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Thumbs Up for Direct Teaching of Thinking Skills

Teachers at a Virginia middle school are teaching critical thinking through direct instruction and sharing their successful lesson plans.



Jackson and students listened to reports by the group observers, identifying the steps that the analysts took to complete their task.



To analyze for personification, Jackson and her class developed a chart of procedures.

Photographs by Kenneth Hailey



Working in small groups, students analyzed paragraphs for personification.

I have taught critical thinking to a decade of students. A few have learned. A few are not enough. Even though master teachers have admonished, "Be thankful and rejoice in the one or two you will reach," I can no longer be satisfied with only one or two successes per class.

I have used a variety of techniques, including teaching formal logic and using carefully prepared sets of questions to "model" critical thinking. However, my generating the questions is to teaching thinking as my assigning specific topics is to teaching writing. Both engender learner dependence. Neither nurtures the "learner autonomy that such instruction seeks to foster" (Beyer 1984a). It is no wonder that only a few students demonstrated thought beyond teacher-pleasing answers. I had given them no direct instruction in how to answer the questions.

I now use direct teaching of specific thinking skills with my middle schoo! language arts students. My classes include the whole range of mainstreamed students, and direct teaching allows each student an avenue for success. The child who reports that her thinking "comes in flashes" and the child whose fingernail turns white keeping his place on the skill step chart both develop "can do" attitudes toward thinking about thinking when guided by the basic operational procedures created during the direct teaching process.

Direct teaching is a blessing for the teacher, too. It is a process as structured as the steps in baking a cake and, at the same time, as flexible as the many possible ingredients. Select a skill, identify its main attributes, introduce it at a time in the curriculum when the skill is needed and therefore meaningful, develop guided and independent practice lessons, and intersperse these practices throughout the year (Beyer 1984c).

At first both the students and I were hesitant, but it didn't take us long to become immersed in the process.

Analyzing for Personification

In selecting a skill to teach, I compared the SRA Achievement Test lists of objectives with the school system's objectives for 8th grade language arts students. The SRA general reading comprehension objective, understanding the author, seemed to be a good beginning place because my students are authors, and nothing intrigues like self-study. Also, my choice was limited since, in direct teaching of a skill, the initial lessons must focus on the skill rather than the content of the discipline (Beyer 1983). A previous test from our basal reader had certified that my students had learned one of the subskills for understanding the author: recognize and understand figurative language. Any further work in the area would be immediately recog-

Table 1. Skill Description

Skill label: Analyzing for personification.
Dissect — breakdown — break apart — separate — divide — make a distinction — resolution (reducing to simpler form; also its answer).
Skill definition: Separation of text into its parts (articles or stories into paragraphs, sentences, clauses, and phrases) to distinguish the figure of speech, personification.
Rules for using the skill:
1. Keep purpose for analysis clearly in mind.
2. Identify "parts" to look for, clues helpful to your analysis, questions to ask yourself to guide your analysis before you begin.
3. Examine each sentence or clause by asking the following clue questions.
   - What is the sentence/clause talking about?
   - Is that subject an object or a thing?
   - Is that subject behaving as if it were a person?
4. Use this skill to discover if or how much an author uses personification.

What to do if:
1. Clues prove inadequate? Consult reference books for definition, examples, and so on. Rewrite clue questions.
2. Evidence of author's use of personification not found? Reevaluate purpose; redesign clues. Lack of evidence may be as important as evidence in supporting an opinion.

Knowledge needed for expert use of the skill:
1. Sentence structure and personification.
2. Classifying and generalizing skills.

Steps involved in the skill:
1. Divide article into paragraphs, sentences, clauses.
2. Run a sentence or clause through the gamut of clue questions; record results; repeat.
3. Draw inference/make generalization to satisfy goal. Did the author use personifications in his or her writing? Does this use or disuse of personification support an opinion of the writing?

nized; my students would be ready for it!

I had not seen much transfer from workbook performance knowledge into my students' writing. I wondered if I taught my students how to analyze whole stories and articles for figures of speech, and to use their findings to support an opinion about that author's writing, would they analyze their own and each other's writings for the same type of evidence and discover their need for more colorful writing? We began our study of thinking with the skill of analyzing for personification.

