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ABSTRACT

This paper is the introduction to a workshop session demonstrating how English and language-arts teachers can teach critical thinking and writing simultaneously to students in grades 4 through 14. It describes how to transform specific skills into frames for critical thinking and writing such as: (1) explaining; (2) categorizing; (3) comparing and contrasting; (4) evaluating; (5) interpreting; (6) justifying with reasons; (7) applying principles; and (8) deriving propositions. Frame negotiation and use are explained, and the model underlying this approach is summarized. The methodology is based on student and teacher negotiation of the thinking steps that implement particular critical thinking skills. This methodology helps students acquire and internalize the skills and transfer them to new situations. Ways in which English and language-arts teachers can use the frames approach within their own curricula and through their own writing assignments are considered. Twenty-three figures illustrate the discussion. (Contains 8 references.) (SLD)

Negotiating and Using Frames to Develop Specific Critical Thinking and Writing Skills

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Negotiating and Using Frames to Develop Specific Critical Thinking and Writing Skills

Introduction:

An effective way to teach critical-thinking skills to students in grades 4-14 is to teach them these skills as part of teaching them to write. The general method for doing this is to develop writing assignments based on thinking tasks and to negotiate with students thinking-writing frames for carrying out these tasks in writing. The work of David Perkins (1985, 1986) provides the cognitive-studies theoretical base for this approach. The approach is also supported by work on *arrangement* done by contemporary scholars of rhetoric and composition such as W. Ross Winterowd (1970), Linda Flowers and John Hays (1988), Richard Larson (1972), and most especially, Frank D'Angelo (1975).

David Perkins' explanation of the nature of intelligence and its relationship to teaching students to think critically is lucid and efficient and creates a powerful justification for using frames to teach thinking. Perkins sees good thinkers as those who can "learn rapidly, plan ahead, speak well, make sound decisions, [and] approach problems systematically and effectively . . . (1986, 4)." Good thinking, in his view, involves orchestrating intellectual *power*, learned *tactics* and known *content*. Since intellectual power is predetermined, it is not greatly susceptible to improvement through instruction. Further, while we do, in fact, teach a great deal of content throughout the school years, Perkins' research suggests that students' learning of content has little, if any, impact on their development of critical-thinking abilities. What *is* susceptible to improvement, however, is the tactical aspect of thinking--"students' tactical repertoire [are] the natural window of opportunity for the improvement of thinking." (1986, 5)

Perkins uses the term "frames" to refer to tactics for critical thinking and specifically defines a *thinking frame* as "a representation intended to guide the process of thought, supporting, organizing and catalyzing that process." (1986, 7) He explains that the frame approach to thinking is part of our intellectual heritage and points to Aristotle's forms of syllogistic reasoning and Bacon's scientific method as classical examples of frames. He also catalogues a range of contemporary programs for using thinking frames across the disciplines. The teaching of frames, Perkins says, has three aspects. First, we must help students *acquire* frames through either direct instruction or metacognitive exercise. Next, we must help students *internalize* frames through practice with simple, then complex materials. Finally, we must help students *transfer* the frames they learn to contexts that are remote from those in which they acquired the frames.

Frank D'Angelo focuses on what he calls, *a paradigm*, which is "the core structure that represents the *principle of forward motion* in . . . writing." (1975, p. 56) By using paradigmatic analysis, he asserts, we can identify the basic patterns fundamental to various kinds of writing, and we can provide these patterns to students for use as they write. D'Angelo identifies ten recurrent paradigms or basic patterns of discourse and presents each as a frame which students can use to facilitate their writing.

What is critical here, and what ties D'Angelo's work to Perkins' theory of thinking frames, is this: D'Angelo sees his paradigms as revealing not only the *arrangement* that a particular form of writing follows, but also, as guiding discourse in a *generative* way. He believes that using these patterns of discourse helps writers *produce new thoughts* about the topics they are writing about. In offering his paradigms of discourse, D'Angelo provides us with frames that help writers produce thoughts. The work of Perkins and D'Angelo together, then, creates the foundation of teaching writing and thinking through the use of thinking-writing frames.

The Problem and an Emerging Solution

Educators and the community alike recognize that many students fail to develop a full repertoire of critical-thinking and writing skills by the time they graduate from high school. Students' poor thinking and writing skills are evidenced in persistent low performance in reading and writing on the **National Assessment of Educational Progress**, declines in **SAT** scores and continuing anecdotal evidence from employers who hire graduates and from college teachers of new students. National leaders deplore the failure of education in the areas of thinking and writing and link this failure to our declining leadership in the world economic arena. There is almost a hue and cry about the obligation of public schools and colleges to teach students to think and to write more effectively.

Clearly, this situation has not gone unnoticed among educators. Teachers everywhere are exploring and implementing thinking-skills curriculum and are turning new energies to teaching writing. What has gone unnoticed, however, is that among these teachers, those in English and language arts already have at hand a powerful instructional model they can use to teach thinking and writing *at the same time*. This instructional model is the "writing process" that has evolved from what James Berlin has called "New Rhetoric" pedagogical theory.

