A Practical Approach for Teaching Comprehension Processes Using Magazines, Paperback Novels, and Content Area Texts.

Process comprehension helps students both to see why they make comprehension errors and to develop techniques to correct these problems. Keeping journals of their behavior while reading magazine articles helps students recognize relationships between their rate, comprehension, interests, and personal reading habits. Once students have developed an awareness of their own comprehension processes, high interest novels will increase their reading fluency. Geared to student ability and interest and approached through open-ended questioning, these novels can build student confidence toward the reading process. In addition, frequent quizzes on the reading can help students develop test taking skills. Content area texts can be used to help students develop good questioning techniques and mapping skills. Generating important questions on the material read (1) gives purpose to reading, (2) encourages the prediction of actual test items, (3) alerts students to important concepts, (4) highlights the material's method of organization, and (5) makes students active readers, thus improving their concentration. Mapping, a second process strategy, reduces information and organizes it into a meaningful picture for the students. (MM)
A Practical Approach for Teaching Comprehension Processes Using Magazines, Paperback Novels, and Content Area Texts

SHERRIE L. NIST - Reading Coordinator
KATE KIRBY - Reading Instructor
ANNICE RITTER - Reading Instructor
Division of Developmental Studies
University of Georgia

April 21, 1983

Running head: Comprehension Processes
**Process versus Product Comprehension**

The surge of research that has emerged in the area of reading comprehension has given some insight into the act itself, but educators are still floundering for methods to teach it, especially to those students who have comprehension problems. While diagnosis and subsequent remediation for students having problems with word attack skills offer an array of tests and materials, the same is not true when assessing and remediating comprehension weaknesses. Any educator who has taught reading for even a short period of time has been involved with students who can fluently read the words but have understood little or none of what they have read. This is especially true for students in middle schools, high schools, and those enrolled in special admission college programs. Poor comprehension abilities for this group are as common as fleas on a dog. And, more often than not, instructors are left to their own devices to diagnose and come up with creative and innovative methods for trying to help these students.

Before discussing ideas which may help poor comprehenders it is important to address how we usually assess comprehension. Generally students are given a series of passages to read and then answer a series of multiple-choice questions. This type of comprehension is termed product comprehension,(i.e. Collins and Smith, 1980) in that...
only the results are examined. From this type of comprehension assessment, teachers often hone in on specific skills with which students have problems. For example, a student might miss a disproportionate number of items identified as detail questions or inference questions and it is, therefore, often stated that these individuals have specific comprehension problems. This method, however, is fraught with problems. It might indicate specific problems, but a product test does not tell why students are experiencing difficulties or what to do about it. Usually there are no techniques given to students to aid them in improving their skills. Often, they are assigned numerous, repetitive exercises in details or inferences to supposedly strengthen the weak area, but this is usually unsuccessful since the individual doesn't know how to go about selecting the correct answer in the first place.

Process comprehension (i.e. Collins and Smith, 1980), however, takes quite a different focus. It examines why students make errors in their comprehension and gives them techniques for monitoring their own comprehension. As the term implies, it gives a process to follow when they can't understand what they have read. Process comprehension makes students aware of both the positive and negative aspects of their reading for it is only through individual awareness that comprehension can be monitored. It will be clear that before we can expect students to do well on product type comprehension tests,
they need to be taught the process aspect of comprehension. This requires much more than basic instruction in general test-taking skills or isolated skills approach to the teaching of reading.

Let us turn now to examining how we, as instructors, can teach process comprehension. While the specific reading material mentioned in this paper is used in a college developmental reading class, the strategies suggested can easily be applied to reading magazines, paperback novels, and content area texts in middle and high school.

Magazines

Magazines offer many advantages for use in the classroom. They have a wide variety of articles and therefore most students can find something of interest. Weekly news magazines such as Newsweek and Time keep students abreast of current events; often address controversial issues which, in turn, stimulate thought and discussion; have a sophisticated vocabulary level much of which can be determined through the use of context or structure; provide practice in reading rate flexibility; and finally, often provide needed background information for other courses in the social, biological, and physical sciences.

