Text Structure Strategies

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In this article, we will describe what text structure is and discuss its importance for reading comprehension. Then we will detail a method of teaching students to follow text structures as a content reading strategy. First, we will review research that suggests that the way in which text is organized and readers' knowledge about text structure affect how much will be remembered after reading. Then we will illustrate various text structures found in narrative and expository text. Next is a discussion of studies in which students have been taught the reading strategies of recognizing and following text structures. This discussion will highlight instructional procedures that have proven successful in enhancing students' recall. Finally, we will explain an instructional sequence for teaching students to recognize and follow text structures.

Research on Text Structure

Being able to follow an author's organization or structure has long been recognized as a valuable reading strategy (Niles, 1974). That is, authors arrange their ideas in certain structures or organizations. Some authors might arrange their information in a sequence such as when explaining a series of events in a certain time period. Other authors might arrange information in a comparison/contrast structure such as when explaining the likenesses and differences between two related species.

Recent research based on schema theory has shown that both the structure in text and the reader's knowledge of structure influence what is remembered from reading. Adults and students recall less information after reading a disorganized passage than after reading a well organized passage (Thorndyke, 1977). But even when passages are well organized, the advantage for recall of that information is lost on readers who are not aware of text structures. Students who do not recognize or use an author's text structure when reading recall fewer ideas from a passage than students who do recognize and use the author's text structure (McGee, 1982). Therefore, it is crucial that students read well organized text with recognizable structures and that students become aware of those structures.

From Dishner, E.K., Bean, T.W., Readence, J.E., Moore, D.W. (1992). *Reading in the content areas:Improving classroom instruction* (3rd ed.). Dubuque, IA: Kendall/Hunt.

Organizational Patterns in Narrative and Expository Passages

There are roughly two types of passages read by school students: narratives (or stories), such as found in literature, and exposition (or informative text), such as found in social studies textbooks.

Narrative Structure

While narratives can, of course, have quite complex structures, researchers generally agree that the structure of a basic or simple story includes six components: setting, initiating event, internal response, attempt, consequence, and reaction (Mandler & Johnson, 1977). Table 6.1 presents a simple story and its structural components (Stein & Nezworski, 1978). Stories with complex structures have these same six components repeated or embedded within one another (see Johnson & Mandler, 1980, for a discussion of structures in complex stories).

Table 6.1. A simple story and its structural components (from Stein and Nezworski, 1978, p. 182).

Narrative Structure	
Structural Component	Example Preposition
Setting	Once there was a big gray fish named Albert. He lived in a pond near the edge of a forest.
Initiating Event	One day Albert was swimming around the pond. Then he spotted a big juicy worm on the top of the water.
internal Response	Albert knew how delicious worms tasted. He wanted to eat that one for his dinner.
Attempt	So he swam very close to the worm. Then he bit into him.
Consequence	Suddenly, Albert was pulled through the water into a boat. He had been caught by the fisherman.
Reaction	Albert felt sad. He wished he had been more careful.

Expository Structures

There are many ways to describe expository text structure or organization. For example, Herber (1978) described both internal organization of expository text (cause/effect, comparison/contrast, time order, and simple listing patterns) and external organization (format and physical features). Meyer (1975, 1982) described five text structures that we believe can be easily applied to comprehension strategies instruction: description, collection, causation, problem/solution, and comparison.

According to Meyer and Freedle (1984), a passage with a *description* structure specifies something about a topic or presents an attribute or setting for a topic. A number of such specifics, attributes, or settings may be presented together in a *collection*. The collection structure is a list of elements that are in some way associated (e.g., by their occurring in a time sequence). The *causation* structure groups elements in a time sequence (before and after) and specifies a relationship whereby an earlier one causes a later one. The *problem/solution* structure includes the causation structure (i.e., there is a causative link between a problem and its antecedents), but there is the addition of a solution set, one element of which is able to break that causative link. The *comparison* structure organizes elements on the basis of their similarities and differences.

