

## Getting Students to Think

How four colleagues changed

Professor Lee's understanding of critical thinking & writing

Experienced professors of writing-intensive classes are often the best source of ideas for effective teaching. That's why Professor Ray Lee\* sent out an e-mail request for help when he felt that his writing assignments were coming up short.

What was Professor Lee's concern? "No matter how much I explained, I kept getting superficial reactions rather than engagement with underlying issues."

In this issue of *Writing Matters*, we feature assignments that experienced writing-intensive (WI) instructors gave Professor Lee. Each of the four recommended assignments (below) integrates critical thinking with writing. Each can be adapted to meet the needs of students in a variety of disciplines.

Here's what Professor Lee wrote about his first experiences as a WI-class instructor:

The student writing in my WI class was not at the level I expected. The first two analysis essays lacked in-depth thinking. Before assigning the third analysis, I asked students what problems they were encountering. The students explained that they had trouble understanding the assigned reading.

I realized that students need help in learning to do critical, sophisticated thinking. I needed to find teaching strategies that encouraged these thinking skills. I e-mailed several colleagues for advice. Their strategies were different, but they all emphasized nurturing and attending to students' "thinking processes." They asked students to **think on paper first and then create a polished presentation of their "best thinking."** When course content was difficult, they coached students on how to tackle the material. I discovered short writing assignments that simultaneously promote and expose thinking skills.

Below are the four assignments that experienced instructors e-mailed to Professor Lee. They are designed to motivate students to think critically as they work through writing assignments.

P I N E 4.33 M E S S A G E T E X T I N B O X

From: prof\_eddy@hawaii.edu  
To: prof\_lee@hawaii.edu  
Subject: **CONCEPT MAPS**

I want my students to understand that each scientific experiment or theory builds upon existing information. Too often, students see each experiment or theory in isolation. A concept map is a simple assignment in which students visually graph the relationships among ideas. I can take one look at their concept map to see if they mapped the correct relationships.

In class, I tell students to list the experiments they've learned about. Students figure out which one came first, which caused a new branch of research, and so on. Then they put the ideas into a visual "map," either a flowchart or a tree diagram.

You can assign a concept map whenever you have a set of related concepts. And you can choose the appropriate shape: tree, flowchart, wheel with spokes, or geographical-type map. The final result is that students have an improved understanding of the connections among ideas. I see the improvement when I read the literature reviews and discussion sections in their reports.

**Sample concept map:** Development of the short-form periodic table of elements

Sir H. Davy & M. Faraday (early 1800s): developed electrochemistry and documented new elements



J. Dobereiner (1820s): stated that triads of elements exist with similar properties



R. Bunsen & G. Kirchhoff (1860): developed the spectroscope which allowed more elements to be documented



J. Newlands (1864): listed elements by atomic weights and stated elements have similar properties at set intervals



D. Mendeleev, J. Meyer (1870): both declared that element properties are functions of atomic weights; Mendeleev created table listing known elements and left spaces for undiscovered elements

\* Messages have been reconstructed to meet space requirements, and names have been fictionalized.

P I N E 4.33 M E S S A G E T E X T I N B O X

From: prof\_bay@hawaii.edu  
 To: prof\_lee@hawaii.edu  
 Subject: **ENHANCED OUTLINE**

When writing a critique of a speech or of a reading passage, the writer must heed details and recognize how they function in the complete piece. I've discovered that I can help students slow down and observe the details by assigning an "enhanced" outline project.

I provide a grid with three columns. In the first column, I break the speech or text passage into meaningful chunks. I ask the students to complete the enhanced outline by filling in the remaining cells with a content summary (column two) and their understanding of what purpose the content serves (column three).

As a follow-up—sometimes before class discussion and sometimes after—students write a short analysis of the probable impact on an audience. I know my students are prepared to write a formal critique after they complete the enhanced outline and short analysis.

**Sample enhanced outline**

Section (page or time sequence of video clip)	Content (What?)	Purpose (Why?)
Opening comments: 0-6 minutes.	<i>Personal story about father's influence on her career.</i>	<i>Lets the audience know she has strong family values.</i>

P I N E 4.33 M E S S A G E T E X T I N B O X

From: prof\_cal@hawaii.edu  
 To: prof\_lee@hawaii.edu  
 Subject: **ADVANTAGES/DISADVANTAGES LIST**

I push my students to search for alternatives and ask hard questions by requiring an advantages/disadvantages list and then one paragraph in lieu of a first draft. My students have deeply held beliefs that prevent them from entertaining different points of view—and they often fail to realize that other viewpoints may be just as valid as their own. Some students use their first idea instead of thinking through many possibilities and selecting the best one.

My assignment is to list, in complete sentences, at least four advantages and four disadvantages of a public policy decision. I use policies that the legislature is currently debating so students make the connection between college and the professional world.

The students bring their lists to class and discuss them in small groups. I'm often surprised: students can sometimes teach each other as well as I can teach them. After the discussion, they revise their lists and then write one paragraph that explains what position they will take when they write their Position Paper and why. I give feedback on the quality of ideas in the list and on the reasoning used in the paragraph. Then, they write a Position Paper.

P I N E 4.33 M E S S A G E T E X T I N B O X

From: prof\_day@hawaii.edu  
 To: prof\_lee@hawaii.edu  
 Subject: **"CREATIVE" WRITING**

My WI class includes both written and oral debates, based on role-playing activities. The first assignment is to write a debate/dialogue between two fictional people, one who staunchly supports an idea and one who is a knowledgeable skeptic. The dialogues are short, about 10-20 exchanges between two people, but students need a deep understanding of both sides to write an informed debate.

The dialogue format breaks students out of the "standard essay" routine and they seem to be thinking more, or thinking more creatively. I enjoy reading the dialogues more than reading standard essays. Of course, all the rules of writing apply so students are still responsible for making sure their dialogues are clear, concise, and written correctly. They have a good handle on issues when they eventually choose a subject for their research project.

**Professor Lee —  
Final Comments**

"The professors' e-mails opened a door in my own thinking. I realized that how students think through the writing assignment can determine their success or failure.

"If I guide their thinking before they start writing their drafts, I help them become successful.

"Simple, short writing assignments that are 'thinking on paper' are a window into their critical thinking skills. Once students are thinking like the professionals in our field, they are on their way to becoming professionals."