Since magazines are used in the classroom for somewhat different purposes than either literature or content area text material, the processing skills needed are also different. Magazines provide an excellent starting place to make students aware of what is occurring when they read. The first step is to have students keep a journal of
their behavior during reading. This enables them to become more aware of concentration, reading habits, rate, and interest level. While this sounds like a simple enough task, students initially have a hard time recording their reading behavior because they have never been asked to be aware of what was happening. When students initially begin to keep a journal they will summarize the magazine article and tell you that it was boring or interesting, but that is about all.

The following is an example of how a beginning journal article might read:

The article was on social security. It gave a history of the social security system and talked about what might happen if the social security system continues the way it is now. I thought it was very boring and I don't like to read stuff about the government.

One way to avoid having students write journal entries such as this is through teacher modeling. The instructor not only tells students what information to include, but also provides a well written example for students to follow. The following is an example of what a good journal entry may look like:
The article "The Social Security Crisis" was not very interesting. There were so many statistics that I got lost in all of that. While I was reading I thought I understood the main ideas but when I finished I realized there was little that I remembered. Since the article was so long, I could feel my rate getting slower and slower. The slower I read, the poorer my concentration became. I even nodded off two or three times. It was hard to maintain interest in something that is not going to affect me for 45 years! Besides, the vocabulary was really hard.

Several improvements are evident here. First, the student has included the following information: interest level, ability to concentrate, understandability, vocabulary level, rate awareness, length factor, and types of information remembered. Second, this student is beginning to become aware of what is happening during reading. Finally, it also supplies the instructor with a wealth of information. After several weeks of reading journal entries the instructor will notice patterns of both individuals as well as the group as a whole. Some of these patterns include:
1. As interest declines, so does rate, comprehension, and concentration.

2. Students get bogged down in details and then have a hard time identifying the main concepts presented.

3. Students have little or no flexibility in rate. The magazine articles which should be used to enhance rate are usually read at the same speed as novels and textbooks.

4. Students have poor vocabularies which often hinder comprehension.

Thus, through the use of the journal, students have taken the first step in learning information processing—self-awareness.

The next step falls on the shoulders of the instructor. Knowing the problems that students are experiencing, instructors can give suggestions to improve these processing skills. There are several things to keep in mind when using magazines in the classroom. First, some self-selection is important. This can either be done on a group consensus or on an individual basis. Often we will distribute the magazines, have the students skim them and let the group decide which articles they would like to read that week. Other times, we will assign specific articles and then permit individual students to select an additional article of interest to them. Through this process, students can compare what goes on when they read something of interest and when they read something they find boring.

Second, in order to improve reading processing skills, students must learn how to create interest where little or none exists. Since
one of the major purposes of using magazines in the classroom is to encourage students to read more (as well as to read something besides a textbook), detailed previewing would defeat this purpose. Therefore, having students look at just the title, pictures, charts, and graphs is usually most effective. Next, they should ask themselves two important questions

(1) What do I already know about this?
(2) How will this affect me or my family?

The first question calls up background knowledge and the second personalizes the article and will often create interest where none exists.

Third, now that background is established and interest is created, what suggestions can be given to students if they still are having problems understanding the article or maintaining concentration? We give our students the following guidelines to follow as soon as they feel that they are losing concentration or that they are not comprehending:
1. Stop immediately! Ask yourself "why?"


3. Is the article too long? If so, read it in sections. Take a five or ten minute break between sections. With each long article try to increase the time between breaks.

4. Is the vocabulary too difficult? If this is the case, try to determine word meanings by the way it is used in context or through structure. If this approach fails consistently, skim the article for difficult vocabulary prior to reading and use a dictionary, if necessary.