The following short examples help clarify what is meant by the five text structures.

Description

World War I was one of the great catastrophes of modern history. It began on July 28, 1914, when Austria-Hungary declared war on Serbia. Before it ended on November 11, 1918, it involved nations from five continents. Millions of people lost their lives.

Collection

World War I was called The Great War. By *great*, people meant that it was momentous or important—big, not wonderful. Many aspects of World War I were momentous.

One way World War I was momentous is that it involved big numbers. It lasted 51 months. It involved 16 European nations, the United States, Australia, and several other nations from Asia, North America, and South America. Millions of people were killed.

Another way World War I was momentous is that it involved big changes. The Russian Empire became the Soviet Union. For the first time, the United States became a major player in European affairs. The Empire of Germany, the empire of Austria-Hungary, and the Ottoman Empire were dissolved.

A third way that World War I could be considered momentous was that it was a big tragedy. It dragged on for years while soldiers died in trenches without gaining an inch of ground for their side.

Causation

World War I was one of the great turning points of modern history. This can be seen in both its causes and its consequences.

The conditions of an industrialized early twentieth century Europe made the war possible, some would even say inevitable. One way industrialization may have caused

World War I is that as nations build empires, they competed with one another for the raw materials and markets that their expanding industrial economies needed. A small matter could turn this competition into warfare. The industrial structuring of society for modem production and marketing of goods made total mobilization for war a relatively small adjustment.

As a result of World War I, people's beliefs and attitudes, nations' policies, and war itself would never be the same. People could never again feel as optimistic as they had before the war about the course of Western civilization, nor as secure from the effects of their governments' military ventures. Hitler's popularity grew out of the humiliation of defeat in World War I and the hardship of post war conditions in Germany. And so, perhaps the worst consequence of World War I was World War II.

Problem/Solution

One of the biggest problems facing the Allies during World War I was transportation of materials and troops from America to Great Britain. The German submarine fleet destroyed many ships in the sea lanes crossing the Atlantic Ocean. Unless these lanes could be made safe, Britain would not get the supplies it needed and American soldiers would be killed even before they reached the European battlefields.

The Allies found two solutions to this problem. The first was to lay mines in the waters between Scotland and Norway. These mines were intended to block the movement of German submarines in and out of their ports on the Baltic Sea. The second solution was to form convoys of ships in the Atlantic shipping lanes. Each convoy was escorted by warships, including destroyers that patrolled the convoy's path looking for German submarines.

Comparison

Two calamities will always stand out in the history of the twentieth century: World War I and World War II. The names by which we know them record their similarities in scale compared to any war before or since. Both pitted two alliances of nations from around the world against one another. Both wars required the mobilization of entire nations in their war efforts. Both involved Germany against Great Britain and her most important ally, the United States.

Still, there are differences between the two world wars. Partly because it involved Japan, the second war involved fighting in more areas around the globe than did the first, including a huge Pacific theatre. Poison gas was not used in World War II as it had been in World War I, but there were many other weapons more deadly than those in the first war. These included the first long range guided rockets, aircraft carriers, long range bomber squadrons, and ultimately, the atomic bomb. Finally, the peace following World War II included an international organization, the United Nations, that has been more effective than the League of Nations that was formed after World War I.

Research Implications for Instruction in Text Structure

Researchers have found that teaching students about narrative structures improves their comprehension and composition of stories (Fitzgerald & Spiegel, 1983; Fitzgerald & Teasley, 1986). However, teaching students about narrative structures only works when students do not have very well developed ideas about story structures before the instruction (Dreher & Singer, 1980). While some children do not have well developed concepts about stories, many elementary students do.