Before asking my students to define the attributes required to analyze for personification, I tried the technique myself. While engaged in the skill, I asked: What am I doing? Why? Could I do it another way? How? How do I know when it works? (Beyer 1984b) After attempting to answer these questions through thinking and writing, I sought help from dictionaries, thesauruses, and grammar and reading texts. A tentative skill description began to form (Table 1).

With a working model of analyzing for personification at hand, I introduced the skill to my classes (Beyer 1985). I started by writing the word *analysis* on the board and soliciting synonyms for it from the students. We defined analysis and gave ways it could be used—in daily life, in language arts, and in other classes.

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Table 2. Introducing a Skill Deductively

Goal: To introduce the skill of analyzing for personification.

Objectives:
- To state, in correct order, the major steps in analyzing printed material for personification.
- To state two rules to follow in analyzing printed material for personification.

Materials:
- *Moon Canyon*—the basal reader
- Homework assignment—written response to a selection from Ray Bradbury's *The Martian Chronicles*.

  Prior skill is needed in writing responses to reading which deal not so much with the events of the piece but with what you thought and/or felt as you reacted to the piece. This assignment is based on Donald Murray, "Good writing makes the reader think or feel, and best writing makes the reader think *and* feel."

- Overhead of example.
- Handouts of the example for each student.
- Charts of the skill's steps with identification clues.

Teacher	Student
Introduce Analysis	
1. Ask for volunteers to share their homework responses. (See above.)	Answers will vary from pure love of science fiction to sheer disgust, from insightful remarks concerning ecology, to surface reaction to magic.
2. "Does Bradbury's style of writing cause you to think or feel a certain way?"	Answers will vary.
3. One way to "get at the truth" of what triggers readers' responses is to analyze the selection.	Listen.
"Anytime you wonder why something works or doesn't work, why something seems great or not-so-great, you analyze."	Note when to apply skill.
"Analysis is the separation of anything into its parts." (Write the definition on the board.)	Copy the definition into their notebooks.
4. "What are some synonyms for analysis, some other words with the same or similar meaning?"	Break apart, dissect, separate, make a distinction, divide.
"What does the detective do to solve a crime?"	Analyzes the data to find evidence.
"What does a doctor do when confronted by a previously unknown disease?" (Mechanic, lawyer, etc.)	Analyzes the symptoms.
"What does your father or mother do to aid in writing the week's grocery list?"	Analyzes recipes, or what's left in the refrigerator.
Explain Analysis	
5. "How? The how's of analysis are governed by the why's. Therefore the first rule of analysis is to clarify the purpose for analyzing."	Listen and copy the steps into notebooks.

Write one step on the board at a time, discuss, erase. This encourages students to make notes. During practice the teacher-made chart may be displayed. The chart can also be left for the lesson review.

Rule 1. Identify/state purpose for analysis.
To find out why my mo-ped just stopped.
Rule 2. Identify clues or questions to guide your analysis.
Owner's/operator's Manual. Use table of contents and index to locate clues—typical causes of mo-peds stopping. Examples: Out of gas—(a) empty gas tank, (b) plugged gas line, (c) faulty carburetor. Ignition problems—(a) bad magneto, (b) broken spark plug wire.
Step 1. Separate the "whole" into its parts.
Get out your screwdriver and begin dissecting your mo-ped. I don't mean that literally, but each potential problem area must be segregated.
Step 2. Compare one part to your clues or questions. Record your findings (make a list). Repeat this step for every identified part from Step 1.
Is the gas tank empty? Is the gas line plugged?
Step 3. Draw inference/make generalization to satisfy goal stated in Rule 1.
I found a broken spark plug wire.

Demonstrate Analysis

6. Distribute copies of example. "I am going to analyze a section of this article for personification, a figure of speech. Watch and help me work through the steps for analysis much as we did for the mo-ped problem." Students listen and watch. Clarify their notes on the process. Answer questions from their notes.

7. Put transparency of the example on the projector and talk through analysis for personification. Ask for steps from students' notes.

Rule 1. Purpose for analyzing: Analyze a paragraph for the figure of speech, personification.
Rule 2. Identification of clues: Personification is when an author writes about an object or thing as if it were a person.
What is the sentence/clause talking about?
Is that subject an object or a thing?
Is that subject behaving as if it were a person?
Compare with known examples of personification.
Step 1. Dividing the whole: Separate the paragraph into sentences; sentences into clauses.
Step 2. Search for personification: Take each segregated part through the questions developed for Rule 2.
Step 3. Satisfy goal: Does the author use personification?