5. Is your rate becoming slower and slower? Use a marker or your fingers as a guide and move down the page at a consistent, steady pace. Don't let your eyes regress. If something is important, it will be repeated again. If it was not, it probably wasn't important in the first place. Try to read it as quickly as possible. Then sit back and see how much you can remember.

6. If at all possible, do not reread. Try any or all of the above-mentioned suggestions. Keep in mind the purpose of the magazines. They are quite different from the purposes set for either paperbacks or textbooks.

Thus, it becomes apparent that through the use of magazines in the classroom students can be made aware of what occurs as they read, often without teacher direction. The next step is to get students reading more so that reading fluency can be developed or enhanced. High interest novels can be utilized as a means to this end.
Novels

A taped interview with a student enrolled in one of our reading courses illicited this following statement: "I don't read much on my own. Before I came here, I never read a whole book. When I was little I hated reading. I never even read comic books." Students such as this unfortunately are all too common, and remind us of the question Allington (1977) asked in an article about ways to develop fluency—"If they don't read much, how they ever gonna get good?" Indeed! When we face older students like this in our reading classes, we must find ways to hook their interest and energy into changing years of non or reluctant reading behaviors.

Students who can read, if they have to, but who choose not to read need an approach that builds on their interests, backgrounds, and draws them into the worlds of information, ideas, and self-knowledge they so desperately need as a basis for controlling their learning processes. Using paperbacks in the classroom can aid in reducing the number of illiterate literates in our schools. Paperbacks can be used in four ways for developing fluent readers who learn to monitor and control their process of reading. First, they can help develop the habit of reading—so needed to make a reader fluent. Do these quotes sound like "reluctant" readers?

"I have a hard time quitting reading each night. I just want to see what'll happen next."
"Our English and math instructors want to read this book because they know we can hardly put it down. They complain about us reading this book in their classes!"

"I got into such a habit reading this book each night that I finished it early and started reading Native Son. Do you mind if I get ahead of the class?"

"I hated for the book to end."

We observed a student walking from our classroom building to our departmental offices. He was reading a copy of Wright's Black Boy (1937) as he walked, not stumbling or missing a page. He said he couldn't wait to get into our class's next assigned reading to find out what happened. Books such as Goldman's Temple of Gold (1957), Hogan's Quartzsite Trip (1980), Wright's Native Son (1940) and Black Boy (1937), and Kata's Patch of Blue (1961), are a few books which have prompted spontaneous comments and lively interest in reading. Activities which reinforce this involvement include such things as: daily reading assignments which are checked with frequent short quizzing and thoughtful discussion; discussion about rate flexibility and practice with easy paperback material (Wood, 1978); in-class time given for silent reading as well as the oral reading of some favorite excerpts by the instructor; and short book "blurbs" which students write and share with each other as recommendations for what they rate as "good reading." Some samples of student-written blurbs are:

"In Cold Blood is a chilling story of murders on a farm, a gloomy book which adds to the horror of the story. You won't be able to put the book down, believe me."

Another student wrote:
"For anyone who enjoys a powerful, captivating book I recommend Black Boy. The book holds your attention and motivates you to keep reading. Upon completion of the book I was left with strong feelings of sensitivity for the author, Richard Wright."

These "blurt" show that students are beginning to develop confidence, interest and fluency in their reading process because they have been given the opportunity and encouragement to read high interest paperbacks.