Researchers have used many different techniques for teaching students about narrative structures. Some researchers have developed questions which indirectly draw children's attention to story elements as they help children retell stories (Morrow, 1983), dictate stories (Morrow, 1986), or act out stories (Pellegrini & Golda, 1982). Some researchers have developed diagrams or maps which show particular story content in such a way as to highlight story components (Beck, Omanson, & McKeown, 1982; Tompkins & McGee, 1989). Other researchers have used charts which label, describe, and give examples of components of story structure (Gordon & Brown, 1982). Some researchers used special macro cloze versions of stories where specific components of stories were deleted (Spiegel & Fitzgerald, 1986). Children were also taught to write stories using the story charts and macro cloze stories. Some researchers gave children stories cut apart into component parts. Children unscrambled the parts to put the story together (Buss, Yussen, Mathews, Miller, & Rembold, 1983). Some researchers taught students to ask themselves questions. These questions were based on the components of story structure (Singer & Donlan, 1982). Finally, some researchers used a set of questions based on story components to help children revise their story compositions. After children write a first draft, teachers help children use special story structure questions to refine their compositions (Gordon, 1989).

In contrast to narrative structure, most elementary students do not have a well developed awareness of expository text structures. Even many middle school students are unaware of common structures found in expository texts (Taylor & Samuels, 1983). Some researchers have examined whether students seem to know more about some expository structures than about others. In general, students seem to have less awareness of the causation structure (Richgels & McGee, 1989; Richgels, McGee, Lomax, & Sheard, 1987).

Several researchers have found that teaching students about expository structures improves students' comprehension of text. These researchers have used a variety of techniques to help students learn about text structures. Some researchers have taught students to write summaries of texts. The steps used to write the summaries highlights aspects of text structure (Armbruster, Anderson, & Ostertag, 1987; Taylor & Beach, 1984). Other researchers have used think and plan sheets that students use as they compose text. These sheets highlight components of text structures (Raphael & Englert, 1990). Other researchers have used the language experience approach to highlight text structures (Kinney, 1985). Some researchers helped students compose text from story

boards of photographs taken by students. The organization of the story boards illustrates particular text structures (Sinatra, Beaudry, Stahl-Gemake, & Guastello, 1990). Finally, several researchers have used graphic organizers to illustrate text structures. Students use these organizers to guide both writing and reading (Piccola, 1987; Richgels, McGee, & Slaton, 1989).

Successful instructional procedures for teaching children to note and use structure in order to understand and remember what they read seem to involve three factors. First, the instructors are knowledgeable about structure. For example, they thoroughly analyzed text so that questions were formulated to draw students' attention to specific details or to help them form inferences that are crucial to following the text organization. Second, the passages used in instruction and follow-up activities were well formed texts. Finally, students were taught a strategy that they actively used while they read. Using this strategy, they were accomplishing a task themselves, rather than merely answering questions or completing other more passive activities. They, for instance, wrote passage summaries that they used when studying.

The best way to teach students to process structure is to make them knowledgeable about the basic types of structures, to help them to use such knowledge to recognize a mixture of structures found in sample reading material, and to teach them a strategy of processing and following structure by writing passages with specific structures. The following section details a writing approach to teaching students to recognize and use text structure when reading (McGee & Richgels, 1985). While it is intended primarily for teaching expository text structures, it can be applied to teaching narrative structures as well.

A Writing Approach to Teaching Attention to Text Structure

Having students write their own passages is the best way to sensitize them to the importance of noting and following an author's structure when they read. Before teachers use this strategy, they should be thoroughly familiar with text structures (see Pearson & Camperell, 1981, for a more detailed discussion of text structure). Examining examples of well structured expository text is beneficial (recall the example of structures given earlier). Teachers should look carefully through their content texts for paragraphs or longer sections structured in each of the five basic expository structures. These passages will be the best passages to use when teaching students about the text structures.

