purpose, structure, and function as they learn to read. I have already described some adjustments and learnings that are necessary for children to make. Below I have listed ways that teachers can help children make the transitions from talk to print.

Reading aloud to children. Many teachers read aloud to their children, but the theories presented here highlight the importance of this activity. By listening to good literature children learn new vocabulary, different sentence patterns and different story structures. For example, when children listen to E.B.White's *Charlotte's Web*, they are exposed to "congratulations," "humble," "sedentary," "supreme," and "gullible." When they listen to stories like the *Six Chinese Brothers* by Chen Houtien they hear an ancient tale about six brothers who outsmart their king, and story pattern that is typical of most fairy tales. As they listen to Uri Shulevitz' *Dawn*, they hear language as metaphor, "The moon lights a rock, a branch, an occasional leaf. The mountain stands guard,

dark and silent."

As teachers we need to read aloud to children every day. We need to talk to them about the language they hear in good literature and ask questions to guide their understanding. For example, after reading a chapter in *Charlotte's Web*, teachers can say, "We have heard the word 'congratulations' used many times in this chapter. Can anyone tell me what it means? Who can use the word 'congratulations' in a sentence? When would you give someone your 'congratulations'? When wouldn't you want to say that to someone? Let's add this word to our vocabulary chart, and it can be our word for the week."

Teachers can use similar questioning techniques to guide children's understanding of story structures and different language patterns. Such instructional time is important for helping children understand some of the functions of written language which differ significantly from the oral language with which they are most familiar.

Writing and Authorship. An important teaching strategy for helping children understand the purposes for print involves writing and becoming authors of books. There are two components to this strategy: 1) allowing extensive opportunities for children at the primary grade levels to write about what they know; and 2) having children "publish" their writing in home-made books. Graves and Hansen (1983) describe a primary grade classroom in which children write frequently. They draw from their own experiences, environment and language, to write about things that are important to them. They then "publish" their writing in home-made books and read and share what they have written. A special chair in the room is designated at the "author's chair." In this chair children read their writing aloud and are questioned by their classmates. These children also study the works of authors, such as Dr. Seuss and Maurice Sendak.

All of these activities help children become familiar with written language and feel comfortable in the written world of books. Children come to understand how print can be used to entertain and inform and to communicate with others. Additionally, the children's home-made books help close the gap between the unknown world of authors and the real world of children.

Language-experience. The language-experience approach to the teaching of reading is a well-known teaching strategy which helps children connect their own language to print. As a class or in a small group children share a common experience (a trip to the zoo, a new hamster in the classroom) and then write about that experience. If children are too young to write themselves, they can dictate their stories while a teacher or aide writes down their words. Children then read and share their stories with the class. Class books and individual booklets can be made from these stories, and the stories can be displayed and read again and again.

The language-experience approach ensures that children write and become authors of books. Like the writing strategy discussed

above, the language-experience approach allows children to use their own experiences, environment, and vocabulary. They can read their stories because the language is familiar to them. A special affinity for their stories exists because they created them. Hence, written language becomes meaningful and serves a new purpose.

Method of repeated readings. Samuels (1979) describes this teaching strategy as one in which children are asked to read a story aloud a number of times until fluency is achieved in that one story. This method can be used with a single child or with a small group of children. Members of small groups may read to each other or into a tape recorder. Providing children with a specific purpose for the oral reading is recommended. For example, older remedial readers can prepare a story to be read to younger children. Younger children can prepare a story for their peers during story time.

Schreiber (1980) argues that the success of this method may arise from the fact that children come to recognize the kind of phrasing that is necessary to make sense of reading -- phrasing that is explicit in spoken language but implicit in written language. This is an especially good strategy to use with children who word-read and clearly fail to make the connection between written language and spoken language.

Reader's theatre. In reader's theatre, children translate stories into plays that have identifiable characters, roles, plots and scripts. Children then act out the plays in drama style. This technique can be used with most stories and at any age level -- first graders can create plays from many of the stories in their basal readers. For example, they can read the story of the "Three Billy Goats Gruff," and then create a play to present to their peers. In their preparation for the play, they must translate from print to speech. Thus, the written words, "Who's that tripping on my bridge?" become spoken words, and children can more easily connect the two.

Beginning readers vary in their knowledge of the relationship between speech and print. Some children enter school with a rich knowledge about print. Others enter with little background and need extensive practice relating the two. In spite of these differences, most children successfully learn the connection between speech and print without formal instruction. It is important, however, for teachers to keep the differences and similarities in mind as they teach beginning readers. In this way teachers may assist children who are experiencing difficulty connecting speech to print. The strategies presented here should be particularly useful for these children and may well assist them in their learning to read.

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SOME THOUGHTS ON SYSTEMATIC READING READINESS INSTRUCTION

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Of the many reading readiness factors, some are known to be immune to, or at least not easily impacted by, the effects of schooling. These include students' socioeconomic and backgrounds of experience, their mental age and IQ, and their basic motivation and achievement orientations. Other readiness factors are recognized as being amenable to training—in other words, as being teachable and learnable. Happily, these include four of the most significant ones; auditory discrimination, auditory comprehension, visual discrimination, and visual memory. In the remarks that follow, an attempt is made to review selected instructional procedures in each of these areas.

First, though, a few preliminary remarks should be made to provide context. Today's mounting pressure on teachers to insure that students perform well on minimum competency and standardized achievement tests has resulted in two fundamental errors related to reading instruction. One is that many teachers are focusing too heavily on teaching skills, particularly phonics and structural analysis, and too little on teaching comprehension and appreciation. The other is that increasing numbers of teachers, in their haste to get students reading, are bypassing or shortchanging readiness, opting instead for earlier (and premature) "formal reading." Nothing, of course, could be costlier.

The fact is that time "saved" by hurrying through readiness is nearly always short-lived and counterproductive. Most teachers have recognized this for years. But, again, because of accountability pressures or whatever, alarming numbers of them seem amnesic. They forget that students' difficulties with specific aspects of reading can be traced frequently to their deficiencies in related readiness skills—phonics to auditory discrimination, comprehension to auditory memory, and sight vocabulary to visual discrimination and memory. That teachers need reminding of these and other relationships is distressing; that they need occasional reminders of pertinent instructional procedures is understandable.

Auditory Discrimination

Auditory discrimination can be defined as the ability to hear likenesses and differences in sounds. As indicated above, it is prerequisite to phonics since relating specific sounds to specific letters or letter combinations is dependent on identifying

likenesses and differences in the sounds themselves.

As with any skill, in teaching auditory discrimination it is essential to progress from easy to difficult in accordance with students' abilities. In other words, teachers first should determine what students can and cannot do; then, perhaps, review briefly certain items in their areas of proficiency; and, finally, begin systematic instruction with the easiest tasks in their areas of inability. To illustrate this progression, ten sets of words are given below. Students would be asked to listen carefully to each set of three words and to identify which two have a like sound and/or which one does not.

1. born	hope	roast
2. pat	hit	mop
3. Sue	Mark	Sam
4. sink	think	bank
5. hear	bird	her
6. flip	slice	flag
7. sand	fan	band
8. Sam	hip	tack
9. stir	beer	Hank
10. Dick	Don	Mike

Item 3, focusing on an initial consonant sound, is believed to be the easiest. The next easiest item is either 6, an initial consonant blend, or 2, a final consonant phoneme. Since 9 deals with /r/, it is judged to be more difficult than 2. The most difficult items are the two focusing on medial vowel sounds, with 1 considered more troublesome than 8 because of the influence of /r/. Although the specific steps in the progression are less than exact, the general direction is clear. Instruction should begin with initial consonant sounds, gradually should progress to ending sounds, and finally to medial sounds.

Experience suggests two other guidelines for instruction. First, contrary to the recommendations of some published material, auditory discrimination training should not begin with rhyming words. Items 4 and 7 are obvious examples of difficult discrimination tasks, but even easier rhyming items tend to be troublesome. Second, care should be exercised initially not to confuse students with mixed items. In 5, for example, students could attend to like initial phonemes (hear - her), like final phonemes (hear - her) or like medial phonemes (bird - her); and in 10, to like initial phonemes (Dick - Donald) or like final phonemes (Dick - Mike).

Auditory Comprehension

Auditory comprehension can be defined as the ability to understand spoken material. Instruction should be provided through the same procedure as in reading, namely, by asking students three types of questions - literal, inferential, and judgmental. These types can be handled concurrently. There is no need, in other words, to progress from literal to inferential and, finally, to judgmental.

Progress from easy to difficult tasks should be made by increasing the amount of spoken material. Students first should demonstrate skill in listening to one sentence and responding appropriately to various questions. Example:

John has a brown and white pet named Mutt.

What color is the pet? (literal)

What kind of pet is it? (inferential)

Is Mutt a good name for a pet? (judgmental)

Subsequently, they should become proficient in dealing with two sentences, then three, then a short paragraph, and so on. The exceptional value of such an activity for present and future listening and reading purposes should be obvious.

Visual Discrimination

Visual discrimination can be defined as the ability to see likeness and differences in shapes, letters, and words. Typical sets of visual discrimination activities - where students would be asked to match one of the three objects on the right with its like object on the left—are presented below.

1. #	*	+	#
2. #+	#+	+#	#*
3. ++	+#	++	###
4. m	m	n	r
5. o	m	t	o
6. ob	bo	od	ob
7. E	e	a	o
8. to	do	to	so
9. so	tape	look	so
10. lamp	limp	lamp	lump

Three errors are often committed in training students in visual discrimination. First, the usual sequence of initially working on shapes, followed by letters, and then by words violates the instructional principle of progressing from easy to difficult. As can be seen above, the easiest discrimination item among the shapes is 1, among the letters 5, and among the words 9. But both 5 and 9 are probably easier than 1 and certainly are less difficult than the other two shape items, 2 and 3. Additionally, 9 is easier than the two remaining letter items 4 and 6.

A second error in visual discrimination training is that students sometimes are given inappropriate assignments. For example, item 7 requires their matching an upper- and lower-case e. Although this item deals with an important readiness skill, namely, knowing the alphabet, it is simply not a visual discrimination task.

A third error is that too much instructional time is devoted to shapes and too little to words. Items 8, 9, and 10 are obviously far more related to reading than items 1, 2, and 3. Yet, with

the objective of getting students "ready for reading," sometimes teachers seem inclined to spend more time on the latter. In the same context, some of the better known readiness tests have several items on shaped discrimination but none at all on word discrimination.