The term "writing process" refers to a recursive approach to writing where students engage in prewriting, writing and rewriting in order, as Berlin explains, to perceive and understand relationships, to create meaning and shape reality (1988, 57-58).

Thus, by its very nature, the writing process is *also* a thinking process. English and language-arts teachers--and other teachers across the disciplines--who use the process to teach students to write, are also using it to teach them to think. As they use the writing process, these teachers are helping students *t develop thoughts, integrate thoughts,* and *clarify thoughts*. In addition to what they are already doing, however, and as yet unexplored by most of these teachers, is an even richer opportunity to use the writing process as a thinking process. This can occur when teachers incorporate thinking-writing frames *into* the writing process and thereby use it to *systematically* teach clusters of widely recognized critical-thinking skills. By using frames with the writing process, English and language-arts teachers can teach both thinking and writing with new and remarkable effectiveness.

Purpose of this Paper

The purpose of this paper is to describe and demonstrate how English and language-arts teachers can teach critical thinking and writing simultaneously by negotiating thinking-writing frames with their students and using these frames within the writing process. The paper explains why the writing process is, in fact, a thinking process and describes how to make it even more effective for teaching thinking through the incorporation of thinking-writing frames. Then, the paper provides examples of the use of this enhanced thinking-writing process with intermediate and advanced students, and suggests ways teachers can use the process with their existing curriculum and their own writing assignments to teach writing and thinking together.

The Writing Process as a Thinking Process

The writing process progresses through the following three phases:

- Prewriting that generates information and ideas about a topic,
- Writing that organizes prewriting material into meaningful relationships and expresses these in a draft composition,
- Rewriting that increases the coherence and clarity of a composition so that it communicates to an intended audience.

The writing process becomes increasingly a thinking process as students employ a range of creative and critical-thinking skills to move productively through its three phases to substantive written discourse. Figure 1. depicts the way these kinds of thinking skills energize prewriting, writing and rewriting within the writing process.

Figure 1. Types of Thinking Skills that Energize the Three Phases in the Writing Process

Idea-Development Skills energize **Prewriting** (Creative Thinking Skills)	Idea-Organization Skills energize **Writing** (Critical Thinking Skills)	Idea-Refinement Skills energize **Rewriting** (Creative and Critical Thinking Skills)

As Figure 1. implies, each phase in the writing process requires the use of particular kinds of thinking skills and each phase *also* provides teachers with opportunities to teach students those thinking skills. In the prewriting phase, teachers can teach students creative-thinking skills that will help them develop many different ideas about their writing topics. In the writing phase, teachers can teach an array of critical-thinking skills that will help students organize their pre-writing material. In the rewriting phase, they can teach both creative and critical thinking skills that will help students increase the communicability of their ideas by enhancing and clarifying them.

The thinking skills that teachers can teach students in support of the writing phase of the writing process are widely recognized critical-thinking skills such as **summarizing, comparing and contrasting, supporting with evidence, justifying with reasons, evaluating with criteria, applying principles and developing propositions.** These recognized critical-thinking skills help students discover and suggest relationships among the items of information and the ideas they amass during prewriting. They are skills that teachers can teach with particular effectiveness by negotiating thinking-writing frames for them with their students.

Using Thinking-Writing Frames Within the Writing Process to Teaching Critical-Thinking Skills for Writing

Broadly, teachers teach critical-thinking skills for writing via thinking-writing frames, by identifying a *limited* set of critical-thinking skills they want their students to learn, incorporating each of these as a critical-thinking task in a writing assignment and negotiating with students a thinking-writing frame for completing each assignment. When students have developed and used frames to complete assignments based on critical-thinking skills, they will command a set of thinking skills *and* a set of discourse paradigms.

Specifically, there are nine steps teachers and students use to construct and employ thinking-writing frames that strengthen specific thinking and writing skills. While the first two of these steps take place during the prewriting phase of the writing process, the majority of them (steps 3-9) take place during the writing process. The complete set of steps is presented in Figure 2.

Figure 2. Steps for Constructing and Using Thinking-Writing Frames

1. Analyzing a critical-thinking-based writing assignment.
2. Gathering information and ideas for responding to the assignment.
3. Negotiating thinking steps necessary for carrying out the assignment's critical-thinking task.
4. Learning the basic format for thinking-writing frames.
5. Converting thinking steps into frame questions.
6. Answering frame questions with prewriting material.
7. Writing first drafts from frames.
8. Reviewing first drafts in terms of the original critical-thinking task.
9. Applying the frame to a new situation.

Students learn critical-thinking skills by using these steps to construct and apply thinking-writing frames to a writing assignment.

Implementing the steps in Figure 2. may appear, at first glance, to be problematic because there are so many of them. But teachers can be reassured here on two counts. First, these nine steps are part of the flow of the overall writing process and once teachers initiate that process, the steps will emerge naturally in sequence. Second, by providing students with clear and straightforward assignments, teachers can help them master the steps quickly. This will make it possible to help students learn a frame every week at least, or every three weeks at most (depending on students' age and development).