Second, paperbacks can be used to cultivate an enthusiastic, confident attitude in students toward their reading processes. A new habit is a powerful agent of change, and reluctant readers who get hooked on reading will begin seeing themselves as "readers." As a teacher, you begin to change attitudes toward reading when you plan for reading experiences which start with the student's ability and interest. In other words, your goals are realistic and within reach of each student. Giving students opportunities to respond to their reading with their own opinions and feelings is a starting place for turning them into learners who think for themselves. We encourage written response with open ended questions, use movies, slides, music, and the previously mentioned news magazines to tie their interest into a paperback and to develop their background of prior knowledge. But sometimes we simply put a book into their hands and say "try this one." As simple as this may sound, it often is a successful approach. The student who hated reading so much--even comic books--took a copy of Baldwin's If Beale Street Could Talk (1974); he returned it two days later
saying, "That man, he can write!" Another student related that as he rode the bus carrying his copy of *Man's Search for Meaning* (1963) under his arm, a "long haired dude" sat down next to him and started talking: "Hey, you reading Frankl?" "Yeh," he said, "it's a pretty good book." The dude replied with, "That's a heavy trip he writes about--meaning and suffering and all that." Antonio saw himself as part of the "community" of readers. The value the instructor places on reading by giving encouragement to that priority in class will enticingly pull the students into this elite "community."

Third, whole language skills can be integrated with paperbacks. Reading only becomes meaningful when it relates and connects with the reader's prior knowledge or experience. When we teach students who read only reluctantly, we need to build that background for reading through the use of meaningful talk, writing, listening, and sharing. For example, prior to reading Frankl's *Man's Search for Meaning*, students were asked to brainstorm, in groups, and compile a list of all they knew about World War II, Hitler, treatment of the Jews, and Japan's role in the war. We later read the book *Hiroshima* (1946) and related that to what we had read in the Frankl book. Watching the movie "The Nuremberg Trials" and reading a chapter on World War II from a history text further pulled our reading together into a more complete picture. Writing creative responses, snappy book reviews, or personal opinions about books also enhanced student interest and
integrated language skills in reading. Values clarification activities helped students find connections between their belief system to that of others. In a classroom environment which encourages risk and involvement, a shared experience based on reading, talking, writing and listening can be created and used to further develop the student's facility with meaning-making processes.

Finally, after the reading habit is established and students' attitudes are improving, paperbacks can be used to raise students' awareness of how they can monitor their comprehension and prepare for tests. Some of the study skills, which are so important in reading content area textbooks, can be developed with paperback reading. Previewing techniques can be introduced or applied by asking students to read the reviewers comments which introduce the book; reading the first few pages aloud; talking about what the students expect from the book. Show them how predicting meaning can increase their motivation and keep them interested, thus improving comprehension. Encourage some underlining and margin notes which might be useful in an open book essay test. Show them how to keep brief notes on characters or events. Quiz them frequently but ask them beforehand to predict several questions which they would expect to be asked. Give them a pool of essay questions you might use on an essay test or ask them to brainstorm five or six as a class. With test taking skills, stress such things as use of time, key words in questions, and editing their answers. You might even write a sample essay test to share with them.
on a book so they will see your process of writing an essay test. A study skills journal (Hoffman, 1983) can be an invaluable on-going, self-monitoring response which each student hands in weekly. Suggestions for prompting informal responses which focus on the students' involvement in their reading and study habits are: What do you think or feel about what you are reading? Do you see any connections between what you read and your life or other reading you have done? Are you having any difficulty reading? Concentrating? What do you do about a reading difficulty? What would you predict to be the important concepts from this reading on which you might be tested? How do you plan on preparing for a test? The purpose of asking students questions such as these is to develop their awareness so that they can monitor and control their own reading processes--a capability which is imperative if students are going to be able to comprehend and synthesize large amounts of content area texts.

Context Area Texts

An important aspect of comprehending content area material is the awareness of three psychological principles in the comprehension process: (1) the importance of students' prior knowledge in the acquisition of new information; (2) the level of text understanding to be achieved; and (3) the organization of information to aid long-term retention, (Readence, 1981). Therefore it would seem that in order for any reading strategy to be effective it would, by necessity, take into consideration
these three principles. Two strategies which significantly aid in teaching students to process content area text material—questioning and mapping—are presented for two reasons. First, we have found that our students find these two approaches very effective when learning textual material and second they meet the above criteria.

