

# Making Magic Happen: Engaging Students to Think Critically in the Content Areas

**Vicky Zygouris-Coe, Ph.D.**

Associate Professor, Education  
University of Central Florida  
[vzygouri@mail.ucf.edu](mailto:vzygouri@mail.ucf.edu)

**Catherine Glass, M.Ed.**

Literacy Coach, Hillsborough County

A presentation given at the Florida Reading Association Annual Conference, September 6-9, 2007, Orlando, Florida



# Student Engagement



If you make a student feel like  
a reader, he'll become a  
reader."

*~Donald Graves*



# Reading in the Content Areas



- Reading in content areas, such as math, science, history, and social studies, implies that students can read and understand expository texts.



# Reading in the Content Areas, cont'd



- Content area literacy – literacy and discursive skills combined with conceptual knowledge “...requires an understanding of how **knowledges** are constructed and organized in the content area, an understanding of what counts as warrant or evidence for a claim, and an understanding of the conventions of communicating that knowledge” (*Moje, Ciechanowski, Kramer, Ellis, Carrillo & Collazo, 2004, p. 45*).



# Reading in the Content Areas, cont'd



- Teachers need to strategically select, integrate in their curriculum, and model effective literacy strategies that will not only engage students with text but also motivate them to continue to read, write, and research a topic.



# Adolescent Readers



- *"Adolescents entering the adult world in the 21st century will read and write more than at any other time in human history. They will need advanced levels of literacy to perform their jobs, run their households, act as citizens, and conduct their personal lives. They will need literacy to cope with the flood of information they will find everywhere they turn. **They will need literacy to feed their imaginations so they can create a world of the future.** In a complex and sometimes even dangerous world, their ability to read will be crucial. Continual instruction beyond the early grades is needed" (p. 99). ~The 1999 position statement of the International Reading Association's Commission on Adolescent Literacy (Moore, Bean, Birdyshaw, & Rycik, 1999)*



# Student Engagement



What role do engagement and motivation have in reading comprehension and comprehension instruction?



# Student-Text Interactions



- Activate students' prior knowledge;
- Guide students' reading of a text;
- Foster active and engaged reading;
- Reinforce concepts gleaned from the text reading;
- Encourage careful/critical thinking when reading a text; and
- Pursue inquiry on different topics. (Tierney & Readence, 2000)



# Cubing



- Cubing is a strategy designed to prepare students in reading and writing (Cowan & Cowan, 1980, Vaughan & Estes, 1986).
- In writing it can be used as a pre-writing activity to stimulate students' thinking about a topic.
- In reading, it can be used to strengthen students' comprehension of a topic from various perspectives.



