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A TAXONOMY OF THINKING SKILLS FOR YOUNG READERS

James A. Wright

There is nothing more futile than the attempt to accomplish a task when one has not yet decided what the task is. Likewise, there is nothing more difficult than a teacher's attempt to teach a set of skills when the teacher has not yet decided what the skills are. A facile reader himself, a teacher might not have analyzed the reading processes in which his mind engages. Yet he must have a clear understanding of these thinking skills if he is to instill them in his students.

This understanding cannot be gained from the basal reader guidebooks or accompanying workbooks. As Niles¹ has so clearly pointed out, these texts and workbooks tend to fragmentize the skills and confuse both teachers and students by presenting too many *different* skills to teach and learn. The authors have further compounded the confusion by developing their own lexicons, disregarding standard definitions and at times contradicting their own. For example, drawing conclusions, inferring, and evaluating the facts or determining the reasoning are considered three different skills by one author. The question "Could this story have happened?" is offered to provide exercise in drawing conclusions, while the question "Could this be a true story?" is prescribed to exercise evaluating the facts or the reasoning. The question "Do you think caused" is given as practice in inferring. "Do you think gave a good reason for what he did?" is proposed to contribute to the development of the skill evaluating the facts or the reasoning.

One series of guidebooks considers perceiving relationships and strengthening "memory" based on logical relationships as two separate skills, with different pages assigned to each in the index of skills. In addition to separate references in the index for drawing conclusions, forming judgments and opinions, and making inferences, one series adds "Using evidence to make judgments and to support opinions" under a separate subheading.

The idea that the thinking we wish a young student to practice is so complicated as to require a teacher's guidebook of more than five hundred pages for each basal reader is appalling. The writer

1. Olive S. Niles, "Comprehension Skills," *The Reading Teacher*, September 1963.

believes, along with Niles,² that the number of thinking skills to be taught could be reduced if teachers could gain a clear awareness of what is essential.

Some careful investigations have been made of the interpretive process in reading, dating back at least to 1917, when Thorndike³ published his classical study of the ways children misinterpret what they read. He attributed their errors to the overpotency of certain words. He concluded, "The mind is assailed as it were by every word in the paragraph. It must select, repress, soften, emphasize, correlate, and organize, all under the influence of the right mental set or purpose or demand." He condemned the "fishing around in the text" for details to use in answering a question and "its use without reorganization" found in the practice exercises of that era. Yet this same perverted form of reasoning is the basis for much of the contrived exercises still found in practice material today.

Most of the writing in the field of reading has had to do with translating or associating printed words with their sounds and meanings. Though the ability to recognize the sound and meaning of the printed symbol is basic to the reading process, it is only the initial step toward understanding an author's attempt to communicate his unique contribution to society. It is at the level of thinking identified by Thorndike, however, that our knowledge is slight and our needs are great.

A reader is unable to "select, repress, soften, emphasize, correlate and organize" the ideas which assail him in print until he has established a "purpose or demand." No assigned reading is logical which has not an assigned purpose. Only those students who read with a purpose can employ the thinking exercised by an efficient reader. Other students are simply engaged in obedient purposelessness.

Once a specific purpose is set and the translating has been done, the reader may proceed to calculate what is relevant and what is irrelevant to his purpose. Only then is he able to accentuate the important ideas and eliminate the unimportant as he reads along. The young reader's ability to eliminate the unimportant stands him in good stead when he is assailed by the abundance of "fake dialogue" found in many school texts. Much other data irrelevant to his particular purpose must also be slighted as he exercises his thinking skills.

2. *Ibid*

3. Edward L. Thorndike, "Reading as Reasoning: A Study of Mistakes in Paragraph Reading," *Journal of Educational Psychology*, VIII, June 1917.

A reader must calculate the relationships among the thoughts presented. Accurate comprehension of a single sentence depends on his grasping the particular kinds of relationships among the ideas, for recognition of syntax requires this same ability. For example, the young reader unaware of the relationships indicated by the "signal" words *but* and *nor* in the sentence "But the natives do not mind the heat, nor do they seem to mind the stinging insects" has missed the gist.

Students should be assigned practice in recognizing signal words and identifying the kind of idea introduced by each one.

Examples:

Another fact—next, then, further, besides, second, moreover, and, also, in addition, another, finally, nor, etc.

An opposite idea—but, still, yet, however, although, nevertheless.

Another time—then, soon, meanwhile, later, at last, finally, suddenly, recently, before long.

Another place—there, here, above, beneath, on the other side, yonder, ahead, behind.

A cause—because, since, when, if, due to, as, in order to, so that, as a result of, on account of.

An effect—therefore, so, consequently, hence, as a result, as a consequence, eventually.

A comparison—before . . . after, some . . . others, then . . . now, once . . . today, but, while, than, like, as.