Visual Memory

Visual memory can be defined as the ability to remember items that have been seen. Visual memory training usually involves showing students an object (shapes, letters, or words) on a flashcard or overhead projector. Subsequently, the item would be removed or covered and the students instructed to identify a like object from two or more distractors. For example, after being shown + on a flashcard, students would be instructed to circle on their paper the matching object in item 1 (below):

1. #	*	+
2. #*	+#	+*
3. ##*	**#	##+
4. a	c	d
5. po	ph	pd
6. tdt	tbt	ttd
7. am	to	is
8. cat	hip	fun
9. hatch	hitch	hutch

Two errors common to visual discrimination training are found also in visual memory. First, even though letters and words are obviously more integral to reading than shapes, some teachers and instructional material seem to place more emphasis on the letter. And second, the usual sequence of beginning instruction with shapes and proceeding to letters and then to words runs counter to the principle of progressing from easy to difficult. As can be seen in items 1 to 9, one example is that some shape items (2 and 3) are more difficult than some letter and word items (4 and 7).

In addition to graduating the complexity of the items themselves, other means of increasing the difficulty level of visual memory activities include: shortening the time an item is displayed, lengthening the interval between the times an item is displayed and the students are directed to respond, and providing interference — through extraneous conversation or commentary — between the display and the response times.

A Final Thought

In the preceding paragraphs, attention was given to certain errors made by teachers in reading readiness instruction. The most serious of these warrants repeating. It is the tendency of some teachers to neglect readiness instruction entirely, particularly for older non-reading students. Whether this neglect is

the result of outside pressures or teachers' own insensitivity is basically irrelevant. What is relevant is the fact that readiness skills are prerequisite to reading skills - regardless of age or grade considerations. Attempts to alter or invalidate this fact will continue to prove futile.

DISPELLING THE MYSTERY ABOUT COMPREHENSION: KINTSCH'S MODEL AND IMPLICATIONS FOR INSTRUCTION

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Most teachers recognize that comprehension is essential to reading, yet to many it remains a mysterious process, certainly more difficult to understand than word identification. We teachers implement comprehension exercises suggested in teachers' manuals, activities written with such objectives as "The pupil will support inferences about characters" (Clymer & Indrisano, 1976, p. 28) or "The pupil will recall the details that support the main idea of a paragraph" (Clymer & Indrisano, 1976, p. 190) or "The pupil will infer story themes" (Clymer, Daniels, & Wardeberg, 1976, 259). Many resourceful teachers plan their own comprehension development activities based on common sensical understandings that comprehension is somehow a process of distilling the gist of a selection, that some parts of selections are more important to that process than others, and that paraphrasing and answering questions provide evidence about how well that process is operating. And some teachers are guided by intuitive insights about what makes a selection easy or difficult, that the state of students' prior knowledge and their meaning vocabularies are factors as important to readability as sentence length and word length, or even concept load and sentence complexity.

Still, all teachers would benefit from an understanding of recent models of the comprehension process. With the mystery about comprehension dispelled, teachers would teach more consistently, be less dependent on the authority of the teachers' manuals, and be more confident about the soundness of some past practices that are based on common sense and intuition.

Reading comprehension can be described as the result of a successful interaction of a reader with a text. Schema theory and linguistic theory are valuable for what they have to say about the parties to that interaction. Both bodies of theory have influenced cognitive psychologists' descriptions of the mental processes involved in comprehension (cf. Richgels, 1982). A brief description of each will provide some "prior knowledge" to make understanding of Kintsch's model of comprehension easier.

Schema Theory

The schema is a construct used by cognitive psychologists

in their theories of memory and learning. A schema can be thought of as a knowledge structure, or framework, which interrelates all of one's knowledge about a given topic. Prior knowledge, organized in schemata, in turn influences the form and content of new knowledge.

The "eating out schema" is a popular example. It contains all that is associated in one's memory with going to a restaurant; such people as the hostess, the maitre d', the waiters, and the waitresses, and such actions and events as giving one's name to the hostess, studying the menu, keeping one's elbows off the table, and leaving a tip, all organized about such scenes as entering, ordering, eating, and leaving.

Schallert (1982) describes schema theory as a list of propositions about the structure of schemata and the role they play in processing information. First, a schema is a specific configuration of variables, some obligatory and some not. Schemata can be embedded within each other, forming hierarchies; the configuration of one's total set of interconnected and cross-referenced schemata may change from moment to moment; and schemata become more elaborate and more specific with experience. Comprehension is a process of finding instances of the various elements within an activated mental framework. Meaning is in fact neither in the message itself, nor in the comprehender's schemata in their abstract state, but rather is a result of a process that combines the two. Finally, activated schemata guide inferences. Inferring naturally happens as a part of what the schema-guided comprehension process is all about; it is not a separate process.

Linguistic Theory

Linguistic theory has gone through several revolutions during the past 25 years. The first and most important was Chomsky's (1957) break with structuralism, with its fixation on the structural relations among words in a sentence's spoken or written form — the kind of relations which are illustrated in sentence diagrams. Chomsky's insight — that sentences can be analyzed in terms of levels of structure, including the surface level form in which they are spoken and the deep structure level which characterizes their essential syntactic relations — created an awareness of the centrality of meaning.

Chomsky's standard theory would represent the deep structure of both sentences, "Johnny opened the book" and "The book was opened by Johnny", as a noun phrase (Johnny), a tense (past), and a verb phrase (open the book). Other linguists have argued for other representations of deep structure during the post-1957 period of linguistic theorizing and controversy. But it is impossible to imagine an effort to build a model of comprehension that does not take Chomsky's invention of the concept of deep structure for granted. Many models of comprehension use Fillmore's (1968) case grammar representation of deep structure. According to case grammar, a sentence consists of a verb and one or more noun phrases, and each noun phrase is associated with the verb in a particular case relationship (e.g. agentive, instrumental, dative, factitive, objective, locative, and benefactive). Thus, "Johnny opened the

book" would be represented as a mode (past) and a proposition, the latter consisting of a verb and two noun phrases (Johnny, in the agentive case, and the book, in the dative case).

When texts longer than one sentence are analyzed, the concept of cohesion becomes important. Halliday and Hason (1976) give detailed attention to such cohesion-creating relations as reference, substitution, and conjunction. An important result of looking for cohesion among sentences of a text is that meaning receives even greater emphasis. Halliday and Hason point out, "A text is best regarded as a semantic unit: a unit not of form but of meaning" (1976, p. 2).

Kintsch's Model of Comprehension

Walter Kintsch's (1979) model of comprehension makes use of elements of schema theory and linguistic theory and has practical implications for classroom teachers. The input to his model is a semantic representation of the text. That is, the text is first represented as a list of propositions, following the procedure described in Kintsch (1974). That procedure uses Fillmore's (1968) case grammar to indicate the relations within the predicate propositions. Propositions are conceptual units, e.g., The Swazi tribe (and) was at war with (and) a neighboring tribe. Arguments are, roughly words within propositions, e.g., "war" in was at war.

A kind of cohesion is then achieved by connecting propositions that have common arguments. The resulting "referential coherence", then, is based on repetition. The gist of a text emerges as repeated elements survive several cycles of such processing, that is, several consolidations of past meaning with new chunks of text. This is bottom-up process.

Gaps may occur, the result of new chunks of text having no elements in common with consolidations of past text in short term memory. When this happens, long term memory must be searched, and if no common elements are established, a "bridging reference" is required.

There are two givens in this process: besides the text, there is the influence of the reader's goal schema. It "determines what is relevant,—sets up expectations, and—calls for certain facts, inferring them if they are not directly represented in the input set" (Kintsch, 1979, p. 5). This is a top-down process.

Kintsch's earlier (1977) model for story comprehension depends upon a somewhat different chunking strategy and upon a different kind of schema. Readers first determine the "macrostructure" of a story, chunking it so that it conforms to a story schema (with the elements exposition, complications, and resolution). The next step is a process of inferring with the purpose of summarizing. Readers label the chunks produced in the first step.

In more recent work, Kintsch (1982) again emphasizes the top-down influence of schemata, this time text-type schemata. The reader must identify the type of text (e.g., whether it is a story or an expository text, or more specifically, a text that

presents an argument, a definition, or a functional analysis) and then can use strategies which are specialized for that text-type (and not tied to specific content).

Informed Classroom Practices

Two kinds of implications for classroom reading instruction follow from Kintsch's model of comprehension: those whose ends are reader behaviors and those whose ends are primarily teacher behaviors. Many of the implied behaviors are not new, but are provided with new purpose and justification, so that teachers familiar with theory will teach with more confidence and consistency.

For the reader

1. Meaning vocabulary and paraphrasing. For a long time experts have agreed that word meaning plays an important role in comprehension (cf. Davis, 1944). Furthermore, instructional techniques (e.g., Otto & Smith, 1980) and comprehension taxonomies (e.g., Carver, 1973) have assumed that comprehension is at least partly a bottom-up process, proceeding from word meanings, to meanings of sentences, to meanings of selections. These beliefs are consistent with Kintsch's (1974 & 1979) model's beginning with a semantic representation of the text, i.e., a list of arguments and propositions. The implication is that teachers can help readers to better comprehend by developing their repertoires of known concepts and their ability to paraphrase sentences. By doing so, teachers increase students' potential for inputting the correct semantic representation of the text; that is, for understanding the smallest elements of the text, its "arguments" or words, as the author intended and for being able to capture the same deep structure meaning for its "propositions" or clauses or sentences as the author's. Instruction should include such activities as semantic mapping and semantic feature analysis (Johnson & Pearson, 1978).

2. Main idea. Identifying the main idea from supporting detail is the most common skill objective of comprehension instruction. When it is not left to happen by a kind of magical osmosis between the text and the reader, it is usually approached in terms of identifying the topic of a selection, which in turn is usually picked out on the basis of which is the most frequently mentioned concept. Kintsch's (1979) "referential coherence" provides confirmation for such a process. Teachers should help students distill the gist of a selection in a manner that parallels Kintsch's chunking and consolidating cycles.

3. Inferring. Most teachers realize that making inferences is necessary at least for comprehension of the kind described in the higher levels of taxonomies (e.g., Barrett's [1972] taxonomy). At the same time, inferring is often mistakenly assumed to be something that happens only after reading, in response to "higher level" comprehension questions. Kintsch's model makes real Schallert's (1982) claim, in her exposition of schema theory, that inferring is a natural and pervasive part of comprehension. Kintsch (1979) shows where gaps in a text's coherence graph require that inferences be made. Young (1980) provides an example for

sound classroom practice in her report of a study that successfully used Kintsch's model as a tool for determining where inferences were required in a text, and thus where marginal notations would best facilitate readers' understanding. Otto, et.al. (1981) and Richgels & Hansen (1982) have described a procedure for writing such notations, which they call "gloss".

