Topics and practices related to college reading instruction are discussed. Reading is seen as a skill which permeates the entire process of study. Speed reading techniques such as increasing eye span, ceasing vocalizations, and reading vertically down the page are criticized as hampering rather than facilitating the comprehension process. The most effective reading process is described as taking in the meaning of each word, from left to right, with a fleeting but direct fixation on each word encountered, gliding over nonessential words, but taking in the meaningful ones. It is suggested that the existing ideas, techniques, and approaches to learning be taken and systematized into some organized form to facilitate independent studying and learning. References are included. (RT)
A moment's reflection would reveal that the title is large enough for at least three doctoral theses: one to cover the past; one to cover the present; and one to cover the implications for the future.

Rather than trying to present sweeping summaries of the past and present, as well as implications for the future, I will concentrate on only a few areas. I have selected a few topics and practices which were strong in the past, are even more vigorous in the present, and I hope, in the future, will be extinct. You can see that I'm going to be critical.

Before I say more, permit me to provide a setting for my comments by saying that my objective in teaching reading and study skills is to help each student to help himself do a better job academically by providing him with the skills and techniques of scholarship. More concretely, provide him with skills to master the textbook, to master the contents of lectures, to write the research paper, to study for and pass examinations -- all these through helping students become independent thinkers.
Reading as a Separate Skill

The many articles in the various journals lead me to believe that more than some teachers of reading teach reading as a separate skill; as a skill sufficient unto itself. Realistically, if reading is to yield any benefit to a student who has to master an academic assignment, reading must be treated as a skill which permeates the entire process of study. Reading, therefore, should be taught within the context of a process, usually a study process.

For example, if a student who has been assigned a chapter in history desires to master his assignment, he must do, at least, these four things: he must read; he must comprehend; he must remember; and he must interpret to some degree the contents of the chapter into his mental framework.

Even the first step, read the chapter, is not the type of reading which most reading programs teach. Actually this study-type of reading violates almost all of the neat principles which most reading teachers teach. Instead of reading rhythmically down the page as most teachers advocate, in actual practice the student seizes a subheading here, a topic sentence there, and a caption under a diagram anywhere. The maze of tracings on the film of an eye camera would be undecipherable as the eyes jump from topic sentence to subheading, then back a page or two to a previously looked-at subheading. Regressions to check on relationships and sequences
would be the rule rather than the exception. And the teachers who recoil at lip movements or subvocalization would be horrified if they watched my students actually talk their way through the chapter during the skimming stage.

How inappropriate it is to talk about words per minute. For after the student has skimmed the chapter he is then told to read carefully a page or so to a good stopping point, then to go back to the first paragraph to ask himself, "What did the author say?" If no answer comes forth, he must read it again, and perhaps several more times until he can say something. He must either underline or jot something in the margin, or else make notes on separate sheets of paper. He does this paragraph by paragraph.

My point is this: If a student tries to read a chapter using the words-per-minute type of technique, he may get a glimpse of the idea in the first paragraph, a misconception in the second, and a misplaced emphasis in the third. When this occurs, it is difficult for me to see how he can somehow grind out of the mind a crystal, clear concept. This just defies logic; that is, you don't get something good out of a conglomeration of errors.

Sometime ago, Professor Hans Bethe, our Cornell Professor who just received the Nobel prize and who had previously received the Fermi award from President Kennedy, said that almost any student could become proficient in any subject if he would memorize the textbook and the lectures, but such a student would never become
creative unless he also reflected on the facts and ideas. Reflection means the repositioning of the facts and ideas, synthesizing them, speculating on their opposites, seeing their implications, making ideas and facts one's very own by blending them into an existing frame of reference. Only then can one leap beyond the ideas and facts in a creative way.

I didn't mean to take all this time just to put forth what appears to be a system; rather, I wanted to make absolutely clear my position that in an academic atmosphere of college, I do not see that we are helping students to do a better academic job by teaching them how to read, however that is done. The payoff is achieved through teaching them how to study.