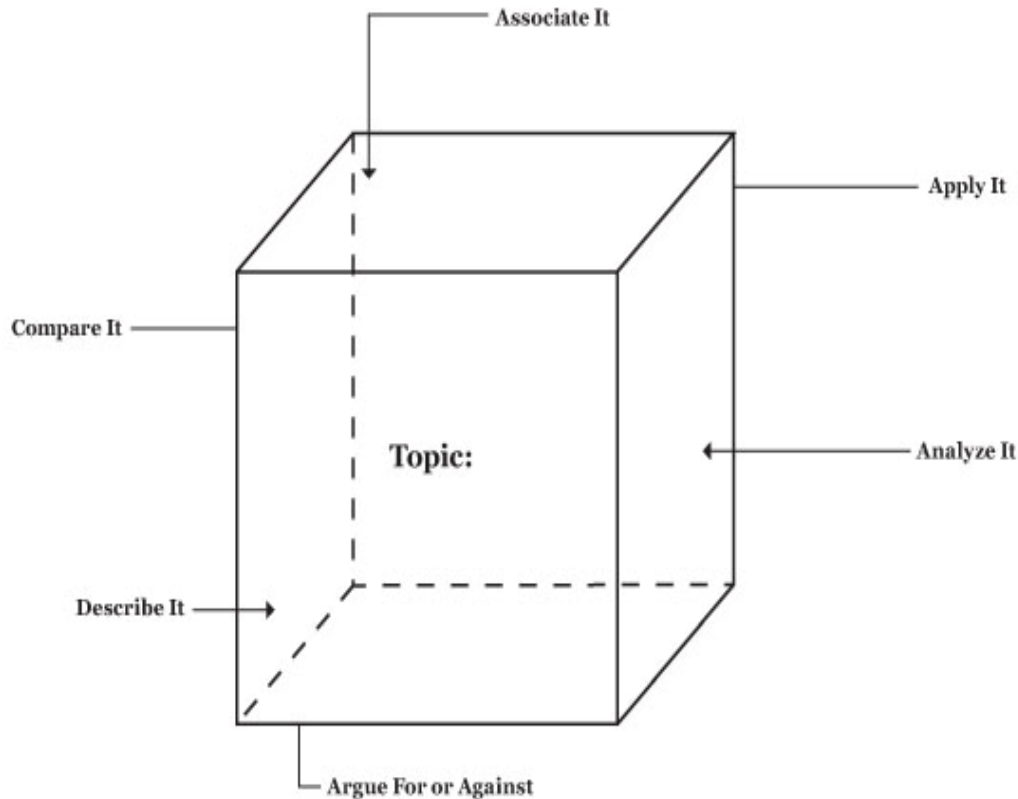
# Cubing, cont'd



- Teachers can use the cubing **as a post-reading strategy** to discuss issues that lead students to think critically about the topic under study. A teacher can use the strategy with the entire class, with small groups, and/or on a one-on-one basis. Any topic can be cubed.



# Cubing



**Cubing is a learning strategy that provides a structure for students to use and share their thinking. Each side of the cube is labeled with a direction that uses the information gained from reading.