Apply Analysis for Personification

8. Ask students to work in their reading/writing groups to analyze the rest of the example for personification.
9. Share process with large class group by posting teacher-made chart.
10. Move between groups as needed. Ask individuals: Where are you in the process? What step? What are you going to do next?

Reflect on Analysis

11. Ask students to think/write on the process of analyzing for personification that they have just completed. They may focus their writing on "I learned . . ." "I was surprised by . . ." "I wonder if . . ."
12. Ask for volunteers to share their writing.
13. If during the sharing session modifications in the teacher-made chart are suggested, mark up the chart. Emphasize that few analyze the same way every time. "Our chart is to help us analyze. It is not the only way, but it is a good beginning."
14. Assign homework (may be begun in the last minutes of class). "Analyze the Bradbury story read last night for personification."

Second, we experimented with the skill. The students handled this with ease. Accustomed to working in peer reading/writing groups, the students were comfortable with taking the risk of speaking out and defending their opinions. Group members were practiced in observing their groups and reporting on their process, so when asked to analyze a selection for personification, the students grappled with the task in a safe environment. One group member observed and took notes, while the others analyzed the paragraph for personification and haggled over the what's, why's, and how's of the skill.

My students and I then listened to the reports of the observers and identified steps the analysts took to complete the task. We developed a chart of procedures.

1. Divide the article into paragraphs, sentences, clauses, phrases.
2. Identify the topic of the sentence, clause, or phrase.
3. Decide if what is discussed is an object or a thing.
4. Decide if the object or thing is acting as if it were a person.
5. Record results and repeat process.

Again we dived into a literary selection and, using our chart, analyzed it for examples of personification. Groups stopped every five minutes to report how the process was working and to modify the chart if the process needed revision.

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This first lesson on thinking skills concluded with the class reiterating the steps of analyzing for personification and the rules we used to direct the process. I invited the students to write about the lesson in their journals. Quickly the sounds of conversation faded to paper rustling and pencil scratching. As I too began to write, I noticed one student holding his notes, nearly at arm's length. A knowing smile erased his former puzzled look when our eyes met: "Mrs. Jackson, all you'd have to do is change the clues and you could use this chart to analyze for anything!"

"Our experience has convinced me that specific thinking skills can indeed be taught directly."

I tempered this enthusiastic endorsement by saying, "After we're sure this process works, let's try it with other figures of speech."

Modifying the Approach

During the next few weeks, short guided practice lessons using student writing as well as the works of better-known authors reinforced my belief that my students and I had discovered a way to teach directly the thinking skill of analyzing for personification. Extension lessons included analyzing other figures of speech. Students soon expanded the model to analyze basic sentence patterns, which were used to support opinions about their own writings.

Meanwhile, my colleagues challenged me to replicate my much bragged-on success. "Direct teaching of thinking skills worked for you, in your classroom. Show us how the strategy works in ours." I modified the original inductive introduction to a deductive introduction (Beyer 1985) and borrowed a fellow teacher's class to model direct thinking skill teaching.

The modification consisted of five steps:

1. *Introduce the skill*—give its label, state a definition, give synonyms, and examples.
2. *Explain the skill*—tell the steps and how each operation proceeds using an example from life experience.
3. *Demonstrate the skill*—show how the steps and rules that govern analysis for personification work.
4. *Apply the skill*—focus on the skill and discuss the process, not its product.
5. *Reflect on the skill*—review the steps involved in the skill and the rules that guide its use, as well as when to use the skill (Table 2).

With the help of a nonthreatening teacher-observer, I honed the unit. We recorded the sessions to document her observations. Our experience has convinced me that specific thinking skills can indeed be taught directly. The results were gratifying. All the students rapidly assimilated the skill and spontaneously adapted the basic skills to problems other than my "test" case.

Several underlying factors were especially helpful in implementing this approach: a noncompetitive learning atmosphere (such as the one developed through regular use of peer reading/writing groups), the students' perceived need for the skill, and the teacher's acceptance of divergent thinking.

Other teachers at my school have now begun teaching thinking. The cost is negligible. Teachers select skills by task-analyzing the existing curriculum; the needed materials are already in the schools. Rather than wait for theoreticians to find the ultimate method, we are sharing lesson plans for teaching thinking skills directly—an approach that works.□

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