Once the reader calculates the relationships among the ideas, he no longer feels he has been assailed by jumbled and isolated facts. Instead, he is able to reorganize the data in his mind and correlate the supporting details with the related main ideas. Perceived in this organized form the ideas are more easily understood, more efficiently recalled, and more accurately applied in further interpretation.

An awareness of the author's organizational pattern affects the reader's thinking as he correlates the facts read and the purpose assigned. Through a recognition of the overpotency of certain words, the structure, or pattern, employed by the author is made clear. In a series of books edited by this writer, Gainsburg⁴ describes the four basic patterns used by writers. He advises the student to become familiar with the key words used in conjunction with the respective

4. Joseph C. Gainsburg, *Advanced Skills in Reading*, Books 1, 2, and 3. New York: Macmillan, 1963.

patterns. For practice, the young reader should calculate which is the key sentence, accentuate the key word or words, and decide whether the other sentences add examples, details in time order, causes, effects, comparisons, or contrasts.

Examples of key words:

Examples—some, many, several, numerous, various, kinds, types, ways, examples, other, variety, endless.

Details in time order—history, stages, steps, changes, events, process, story, development, method.

Cause-effect—reasons, causes, because, since, why, how, consequences, results, effects, so, so that.

Comparison-contrast—like, similar, same, alike, while, but, although, though, better, different, before . . . after, then . . . now, here . . . there.

✕ Finding the main idea and not mistaking a detail for the main point is incidental when the reader has accentuated the key words, calculated the basic pattern used by the author, and correlated the supporting details. Classifying, outlining, and summarizing are further corollaries of this same clear thinking. The reorganizing referred to by Thorndike is also contingent upon this ability.

Through reorganizing what he reads, the reader may formulate a special kind of summary. He may arrive at a generalization. However, generalizations require an accurate appraisal, or evaluation, of the material being read. The young reader should be provoked to think, "What kind of person was"?" or, "What did I learn from this selection that can help me understand others?" The older pupil should practice thinking, "What general conclusion can I draw from this selection, and what evidence can I find to support this conclusion?"

The new approach to the teaching of social studies emphasizes this same technique of "discovery." Discovery is inductive reasoning, or "reasoning from particular facts or individual cases to a general conclusion." According to some authorities, these inductions are inferences.

The ability to evaluate the main points and significant details leads naturally to skill in drawing various inferences which provide the reader richer meaning as well as greater interest. Only through these inferences can characters and scenes come to life. The young reader must practice inferring the author's purpose or viewpoint, the details or events omitted, and the moods, motives and character

traits implied. His appreciation is further enhanced when he makes associations, forms sensory images, and makes comparisons. He must read aggressively, always anticipating what the author is going to say next.

The young reader must also make judgments. He must judge whether the ending was a surprise—whether he missed any of the hints along the way that a good writer gives and a good reader recognizes—whether the ending is satisfying: true to the characters and events in the selection, and true to life—whether the author's purpose is to present fantasy, thrilling adventure, humorous incidents, humorous characters, life in a particular place at a particular time, a study of a particular character, a great truth or theme, propaganda, or a satire—whether the author succeeded in carrying out his purpose—whether the author made most use of plot, characters, or setting in carrying out his purpose—and whether the selection is suitable to the maturity of the young reader himself.

When reading nonfiction the young reader must think about whether the facts are relevant to the theme or topic—whether the statements are facts or opinions—whether the facts can be verified—whether the author is qualified—whether relevant facts have been suppressed—and whether the reader must revise some of his own prior assumptions in the light of what he has just read.

During ordinary reading, these thinking skills are not used in isolation. They are used in varied combinations. However, for the purpose of description or practice in the improvement of a skill, isolation is necessary. Also, the function of each skill as it relates to the major purposes for reading is better understood in the light of this taxonomy which has its origin in Thorndike's research of 1917.

A teacher who does not have a fairly clear awareness of the thinking skills required of an efficient reader must resort to contrived reading selections and contrived reading exercises which develop thinking of the shallowest kind. A knowledge of the intricate process of appreciating an author's composition of ideas is a decisive tool in the hands of a teacher. Possessing this insight, a teacher is able to assign any and all reading matter as a vehicle through which a particular skill may be learned or reviewed.

Teaching the student the thinking skills is accomplished by posing guiding questions, having the student read to find the answers, and then discussing the student's responses with him. If the questions posed are thought-provoking and stimulating, the student will grow in his ability to think about what he reads. If the questions are limited

to facts and small details, thinking and appreciation will be shallow. Under the latter type of guidance a student will GO through his reading text. Under the former type a student will GROW through his reading text. He will become aware of the different literary styles and eventually adopt a discriminating taste, based on a reasonable evaluation of available literature.

Over a period of time the teacher should transfer the responsibility for posing questions onto the pupil himself. While he may need help at first to formulate these questions orally or in written form, he should be encouraged gradually to “think” the questions to himself. With enough practice, he should develop an aggressive, inquiring, purposeful attitude which prompts him automatically to translate, calculate, accentuate, eliminate, correlate, and evaluate those ideas he meets in print.

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