**

- **Describe it:** How would you describe this topic/issue/event/person? Describe key characteristics/points/and/or attributes including size, shape, and colors.

- **Compare it:** What is it similar to?

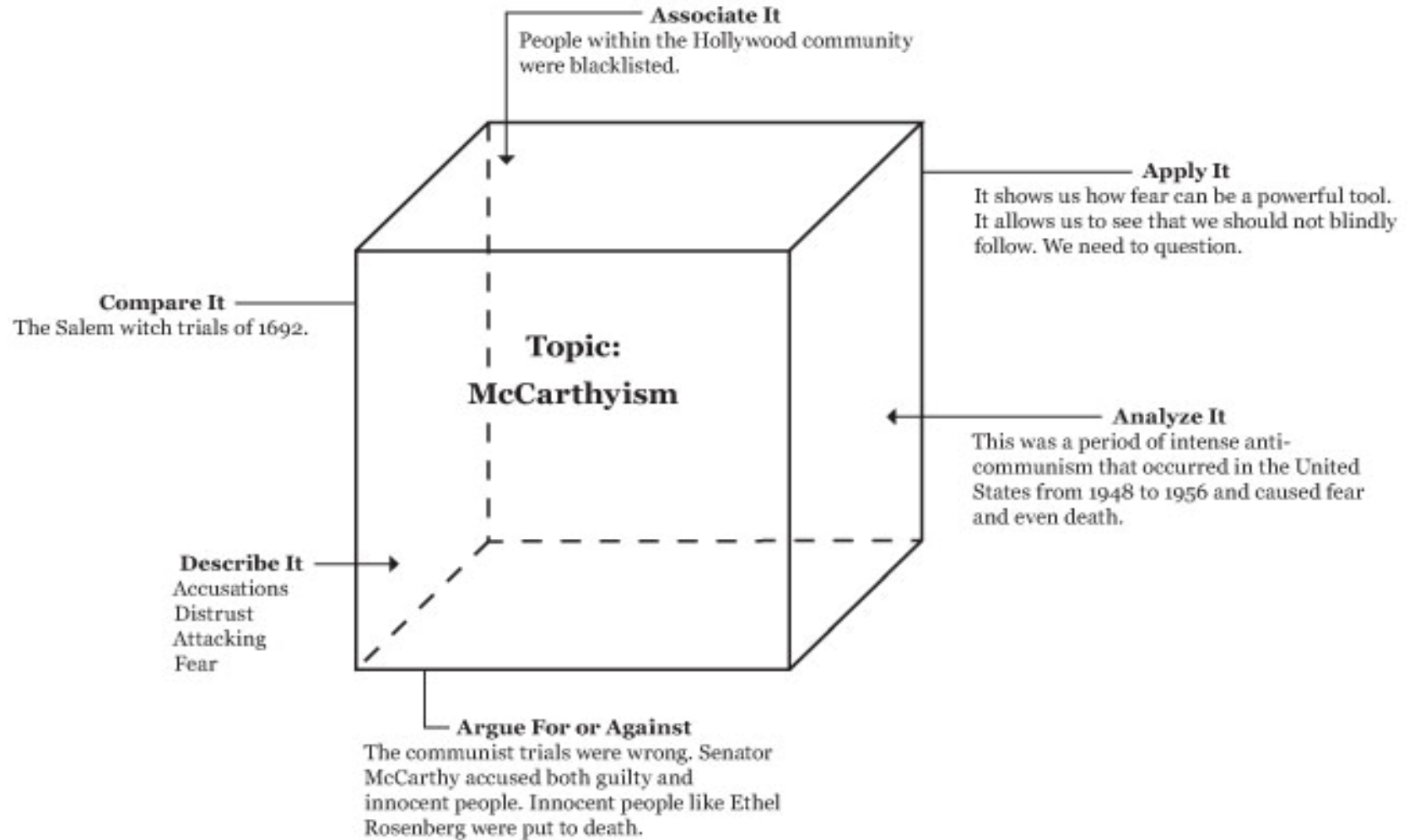
- **Associate it:** What does it make you think of? How does the topic connect to other topics/issues/subjects? How does this decision/event connect to other decisions/events? How does this person/character relate to other people/characters?