4. Prior knowledge. All teachers know that it is easier for their students to comprehend a passage when its subject is familiar to them. Good teachers provide background information before assigning reading on unfamiliar topics. This is evidence of their seeing comprehension at least in part as a top-down process. Strange (1980) and Jones (1982) have discussed instructional implications of schema theory, and Sadow (1982) has shown how basing comprehension questions on story grammar may help children develop story schemata. The additional implication from Kintsch's (1982) work is that teachers should develop children's schemata for other text-types than just stories, that they should encourage a specialized kind of prior knowledge, knowledge about the typical forms or structures of various kinds of texts. Teachers should then teach strategies (such as attending to the organizational features) for dealing with the unique characteristics of various texts.

For the teacher

1. Readability. Kintsch himself discusses the implications of his model for readability. Kintsch and Vipond (1979) improve upon traditional methods for determining readability, which are based upon such factors as sentence length and number of syllables in words. They criticize such methods for their lack of foundation in a theory of text structure and text processing, for their dependence on calculations of only fairly obvious surface features of texts, and for their measurement of style rather than content. In other words, the traditional formulas ignore many relevant findings from schema theory and linguistic theory. Kintsch and Vipond propose that readability might be better determined in terms of concepts drawn from Kintsch's model, such as how often a reader must search long term memory in order to make a connection between present and past input and number of bridging inferences that must be made. This implies doing a text analysis.

2. Text analysis. Teachers can better help their students to understand texts if they have first carefully analyzed the texts themselves. Otto et. al. (1951) suggest that both formal (e.g., Kintsch's system) and informal (e.g., mapping and outlining) analyses of texts can help teachers to determine which skills and strategies need be applied. With Kintsch's system, the analysis can go beyond determination of content. By determining what text-type the selection fits and how readable it is (based on Kintsch's and Vipond's [1979] interpretation of readability), teachers can prepare comprehension lessons that emphasize processes (both top-down and bottom-up) as well as products. Such lessons provide students with tools for comprehension which can be applied independently in later reading.

Summary

The mystery that surrounds comprehension development can be dispelled by an understanding of schema theory and linguistic theory, and especially by an understanding of Kintsch's model of comprehension, which draws from those bodies of theory. Some of the instructional practices discussed in this article are already in common use, but all the practices discussed here can be used with more confidence and more consistency in light of current theory regarding text processing.

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ENHANCING INDEPENDENT VOCABULARY GROWTH

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Most educators would agree that the expansion of students' reading, writing, listening, and speaking vocabularies is an important goal of schooling at all levels. Many teachers have well structured vocabulary development programs as part of their regular curricula, utilizing a variety of methods to provide direct instruction in word meanings. Recent research by Gipe (1978-1979) has shown that some of these methods (specifically those stressing context and the application of new words to personal experiences) are more effective than others (i.e., the dictionary method—writing the definition of the new word and using it in a sentence).

Research such as Gipe's which explores the effectiveness of various methods of direct instruction in the meanings of words is very important to those planning vocabulary development programs. Direct instruction in word meanings cannot, however, be the sole basis for such programs. Educators cannot ever teach directly each word they hope their students will eventually know. Rather, such direct instruction needs to be combined with a more transcendent and far-reaching goal, that of developing students who have the interest and ability to expand their own vocabularies, independently. Educators need to assist students in acquiring skills, understandings, and attitudes that will allow their students (even propel them) toward independent expansion of their own vocabularies.

In this paper the skills of independent vocabulary expansion—use of context clues, structural analysis, and the dictionary—will not be discussed. Rather, in this paper, the focus will be on understandings and attitudes needed for successful vocabulary development. These understandings and attitudes can be grouped into three categories of concerns: intellectual, practical, and affective.

Intellectual Concerns

In order to embark upon a lifetime of independent, individual vocabulary development, a learner must have an understanding of what words are and how they function; in other words, s/he must understand the nature of words. The student must realize that words are tools that can be used in many different ways—to communicate information, to arouse emotions, to manipulate and persuade. However, unlike Humpty Dumpty in Alice in Wonderland who exclaims, "When I use a word, it means just what I choose it to mean—neither more nor less", the student must understand that there are limitations on ways individual words may be put into use. If a word

is used so inappropriately that communication is not established, then those limited have been exceeded.

The student must also understand that word meanings change, across time, across place, and among individuals. A "fair" date in Jane Austin's era would rate a "9" or a "10," whereas a contemporary "fair" date would plummet to a "3" or a "4" on the Bo Derek scale. A "toboggan" is something you put on your head in the South, which sounds just plain silly to someone from Wisconsin or Minnesota. Words have special nuances of meaning among individuals, too, and learners need to be more aware of the effect of connotations in communication. "Cute" is a complimentary term to many persons and a lot of people wouldn't mind in the least being called "cute." But to some "cute" has connotations of empty-headed fluff, and to be called "cute" is an insult.

Several activities can be used to help students develop the prerequisite intellectual understandings necessary for vocabulary growth.

1. To emphasize the power of words to communicate, divide the class into groups of 3-4. Give each group a copy of a dialogue in which said is underlined each time it occurs.

Figure 1
Word Replacement Activity

Monica slithered into the room. "Hello, Jordan," she said. "How do you like my new dress?"
Jordan said, "I think it's lovely, Monica."
 "Do you really?" she said.
 "Oh, yes!" he said. "It makes you look so--so young!"
 "Well," said Monica, "I'm not so sure I like how you put that."
Jordan said, "Merciful heavens! I didn't mean to insult you!"
 "All right," she said. "I'll overlook it this time."

Then give each group the task of developing a specific relationship between Monica and Jordan just by replacing said with more communicative words. For example, if Monica were to be an aggressive domineering individual and Jordan a thoroughly henpecked nonentity, words like barked, demand, and growled might be used for Monica's lines, whereas Jordan might whine, whisper, or mumble. After each group has completed its revision, the new dialogues can be shared and students can discuss which words had the most influence on their emerging pictures of Monica and Jordan.

2. In order to alert students to the power of words to manipulate and persuade, have them compare two newspaper versions of the same incident. Sports events provide many opportunities for this as a 45-24 football score is described as a drubbing by the winning team's hometown paper and a mere loss in the losers' paper. Editorials are also easily accessible sources of alternate points of view. Ask the students to identify exactly which words are used in a manipulative or persuasive manner.

3. Have students create their own examples of manipulative or persuasive writing. Short passages in which specific words

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Practical Concerns

A second major area of concern in vocabulary development is that of practical application. Understanding about words and knowing meanings of words are rather sterile accomplishments if an individual is unable to use words effectively, both receptively and productively. In order to do this students need many opportunities to practice applying new words to their own experiences (Gipe, 1980). Furthermore, they need practice in clarifying how related words are both similar to and different from each other. Students also need to learn to differentiate among potentially confusing contexts; that is, they have to be able to choose the right word for the right time and place. Many of the words listed by Roget under good would be inappropriate in "That is a very good pie."

The following activities will assist students in becoming adept at using words, both as writers and speakers and as readers and listeners. The goals of having students apply words to their own experiences and of helping them learn to apply these words to appropriate contexts should be combined and the activities described below follow this principle.

1. Before one can differentiate among potentially confused words, one has to have a stock of related words, i.e., a thesaurus, in one's head. One activity that can give students practice in clustering related words (from which to choose the one precisely needed) is based on an old 1950's TV show entitled Two for the Money. Pairs of students are given a category, such as "things you can cut with" or "words meaning big," and are given three minutes to name as many words as they can which fit the category. The players alternate giving words and if one player cannot think of a word, the other simply has to wait. After three minutes, the answers are reviewed by the class. The team receives one point for each appropriate word minus two point for each inappropriate word (to discourage just saying a word in order to give your partner another chance).

2. To help students understand that one word can label many concepts, have them dictate about ten sentences that contain an overused word, such as good. Then have the class or small groups substitute more precise words, such as "The pie is delicious," "The obedient child pleased his mother," or "A Ferrari is a classy, powerful car."

This activity can be varied by having an antonym be the substitution, resulting in sentences such as "The pie was tasteless (or too sweet or stale)."

3. Asking students to describe similar or even identical objects leads to excellent practice in precise use of words. Give each student a book or a mug, or even let them use their own shoes. Each student is to write as precise a description as possible of his or her object. Then all the objects are displayed on a table, the students switch descriptions (to avoid recognition of John's shoe simply because John is reading the description) and students try to match the description with the object. When

students become skilled at describing objects that are fairly dissimilar, switch to extremely similar objects. Give each student a lemon (Hennis, 1979) or a wooden pencil and see if they can write truly unique descriptions that allow others to identify their lemon or pencil.

Another variation is to have the students write a description of the same object and then have these descriptions compared.

4. To help students explore which contexts are appropriate for certain words, have them discuss situations in which they might feel resentful and in which they wouldn't feel resentful or occurrences that could or could not be considered fortuitous. At the end of the discussion, have the students review the positive and negative examples of the word's use and then lead them to a summarizing statement about appropriate contexts for that word. For example, the students might come to the conclusion that resentful is appropriate only when you think your rights have been trampled on.

5. Forced choice exercises can be quick application activities for the spur of the moment when only a few minutes are available. Ask the students to choose between two somewhat similar words for a context and then have them justify their answer. Two examples might be: to open a letter, would you use a stiletto or a machete? Why? If you got the highest grade on the math quiz and the teacher announced that fact, would you stalk or strut when going up to get your paper? Why?

Affective Concerns

Probably the most crucial area of concern in vocabulary development is the affective area. Students who understand the nature of words can use them effectively still will not be independent vocabulary developers unless they learn to like words. They must enjoy words and have a sense of pride in using the right "tool" when writing or speaking. They must be sensitive to new words when they meet them and must be intrigued by them.

An enthusiastic teacher is the core of any vocabulary development program and is essential for imbuing students with a voracious appetite for words. Such a teacher will surround students with words, making vocabulary development part of almost every aspect of their classroom lives, celebrating with them the discovery and use of new words, and giving them a myriad of opportunities to explore and interact with words.

To get students "hooked" on words, the following activities may be useful:

1. A way to bring fascination into word study is to read to students from works by authors who use words well. For example, one can open Annie Dillard's Pilgrim at Tinker Creek almost at random and find language like this:

Look again at the horsehair worm, a yard long and thin as a thread, whipping through the duck pond, or tangled with others of its kind in a slithering Gordian knot. Look at an overwintering ball of buzzing bees...