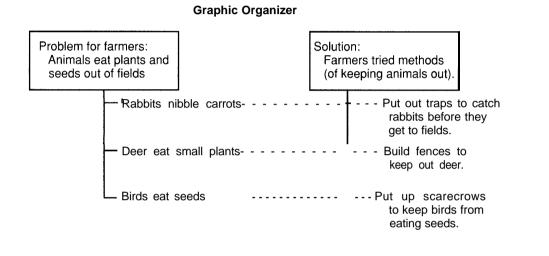
Introducing Text Structure

Young elementary students or older, less able readers may need concrete experiences designed to illustrate what is meant by *structure*. Demonstrating structure by organizing blocks is one way to accomplish this. The teacher gathers blocks of different sizes, shapes, and colors and then builds a tower of blocks. During the process, the teacher emphasizes its structure by having students describe how many blocks are being

Table 6.2. Farmer problem passage and its graphic organizer.

Farmers' Problems with Animals

When animals eat plants and seeds out of fields, farmers have an important problem. Some animals, like rabbits, come up to the fields and nibble plants like carrots. Some animals, like deer, also wander into farmers' fields and eat small plants before they can grow tall. Many birds eat seeds in the fields and then the seeds cannot grow into tall plants. Farmers have tried several methods of solving the problem of animals' eating plants. They have put out traps to catch rabbits before they can get into the fields to eat small plants. Farmers have built fences to keep the deer out of their fields. They have put up scarecrows to keep the birds from eating any seeds.



placed at each level in the tower. Students are then instructed to use differently colored and shaped blocks to build a tower with a structure identical to the teacher's. In order to compare structure found in block towers to structure found in content passages, the teacher then presents two expository passages written with similar structures. Tables 6.2 and 6.3 show two problem/solution passages along with a modified graphic organizer of each. (A graphic organizer is a visual display of the ideas in a passage and of the relationships among those ideas.) As they compare the two passages and their organizers, students' attention should be focused on structure. They should note that these two passages have similar structures but different ideas, just as the two block towers had similar structures but were built of blocks of different colors and shapes.

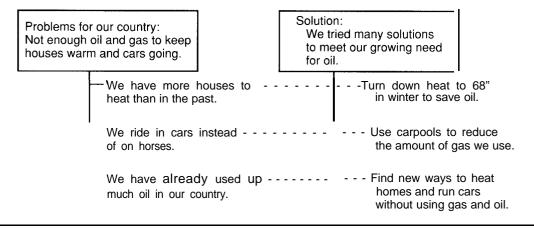
Learning Specific Text Structures Through Writing

Once students know what is meant by text structure, they are ready to begin learning to recognize each of the five basic types of expository text structures. The teacher can use a five-step instructional sequence similar to that developed by Hennings
 Table 6.3.
 Gas Shortage problem passage and its graphic organizer.

Problem of Gas and Oil Shortage

Our country has a serious problem of trying to get enough gas and oil to keep our houses warm and cars going. Today we have many more houses in our country than we did in the past. Also, today we ride in cars that use gas instead of riding on horses. We have already used up much of the oil in our country. We have tried many solutions to meet the problem of our growing need for oil and the shortage of oil supplies. One solution is to turn down the heat in our homes. Keeping our homes at 68° in winter saves oil. Another solution is to use carpools to reduce the amount of gas we use. Another solution is to find new ways to heat homes and run cars without using gas or oil.

Graphic Organizer



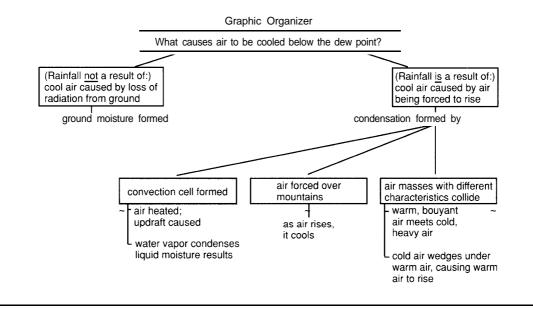
(1982). First, the teacher selects a passage that follows one of the expository structures. This structure will be the one introduced to the students. Second, the teacher prepares a modified graphic organizer of the passage. Table 6.4 is an example of a passage and its organizer for use in teaching the causation structure. Third, the teacher uses the graphic organizer to introduce the students to the ideas in the passage, adding additional information to clarify and expand if necessary.