Self questioning before, during and after reading is an important aspect of increasing comprehension. Since content material demands that students possess the ability to move beyond the literal or factual level of understanding to that of the evaluative and applicative levels, teaching students to formulate good questions is imperative. Making this transition requires an active approach to the material, and to organize the material into meaningful units of information for long-term memory purposes.

Additionally developing good questioning techniques is an important strategy to acquire since it aids in processing textual information. Questioning requires students to be active readers in that they must pause and think about what they have just read; they must generate questions from text that they will read; they must reformulate old questions or generate new ones as they move through a chapter. Students should be able to move from the memory level of questioning, which concentrates upon facts and details to that of interpretive and applied levels, which focuses upon making judgments, drawing conclusions, and finding practical applications to the material at hand.
The following outline of psychology chapter with its headings and subheadings included, can be used as an example of the type of questioning that students should be able to develop to aid in their comprehension of the chapter.

<table>
<thead>
<tr>
<th>Behavior Genetics</th>
<th>Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Genetic Mechanisms</td>
<td>What are the basic genetic mechanisms?</td>
</tr>
<tr>
<td>Mendel's Laws</td>
<td>What did Mendel's law state? Do</td>
</tr>
<tr>
<td></td>
<td>Mendel's laws apply too?</td>
</tr>
<tr>
<td>Application to Human Traits</td>
<td>How in humans?</td>
</tr>
<tr>
<td>Genotype versus Phenotype</td>
<td>What is genotype? Which controls</td>
</tr>
<tr>
<td></td>
<td>what we are?</td>
</tr>
<tr>
<td></td>
<td>What is phenotype?</td>
</tr>
<tr>
<td>Complex Traits and Multiple Genes</td>
<td>What are some of the complex traits?</td>
</tr>
<tr>
<td></td>
<td>What are multiple genes?</td>
</tr>
<tr>
<td>Nature versus Nurture</td>
<td>Which is more important in development?</td>
</tr>
<tr>
<td>Inheritance of Behavioral Traits</td>
<td>How do we inherit our behavior?</td>
</tr>
<tr>
<td>Effects of Environment</td>
<td>How does our environment influence</td>
</tr>
<tr>
<td></td>
<td>who we are?</td>
</tr>
<tr>
<td>Nature--Nurture Interaction</td>
<td>How do nature and nurture interact?</td>
</tr>
<tr>
<td>Inheritance of Intelligence</td>
<td>Is intelligence herited?</td>
</tr>
<tr>
<td>Heritability</td>
<td></td>
</tr>
<tr>
<td>Heritability versus Actual</td>
<td>Do I possess special intellectual abilities?</td>
</tr>
<tr>
<td>Intelligence Scores</td>
<td>How does race relate to behavior?</td>
</tr>
<tr>
<td>Special Intellectual Abilities</td>
<td>How did the black and/or white races evolve?</td>
</tr>
<tr>
<td>Race and the Inheritance of Behavior</td>
<td></td>
</tr>
<tr>
<td>Evolution of Races</td>
<td></td>
</tr>
</tbody>
</table>
This particular chapter lends itself well to the three levels of comprehension. It allows the student to begin with factual questions -- "What is phenotype?" "What are Mendel's laws?" -- to progress to more sophisticated ones that require evaluation and application of the material -- "Do I possess special intellectual abilities?" or "How can genetics be applied to medicine?"

Thus, the use of the questioning technique accomplishes numerous objectives. First, it aids in setting purposes for reading. It gives students reasons for reading a chapter rather than "Ms. Jones told me to." Additionally, when students have a purpose for reading, they tend to call up more prior knowledge. Second, it encourages the prediction of actual test items. As questions are formulated, students begin to think in terms of how particular information could be asked on a classroom test. This element is closely tied to the third...
objective of questioning—it alerts students to the most important concepts being presented. When students are taught to make up chapter questions they should always ask themselves, "How important is this piece of information?" If it is not important, encourage students to ask a new question. Fourth, this strategy easily alerts students to the organization of the chapter. This is of extreme importance since readers should be made aware of the logical flow of text. As surprising as it may seem, often times students cannot even tell you the chapter title, let alone how it's organized. Fifth, questioning sustains attention and improves concentration because students are active rather than passive readers. It enables them to better keep their mind on the task at hand. Finally, questioning techniques encourages both consolidation and application of text. Since they are asking both literal and applicative question types and keying in on important information, the amount of material to be learned can be reduced and applied.