(Dillard, 1974, p. 137)

A bonus benefit from such a practice, of course, is that students may decide to read the whole book on their own.

2. Word histories may intrigue students. (How gratifying it would be if the Oxford English Dictionary or the Morris Dictionary of Word and Phrase Origins were available in every high school to provide immediate answers to questions.) Teachers should share interesting histories regularly with their classes. Students will be fascinated at the derivation of such a word as sabotage (from the practice of dissatisfied European factory workers of damaging machinery with their sabots, their wooden shoes) (Morris & Morris).

3. Bulletin boards may be used to give students opportunities to explore, enjoy, and interact with words. Questions such as "How is a flume like a gorge?" and "How would you use a kirtle?" could be posted. Students could write their answers on strips of paper and post them under the questions. Students should be accurate but try to avoid giving away the meaning of the word. A good response to the kirtle question might be "I would give it to a fashion museum" or "I'd wear it on the beach at the end of a sunny day."

As a variation, a "word of the week" could be displayed and students could post sentences that they had written using the word, such as "I could tell from her diffident answer that she was embarrassed but pleased" or "His diffident response didn't fool me. I knew that he really wanted to go to the game with us."

4. Many students will be surprised and then fascinated by words with a great many meanings. Occasional team competitions can be held in which small groups of students have 3-5 minutes to write as many different uses of a word as possible. Limiting contexts instead of giving dictionary definitions would be the idea. Example a right hook, right the sailboat, equal rights with others, the political right, and so on. The students will no doubt be amazed to learn that the Random House Dictionary of the English Language (1967) gives 62 definitions for right and 113 for reak. Even such "concrete" words as battery will contain surprises for many students.

5. An exploration of the power of words to evoke images can lead to heightened interest in words. Short discussions of permissible and nonpermissible images can sensitize students to this. Returning to Monica & Jordan (fig. 1), the students might be asked to describe Monica's dress. What kind of material is it...what makes the word slithered appropriate?

6. Surrounding the students with words means sneaking vocabulary practice in wherever possible. One opportunity for this occurs when students are to be divided into small groups for a classroom activity. If arbitrary grouping is desired, let every student draw a word from a hat. Then the students are to group themselves by discovering what the different categories are and which words make up those categories. Multiple meaning words are special fun here: ace and deuce go with let and love; kite goes with towhee and petrel. Naturally a dictionary must be available and class-wide cooperation is a must. This takes longer than counting off by fives, but it is worth the extra 5 - 10 minutes to expose the students, once again, to enjoyable experiences with words.

Summary

Direct teaching of vocabulary is important, but it is not enough. The most important goal of any vocabulary development program is not learning the meanings of a large number of words. Rather, the main thrust should be providing students with the interest and ability to expand their meaning vocabularies on their own. Attention to the three areas of concerns described in this paper—intellectual, practical, and affective— will help teachers plan effective and long lasting vocabulary development programs.

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READING GAINS OF STUDENTS IN A COLLEGE READING LABORATORY

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Recent emphasis has been placed on the importance of relating reading instruction to content areas as it is hoped that the transfer of reading improvement will be automatic since the instruction is done in content materials. Reading instruction in the content areas at the college level has demonstrated significant gains in students' grade point averages (Martin and Blanc 1981, Santa and Truscott, 1979), however, in these GPA-related studies, there was no control exerted over reading achievement. Because of this and because of the pervasive emphases on reading instruction in the subject areas and on college student retention, there is a need to take another look at the reading gains of students instructed through non-content related college reading programs.

In non-content related reading instruction students are given reading materials of a general nature rather than specific areas. Content, of course, is included in general materials, but is presented in a random rather than a systematic fashion. Typically, the materials present content in a series of articles or stories which are relatively brief and are generally not related to one another. At the same time these articles or stories are controlled as to readability level and length.

In this study, non-content related reading instruction was provided in a laboratory setting through a semester-long course which met for three hours per week. Students receive grade points for the course, but the course does not count for graduation credit. Materials used are the generic types previously described. Emphases of the program are as follows:

1. Through small group and individual instruction, students work in different materials at different levels.
2. Students build an affection for reading through reading self-selected paperbacks.
3. Reading vocabulary is built through word study and dictionary use.
4. Students build comprehension by completing a series of developmental readings. Comprehension is also developed through specific comprehension subskill exercises such as main idea and inference.
5. Study reading ability is improved through use of organizing strategies such as SQ3R.
6. Reading rate is an artifact of the lab used primarily to increase attention to the task; although, a bit of emphasis is placed on varying rate, such as in skimming.

Design of the Study

Subjects

Subjects were traditional-aged entering freshmen and were full-time students. No institutional screening tests are used except for ACT scores, where available, and, student self-estimates of grade point averages in the high school subjects of mathematics, science, social science, and English. Students either selected the reading course or were advised to take it. In either case enrollment in the reading course was voluntary, taken along with other college courses. Control subjects were also enrolled as full-time students. There were 18 females and 14 males in each of the two groups. Mean, standard deviation, and range scores for ACT's and high school grade point averages are reported as follows— ACT: M = 15.72, S.D. = 3.69, R = 10 - 24; GPA: M = 2.92, S.D. = .46, R = 2.0 - 4.0. Experimental subjects were drawn equally from sections taught by five separate instructors.

Instrument

All 64 subjects were administered Forms E and F of The Nelson Denny Reading Test (Brown, Bennett, Hanna, 1981) as pre- and post-test measures. This test yields measures of vocabulary, comprehension, and total reading achievement, as well as reading rate. Two studies (Cummins 1981, Stetson, 1982) have shown that through short-term coaching students can be taught to speed up their answering on the post-test form and demonstrate substantial gains over the pre-test form. Two procedures were used to minimize the possible effects of students utilizing a rapid-fire guessing strategy on the pre- and post-tests. First the reading rate was omitted from the pre- and post-testing sessions. Second, students' raw scores were computed in the conventional fashion (total number answers which were correct), but, they were also adjusted for items which were missed and for items which went unanswered. The formula used to adjust the raw scores was taken from Gulliksen (1950, 252):

$$X_s = R - \frac{W}{C} - \frac{S}{D}$$

Gulliksen reasoned that in adjusting student scores, a larger penalty should be exacted for errors than for items skipped; therefore, while C and D are arbitrary values, Gulliksen stated that C should be smaller than D. Further, he noted that C should be smaller than the number of possible answers per question (minus 1), and that D should be larger than the number of possible answers per question. The final formula used is as follows:

$$\text{Adjusted Score} = \frac{\text{Right Answers}}{3} - \frac{\text{Wrong}}{3} - \frac{\text{Skips}}{6}$$

This formula was applied to each student's score for vocabulary and comprehension (and total) for both the pre- and post-test measures in both the experimental and control groups.

Procedure

Experimentals and controls were administered the pre-test at the beginning of the semester and the post-test at the end of the semester. Raw scores and adusted scores were computed for

Table 1
Mean, Standard Deviation, and Mean Difference
Scores for Pre- and Post-test Reading Achievement
Measures for Control and Experimental Groups

Measure	Controls n = 32	Experimentals n = 32
Vocabulary		
Pre-test means	41.97	41.44
Pre-test standard deviations	11.06	10.80
Post-test means	43.88	47.16
Post-test standard deviations	11.59	12.32
Mean differences	1.91	5.72
Comprehension		
Pre-test means	44.31	40.63
Pre-test standard deviations	7.06	9.83
Post-test means	50.81	50.38
Post-test standard deviations	9.03	7.42
Mean differences	6.50	9.75
Total		
Pre-test means	86.28	82.06
Pre-test standard deviations	16.45	18.01
Post-test means	94.69	97.53
Post-test standard deviations	17.82	16.83
Mean differences	8.41	15.47

each student on both tests. Comparison of reading gains for the two groups was done on both raw and adjusted scores by a repeated measures analysis of variance. The first hypothesis stated that there would be no significant differences between the control and experimental groups on each of three measures of reading achievement. Reading achievement was defined as vocabulary, comprehension, and total raw scores. The second hypothesis stated that there would be no significant differences between the control and experimental groups on each of three measures of adjusted reading achievement. Adjusted reading achievement was defined as vocabulary, comprehension, and total adjusted raw scores.

Results

Table 1 reports the results of mean, standard deviation, and mean difference scores on pre- and post-test measures in vocabulary, comprehension, and total reading achievement for the two groups. On the measure of vocabulary, the experimental group had a lower mean pre-test score than the control group; however,

this trend was reversed on the post-test mean vocabulary scores.

Table 2 reports the results of the repeated measures ANOVA's comparing the two groups on each of the three pre- and post-test measures of vocabulary, comprehension and total reading achievement.

Table 2
Repeated Measures ANOVA's Comparing Gains in
Reading Achievement Measures for Control
and Experimental Groups

Source	(N = 64)	MS	F	p
Group				
Vocabulary		60.50	.25	.62
Comprehension		136.13	1.22	.27
Total		15.13	.03	.87
Pre-post-test				
Vocabulary		465.13	18.90	.001
Comprehension		2112.50	70.30	.001
Total		4560.13	73.90	.001
Group X pre-post-test				
Vocabulary		116.28	4.73	.03
Comprehension		84.50	2.81	.10
Total		399.03	6.47	.01

No significant differences were found in the group effect on measures of vocabulary, comprehension, and total reading achievement. On the time effect (pre-post-test), scores for all three dependent variables (vocabulary, comprehension, total reading achievement) reflected significant differences ($p < .001$). The results from the interaction of group and test (group X pre-post-test) revealed that the two groups differed significantly on the variables of vocabulary ($p < .03$) and total reading achievement ($p < .01$), but not on reading comprehension ($p < .10$). Because the experimental group yielded significant gains over the control group in vocabulary and total reading achievement (raw scores), the first hypothesis of no significant differences between experimental group and control group was rejected.