In the fourth and crucial step, the teacher guides the students in composing their own passage that incorporates the ideas presented in the graphic organizer. It is important to remember that the students have not yet seen the original passage, only its organizer. By being cast in the role of author and being given the content of the passage in the graphic organizer, students will naturally focus on organization.

The teacher can guide the composing process by focusing attention on each section of the graphic organizer and helping students to form sentences that convey the information from that section. Students should be guided to use the relationship words from the organizer in order to relate the ideas in their passage. During this process, the teacher can easily draw attention to the type of structure, the characteristics of its organization, and examples of clue relationship words often associated with the structure. For examTable 6.4. Precipitation causation passage and its graphic organizer,

Precipitation

What causes air to be cooled below the dew point? When air cools overnight as radiation from the ground decreases, does rainfall result? Rainfall and other forms of precipitation do not result from this type of cooling although some ground moisture is formed. Precipitation occurs when air rises and then cools. There are three ways that air is forced to rise and condensation is formed. Air rises when an area is heated. As the heated air rises, a convection cell is formed. Air in the cell rises rapidly until moisture is formed from the water vapor in the air. Air is also forced to rise when its path is blocked by a mountain. When air rises over the mountains, it is cooled and moisture is formed. Finally, rising air occurs when air masses with different characteristics collide. When cold, heavy air meets warm, more buoyant air, the cold air wedges under the warm air. The warm air then rises and precipitation results.



ple, when composing from the precipitation organizer (Table 6.4), the teacher can refer to the causation structure, pointing out that this structure often describes a result followed by explanation of its causes.

Once the draft is completed, students can revise and edit by rearranging and combining sentences, eliminating repetitive words, and adding topic or summary sentences. Table 6.5 presents an example of a student-composed passage following the graphic organizer from Table 6.4.

The fifth step involves having students compare their passage to the original text passage, which they now see for the first time. They should note differences and similarities in the information presented and how it is organized. For example, when comparing the student-composed passage (Table 6.5) to the text passage (Table 6.4). students might notice that their passage has more relationship words, making the causal chain connecting rainfall, cool air, and rising air more explicit and understandable.

Table 6.5. Passage composed during learning-by-writing session based on graphic organizer in Table 6.4.

Causes of Precipitation

What causes air to be cooled below the dew point resulting in precipitation? Air cools overnight because radiation from the ground decreases. Is this enough cooling to result in rainfall? Generally not. However, overnight cooling does cause some moisture to be formed on grass and other low-lying plants when the air near the ground cools below the dew point. Rainfall, snow, hail, and other forms of moisture are only caused by air being cooled because it is forced to rise. As air rises, it cools and the water vapor in the air returns to a liquid state through condensation. One way air is forced to rise is when a convection cell is formed. Air in a particular area is heated. This causes the air to rise rapidly in an updraft. As it rises water vapor in the air condenses into raindrops. A second way air is forced to rise is when a mountain blocks the path of air. As air rises over the mountains, condensation and rainfall result. Finally air rises when air masses with different characteristics meet. When a mass of cold, heavy air confronts a mass of warm, more buoyant air, the cold air pushes beneath the warm air causing it to rise.

Other passages written with a similar structure should also be compared to the studentcomposed and original passages. For instances, a section detailing the causes of high pressure systems could be examined along with the passage about causes of precipitation.

This five-step instructional sequence can be repeated to teach all of the basic expository text structures. As students learn to recognize more of the structures, they can examine longer passages with combinations of more than one organizational pattern.

Follow-up Activities

The use of study guides or gloss notations can reinforce students' knowledge of several common expository text structures and can further their application of that knowledge. The traditional three-level guide (Herber, 1978) can be constructed so that its questions help readers to see descriptions, causative links, solutions, and/or comparisons that are either explicitly stated or implied, or to apply information from passages in their own formulations of causation, solution, etc. Gloss is another technique that teachers can use to reinforce structure knowledge. This technique uses teacher-prepared marginal notations to direct students' attention to parts of texts that call for application of previously learned processes (Otto, 1981). Richgels and Hansen (1984) described uses of gloss that include helping students use a text's organization or impose organization on a poorly structured text; Richgels and Mateja (1984) suggested that gloss is an improvement over other study guides because of its incorporation of teacher modeling behaviors.