The following discussion explains how teachers prepare to use the nine steps and then how they carry out each step effectively *and* efficiently as a natural part of the overall writing process.

Preparing to Use Thinking-Writing Frames Within the Writing Process

1. Select a limited set of critical-thinking skills on which to focus. Teachers need to use their own judgement in deciding what set of critical-thinking skills they want to incorporate into their writing assignments and what content materials these assignments will be based on. Figure 3. presents a fairly comprehensive list of recognized critical-thinking skills, many of which are of interest to teachers of students in grades 4-14. The figure also provides a basic definition of each critical-thinking skill.

Figure 3. Critical-Thinking Skills for Students in Grades 4-14

1. Discussing - reflecting on a topic using knowledge, experience and opinion.
2. Describing - delimiting an item, event, idea; detailing and identifying critical attributes.
3. Narrating - recounting an event or group of events in relation to one another.
4. Defining - establishing and demonstrating the meaning(s) of a term or concept.
5. Summarizing - presenting the substance of a body of ideas in a condensed form.
6. Comparing/Contrasting - showing similarities and differences in items/ideas.
7. Explaining - showing how parts work together to create a process or relationships.
8. Supporting with Evidence - presenting information and ideas to support an assertion or proposition.
9. Justifying with Reasons - presenting reasons to support an assertion or proposition.
10. Categorizing - grouping items/ideas in terms of shared attributes and constructing meaning from groupings.
11. Interpreting - deriving the abstract or implied meanings of concrete or direct expressions.
12. Evaluating - using criteria to assess efficacy or quality.
13. Designing Plans - creating original, fact-anchored plans or proposals from any combination of new or pre-existing parts.
14. Applying Principles - showing how a general principle can work or be reflected in one or more particular cases.
15. Developing Propositions - showing how a number of particular cases reflect a general principle.

Teachers select a limited set of these critical-thinking skills to incorporate in their regular writing assignments.

2. Design writing assignments that require use of the selected critical-thinking skills. To develop writing assignments that incorporate their selected critical-thinking skills, teachers turn to their own instructional materials and curriculum guides. Figure 4 provides examples of critical-thinking-based writing assignments that English and language-arts typically develop when they use the writing-thinking frames approach.

Figure 4. Sample Writing Assignments that Require use of Critical-Thinking Skills

1. **Summarize** "The Scarlet Ibis" by James Hurst.
2. **Compare and contrast** Nora and the priest in Frank O'Conner's "First Confession" in terms of their attitude toward Jackie and their method of relating to him.
3. **Use evidence** from "The Emperor's New Clothes" **to support** the idea that people who care too much about what others think may act foolishly.
4. Take a position on whether Mme. Loisel in DuMaupassant's "The Necklace" was "ruined" or "saved" and **justify your position with reasons.**
5. **Categorize** the advertisements for cars profiled by your group and tell what these categories suggest about the messages the ad writers wish to send.
6. **Evaluate** the effectiveness of Nina Warner Hooke's "A Glimpse of Eden" **in terms of** its use of action and symbol.
7. **Apply the principles** of behavior modification to Ferenc Molnar's "The Best Policy" to reveal how Floriot obtained the job as bank manager.

These teacher-designed assignments require students to carry out specific, critical-thinking tasks.

3. Assign students language activities related to critical-thinking-based assignments. With assignments developed, teachers develop an array of language activities for students that support and are related to the topics in the assignments. These activities include readings--stories, poems, articles and so forth, visual experiences--films, slides, videos, and speaking-listening experiences--interviews, surveys, teacher commentary, that students will use as idea sources as they respond to the assignment. These activities also often include materials related to the critical-thinking task in the assignment--discussions of the purpose and process of the task. Usually, students will engage in these activities before they begin to work on the assignment.

With critical-thinking skills developed, assignments constructed and related activities underway, the steps in direct classroom instruction in thinking-writing frames can go forward. Teachers and students work together to carry out these steps.

Teaching Thinking-Writing Frames in the Classroom

1. Begin by having students analyze the first critical-thinking assignment. To help students analyze the assignment for the purpose of developing a thinking-writing frame from it, the teacher asks students to answer two questions:

* **What critical-thinking task does this assignment require?**

* **What topic does this assignment ask me to think critically about?**

Figure 5A. provides an example of how middle school students responding to an assignment about car advertisements might use this first step. Figure 5B. shows how students in high school or beyond might use this first step as they respond to an assignment based on Frank O'Conner's short story, "First Confession." As the examples demonstrate, students record the assignment itself and their answers to the two questions.

Figure 5A. Middle School Example of Assignment Analysis

Assignment:	Categorize the advertisements for cars profiled by your group and tell what these categories suggest about the messages the ad writers wish to send.
Thinking Task:	Categorizing
Topic:	Advertisements for cars profiled by our group

Figure 5B. High School Example of Assignment Analysis

Assignment:	Compare and contrast Nora and the priest in Frank O'Conner's "First Confession" in terms of their attitude toward Jackie and their method of relating to him.
Thinking Task:	Comparing and Contrasting
Topic:	Attitude toward and method of relating to Jackie

Students analyze assignments to identify their critical-thinking tasks and topics.