In testing the second hypothesis, the raw scores for each student were first adjusted according to the previously-described Gulliksen formula. Table 3 reports the adjustment mean, standard deviation, and mean difference scores for pre- and post-test measures in vocabulary, comprehension, and total reading achievement for the two groups. The mean adjusted vocabulary pre-test score for the experimental group was lower than that of the control group. By the post-test, however, the mean adjusted vocabulary

Table 3
Adjusted Mean, Standard Deviation, and Mean Difference Scores for
Pre- and Post-test Reading Achievement Measures
For Control and Experimental Groups

Measure	Controls n = 32	Experimentals n = 32
Vocabulary		
Pre-test means	28.44	27.38
Pre-test standard deviations	13.48	13.55
Post-test means	29.87	34.21
Post-test standard deviations	14.64	14.72
Mean differences	1.43	6.83
Comprehension		
Pre-test means	36.94	32.54
Pre-test standard deviations	8.35	12.09
Post-test means	44.57	44.03
Post-test standard deviations	11.45	9.61
Mean differences	7.63	11.94
Total		
Pre-test means	65.40	59.93
Pre-test standard deviations	19.77	22.10
Post-test means	74.45	78.22
Pre-test standard deviations	22.57	20.06
Mean differences	9.05	18.29

score of the experimental group exceeded that of the control group. In comprehension, the experimental subjects had a substantially lower pre-test mean score than the control subjects. At the time of the post-test, the controls maintained a slight advantage over the experimentals in reading comprehension. For the adjusted total reading achievement scores, the experimental group had a lower mean score on the pre-test and a higher mean score on the post-test.

Table 4 reports the results of the repeated measures ANOVA's comparing the two groups on each of the three pre- and post-test adjusted scores in vocabulary, comprehension, and total reading achievement. No significant differences were found in the group effect on adjusted scores for vocabulary, comprehension, and total reading achievement. For the time effect (pre-post-test), adjusted scores for all three dependent variables (vocabulary, comprehension and total reading achievement), showed significant differences

Table 4
Repeated Measures ANOVA's Comparing Gains
in Adjusted Reading Achievement Measures
for Control and Experimental Groups

Source	(N = 64)	MS	F	p
Group				
Vocabulary		85.97	.24	.63
Comprehension		195.53	1.13	.29
Total		23.12	.03	.87
Pre-post-test				
Vocabulary		546.56	15.80	.001
Comprehension		2922.30	62.14	.001
Total		5975.98	66.98	.001
Group X pre-post-test				
Vocabulary		232.47	6.72	.01
Comprehension		118.97	2.53	.12
Total		681.37	7.64	.008

($p < .001$). Interaction of group and test (group X pre-post-test) showed that the two groups differed significantly in adjusted vocabulary ($p < .01$) and in adjusted total scores ($p < .008$), but not in adjusted comprehension ($p < .12$). Because the experimental group yielded significant gains over the control group in vocabulary and total reading achievement (adjusted raw scores), the second hypothesis of no significant differences between experimental and controls was rejected.

Discussion

In this study it was demonstrated that university freshmen, instructed in a non-content related reading laboratory, made significant gains over a matched control group in vocabulary and total reading achievement. Adjusting students' raw scores in both groups for errors and items skipped did not alter these findings. Further research in non-content related reading instruction should explore the comprehension question. Within the confines of this study four factors may have contributed to non-content related reading instruction's failure to make a substantial impact on reading comprehension.

The first factor is the reading comprehension subtest of The Nelson-Denny Reading Test. The authors report alternative-form test reliabilities for Forms E and F as follows:

vocabulary subtest	.92
comprehension subtest	.77
total test	.91

The fact that the alternative form reliability of the comprehension subtest is low relative to that of the vocabulary subtest and to that of the total test suggests that it may not be stable enough to capture distinct changes in reading comprehension across time.

The second factor to be considered is the non-content related materials. They possibly lack the continuity, relevance and sophistication of content materials. The third factor is the attitude of the lab instructors. They may not have moved the experimental subjects in the duration of the semester-long course, far enough into the more sophisticated and lengthy passages of the non-content related reading materials. Finally, there is the possibility that the comprehension subtest with relatively low alternative form reliability; relatively unsophisticated reading materials; and, a lack of intensity in comprehension instruction, together, thus resulting in the experimental group's failure to make gains in reading comprehension substantially greater than that of the control group.

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PROFESSIONAL READING DEVELOPMENT AND THE EVALUATIVE PROCESS: A CALL TO ACTION

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One of the cornerstones of good teaching is an effort to keep abreast of the latest developments in all areas of the curriculum. There are many ways this can be accomplished: reading journal articles, attending meetings and conferences, and participating in staff development programs offered by the school district. These activities are likely to enhance one's teaching skills which will ultimately benefit students.

In the area of reading instruction, there is another viable way teachers can upgrade their teaching competencies, and that is to join the International Reading Association, the National Council of Teachers of English, and similar organizations. Members of these organizations receive journals that contain a good mix of practical and theoretical articles, newsletters and other publications designed to broaden one's knowledge of reading instruction.

In addition to annual conferences, there are state conferences, regional conferences, seminars and local council meetings held on a regular basis. These meetings are designed to bring fresh and useful information to classroom teachers and reading personnel. All of us have had the experience of feeling exhilarated after attending some of these meetings and our attendance has resulted in positive change and revitalization in our work with students.

Few would dispute the advisability or benefits that accrue to those who join professional organizations. Two pertinent questions, however, emerge: "Are classroom and reading teachers truly encouraged to join a professional reading organization?" and "Are they encouraged at the school-district level to attend reading meetings, conferences, and to participate in other inservice reading programs?"

These questions are interesting and ones which call for some examination. One must start with a basic premise: all practitioners in reading programs have one thing in common—their performance is evaluated. Evaluation is crucial since its purpose is to assess a teacher's effectiveness and ability to teach youngsters how to read proficiently.

Since all teachers are evaluated—most on a yearly basis—it is logical to assume that membership in a professional reading organization and attendance at reading meetings and conferences

are not only worthwhile enterprises but ones which should serve as important criteria in the evaluative process? In other words, should these activities be included in a school district's evaluation documents? The assumption here—and it is not a far-fetched one—is that if these activities were an integral part of the evaluative process more teachers would participate in them.

With these considerations in mind, the author selected two cities in each state (one small and one large) and sent a letter recently to the superintendents of schools in these cities, requesting information concerning their inservice offerings in reading and a copy of the evaluation document used in that city's school district.

A total of 100 letters were mailed, and 41 responses were received. The responses were from 27 different states representing a geographic balance of all parts of the country. The largest school districts responding were Milwaukee, Houston, New Orleans, Baltimore, St. Louis, Cleveland, Oklahoma City, Providence, and Honolulu. The smallest cities responding were Allentown, Penna., Roseburg, Ore., Suffolk, Va., Parkersburg, W.V., and Oxnard, Calif. The remaining 27 school districts submitting their evaluation documents tended to be larger rather than smaller in terms of school population.

The length and scope of the documents submitted varied quite widely. Some were extremely detailed while others (a small number) were one page and rather sketchy. Essentially, the evaluative instruments fell into the following broad categories (with at least two common examples included for each):

Interpersonal Relationships

Exhibits positive relationships with all school personnel (teamwork)

Promotes self-image in students

Instructional Competency

Demonstrates knowledge and understanding of curriculum and content

Encourages creativity and divergent thinking

Learning Environment

Maintains classroom control

Maintains a positive learning climate

Meets needs of individual students

Personal Characteristics

Is punctual

Demonstrates physical health and emotional stability

Meets deadlines

School-Community Relations

Establishes communication with parents

(Sch.-Comm. Relations cont'd)

Develops and coordinates an effective school advisory process

Professional Growth

Reads professional books and magazines, takes course, attends meetings voluntarily

Demonstrates professionalism and professional growth

It is interesting to note that more commonality than diversity exists among school systems in the manner in which teachers are evaluated. Most use the "S" (Satisfactory) and "U" (Unsatisfactory) system. Others used a bit more detailed system, i.e., Unsatisfactory, Needs Improvement, Satisfactory, Good, Superior.

Examination of the documents, while indicating common characteristics and components used to evaluate teachers, vary the most in two areas: 1) parent relationships, and 2) professional growth. Not all school districts responding included these two important areas.

While most do evaluate teachers in terms of their ability to communicate with parents, some ignore the community. A constructive suggestion would be to have school districts add the following statement:

"Maintains a cooperative relationship with parents and the community."

Since professional growth is a powerful antidote to stagnation and sterility in the teaching process, it is crucial that all school districts include a specific criteria regarding professional growth as a basis for evaluating teachers. The Houston Independent School District uses the following criterion which the author feels has application for all school districts:

"Keeps abreast of educational developments on the national, state and local levels."

This criterion is important because it encourages teachers to attend meetings outside as well as inside their school districts to achieve professional growth. In the area of reading, for example, teachers would be encouraged to attend NCTE and IRA conventions, as well as regional, state and local council meetings since attendance at such meetings would be part of the evaluative process.

Regarding inservice, most school districts indicated that they formulate plans based on the needs of their individual school districts. Plans and requirements vary widely and are not readily generalizable. The writer would like to state, however, that he was impressed with the catalog of inservice offerings sent by Milwaukee. This catalog is impressive in its scope and diversity and offers teachers a wide sampling of inservice opportunities on a credit basis (tied to salary increments) in every aspect of the curriculum.

In summary, it is disheartening to note the complete absence of any reference in the evaluation documents studied regarding membership of teachers in professional organizations. Positive steps are necessary in order to improve the current situation as revealed by this survey. Therefore, this investigator offers the following five calls to action:

1. Professional reading organizations should draft a position statement outlining this apparent void in professional reading development and encouraging school district officials to include membership in such organizations as part of the evaluative process.

2. School districts should offer inservice credits for membership in a professional reading organization and attendance and/or participation at an annual or national convention.

3. Reading professionals should work with State Departments of Education in formulating specific guidelines which encourage teachers to attend local and state reading meetings and conferences.

4. Since literacy is a top priority, it is crucial that administrators be made aware of the advantages of professional reading development that accrue both to themselves and their instructional staffs.

5. Leaders in the reading community can take a leadership role in this endeavor by ascertaining the meeting dates and locations of administrators (principals and superintendents) and ask to make a brief presentation concerning the importance of professional reading development and to stress this importance by including it as an integral part of their evaluation documents.

Professional development in reading can do a great deal to improve the quality of the instructional reading program at all levels. Teachers will be more responsive to joining professional reading organizations and participating in inservice reading programs if they know that these activities are part of the evaluative process.