Helping Students with Poorly Organized Texts

So far we have described methods for teaching students to comprehend well organized texts, passages with structures that are easily identified as description, collection, causation, problem/solution, or comparison. Unfortunately, most real-world organization Table 6.6. Sample passages from American history textbooks.

Passage A

Imperialism as a cause. Another source of tension was imperialism, the struggle for colonies. As you recall, during the late 1800's and the early 1900's the major powers of the world were engaged in a race for empire. By 1914, so far as colonies were concerned, the nations of Europe could be grouped into two classes: the "have" nations and the "have not" nations.

Great Britain and France, each with huge colonial empires, were among the "have" powers. Although Russia owned no colonies, it possessed immense areas of underdeveloped land and thus was also a "have" nation.

Germany, on the other hand, was a "have not" nation. It owned colonies in Africa and in the Pacific, but its colonial empire was relatively small and Germany wanted additional territory. Italy was in a similar situation. One of the reasons that finally brought Italy into the war on the Allies' side was a promise of colonies when the war ended (Todd & Corti, 1982, p. 573).

Passage B

The desire for colonies. Britain and France had many colonies in Africa and Asia. Germany had few colonies and wanted more. It had become a nation as recently as 1876. Now Germany wanted "a place in the sun." Britain and France learned that Germany's desire for more colonies would interfere with their own empires (Peck, Jantzen, & Rosen, 1983, p. 404).

is not so apparent. As a natural follow-up to the learning-by-writing strategy described earlier, we suggest an editing strategy that is a process of comparing differently structured passages about similar topics, examining them as an editor would. This process differs from the learning-by-writing process in that the class discusses, edits, and rewrites *poorly* organized passages and—in order to simulate a real-life reading situation—the teacher presents them immediately, without graphic organizers. Students are already knowledgeable—from the learning-by-writing sessions and follow-up activities—about text structure, but must now know what to do when they encounter texts that do not perfectly follow the patterns they have learned.

The teacher should begin by helping students to compare the real-life texts with such idealized texts as the social studies passages used for illustration earlier. Students should be encouraged to ask what attributes of the ideal are present in the real text. How close a fit can be made? Even though a perfect fit is not possible with poorly organized texts, comprehension can be furthered by the reader's trying to relate propositions in the text in any of the ways described by the ideal structures. Students can ask, "Is the author really describing, collecting, telling about a causative relationship, telling about a problem and solution, or comparing?" In that way, they are acting like editors. They can follow-up with actual or mental revisions of texts so that they more closely resemble the ideal structures.

Table 6.6 shows excerpts from two American history textbooks (Todd & Curri, 1982; Peck, Jantzen, & Rosen, 1983). They differ by more than just length. Neither exactly follows any one of the expository text structures illustrated earlier. Each is from a longer section of text made up of several subsections whose subheadings form a list of causes of World War I, and each is a complete subsection. Passage A is rather well

organized, following a comparison structure. The countries involved in the first years of World War I are organized on the basis of their having been "have" or "have not" powers. At the same time, the passage gives two explicit indications of causation ("as a cause" and "source of"). Students could be encouraged to note the words and paragraph structure signals of a comparison structure and also could be prompted not to lose sight of the superordinate causation structure. The teacher and students might compose, by way of revision, a summary sentence that reiterates and makes explicit the causative links between imperialism and war.