**Speed Reading**

Now, let me direct my remarks for a while on speed reading. I am continually amazed to see in our journals so many articles on speed reading, and from the descriptions, speed reading, or at least, rapid reading is the backbone of most programs. Some articles unashamedly start out, "Would you like to double the reading rate of your students in one session?" While others move in more slyly with this kind of a justification: "With the rapid changes in our modern world and the ever-increasing demand for speed and efficiency..." And even though such an article tries to put on itself its own stamp of respectability by saying, "In this approach,
both rate of reading and comprehension are recognized..." still
the methods used are no different from methods used in any other
speed-reading program.

These articles usually give the same old story on eye fixa-
tions. As we know, anyone advocating speed reading, must establish
that with a single eye fixation, more than one word can be taken in.
The usual proof that this is possible is the basketball player
analogy: he is dribbling down the center of the floor, looking
straight ahead, but seeing the players on either side. By using
such a crude, gross, physical-type analogy, the teacher of speed
reading thinks that he has somehow won his point. It is true
that when I look at the very center of a page, I can see that the
page contains a full page of words, but I can recognize only the
one word on which I'm fixating. If I continue to stare, I can call
out the word to the left and to the right, but I'm not sure whether
my eyes shifted an almost imperceptible micro-bit to the left and
to the right. Furthermore, I feel that my mind entertained each
word separately. There are two main questions in the fixation theory:
First, even if the two words were seen physically in one fixation,
can the mind get meaning from two words at the same time, or does
it have to entertain each word separately? If the mind has to
entertain each word separately; that is, each word has to await its
turn, why not view the words separately in the first place? It
would be less confusing.
Every teacher of reading should know the contents of the EIDL Reading Newsletter 30, which contains a splendid piece of objective research on eye movements. Using an eye camera to photograph the reader's eye movements, this study revealed that the average college reader took in 1.11 words per fixation, and that the most superior readers, trained or untrained, seldom took in more than 2.5 words in a single fixation.

The same Newsletter (4) points out that only four or five letters around the fixation point are seen with 100 per cent acuity, and words which are one inch from the point of fixation are seen with 30 per cent acuity. It seems to me that when the mind struggles to recognize more fully what the fuzzy words on the periphery are, the mind breaks to some degree, its concentration on meaning thus engendering a slight delay — a slight pause. Instead of trying, in the first place, to take large indigestable visual-bites, wouldn't it be better to take in the meaning of each word, from left to right, with a fleeting, but direct fixation on each word encountered, quickly seeing, discarding, and gliding over non-essential words, but taking in the meaningful ones? You may say, "Yes, but that is word-by-word reading." I reply, "Have you already forgotten that the average college reader took in 1.11 words per fixation, which is practically word-by-word?" May I also ask, "How else does one read except by looking at the words?" Yes, not all words are equally important, so you can skip some. But how do you know which ones to skip without first looking at them? Let me also
say that the speed readers make many, many assumptions for which they have no proof.

My parting shot on this subject is: Does the mind somehow impose a single meaning instantly upon a cluster of words, or does it take meaning from each word individually? How do you know?

The Vocalization Argument

The teachers of speed reading attack vocalization and sub-vocalization with fanatical zeal. The speed-reading experts are constantly exhorting students to "break the sound barrier"; that is, to go directly from the printed symbol to the meaning. The speed-reading expert not only makes the assumption that vocalization is utterly bad, but also that it can be eliminated; yet he does not give any evidence that getting the meaning directly from the printed symbol can be done.

There are many learned men in the field of linguistics who strongly insist that to get meaning from the printed word depends upon how well the reader can furnish the oral counterpart to release the meaning which the reader already has.

McGuigan (3) at Hollins College, Virginia, in an extensive research study sponsored by the U.S. Office of Education, concluded confidently that the "thinking" which goes on during silent reading is actually "silent speech." This holds true for his subjects which range from age six through college adults.
Edfelt (1), Director of Reading Research at the University of Stockholm, concludes that "silent speech is universal during silent reading; it increases with the difficulty of the material; efforts to eliminate it should be discontinued."

Some researchers say that silent speech during silent reading might be a physiological factor necessary to the process of reading. Gertrude Hildreth (2) says:

"It is doubtful whether a child can become a fluent reader, comprehending fully what he reads, without a good oral language foundation and continued attention to oral language improvement."