THE EFFECTIVENESS OF SSR: AN OVERVIEW OF THE RESEARCH

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An activity which has become increasingly popular in many school systems in recent years has been Sustained Silent Reading (SSR). In this program both teachers and students engage in reading self-selected material for a given period of time daily (McCracken 1971). Advocates of SSR stress the importance of the student viewing reading as a holistic activity and that if children are only taught isolated skills, they will develop a narrow perception of what the reading act involves. They argue that when children actively engage in the reading process, they view the mastery of skills not as an end in itself but rather as a means of attaining a broader goal. Research conducted to determine the effects of SSR has produced mixed results. Evans and Towner (1975) found no significant difference in achievement when comparing forty-eight fourth graders using SSR with those using selected commercial materials over a ten week period. In a three week study, using thirty-four junior high school students, Vacca (1976) produced similar findings. Likewise, a five month study using high school students conducted by Reed (1977) as well as a one month study by Oliver (1973) showed that improvement in reading was not significantly greater for those students involved in SSR. Since these studies were conducted during a time period of six months or less, the researchers suggested that different findings may have occurred had the experiments lasted for a longer time span. However, in a six week study, Wiesendanger (1982) reported that the group involved in the SSR program achieved significantly higher in both word recognition and comprehension. An interesting aspect of the study was that SSR was combined with systematic skills instruction. Lawson's (1968) findings indicated that SSR was more effective if this was done. He concluded that when students were taught systematic skill instruction in addition to having free reading, they achieved significantly higher than either those in a classroom that included a large amount of free reading or in a class with emphasis on skills instruction but with no free reading. Furthermore, Oliver (1970) advocated implementing a ratio of 80% practice to 20% instruction in order to develop independent readers.

When analyzing the results of long term studies, it is evident that the findings are skewed in favor of SSR. These studies have shown that achievement has improved significantly with those students involved in an SSR program. In a one semester study, Mil'on

(1980) found that students gained slightly in vocabulary and comprehension. Pfau (1966) conducted a two year study using first and second graders and found significantly greater achievement in favor of the SSR group as did Langford (1978) whose study lasted for a six month period.

The results of previous studies have focused on the effects of SSR on reading achievement *per se*. However, during the recent decade there has been a deepening concern about the habits and attitudes of the students toward reading. As a result, an increasing number of school systems have included the development of a positive attitude toward reading as one of their long range objectives. Changes in attitude may indeed have long term effects on reading achievement. It is reasonable to assume that if the student has developed a positive attitude toward reading, he will read more. One might postulate that the more one reads, the more proficient at reading one will become. Consequently, it might behoove the school to implement techniques in the curriculum that develop and sustain a positive attitude toward reading.

One's attitude toward reading has been deemed a critical factor in determining the success of one's reading program. When measuring how SSR affected attitude toward reading, Milton (1980) found that students involved in an SSR program showed a less favorable attitude toward reading than they had prior to the implementation of the program. He attributed the failure of the program to the following factors. The faculty was not part of the decision-making process. Adequate inservice was not given the staff regarding the implementation of the program. Some teaching areas were inappropriate for carrying out SSR. A second study whose findings showed that SSR had a negative effect on attitude was conducted by Mikulecky & Wolf (1977). They concluded that the attitude of seventh graders toward reading declined slightly when SSR was implemented.

While the two previously mentioned studies were composed of junior high and senior high school students, Cline (1980) included students from grades three to twelve and found that attitude toward reading had improved. Likewise, in studies conducted by Pfau (1966), Lawson (1968), Petre (1971), Hanson (1972), Wilmot (1975), Vacca (1976), Wolf (1977), and Langford (1978), students involved in SSR had developed a more positive attitude toward reading when compared to those students in other programs.

Conclusions:

In summary, when analyzing the results of the major research findings, one may make the following conclusions:

1. The effect of SSR on word recognition and reading comprehension appears inconclusive. Of the eight studies summarized, four (Evans & Towner, Vacca, Reed, Oliver) reported findings that showed SSR either made no significant difference or had a negative effect on word recognition and reading comprehension, while four studies (Milton, Pfau, Langford, Wiesendanger) reported students involved in an SSR program achieved significantly higher results.

2. SSR appears to have positive effects on attitude toward reading. Of the eleven studies conducted, nine reported (Cline, Pfau, Lawson, Petre, Hanson, Wilmot, Vacca, Wolf, Langford) that SSR had a positive effect on reading attitude, while only two (Milton, Mikulecky & Wolf) reported that SSR had a negative effect.

Implications

It has long been known that the success of an SSR program has been dependent on both the teacher and children reading, availability of materials on a wide range of topics and readability levels, as well as daily scheduled sessions (McCracken, 1970). After summarizing the available research conducted in the area, it appears that several additional factors may be instrumental in determining whether or not the program implementation is successful. In order to better determine what the significant factors affecting the success of SSR are, it seems logical to scrutinize the previously mentioned studies and compare their procedures along with their findings. In so doing, the following questions arise:

1. Is it possible that the effects of SSR on reading comprehension and word recognition are more likely to be evident only after a period of at least six months? Four of the five studies (Evans & Towner, Vacca, Reed, Oliver) conducted for five months or less reported that SSR did not improve reading comprehension or word recognition. Yet the studies conducted over a time span of six months or more (Milton, Pfau, Langford) reported that children enrolled in SSR had achieved significantly better results in reading achievement.
2. Would better results be obtained if SSR were combined with systematic instruction in the skills area? One short term study (Wiesendanger) reported significant findings in favor of the group involved in SSR. In this experiment, SSR was combined with systematic skills instruction. Perhaps educators should not view SSR as a replacement for reading instruction but rather an activity whereby the skills taught are reinforced through practice.
3. When measuring the effects of SSR on reading attitudes, is it possible that the younger the child the more likely that his attitude would be improved? In analyzing the studies (Milton Mikulecky & Wolf) that showed children involved in an SSR program had not improved in their attitude toward reading, one should note that both studies reported findings based on junior high and senior high school students. All studies (Pfau, Lawson, Petre, Hanson, Wilmot, Vacca, Wolf) that included elementary grade children reported they viewed reading more positively after being involved in an SSR program. It may also be that while attitude of the older child toward reading may be possible to change, it may take a greater period of time to do so. Hence, it seems logical to introduce SSR to children when they are enrolled in the primary grades.
4. Is it necessary to provide in-service training to teachers

before the implementation of the SSR program? From the results reported by the Milton study, it seems evident that teacher input can be a critical factor in determining the program's success. The attitude of the teacher toward SSR may be very significant, particularly if the SSR program is to be implemented throughout all grade levels of an entire school.

5. Finally, because an SSR program appears to have significant effects on attitude, is it more likely that the benefits of SSR are long range? Perhaps, more than with other techniques or programs, educators should be particularly interested in the long range benefits of SSR. It seems that since SSR helps children develop a positive attitude toward reading, reading habits may likewise be affected. One study (Hanson) reported that habits of children involved in an SSR program had improved. If children's reading habits can be improved, then incorporating an SSR program into the curriculum would have long lasting positive results and the true effects of SSR should be measured only after a period of years, instead of months.

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CHILDREN'S LINGUISTIC INSIGHT: WHAT WE THINK WE KNOW

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Our first goal in this paper is to deal with the title. Why "linguistic insight" rather than the more common "linguistic awareness" or "metalinguistic awareness?" And why the subtitle, "What we think we know?" A second goal will be to highlight some of the research in this area which speaks to the teacher of reading.

The first issue, a definition, rises out of the varying ways in which the terms "linguistic awareness" and "metalinguistic awareness" have been used. One of the first appearances of these terms was in a brilliant collection of studies called Language By Ear and By Eye (Mattingly, 1972). Viewing speaking and listening as primary linguistic activities, Mattingly described reading and writing as "parasitic" on these primary functions, requiring linguistic awareness which he regarded as a specially developed metalinguistic consciousness of certain aspects of speech and literacy. In the flow of time and research, metalinguistic awareness has become more commonly used to refer to the ability to think about language and to talk about it or to consciously act upon it as if language were an object to be considered.

Learning a new language in a formal way is a good example of a metalinguistic activity for adults. When we think in terms of the right case, of adding the correct thing, or choosing an appropriate article so we can buy an airmail stamp to send home our postcards from "far away places with strange names," we are engaging in a metalinguistic exercise. Compare that activity with the more spontaneous use of one's native language or a bilingual activity learned in an immersion program. Adults whose first language is other than English, or those who were raised in a home where another language was used by the parents to communicate about those matters they did not want the children to understand, are often surprised and shocked when they understand phrases or recall words they didn't know they knew. Such performance is not the result of conscious formulation as is formal language learning. This distinction between "knowing something" and "knowing that you know" is often the one made between linguistic and metalinguistic awareness.

In children, such a distinction is often evident in speech performance. The child who says "I goed home" demonstrates a tacit awareness of the function of the -ed marker for tense. This type

of linguistic insight is much different from being able to comment about usage. When asked why they use "goed," which is a form not heard or reinforced at home, young children frequently appear evasive and uncomfortable. They might say, "Because it is 'goed', that's why, silly!" Or they'll vaguely refer to it as the way one says the word.

A more sophisticated stage of linguistic insight is an ability to detect what "sounds funny." This ability to detect error may occur before and/or after performance clearly demonstrates any awareness of some regularity. For example, a child who corrects one's pronunciation of "Louella," which the adult might say as "Woo-ew-wa," in mimicry of the young speaker, may say, "No, it's not 'Woo-ew-wa;' it's 'Woo-ew-wa!'" This would be similar to the child who finally begins to reject, "I goed" as "sounding funny."

The ability to reflect on language abstractly to discern a rule is a most highly developed level of this insight. Saying "I say 'goed' because -ed means it happened before," would be an example of such insight, a statement that has been rarely, if ever, uttered by a small child who says "goed." Noting, "That must be a long 'a' because there's a silent 'e' on the end," is another such example of a difficult or abstract response to language. Yet this is the level on which children are often asked to work at very early stages of reading acquisition. Being tricky and sometimes devious, students are often able to master the statements about the language without having the true insights, or conversely, to be unable to explicate the tacit insights they do have. This creates what teachers call a problem of "transfer." In actuality, failure to transfer is often an indicator of rote memorization rather than internalized learning.

A third observation, concerning both the definition of what linguistic/metalinguistic awareness might be and how it develops in children, is the nature of the tasks used by researchers to investigate children's capabilities. Different cognitive operations may be tapped by one study and not another. A good example is sound segmentation requiring analysis (breaking cat in /c/ /a/ /t/) as opposed to synthesis (blending those sounds). Research in phoneme perception often asks the child to isolate out sounds (analysis) while others ask for blending (synthesis) as modes of response. Yet both types of task are used to draw conclusions about phoneme perception and manipulation. Further complicating the research is the fact that different researchers use different sizes of units (phrases, words, syllables, phonemes) in contexts ranging from meaningful to meaningless. Lastly, the differences in processing demands are apparent, some studies calling for recognition, some for recall as well as a variety of other tasks. All of these task demands interact, making it quite difficult to equate and compare studies.