A second process strategy which proves useful to students is mapping—organizing the information presented in a graphic form. Mapping is both a comprehension and a memory-recite technique which graphically defines hierarchical relationship among concepts (Pearson & Johnson, 1978). It serves to reduce information and organize it into a meaningful picture for the student.
Mapping is extremely useful with unfamiliar material which is loaded with new terminology and new concepts found in many technical content areas.

Before readers actually construct their map they need to survey the chapter in order to get a general idea of the concepts being presented. Following the survey, the self-generated questions previously discussed should be asked. Obviously, the next step is for the students to read the chapter, making a jot list of the key terms and major concepts presented. Finally, using the jot list, a map is constructed that includes all or most of the information listed.

While there are many ways to make maps, (we encourage students to personalize them), our students find the following guidelines beneficial:

a. Decide on the single key term or concept. Put that in the middle.

b. Decide what class of things that term or concept belongs in. Put the class above the key term.

c. Put definitions of the key term next to it.

d. Put any sub-categories of terms or concepts below the key term.

e. Put specific examples lowest on the map. Again, put definitions to the side of terms or examples.
While this process is often initially difficult to grasp, practice in mapping a variety of different materials enables readers to eventually feel comfortable in using the strategy. One way to introduce it is to begin with a brief paragraph and model the basic framework. In the following specific example paragraph and map, the information is reduced to aid in both the comprehension and retention of the material.

"Glands are epithelial tissues which are specialized for secretion. The two types of glands are the endocrine glands, which secrete their products into the bloodstream and exocrine glands, that secrete their products into ducts; examples are sweat glands and digestive glands."
Several factors concerning mapping should be kept in mind. First, while this strategy is probably best introduced at the paragraph level, instructors must move students toward mapping entire chapters. While most text chapters will certainly require several maps, one for each major concept presented, it would defeat the purposes to have students map paragraph after paragraph. This is true in light of the fact that the major advantages to using mapping are the reduction of information and the organization of the text material.

Second, a combination of mapping and questioning provides a powerful study strategy since it enables students to key in on major concepts presented as well as supporting details. Additionally, questioning aids in calling up prior knowledge which in turn encourages the construction of maps that are highly personalized.
For example, in referring back to the outline of the psychology chapter, it is easy to see how individuals with a stronger background in psychology may have less information included in their maps than those who are taking their first course. Parts of the chapter already known need not be mapped in any detail.

Third, mapping helps students see the relationship among ideas; it helps them better understand how concepts fit together. This strategy is especially useful for those who learn better through the use of imagery since students can construct a map and then get a mental image of what it looks like. Some students state they have no problem in picturing their map in their head and that this helps them to easily recall important information during a test-taking situation.

Finally, the construction of maps helps readers to chunk information. Rather than learning fragments or isolated details, students can group important test material into meaningful chunks which, again, aids in remembering and synthesizing larger amounts of text.

**Conclusion**

It becomes apparent that an isolated skills approach to the teaching of reading comprehension will not suffice. The teaching of isolated skills gives students nothing to apply to their reading when they are on their own. It is imperative that students learn to process connected discourse, to become active readers, to become aware of what is occurring inside their heads as they read, to develop fluency in
their reading, and to recognize when they do not understand what they have read. An isolated skills approach cannot accomplish these things. Rather, an approach which stresses information processing skills with material from magazines, novels, and content area texts provides students with the types of skills that are relevant and that can be applied across all disciplines.
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