2. Help students gather information and ideas about the assignment topic with prewriting. At this point, teachers help students use a variety of prewriting (creative thinking) strategies to help students review their assignment-related activities and experiences and develop topic-related information and ideas for writing. These "prewriting" strategies may include, for instance, large-group brainstorming and discussion, re-reading or reviewing assigned literature or media and making notes in small groups, asking patterned questions and visually diagraming information. (See Pritchard, F., *Teaching Writing as Thinking* for description and demonstration of prewriting strategies for creative thinking.)

After using several of these prewriting strategies, students have at hand, a comprehensive file of information and ideas related to the topic. Figures 6A. and 6B. show the kind of information and ideas that students working with the "Car Ads" and "First Confession" assignment might gather from their assignment-related activities and experiences. Figure 6A. is an example of a profile sheet that one group of middle school students developed for *one* car advertisement. Because their group profiled 14 ads overall, they have a similar sheet for each of the 14 cars. Later as they employ a thinking-writing frame for categorizing, they will put profile sheets into groups and draw conclusions about each group. Figure 6B. summarizes all the information one high school student gathered from a dictionary, from discussions with Catholic classmates and from the story itself.

Figure 6A. Example of Prewriting Information and Ideas Students Gather to Respond to a Categorizing Critical-Thinking Assignment

Assignment:	Categorize the advertisements for cars profiled by your group and tell what these categories suggest about the messages the ad writers wish to send.

Information and Ideas

1. Car Type - two-door coupe, hatch-back, wire wheels
2. Color - red with chrome trim, black-glass windows
3. Price - over $30,000
4. People Present - one white male surrounded by five girls
5. Clothing - male in fashion sport clothes, girls in racing silks
6. Setting - race track, near starting gate
7. Action - male being admired by girls, horses rearing in starting gate

Figure 6B. Example of Prewriting Information and Ideas Students Gather to Respond to a Comparing and Contrasting Critical-Thinking Assignment

Assignment: Compare and contrast Nora and the priest in Frank O'Conner's "First Confession" in ter' s of their attitude toward Jackie and their method of relating to him.

Information and Ideas

1. **Confession** - Central ritual of the Catholic Church, reveal sins, disclose private thoughts and be forgiven by a priest. Must do penance - usually prayers--"Hail Marys" - prayers to the mother of Christ to ask God to forgive the sins.

2. **First Confession** - Catholic children make this when they have learned the *Catechism* and know the rules of the church--means they are adults now and responsible for their sins. Will not go to heaven if sins are not absolved by forgiveness and penance. A very big event for a child, very afraid.

3. **Nora** - Treats Jackie very roughly, jerks him around. "The hatred with which she viewed him was almost diabolical, but when she spoke her words were full of passionate sympathy." (p. 18) Is ashamed and angry when he falls out of the confessional, hits him. Sees him as a sinner. "Some people have all the luck. I might as well be a sinner like you."

4. The Priest - Shows sympathy. Tells Nora to stop hitting him. "Run away you little jade!" (p. 21) Gets Jackie to tell his fantasy of killing his grandmother by admiring him. "You're a terrible child," said the priest with awe. (p. 23) "There's a lot of people I want to get rid of, but I'm not like you. I'd never have the courage." Warns Jackie without preaching. "And hanging is an awful death." (p. 23). Gives him small penance and candies.

Students record prewriting information and ideas for use in thinking-writing frames.

3. Negotiate with students the thinking steps they will use to carry out the assignment's critical-thinking task. This is a "metacognitive" step in which teachers ask students to *think* about how they can effectively carry out the critical-thinking task in an assignment. This involves *identifying each step in the task from start to finish and stating the step in writing*. Often, many students will not know immediately what steps they use to carry out a particular critical-thinking task. This may be because they have developed a set of steps intuitively and internalized it for spontaneous and unconscious use. Or, it may be because they have, as Perkins suggests, no real *tactical* understanding of how to carry out the task. In either case, it is essential that teachers and students together identify all the steps that seem to be necessary to carry out a particular kind of critical thinking and rehearse these in discussion to see if they are valid. Figure 7A. provides an example of steps for **categorizing** that a teacher and students might negotiate as they

work with the "Car Ads" assignment and Figure 7B. provides an example of **comparing and contrasting** steps that a teacher and students might negotiate as they work with the "First Confession" assignment.

Figure 7A. Example of Student-Negotiated Steps for Comparing and Contrasting

Steps in Categorizing
1. Identify the general idea that underlies all items to be categorized.
2. Group items that share a particular idea in a first category.
3. Group items that share other particular ideas in second, third, fourth etc. categories.
4. Show how particular ideas for each category elaborate the idea that underlies all items.