Passage B looks simpler because it is shorter and lacks Passage A's embedding of one structure within another. It also lacks, however, any of the signal words of an ideal causation structure (e.g., because, as a result of, therefore), and thus may, in fact, be more difficult than Passage A. Students might ask, "Is this really organized by a causation structure or is it just a collection?" They should be encouraged to revise it, creating a causative structure and making the causative links more explicit. Note that the passages used in initial instruction for both the learning-by-writing and the editing strategies have been passages with causative or problem-solution structures. These were used first because students have demonstrated better recall with them than with description or collection structures (Meyer & Freedle, 1984).

Summary

We have described text structure with an emphasis on expository text. Research shows that students who are knowledgeable about text structure have good recall for well organized texts. We have given a learning-by-writing strategy for teaching text structure to students, suggested follow-up activities to that strategy, and described an editing strategy for helping students use their text-structure knowledge with poorly organized texts. Content teachers who use these strategies will be helping their students become more independent readers of content materials.

References

Armbruster, B., Anderson, T., & Ostertag, J. (1987). Does text structure/summarization instruction facilitate learning from expository text? Reading Research Quarterly, 22, 331-346.

Bartlett, B. J. (1978). Top-level structure as an organizational strategy for recall of classroom text. Unpublished doctoral dissertation, Arizona State University, Tempe.

Beck, I. L., Omanson, R. C., & McKeown, M. G. (1982). An instructional redesign of reading lessons: Effects on comprehension. Reading Research Quarterly, 17, 462-481. Buss. R. R., Yussen, S. R., Mathews, S. R., Miller, G. E., & Rembold, K. E. (1983). Development of chil-

dren's use of story schema to retrieve information. Developmental Psychology, 19, 22-28.

Dreher, M. J., & Singer, H. (1980). Story grammar instruction unnecessary for intermediate grade students. *The Reading Teacher*, 34, 261-268.

Fitzgerald, J., & Spiegel, D. L. (1983). Enhancing children's reading comprehension through instruction in narrative structure. Journal of Reading Behavior, 15, 1-17.

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Fitzgerald, J., & Teasley, A. (1986). Effects of instruction in narrative structure on children's writing. Journal of Educational Psychology, 78, 424-433.

Gordon, C. (1989). Teaching narrative text structure: A process writing approach to reading and writing. In K. D. Muth (Ed.), *Children's comprehension of text: Research into practice* (pp. 79-100). Newark, DE: International Reading Association.

Gordon, C. J., & Braun, C. (1982). Story schema: Metatextual aid to reading and writing. In J. Niles & L. Harris (Eds.), New inquiries in reading research and instruction (pp. 262-268). Rochester, NY: National Reading Conference.

Hennings, D. G. (1982). A writing approach to reading comprehension—Schema theory in action. Language Arts, 59, 8-17.

Herber, H. L. (1978). Teaching reading in content areas (2nd ed.). Englewood Cliffs, NJ: Prentice-Hall.

Johnson, N. S., & Mandler, J. M. (1980). A tale of two structures: Underlying and surface forms in stories. *Poetics*, 9, 51-86.

Kinney, A. (1985). A language experience approach to teaching expository text structure. *The Reading Teacher*, 38, 854-856.

Mandler, J. M., & Johnson, N. S. (1977). Remembrance of things parsed: Story structure and recall. Cognitive Psychology, 9, 51-111.

McGee, L. M. (1982). Awareness of text structure: Effects on children's recall of expository text. *Reading Research Quarterly*, 17, 581-90.

McGee, L., & Richgels, D. (1985). Teaching expository text structure to elementary students. *The Reading Teacher*, *38*, 739-748.

Meyer, B. J. (1985). The organization of prose and its effects on memory. Amsterdam: North-Holland.

Meyer, B. J. (1982). Reading research and the composition teacher: The importance of plans. *College Composition and Communication*, 33, 33-49.

Meyer, B. J., & Freedle, R. O. (1984). Effects on discourse type on recall. American Educational Research Journal, 20, 517-28.

Morrow, L. M. (1983, December). *Effects of story retelling on young children's comprehension and sense of story structure*. Paper presented at the annual meeting of the National Reading Conference, Austin, TX.