Be that as it may, there are a few lines of research which seem suggestive for the teaching of reading. The remainder of this paper will attempt to highlight these areas. Because of the definitional confusion, this paper will adopt the term "linguistic insight," coined by Ehri (1979) in a superb summative article

to which the interested reader is referred for a more exhaustive review of research titles.

Research on Linguistic Insight

Teachers generally assume that children who are fluent in the use of language present at least appropriate cognitive receptors for beginning reading. However, Reid's (1966) research with Scottish five-year olds emphasized that they lacked any specific expectancies of what the purpose of reading might be or what the process might be like. They also exhibited what Downing called "cognitive confusion," calling letters 'numbers' and confusing both these and other terms with 'words' and 'names.' When children were asked point blank, what reading is (Groff, 1976) some answered, 'making sounds,' 'breathing,' 'moving your mouth,' and other non-meaning involved definitions. Many cross-cultural replications and related studies (Clay, 1972; Lundberg and Torneus, 1978; Rapan-dopolou and Sinclair, 1974) suggest that children do begin the educational process in this state of confusion. Teachers must not assume a shared vocabulary with their students and should establish it prior to or during reading instruction which is so structured as to develop these awarenesses. LEA or experience charts are examples of techniques which develop a common vocabulary.

Other lines of research involve the activities we ask children to perform when we teach sight recognition and sound/symbol correspondences. A body of evidence has accumulated depicting children as not able to easily isolate a word in either the spoken speech stream or in the printed sentence (Holden & MacGinitie, 1972). Karpova (1955), one of the first to examine the child's ability to segment sentences into words, found several stages in this segmentation process. At first, the division was made semantically, not lexically. For example, for the sentence

Jim and Jake went for a walk.

a 4 year old might identify two "words"

Jim went walking/ and/ Jake went walking.

An older, more linguistically insightful child would make the division on a subject-predicate basis, calling the two "words"

(Jim and Jake) /// (went for a walk)

Finally a slowly developing word-consciousness would evolve for more 'wordlike' segmentation but, frequently, the function words (of, and, for) would be omitted or tied to words for which they served some function. Such results are substantiated by other researchers (Ehri, 1975; Holden & MacGinitie, 1972) who structured tasks related to matching words heard with processes of tapping, laying down markers or filling in slots. Although these tasks are not equivalent and are being scrutinized (Lundberg, 1978) to try and reconcile inconsistencies of results, it does seem that the ability to auditorially separate words is not a natural capability at school entrance.

Similarly, the visual characteristics of words are not immediately evident to beginning readers. Children are not able to match a spoken word with one that would be of appropriate word length even when the distinction is as simple as long (@@@@@@@@) versus

short (@@@) (Rozin, Bressman, Taft, 1974). Further, word space boundaries are not obvious markers for children (Downing, 1970B; Meltzer & Herse, 1969). Thus, a teacher using a word-based program or an LEA approach that requires matching the language heard with the language read should not expect boundaries of words to be salient to all beginning readers.

With respect to the teaching of sound/symbol correspondences, the interword segmentation ability on which such instruction is predicated is apparently a highly analytic and abstract act for young children. Even though young children can discriminate minimal pairs ('bat' versus 'cat') they may not be able to analyze or isolate sounds in words. This seems sensible in light of psycho-acoustic research which reveals that, in actuality, there are no acoustic boundaries separating phonemes in speech. Although 'bat' has three phonic correspondences, it only has one acoustic segment which is the size of the syllable (Liberman & Shakweiller, 1977; Limberman, et al, 1974). Indeed, many studies (Smith and Spoehr, 1973; Gibson, 1971) suggest that the syllable is the smallest unit for which sound analysis is desirable. Combined with the research on the difficulty of both analytic and synthetic phonic-like tasks, this work on phoneme perceptions suggest that syllabary and invented spelling programs may be optimal for the initial reading programs (Gleitman and Rozin, 1973; Chomsky, 1977; Read, 1971).

Though this research suggests ways in which we might re-evaluate our preconceptions about children's abilities at the beginning of reading, the experimental tasks have been called into question, as was noted earlier. Such dissatisfaction has led to the design of naturalistic, more ecologically valid methods of assessing and developing children's readiness to read.

Clay's SAND test (1978) presents a child with a book and asks the child to do a series of tasks to reveal both tacit and explicit insights about books, language, print, meaning and language manipulation. The SAND test presents a model for assessment which is prescriptive rather than predictive, that is, it can tell you what needs to be taught/developed, not just who may do poorly in beginning reading.

Another technique for both assessment and teaching (Morris, 1978) involves auditory memorization of a familiar children's rhyme or jingle which is then used with its written correlate to assess the child's awareness of directionality, word boundaries and more sophisticated word, letter and sound variables. The task is prescriptive of the child's level of competence as well as being highly correlated with standardized readiness predictive measures (Morris—in press). How, then, can we summarize what this complex and burgeoning field of research as to say to the classroom teacher? First of all, it cautions us not to assume a shared vocabulary with our students. Such simple and frequently used terms as 'word' 'letter' and 'sentence' may be unknown to them. Secondly, a child's, indeed an adult's, linguistic performance is not identical with his ability to reflect on and to analyze language. Knowing and "knowing that you know" are not the same

thing. Even the student who can parrot a rule or use a grammatical construction may be unable to explicate or manipulate linguistic structures.

Further, with respect to sound/symbol correspondences, analytic and synthetic tasks required by phonics training programs could be beyond the capability of many kindergartens and first grades. Programs relying on syllabaries or invented spellings are being proposed as sensible alternatives. Lest the LEA practitioner feel smug, research also cautions us that speech and writing are not the same nor are the correspondences between them obvious to the beginning reader.

Finally, the development of more ecologically valid and sensitive techniques can help us both test and teach in a classroom setting. Such field-based methods can help us to become more insightful about children's use of and knowledge about language at the same time as we develop their awareness. Such teaching and research tools may give us 'cleaner' data on children's linguistic insights so that a future paper of this type might be entitled—

"Children's Linguistic Insight: What We Know We Know"

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AN INQUIRY INTO SUMMER LOSS IN READING: GRADES 1-7

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How does a three month summer vacation affect student reading ability? This study focused on whether students in grades one through seven experienced a gain or loss over the summer months in vocabulary and/or comprehension as measured by a standardized reading survey test.

Perspective from Related Research

Over the years, several investigators have studied students' reading achievement levels before and after summer vacations, but their results are not in agreement. Morrison (1924), Mousley (1973), and Rude and Niquette (unpublished) found that reading achievement levels were maintained by first, second, and third graders over the summer months. Morrison (1924) measured reading achievement levels of 81 first, second, and third graders in the spring and fall using two standardized reading tests. Comparing pre-summer scores to post-summer scores let Morrison to conclude that these children experienced no significant loss in comprehension over the summer months.

Mousley's study (1973) was limited to third graders (N-64). These children were tested using alternate forms of the Stanford Reading Achievement Test. A t-test was used to determine if there was a statistically significant difference in pre-summer and post-summer reading scores for these students; the analysis revealed no significant difference in reading vocabulary, reading comprehension, or total reading ability. Mousley concluded that the students in his study did not suffer a loss in reading ability despite the lapse of 85 vacation days.

Rude and Niquette used alternate forms of the Gates-MacGinitie Reading Test before and after summer recess to determine overall reading ability of 78 first, second, and third grade students. They concluded that overall reading ability was maintained uniformly over the summer recess. The one exception was a significant ($p .01$) gain in reading comprehension at the first grade level.

Irmina (1928) measured the pre-summer and post-summer academic achievement of 1184 students in grades one through seven. She found that first graders showed a slight loss in reading achievement, while students in grades two through seven showed slight gains; however, none of the changes in reading achievement was significantly significant. Irmina concluded that summer vacation does not cause any appreciable change in the overall reading ability of a class.

Humphrey (1967) reported the results of a study designed in part to determine the reading loss or gain of 3957 first grade children over the summer months. The children were tested before and after summer vacation with alternate forms of the California Reading Test. Humphrey found that except for girl's comprehension score, first graders experienced significant losses in all areas of reading achievement during the summer. Elder (1927), however, concluded that ability in silent reading changes whether students are in school or not; the 203 third, fourth, fifth, and sixth graders he tested showed an average gain of .45 years over the summer.

Several investigators have examined the influence of such factors as intelligence, sex, and environment on the retention of students' reading skills over the summer months. Rude & Niquette concluded that sex and intelligence did not influence the retention of reading skills. Ross (1974), however, found a wide range of retention rates among 119 sixth grade students in low, middle, and upper reading groups. Students in the middle and upper reading groups gained four to nine months in reading over the summer; students in the low reading group lost ten months. Ross concluded that the summer regression phenomenon exists only among the low achievers in reading.

Turner (1972) found a significant ($p = .01$) connection between neighborhood/home background and the retention of reading ability for 226 eight-, nine-, and ten-year-old children. In addition, Turner concluded that younger children and/or children with low mental ability were most likely to be adversely affected by environmental factors.

The results of previous studies investigating students' retention of reading ability over the summer months are inconclusive. The present study was designed to explore this problem further.

Sample

Since most previous studies have been limited to specific grades, an overall picture of possible changes in reading ability during the summer months has been difficult to ascertain. The one study that involved grades one through seven was conducted over fifty years ago and involved an average of 169 students at each grade level.

The present study involved a total of 640 students in grades one through seven. For the entire sample, the number of boys and girls was approximately the same, although there were some differences in several grades (especially in grade four where there were 26 boys and 46 girls). The breakdown of the sample by grade and sex is presented in Table 1.