Figure 7B. Example of Student-Negotiated Steps for Comparing and Contrasting

Steps in Comparing and Contrasting
1. Identify items that will be compared and contrasted.
2. State a set of points that will be used to compare and contrast the items.
3. Compare and contrast the items on each point.
4. Make a summary statement about how the items are similar and how they are different.

Students and teachers develop steps for particular critical-thinking skills and try them out in discussion.

4. Help students learn the basic format for thinking-writing frames. The basic format for thinking-writing frames is the three-column, question-answer-detail layout (adapted from *Individualized Language Arts*, 1974). This format provides spaces at the top for identifying the critical-thinking task to which the frame relates and for stating the assignment which includes that task. The first of the three columns on the frame provides spaces for organizing questions that students develop from the steps they identified as necessary for task completion. The second and third columns, provide spaces for converting students' prewriting material into answers and details related to these questions. Figure 8. shows the format for writing-thinking frames.

Figure 8. Format for Thinking-Writing Frames

Critical-Thinking Task:
Assignment:

QUESTIONS	ANSWERS	DETAILS
1.		
2.		
3.		

Students use this frame format to "organize, support and catalyze their thinking." (Perkins, 1986, p.7)

5. Help students convert thinking steps for the critical-thinking task into frame questions. Helping students transform thinking steps into frame questions is, again, a matter of negotiation. But it is usually a much shorter and simpler process than negotiating the original steps themselves. Figure 9A. shows how the steps for the categorizing developed by students for the critical-thinking task in the "Car Ads" assignment appear as questions on a thinking-writing frame. Figure 9B. shows the transformation of comparing and contrasting steps for the "First Confession" assignment into thinking-writing frame questions.

Figure 9A. Thinking-Writing Frame for Categorizing

Critical-Thinking Task: Categorizing

Assignment: Categorize the advertisements for cars profiled by your group and tell what these categories suggest about the messages the ad writers wish to send.

QUESTIONS	ANSWERS	DETAILS
1. What general idea underlies all of these items?		
2. What idea collects some items in a first category?		
3. What idea collects some items in a second category?		
4. What idea collects some items in a third category?		
5. What idea collects some items in a fourth category?		
6. How do these categories elaborate the general idea of attracting buyers with images and language?		

Figure 9B. A Thinking-Writing Frame for Comparing and Contrasting

Critical-Thinking Task: Comparing and Contrasting

Assignment: Compare and contrast Nora and the priest in Frank O'Conner's "First Confession" in terms of their attitude toward Jackie and their method of relating to him.

QUESTIONS	ANSWERS	DETAILS
1. What items am I comparing and contrasting?		
2. What points will I use to compare and contrast these items?		
3. How does each item compare and contrast on each point?		
4. How are these items similar and different overall?		

Students write steps for critical-thinking tasks as questions on their frames.

Once students have accomplished this fifth step and have set up a thinking-writing frame for the critical-thinking task they identified in a particular assignment, they have *also created a general frame for that critical-thinking task.* They have at hand a *tactic* (in Perkins' terms) or a *paradigm* (in D'Angelo's terms) for doing a particular kind of thinking in a wide variety of situations. Their first practice with this tactic or paradigm will come as they use the frame to organize a response to the writing assignment in which they first identified the critical-thinking task.

6. Have students answer frame questions with prewriting information and ideas. As soon as students establish the thinking-writing frame for the critical-thinking task represented in a particular assignment, they need to try out the frame with the assignment itself. This means that they need to search back over the prewriting material they developed from activities related to the assignment and use that material to answer the frame questions in columns two and three. Figure 10A. demonstrates how a student might complete a **categorizing** frame for the "Car Ads" assignment and Figure 10B. demonstrates how a student might complete a **comparing and contrasting** frame for the "First Confession" assignment.

Figure 10A. A Completed Thinking-Writing Frame for Categorizing

Critical-Thinking Task: Categorizing

Assignment: Categorize the advertisements for cars profiled by your group and tell what these categories suggest about the messages the ad writers wish to send.

QUESTIONS	ANSWERS	DETAILS
1. What general idea underlies all of these items?	* Aimed at attracting car buyers.	+ Use images and language.
2. What idea collects some items in a first category?	* Idea of car for sport and excitement.	+ Racy, fast, low or high tech, performing on roads, track - mid to high price.
3. What idea collects some items in a second category?	* Idea of car for romance and sex appeal.	+ Couples in formal dress, on wind-swept vistas; strong, silent men; proud, beautiful women - mid price.
4. What idea collects some items in a third category?	* Idea of car for keeping families together.	+ Moms, dads with kids, dogs on trip; moms with car pools, dads with little-league teams, station wagons, vans - low to mid price.
5. What idea collects some items in a fourth category?	* Idea of car as a sign of success.	+ Older businessmen, professional women - cars performing on open-landscape highways - high price.
6. How do these categories elaborate the general idea of attracting buyers with images and language?	* Target a specific market with specific images and language.	+ Young people - images/language of sports cars, romance sexuality. Families - images/language of room for all together. Successful people - images/language of free, open power.

