Get a GRIP on Comprehension

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"Today children, we are going to learn how to make inferences to help us better comprehend what we read. Get out your reading workbook and turn to page 54. Read the directions carefully and answer each question on page 54," intones the fourth grade teacher to pupils. How often have you made an assignment like this? Durkin's research (1978-79) has indicated that much more time is spent testing reading comprehension than teaching it. Consequently, all reading comprehension skills need to be taught by the teacher to the students in the classroom. Since making inferences is a necessary comprehension skill when reading across the curriculum (Gordon, 1985), it also must be taught. However, many children find it difficult to make inferences because they are required not only to derive a conclusion from the facts or premises found in their reading materials, but in many cases, they must go beyond the text to their own knowledge and experiences for information. Thus, prior knowledge which students bring to the text, as well as their sensitivity to the text information, are essential aspects of inferential comprehension.

Background

To teach students to infer, we use three techniques: 1.) direct or explicit instruction, 2.) a generative process, and 3.) reciprocal questioning. We call this three phase process Generating Reciprocal Inferences Procedure or GRIP.

First, for reading comprehension to be effective, several reading authorities indicate that instruction must be direct and explicit (Pearson, 1984: Baumann, 1986). We explicitly
instruct children to recognize ten slot-filling inferential types as recommended by Johnson and Johnson (1986) to help them better understand their reading materials. These ten slot-filling inferential types are location, agent, time, action, instrument, category, object, cause and effect, problem solution, and feelings-attitudes. Instruction takes place in small groups where we model the procedure and elicit children's responses.

Second, for readers to successfully develop inferential skills, they must become active participants in making inferences. As children use their prior knowledge, they infuse print with meaning. They actively organize and relate new information to what they already know to remember what they read. As such, reading is viewed as a generative process. The generative model of learning states that reading comprehension is enhanced when children generate sentences about what they have read (Wittrock, Marks & Doctorow, 1979).

Third, in order to help children succeed in comprehending what is read Manzo's (1968) reciprocal questioning technique is used. During reciprocal questioning the teacher and children take turns in questioning one another on the material read. A modification of this technique involves children questioning each other after the teacher models reciprocal questioning procedures for the children. In this way generative and reciprocity procedures become a process-product activity which heightens children's success in making inferences.

Modeling Inference Awareness

To develop children's inference awareness, we use the modeling sequence as explained in Pearson's (1985) gradual release of responsibility model. Responsibility for making an inference is gradually shifted from the teacher to the students. To demonstrate this process as we use it, and example follows in which we model the entire process of making an inference: (a) Highlights clue words, (b) Makes Inference, and (c) Justifies inference.

"The elevator ride was great fun. Now Kathy and Becky looked down through the wire fence as the wind whistled in their ears. The people and the cars on the city street looked just like tiny toys. Although they were very
high up, the girls were not frightened. It was exciting to see the whole city spread out before them." Where are Kathy and Becky?

We begin modeling the inferencing process by highlighting clue words, such as elevator ride, looked down, people and cars like tiny toys, whole city spread out, etc. Next, we make the inference that two girls are on a high building overlooking the city. We justify the inference by going back through the paragraph and pointing out how each key word is giving us a clue to determine the location of Kathy and Becky.

Four more paragraphs will be needed to complete the process of gradually releasing the responsibility for inferencing from teacher to student. In the next paragraph, we highlight clue words, the children make the inference and we justify the inference the students made. In step three, using a third paragraph, the children highlight the key words, we make the inference and justify the inference. In the fourth paragraph, the children highlight clue words, the children make the inference and we justify their inference. Finally, the children take responsibility for the entire inferencing procedure.

Generating Reciprocal Inferences Procedure (GRIP)

After the children are able to assume the responsibility for finding key words, making and justifying the inference, they move into generating and reciprocal inferencing. Each child is paired with another child in the classroom. These pairs of children generate their own inference paragraphs by writing paragraphs with key or clue words to give hints for making an inference. The children in each pair exchange paragraphs, mark the key words, make the inference and justify the inference made to the other child. The child who wrote the paragraph would indicate if the inference were correct or not. Each child in the classroom could have several opportunities to generate the paragraphs and to make inferences. This type of practice could take as long as needed, and interest remains high.

A sample lesson on location inference follows:

Figure 1
Location Inference
Anticipatory Set
"Inferencing is reading and using what is printed on the page and what you already know to make an intelligent decision. To help you understand what an inference is I will use some pictures."

On the Page
In Your Head
Inference

STUDENT OBJECTIVE
Today we are going to work on inferring where things are happening. This is called a Location Inference.