The students were all from a single school district that contained three elementary schools, a junior high school, and a high school. The total population from two elementary schools and the junior high was used in this study, provided pre- and post-summer test results were available. One of the elementary schools was located in a lower middle class area, while the other elementary school was described by school officials as being middle

Table 1
Comparison of Pre- and Postsummer Vocabulary
Grade Equivalent Scores by Grade and Sex

Grade /Sex	N	May Mean	Stand. Devia'n	Sept. Mean	Stand. Devia'n	t- value	2-t'd prob.	Direc'n of chng*
Gr. 1	73	2.87	.62	3.11	.90	-3.26	.002	+
Boys	40	2.92	.62	3.22	.90	-2.74	.009	+
Girls	33	2.80	.63	2.98	.89	-1.76	.088	0
Gr. 2	74	4.14	.85	4.21	1.01	-0.76	.450	0
Boys	37	4.09	.92	4.26	1.00	-1.34	.187	0
Girls	37	4.20	.79	4.15	1.02	0.44	.665	0
Gr. 3	61	4.81	1.05	4.97	1.41	-1.34	.185	0
Boys	37	4.64	1.22	4.86	1.68	-1.26	.217	0
Girls	24	5.07	.65	5.13	.83	-0.48	.638	0
Gr. 4	72	5.61	1.48	5.81	1.69	-1.19	.238	0
Boys	26	6.10	1.97	6.10	2.10	0.01	.991	0
Girls	46	5.34	1.03	5.64	1.41	-1.76	.084	0
Gr. 5	77	6.52	1.58	6.91	1.89	-2.47	.016	+
Boys	43	6.60	1.65	6.66	1.83	-0.26	.794	0
Girls	34	6.42	1.50	7.22	1.94	-3.57	.001	+
Gr. 6	136	7.67	1.91	7.83	2.38	-1.13	.259	0
Boys	75	7.62	1.79	7.62	2.28	0.01	.994	0
Girls	61	7.73	2.06	8.10	2.50	-1.55	.125	0
Gr. 7	147	8.15	2.19	8.24	2.37	-0.50	.618	0
Boys	64	8.01	2.23	8.17	2.14	-0.67	.504	0
Girls	83	8.27	2.17	8.30	2.55	-0.11	.910	0
Totals	640	6.18	2.44	6.36	2.63	-2.89	.004	+
Boys	322	6.11	2.44	6.23	2.54	-1.53	.126	0
Girls	318	6.26	2.45	6.49	2.71	-2.51	.013	+

* + significant positive gain   0 no significant change
- significant negative loss

class. Students from these schools later attend the junior high school. Reading achievement in the school district is generally at or above grade level as measured by the Gates-MacGinitie Reading Tests.

Data Collection

The school district in which this study was conducted systematically collects data on student reading achievement in May and September. Reading achievement is assessed in two dimensions: vocabulary and comprehension. Appropriate levels of the Gates-

Table 2
Comparison of Pre- and Postsummer Comprehension
Grade Equivalent Scores by Grade and Sex

Grade /Sex	N	May Mean	Stand. Devia'n	Sept. Mean	Stand. Devia'n	t- value	2-t'd prob.	Direc of Chng*
Gr. 1	73	2.87	.73	2.99	1.08	-1.27	.207	0
Boys	40	2.89	.71	3.03	1.13	-1.03	.310	0
Girls	33	2.84	.76	2.93	1.05	-0.74	.466	0
Gr. 2	74	3.98	1.00	4.22	1.24	-2.41	.018	+
Boys	37	3.99	1.00	4.19	1.44	-1.19	.242	0
Girls	37	3.96	1.02	4.26	1.02	-2.40	.022	0
Gr. 3	61	4.89	1.33	4.39	1.50	4.02	.001	-
Boys	37	4.70	1.56	4.37	1.82	1.87	.069	0
Girls	24	5.17	.80	4.43	.85	5.27	.001	-
Gr. 4	72	5.37	1.86	5.75	2.10	-2.07	.042	+
Boys	26	5.82	2.24	6.27	2.48	-1.31	.201	0
Girls	46	5.11	1.57	5.45	1.81	-1.58	.122	0
Gr. 5	77	6.76	2.14	7.22	2.35	-2.44	.017	+
Boys	43	6.36	1.70	7.15	2.39	-3.69	.001	+
Girls	34	7.26	2.53	7.32	2.32	-0.17	.866	0
Gr. 6	136	8.28	2.70	7.45	2.68	5.94	.001	-
Boys	75	7.94	2.80	7.27	2.64	3.44	.001	-
Girls	61	8.70	2.53	7.67	2.74	5.20	.001	-
Gr. 7	147	8.85	3.01	8.03	2.88	4.54	.001	-
Boys	64	8.70	2.82	7.82	2.94	3.04	.003	-
Girls	83	8.96	3.16	8.19	2.84	3.36	.001	-
Total	640	6.46	3.08	6.19	2.88	4.11	.001	-
Boys	322	6.26	2.96	6.07	2.88	2.00	.047	-
Girls	318	6.67	3.18	6.31	2.88	3.86	.001	-

* + significant positive gain   0 no significant change
      - significant negative loss

MacGinitie Reading Tests are used in each grade. The vocabulary subtest samples the student's ability to identify the meaning of isolated words. The tests below fourth grade require the student to match words with their pictorial representations. The tests for grades four through seven require the student to choose which of five response words is most similar (synonymous) to the test word.

The comprehension subtest measures the student's ability to read and understand sentences (in grades one through three) and/or complete prose passages (in grades four through seven). Raw scores for all levels of this test can be converted into grade

equivalent scores, percentiles, or standard scores.

For this study, pre- and post-summer vocabulary and comprehension grade equivalent scores were compared by two-tailed dependent t-tests. Differences in grade scores were considered statistically significant if the t-value resulted in a probability level equal to or less than .05.

Results

Vocabulary. Table 1 contains the comparisons for the vocabulary subtest scores of the Gates-MacGinitie. The total sample showed a statistically significant gain in vocabulary. This gain appears largely due to the increased vocabulary scores for the girls.

When the data were analyzed by grade and sex, statistically significant gains in vocabulary occurred for boys in grades one and girls in five. In each of the other grades vocabulary scores increased; however, none of these gains was statistically significant.

Comprehension. Table 2 contains comparisons of the comprehension subtest scores. The total sample showed a statistically significant loss in comprehension. The same phenomenon was noticed when total sample was analyzed by sex.

When the data were analyzed by grade and sex, statistically significant gains in comprehension occurred in grades two, four, and five. Only boys in grade five, however, made statistically significant gains when the data were analyzed by sex.

Unlike the vocabulary gains over the summer, the comprehension scores significantly decreased in grades three, six, and seven. The scores for girls showed a statistically significant decrease in grade three. Scores for both boys and girls decreased significantly in grades six and seven.

Table 3
Significant (.05 level) Gains (+) or Losses (-)
Between Pre- and Postsummer Vocabulary and
Comprehension Grade Equivalent Scores by Grade

Grade	Vocabulary	Comprehension
1	+	0
2	0	+
3	0	-
4	0	+
5	+	+
6	0	-
7	0	-
Total Group	+	-

Discussion

Table 3 contains a concise summary of changes in vocabulary and comprehension for each of the seven grades. Vocabulary scores were either maintained or significantly improved in each of the grades. Comprehension scores, on the other hand, improved significantly in grades two, four, and five, and declined significantly in grades three, six, and seven. As a group, students experienced a statistically significant loss in reading comprehension over the summer.

Since comprehension should be the ultimate goal of any reading program, a more detailed analysis at each grade level where gains or losses in comprehension occurred is appropriate. Students made statistically significant gains in grade two (2.4 months), grade four (3.8 months), and grade five (4.6 months). The gains at grades four and five would seem to have practical significance in addition to statistical significance. Statistically significant losses in comprehension occurred in grade three (5 months), grade six (8.3 months), and grade seven (8.2 months). All these differences appear to have practical significance for teachers and school officials.

In some cases, different levels of the Gates-MacGinitie Reading Tests were used for May and September testing. For example, in May the Primary A level was used for first grade. In September these students, now in second grade, were given the Primary B level of the Gates-MacGinitie. While it may be tempting to explain gains or losses depending on whether different levels of the Gates-MacGinitie were used, such an explanation does not seem plausible. Different levels were used in grades one, two, three, and six. In these four grades students' vocabulary scores indicated only one significant change in vocabulary (+). In the remaining grades when a different form of the same test was used, students' vocabulary scores also indicated only one significant change in vocabulary (+).

When comprehension scores were analyzed in a similar manner, two grades showed positive changes, one showed a negative change, and one showed no change for those grades where different levels of the test were used. In those three grades where an alternate form of the same test was used, there were two positive gains and one negative change. An informal analysis of this sort makes it difficult to argue that the observed changes are due to different levels of the Gates-MacGinitie used in the study.

Similarly, it is difficult to explain the observed differences with regression effects. If regression effects are used to explain the significant loss in comprehension in grades six and seven, why were vocabulary scores in these grades stable over the summer months? As the data are studied, it becomes clear that some changes in reading achievement occur over the summer months; moreover, some of these changes appear to have practical significance.

Perhaps the observed differences are due to "good" or "poor" readers. Ross (1974) found that 119 sixth grade students in the middle and upper reading groups gained four to nine months in

reading while students in the low reading groups lost ten months. He concluded that the summer regression phenomenon was valid only for low achievers in reading. Data from the sixth graders in the present study made it possible to test this hypothesis in a similar manner.

The 136 sixth graders in the present study were separated into two groups according to their comprehension scores. One group ("poor" readers) was composed of 51 sixth graders whose comprehension scores were below grade level (6.8) at the time of the May testing. The other group ("good" readers) was composed of 85 sixth graders whose scores were at or above grade level (6.9) at the time of testing. When the pre- and post-summer scores were compared for each group by means of t-tests, the "poor" readers lost 2.7 months in comprehension—a loss that was not statistically significant. The "good" readers, on the other hand, lost over a year in comprehension—a difference significant beyond the .001 level. The claim that the regression phenomenon is valid only for poor readers is not supported by data analyzed in the present study.

Additional informal analyses at the other grades seem to suggest that it is, in fact, the student reading at or above grade level who experiences significant losses in reading achievement. If regression toward the mean is used to explain these findings, who do some "good" readers at certain grade levels show significant gains? Once again, there is reason to believe that the gains or losses some students experience over the summer months are independent of any limitations that a given standardized test may possess.

Conclusions

Is students' reading ability affected by a three-month summer vacation? The answer to that question cannot be reliably answered for the general population in our schools. Past research has given mixed findings. The present study, in assessing reading ability in vocabulary and comprehension for grades one through seven, found results that were also mixed.

Inasmuch as this study was the largest of its kind in five decades (in terms of grades involved) it may be useful to draw several conclusions that can be supported by the data.

First, vocabulary scores for this sample of 640 students improved significantly over the summer months. For practical purposes it would be best to say that overall, students in each grade maintained or improved vocabulary scores. Overall, girls did significantly better than boys; however, boys maintained or improved their pre-summer scores at each grade level.

Second, comprehension scores for this sample of students declined significantly over the summer months. Students in grades three, six, and seven are largely responsible for the loss in comprehension. Although there were significant increases in grades four and five, the total sample of students experienced a significant loss in comprehension.

Third, the belief that losses in vocabulary and comprehension are due only to "poor" readers was not supported by this study. Analysis of the data at each grade level suggests that students reading at or above grade level are more likely to experience regressions in reading over the summer months than "poor" readers.

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