Figure 10B. A Completed Thinking-Writing Frame for Comparing and Contrasting

Critical-Thinking Task: Comparing and Contrasting

Assignment: Compare and contrast Nora and the priest in Frank O'Conner's "First Confession" in terms of their attitude toward Jackie and their method of relating to him.

QUESTIONS	ANSWERS	DETAILS
1. What am I comparing and contrasting?	* Nora and the priest.	+ His sister. + The man who hears his first confession.
2. What points will I use to compare and contrast them?	* Attitude toward him. * Method of relating to him.	+ Mental view of him. + Behavior they use with him.
3. How does each item compare and contrast on each point?	* Nora Attitude - Sees him as a sinner, a threat to her, a nuisance. * Behavior - Rough, jerks him around, hits him. Shows sympathy in talking to him. * Priest Attitude - Sympathy, sees him as a child, not a serious sinner. * Behavior - Protective, indulgent - Makes Nora stop hitting him. Warns him indirectly, gives him candy.	+ "The hatred with which she viewed him ... p. 18. "Some people have all the luck. I might as well be a sinner like you." p. 25. + "You're a terrible child." p. 23. "I'd never have the courage." p. 24. + "Run away out of this, you little jade!" p. 21. + "And hanging is such an awful death." p. 23.
4. How are these items similar and different overall?	* Only similar in one way. Both show compassion. * Mostly different. Nora competes with him as rival. Priest accepts him as a child.	+ Nora only in her voice. The priest in attitude and behavior. + Thinks he is lucky, better off being bad then she is being good. + Shows interest, gentleness and parent-like forgiveness, small penance and candy.

7. Have students write first drafts directly from their frames. To help students set framed critical-thinking skills in their cognitive structures, teachers have them write out first-draft responses to the assignment in the sequence of the questions on their frames. This may result in a response that is fairly flat stylistically, but style is not the fundamental concern at this point. Students can improve on style later as they revise and edit during rewriting. What is important here is that students transfer into writing the sequence of the critical-thinking task as they have laid it out with their frames, and thereby practice the sequence for a second time. Figure 11A. shows a first draft that the student who completed the frame in Figure 10A might write and Figure 11B. shows a first draft based on the student's frame in Figure 10B. The final two sentences in the "Car Ads" draft and the final sentence in the "First Confession" draft go beyond the original frames and represent D'Angelo's proposition that frames themselves generates new thoughts.

Figure 11A. Example of a First-Draft Assignment Response that Carries Out the Critical-Thinking Task of Categorizing

First Draft of "Car Ads" Assignment

Car ads use images and language to attract car buyers. The images and language use four different ideas to attract buyers. The first idea is the car for sport and excitement. Ads for these cars show racy, fast, low-slung and high-tech machines. They are performing on roads and tracks. They are medium to high price. The second idea is the car for romance and sex. These ads show couples in formal dress. They are often in wind-swept vistas. The men are strong and silent. The women are beautiful and proud. These cars are medium priced. The third idea is the car for keeping families together. These ads show moms and dads with kids and dogs on trips. They show moms with car pools and dads with little league teams. Many of these ads show station wagons or vans. They are low to medium in price. The fourth idea is the car as a sign of success. These ads show older businessmen or professional women in cars performing on open landscapes and highways. These are high priced cars.

By designing ads around these four different ideas, car companies can target specific groups of buyers with specific images and language. Young people are targeted with images of sport and romance. Families with images and language which tells that there is room for all to be together. Successful people are targeted with images of freedom and power. Companies suit ads to what the buyers probably want. This way they sell more cars.

Figure 11B. Example of A First-Draft Assignment Response that Carries Out the Critical-Thinking Task of Comparing and Contrasting

First Draft of "First Confession" Assignment

Nora and the priest in Frank O'Conner's "First Confession" can be compared in terms of their attitude, or mental view of Nora's brother Jackie and in terms of their behavior toward him. This paper will look at each character in terms of these two points of comparison.

Nora's attitude is that Jackie is a sinner, a threat to her and a nuisance. As O'Conner states: "The hatred with which she views him was almost diabolical. . " (p. 18) At the end she says, "Some people have all the luck. I might as well be a sinner like you." (p. 25) Her behavior with him is rough. She jerks him around and hits him and only shows some sympathy to him when she talks to him, "...when she spoke her words and tone were full of passionate sympathy." (p. 18)

The priest has sympathy for Jackie and sees him as a child, not as a serious sinner. You can see this in the way he seems to go along with Jackie's plan to kill his grandmother and says with awe, "You're a terrible child." (p. 23) and "I'd never have the courage." (p. 24) In his behavior, the priest is protective with Jackie. He stops Nora from hitting him and says to her "Run away out of this, you little jade!" (p. 21) Also, he doesn't scold Jackie about his plan, just warns him indirectly that people get hung for killing their grandmothers and hanging is an awful death.