INPUT AND MODELING
Using the first sample paragraph the teacher models the whole process: (a) Highlights clue words (b) Makes Inference (c) Justifies Inference

Sample paragraph One:
The elevator ride was great fun. Now Kathy and Becky looked down through the wire fence as the wind whistled in their ears. The people and the cars on the city street looked just like tiny toys. Although they were very high up, the girls were not frightened. It was exciting to see the whole city spread out before them.

Where are Kathy and Becky?

Using the second sample paragraph: (a) Teacher highlights clue words (b) Children make inference (c) Teacher justifies inference

Sample Paragraph Two: It was a hot sunny day. Aaron looked around him. A group of children were building sand castles. People walking near the water left footprints in the sand. Other people were swimming. Aaron got up and took his surfboard into the water.

Using the third sample paragraph: (a) Children highlight clue words (b) Teacher makes inference (c) Teacher justifies inference
Sample Paragraph Three: Pat walked into the room. He tripped over a pair of sneakers. "I know it's here," he said. He pushed aside a stack of paper on his desk. Then he moved a pile of clothes. Finally, Pat found his baseball cap under his bed.

Where is Pat?

Using the fourth sample paragraph:
(a) Children highlight clue words
(b) Children make an inference
(c) Teacher justifies Inference

Sample Paragraph Four: After check-in, the bell hop helped us carry luggage to our room. He left us two keys. When we opened the drapes, we had a view of the city.

Where are we?

Using the fifth paragraph:
(a) Children highlight clue words
(b) Children make an inference
(c) Children justify inference

Sample Paragraph Five: When Michael sat down, he looked at the menu. He ordered a cheese sandwich, a salad and a bowl of soup. He ate everything. Then he had two more bowls of soup.

Where is Michael?

PRACTICE AND APPLY

Generating Reciprocal Inference Procedure (GRIP):
Divide the class into small groups. Give each group a location word card (e.g., park, movie, restaurant, etc.). Each group generates paragraphs which contain clues for their location.

Each group presents paragraphs to the class. Using individual boards, the students respond with the correct location. Teacher carefully observes student responses noting those responding incorrectly.

FEEDBACK

Discussion and more GRIP as needed.
The lesson plan illustrates in detail the use of Pearson's (1985) gradual release of responsibility model of explicit instruction and the Generating Reciprocal Inferences Procedure which incorporates aspects of generative comprehension and reciprocal questioning.

**GRIP Variations**

An excellent variation to GRIP procedure as described above involved children generating inference paragraphs using a specific slot-filling inference type. For example, suppose that we taught a lesson on using inference skills in determining an object which was used in the passage. Children were asked to write paragraphs not mentioning the object by name but giving clue words that would help other readers identify the object. Then, each paragraph was reproduced on the chalkboard or chart paper or projected on a screen using an opaque projector. We also had children write their paragraphs onto an acetate sheet which made it possible for use with an overhead projector. After the paragraph is read by all, the children make their inference by writing their response on individual marker boards. When they are finished, we make a quick check to determine which children are understanding the specific inference and which ones need additional help.

Another variation is the GRIP board game. Children play the GRIP board game in pairs. Before the game begins, each child needs to understand the rules for playing the game and follow them carefully. We begin by discussing the game rules with the children:

1. Requires two players to play the game.
2. Write four sentences that go together to make a story. Underline the clue words in each sentence.
3. Select a marker.
4. Place marker on START.
5. Throw the die, letting the highest start the game.
6. Each player moves his/her marker the number of spaces shown on the die.
7. If you land on STATION, have the other player read a sentence.
8. If you land on MAGNIFYING GLASS, move to the nearest STATION, have the other player read a sentence.
9. A different sentence is read at each STATION.
10. You must be on STATION to guess and you only get one guess.
11. If you land on STOP SIGN, go back to the space from which you started your turn.
12. You can be on the same space as the other player.
13. If you land on SIDETRACKED, follow the feet.
14. If you land on SQUAD CAR, follow the road.
15. Whoever guesses what the story is about is the winner and the game is over.

When the GRIP Board Game is introduced, play the game with one child while the other children in the classroom watch. This makes the transition from discussing the rules to playing the game easier. (The GRIP Board Game, shown on page following References.)

SUMMARY
Children's ability to make inferences is important in all types of reading activities. The strength of our approach to teaching inferential comprehension lessons lie in direct or explicit instruction, the generative process and reciprocal questioning. GRIP is a useful strategy to assist children in making inferences while reading. We have found through classroom practice that GRIP is effective in helping children develop skill in making inferences.

SELECTED REFERENCES
Baumann, J. F. (1986). The direct instruction of main idea comprehension ability. In TEACHING MAIN IDEA COMPREHENSION, Newark, DE: IRA.