Morrow, L. M. (1986). Effects of structural guidance in story retelling on children's dictation of original stories. *Journal of Reading Behavior*, 18, 135-152.

Niles, O. S. (1974). Organization perceived. In H. L. Herber (Ed.), *Perspectives in reading: Developing study* skills in secondary schools. Newark, DE: International Reading Association.

Otto, W. (1981). Glossing for improved comprehension: A new look at an old technique. In G. McNinch (Ed.), *Comprehension: Process and product*, Carrolton, GA: Thomasson.

Pearson, P. D., & Camperell, K. (1981). Comprehension of text structures. In J. Guthrie (Ed.), Comprehension and teaching: Research reviews. Newark, DE: International Reading Association.

Peck, I., Jantzen, S., & Rosen, D. (1983). American adventures. New York: Scholastic Book Services.

Pellegrini, A. D., & Galda, L. (1982). The effects of thematic-fantasy play training on the development of children's story comprehension. American Educational Research Journal, 19, 443-52.

Piccola, J. A. (1987). Expository text structure: Teaching and learning strategies. *The Reading Teacher*, 40, 838-847.

Raphael, T., & Englert, C. (1990). Writing and reading partners in constructing meaning. *The Reading Teacher*, 43, 388-400.

Richgels, D. J., & Hansen, R. (1984). Gloss: Helping students apply both skills and strategies in reading content texts. *Journal of Reading*, 27, 312-17.

Richgels, D. J., & Mateja, J. Å. (1984). Gloss II: Integrating content and process for independence. *Journal of Reading*, 27, 424-31.
 Richgels, D. J., & McGee, L. M. (1989). Instruction in awareness of causation and compare/contrast text

Richgels, D. J., & McGee, L. M. (1989). Instruction in awareness of causation and compare/contrast text structure. In S. McCormick & J. Zutell (Eds.), *Cognitive and social perspectives for literacy research* and instruction (p. 301-309). Chicago, IL: National Reading Conference.

Richgels. P., McGee, L.M., Lomax, R., & Sheard, C. (1987). Awareness of four text structures: Effects on recall of expository text. *Reading Research Quarterly*, 22, 177-196.

- Richgels, D. J., McGee, L. M., & Slaton, E. A. (1989). Teaching expository text structure in reading and writing. In K. D. Muth (Ed.), Children's comprehension of text: Research into practice (pp. 167-184). Newark, DE: International Reading Association.
- Sinatra, R., Beaudry, J., Stahl-Gemake. J., Guastello, E. (1990). Combining visual literacy, text understanding, and writing for culturally diverse students. Journal of Reading, 33, 612-617.
- Singer, H., & Donlan. D. (1982). Active comprehension: Problem-solving schema with question generation for comprehension of complex short stories. Reading Research Quarterly, 17, 166-85.
- Spiegel, D. L., & Fitzgerald, J. (1986). Improving reading comprehension through instruction about story
- b) E. D. D. W. The genue, J. (196). Improving reading comprehension anoder story parts. The Reading Teacher, 39, 676-682.
 Stein, N. L., & Nezworski, T. (1978). The effects of organization and instructional set on story memory. Discourse Processes, 8, 177-193.
 Taylor, B. M., & Beach, R. W. (1984). Effects of text structure instruction on middle-grade students' com-
- prehension and production of expository text. *Reading Research Quarterly*, 19, 147-61. Taylor, B. M., & Samuels, S. J. (1983). Children's use of text structure in the recall of expository material.
- American Educational Research Journal, 20, 517-28.
 Thorndyke, P. W. (1977). Cognitive structures in comprehension and memory of narrative discourse. Cognitive Psychology, 9, 77-110.
 Todd, E. P., & Curti. M. (1982). Rise of the American nation. New York: Harcourt Brace Jovanovich.
- Tompkins. G., & McGee, L. M. (1990). Teaching repetition as a story structure. In K. D. Muth (Ed.), Children's comprehension of text: Research into practice (pp. 59-78). Newark, DE: International Reading Association.