Overall, Nora and the priest are really only similar in one way and that is sympathy. But Nora only shows compassion in her voice and not in her behavior. The priest shows it in his attitude and behavior. These two are really quite different. Nora competes with Jackie as a rival. She is jealous of him like a sister and thinks he is lucky for getting away with being bad. The priest shows interest in him and is gentle. He treats Jackie with parent-like forgiveness and gives him a small penance and some candy. The story shows that these differences give Jackie a very different view of men and women.

Students write out first drafts in the order of their thinking-writing frames and thus practice in writing the sequence of steps in a critical-thinking task.

8. Involve students in peer review that reinforces understanding of the critical-thinking skill they have learned. When first drafts are complete, teachers organize students into groups that are arranged to include students who are most and least capable with those of average capability. In these groups, students read each others' first drafts and hold each up to the scrutiny of the three questions shown in Figure 12.

Figure 12. Questions Students Use to Work in Critical-Thinking Review Groups

Questions for Critical-Thinking-Based Editing:
1. How does this paper follow or not follow the agreed-upon steps for accomplishing its critical-thinking task?
2. What material can be added to make agreed-upon steps more clear or complete?
3. To what other situations can we apply the critical thinking used in this paper?

Students' peer review groups use these questions to make sure members' papers reflect the sequence of the original critical-thinking tasks and to consider future applications of the kind of critical thinking they have learned.

As they work, students make notes of group-review results on their first drafts and save these for use during the formal rewriting phase of the writing process. When students enter the rewriting phase and edit and revise their ideas, they need to continue keeping in mind the critical-thinking-skill steps that structure their papers. This means that while they improve papers stylistically through the addition of ideas and changes in syntax, and while they make efforts to use accepted writing conventions, they need, also, to make sure that the critical-thinking skill they have learned by writing the paper is faithfully represented in it. After rewriting, when teachers receive final papers, they evaluate them in two ways. On the one hand, they evaluate final papers for evidence of students' use of the original critical-thinking steps negotiated in the classroom. On the other hand, they evaluate them for evidence of students' improved writing skills learned from creative and critical-thinking skills for rewriting.

9. Assign students new applications of the critical-thinking tactic they have learned. Once students submit their final papers, teachers bring the process of using frames to teach critical thinking full circle by requiring students to apply what they have learned in new situations. Teachers do this using Perkins' recommended *fading* technique so that students take increasing responsibility for applying the learned thinking skill/tactic in new ways. Figures 13A. and 13B. provides examples of new-application assignments a teacher might give students who have categorized car ads or compared and contrasted Nora and the priest in "First Confession." In each figure, the first assignment specifies the content students are to address and the method they are to use in applying the skill of interest. The second assignment in each figure requires students to develop their own method for applying the skill, and the third requires them to identify content to which they will apply the skill *and* the method they will use. In this way, teacher control fades and student control becomes preeminent.

Figure 13A. Examples of Assignments that Require New Applications of the Categorizing Critical-Thinking Skill

New-Applications Assignments:

Instructions: Complete a categorizing frame on one side of a 5x8 card for each of the following.

1. Categorize short stories in our literature books in terms of the age and gender of their central characters.
2. Categorize recreational activities of people in your age group and comment on what these categories suggest to you about your age group.
3. Categorize and comment on the experiences you have had in a particular period of your life.

Figure 13B. Examples of Assignments that Require New Applications of the Comparing and Contrasting Critical-Thinking Skill

New-Applications Assignments:

Instructions: Complete a comparison/ ontrast frame on one side of a 5x8 card for each of the following.

1. Compare and contrast two national public figures in terms of their attitudes and their behavior toward their colleagues, the people, or the press.
2. Compare and contrast two courses of action you might take upon graduation in terms of any three points you identify.
3. Compare and contrast two things that are important in your life.

Students complete thinking-writing frames for these assignments to practice the critical-thinking skill they have learned in new and life-based situations.

Using Frame-Based, Critical-Thinking Instruction Within Existing English and Language-Arts Curriculum

English and language-arts teachers' own writing assignments are the foundation from which they teach thinking and writing with thinking-writing frames. These assignments reflect teachers' understanding of their students' needs and interests and their knowledge of their field. Through them, teachers link students' development and the field of English/language arts in a dynamic based on thinking and writing.

Teachers can easily shape their writing assignments to incorporate critical-thinking skills. Before beginning the semester or year, they review their curriculum guides and the literature or reading texts and other media they plan to use. These materials often contain fully-stated writing assignments or writing-assignment suggestions based on critical-thinking tasks. Or these materials will evoke ideas that teachers can shape into their own, unique writing assignments. Whatever the case, teachers collect five or six assignments, then craft them as critical-thinking assignments--assignments that have topics important to students, critical-thinking skills they need to develop and audiences they should learn to address. Teachers then note these assignments directly in their curriculum guides or in other appropriate places, so they will be ready for use when students are working with the English or language-arts content on which they are based.

Figures 14A., 14B. and 14C. demonstrate how teachers at three different levels might prepare their own writing assignments for teaching critical thinking with thinking-writing frames. Figure 14A. shows assignments developed by a fourth-grade teacher of all subject areas, Figure 14B. shows assignments developed by a seventh-grade language-arts teacher, and Figure 14C. shows assignments developed by an eleventh-grade English teacher. These teachers record their assignments in their own copies of the units they relate to so that they will have them ready for use when they and students come to those units.