I take this to mean that the stronger the bond of association between its printed form and its sound, the more rapidly will the word be read and comprehended when later seen on the printed page.

A great psychologist, Edward Bradford Tichener (5), describes the way he reads:

"When I am working for myself, reading or writing or thinking ... my natural tendency is to employ internal speech; and there are occasions when my voice rings out clearly to the mental ear and my throat feels stiff as if with much talking."
We should take a closer look at some of the other techniques advocated by teachers of speed reading; such techniques as: focusing the eyes above the line of print; moving the eyes vertically down the page; reading while the teacher is counting out loud, or the metronome is ticking; and reading the words between the fingertips.

Does a baseball player focus his eyes two inches above the ball so he will see it better? If a flower garden has a series of horizontal paths, does one stomp through, making his own vertical path to see better the garden? Is the listening to the counting supposed to provide practice in concentrating on two activities at the same time? Is reading so easy that we wish to make it more challenging by blotting out some of the words with our fingers; or can we absorb some of the words osmotically through our fingertips?

Teaching Readers to Vocalize

In addition to other things, I have been teaching speed reading to businessmen over the past fourteen years. For the first seven years I preached the standard approach of knocking out vocalizations of all sorts, eliminating regressions, scooping up gobs of words at a fixation, and so forth. My very best lectures and demonstrations were in this area. It was enjoyable to teach.

After much reflecting, however, I made a gradual but nonetheless complete change. Since I could not find any real evidence
that vocalization was bad, I adopted the common-sense approach and used it in my teaching over the last seven years. The common-sense approach briefly, as I relate it to the businessmen and students, is this:

It is not only all right to vocalize; actually you must vocalize if you want to understand what you read. Without vocalizing you will see but the empty shell devoid of meaning. Now, don't necessarily whisper the word, rather hear it mentally. In other words, I want you to use the technique of intonation.

I am sure that many of us have experienced the insight gained when reading aloud an especially difficult paragraph which on several previous silent readings did not yield up the author's meaning. It seems that when we utter aloud the words spread out line by line on the page before us, we transmute the inert, lifeless, mummified inked-symbols into living sounds, dynamic and flowing like a living brook having power and life of its own. The linguists all remind us of the power of sound, by saying, "Remember the primacy of the spoken word."

From my records, I found that for the first seven years when I taught that vocalization was a bad habit, the mean speed and comprehension scores for the initial test were 280 words per minute with 86 per cent comprehension. The mean scores for the final test were 660 words per minute with 64 per cent comprehension.
For the last seven years when I not only encouraged vocalization, but taught students and businessmen to vocalize, the mean speed and comprehension scores for the initial test were 275 words per minute with 84 per cent comprehension. The mean scores for the final test were 350 words per minute with 78 per cent comprehension.

From these gross data (which are good enough for me personally), I conclude that all the harangue about non-vocalizations, non-regression, eye fixations, reading vertically tends to hamper rather than facilitate the comprehension process. I say: There is no future in the non-vocalization - big fixation approach. Actually it leads to a dead-end.

Summary and Conclusion

Since the topic specifies a glimpse into the future, let me say that there is none for speed reading. It is a dead-end.

The only body of skills and techniques which have a future are the reading and study skills which a student must employ in his studying to master, to some degree, his academic work.

For example, Robinson's SQ3R which is the mainstay of many good study skills programs and has helped multitudes of students is not a reading technique; it is a study technique.

Now, Robinson's contribution in this case was his systematizing the individual steps which have been known and used separately for
Many of the old books advocate that the reader first **survey** his material before settling down to reading thoroughly. The **question**, **recitation**, and **review** steps were advocated by some of the early Greek and Roman writers.

I am not trying, in the least, to detract from Robinson, rather to give him credit for his system and synthesis. My point, however, is that we should not look for some **new secret** process which will automatically and miraculously turn us and our students into good readers; rather, we should take the existing ideas, techniques, and approaches to learning and adapt and systematize them to help students, as well as ourselves, toward more efficient learning—toward becoming independent students and independent learners.