Figure 14A. Examples of a Fourth-Grade Teacher's Assignments for Teaching Critical Thinking and Writing with Thinking-Writing Frames

Assignment	Related Unit of Study
1. Write a paragraph describing the solar system so that a person reading your paper can form a mental picture of the relationships of the sun and the planets.	1. The Solar System (Science)
2. Imagine touch-down on another planet. Describe your experiences in a letter to your family.	
3. Write a short tale for our third-grade, folk-tale book about how something in nature came to be the way it is.	2. Folk Tales (Language Arts)
4. Describe the special activity that Maria's family enjoys on "Yuagua Days" so a friend who has not read the story can "see" what the activity is.	
5. Use the article "Animals Need Doctors Too" to summarize the work that veterinarians do for the careers bulletin board.	3. Learning to Lead (Social Studies)
6. Show me you understand by explaining in a paragraph the process Alexander Graham Bell used to teach deaf children.	
7. Use evidence from our reading to support the idea that Columbus and his men worked together in a community.	4. On Stage (Language Arts)
8. In a one-page paper for me, evaluate the radio play *The Phone Call* in terms of realness of characters, suspense and appropriateness of the ending.	
9. Design a plan to produce *The Phone Call* as a video play for the fourth-grade classes in our school.	

Figure 14B. Examples of a Seventh-Grade Teacher's Assignments for Teaching Critical Thinking and Writing with Thinking-Writing Frames

Assignment	Related Unit of Study
1. In a letter to a younger relative or friend, give reasons why it is important to have a personal value system.	1. Short Stories
2. Write a paragraph explaining to me how Tonga's changed image in "Clothes Make the Man" changed his behavior.	
3. In "The Parsley Garden," Al is "humiliated." Write a paper to share with the class explaining why humiliation causes people to withdraw from interacting with others.	
4. Write a story to share with our class about a time when you lost something valuable.	
5. Prepare for our reading of *The Miracle Worker* by writing a paper for me that compares and contrasts stories and plays in terms of how they present setting, plot and characters.	2. Shining Through
6. In Act II of *The Miracle Worker*, Annie says that Helen cannot learn because of her family's love, and the Captain says, "Now what does that mean?" Write a paper telling the captain in your own words how love can cause learning handicaps.	
7. In "Maria's House," Mama said, "Art must be true." Use evidence from the story to show me that Maria finally agreed with Mama. Which picture do you think Maria showed her art teacher? Justify your position in writing to our class.	
8. For our unit test, use categorizing to characterize Annie Sullivan.	
9. Apply Kant's *categorical imperative* to Rain Dove's actions in "Unseen Fire" to see if she uses thoughtful, moral decision-making.	

Figure 14C. Examples of an Eleventh-Grade Teacher's Assignments for Teaching Critical Thinking and Writing with Thinking-Writing Frames.

Assignment	Related Unit of Study
1. Analyze five TV ads for beer, pet foods, housecleaning or gardening products and develop a proposition about the cultural stereotype your ad type creates and the words used to create this stereotype. Write your analysis in a paper to read to the class.	1. Media Messages
2. In a micro-theme, interpret for me the general meaning of Cassius' statement, "The fault, dear Brutus, is not in our stars, but in ourselves that we are underlings."	2. *Julius Caesar*
3. In a two-page paper for a public audience, explain how Marc Antony stirred people to join him. Do this by tracing what he said to inflame them.	
4. Discuss community service in writing for a general class discussion of our school system's new, community-service requirement for high school students.	3. Civic Life and Letters
5. Write a book-jacket summary of a novel of your choice to intrigue a classmate without giving the story away.	4. Novels New and Old
6. We have explored the ironic hero in novels such as *One Flew Over the Cuckoo's Nest* and *The Color Purple*. For your unit paper, explain how the hero in a novel of your choice is or is not an example of the ironic hero.	
7. Some critics say science fiction is merely entertainment and has little lasting value. Others say this fiction is good literature. Take a position one way or the other and write a paper that will encourage the school librarian to minimize or maximize spending on books of this type.	
8 Write a one-page paper to present to the class in which you interpret the meaning of one or more symbols in the novel you are reading.	
9. Propose a rule, definition, correlation or cause-effect relationship for one or more aspects of "top-forty" music.	5. Language and Life

Summary

This paper has proposed a *frames* or *paradigms* approach that English and language-arts teachers can use to simultaneously strengthen the writing and critical thinking of students in grades 4-14. It has demonstrated a methodology for constructing and using frames that is based on student and teacher negotiation of the thinking steps that implement a particular critical-thinking skill. This methodology helps students acquire and internalize the skill and transfer it to new situations. Finally, the paper has suggested ways English and language arts teachers can use a frames approach to critical-thinking and writing instruction within their own curriculum and through their own writing assignments.

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