- **Analyze it:** Tell how it is made or what it is composed of. How would you break the topic/problem/issue/event/decision into smaller parts?

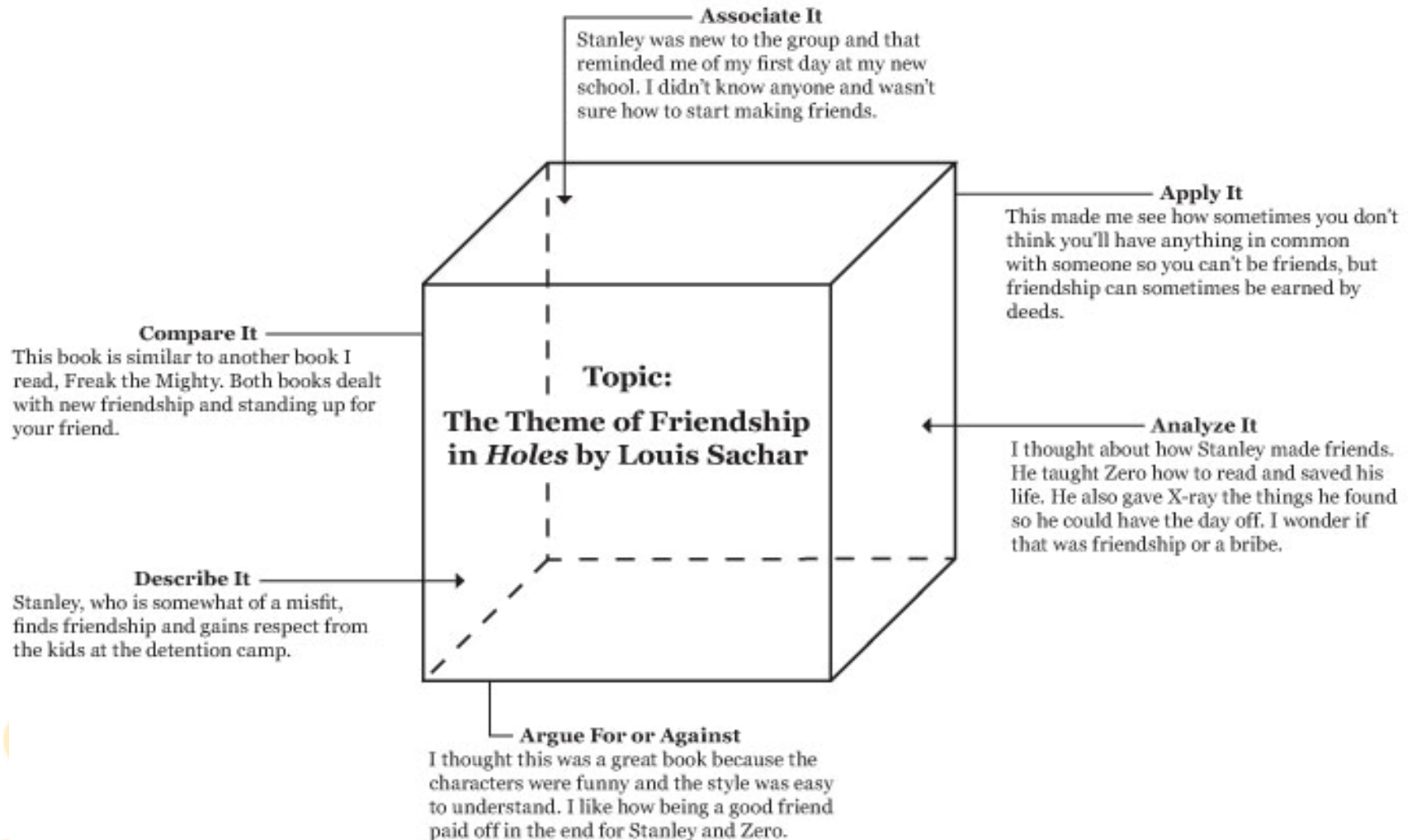
- **Apply it:** What can you do with it? How is it used? How does it help you understand other topics/issues/decisions/events?

- **Argue for or against it:** Take a stand and list reasons for supporting or not supporting it.
  - I am for this because. . . .
  - I am not for this because. . . .
  - This works because. . . .
  - This does not work because. . . .
  - I agree because. . . .
  - I disagree because. . . .

# Cubing-McCarthyism



# Cubing - Friendship



# Why use cubing?



- It allows students to look at an issue or topic from a variety of angles.
- It offers a chance to differentiate learning by readiness.
- It provides uniqueness to a lesson because of their novelty and fun.



# The Need for Metacognition



- Comprehension and critical thinking is not just about using an effective reading strategy!
- Teachers need to model metacognition.
- Students need opportunities and support for metacognition to develop!



# Cubing Variations



- Number the list. Roll the dice to select the item on the list to complete.
- Write each direction on a small strip of construction paper. Mix the strips. Ask each student to draw a strip.
- Apply various levels of questioning as outlined on Bloom's Taxonomy.
  - Find the word that means \_\_\_\_\_ (knowledge)
  - How is this information valuable to our community? (evaluation)



# Cubing Variations

<p><u><b>Thinking Cube 1</b></u></p> <ul style="list-style-type: none"><li>▪ <b>Analyze</b></li><li>▪ <b>Plot</b></li><li>▪ <b>Compare</b></li><li>▪ <b>Contrast</b></li><li>▪ <b>Define</b></li><li>▪ <b>Support</b></li></ul>	<p><u><b>Thinking Cube 2</b></u></p> <ul style="list-style-type: none"><li>▪ <b>List</b></li><li>▪ <b>Describe</b></li><li>▪ <b>Argue</b></li><li>▪ <b>Apply</b></li><li>▪ <b>Conclude</b></li><li>▪ <b>Discuss</b></li></ul>
<p><u><b>Visual/Spatial Cube</b></u></p> <ul style="list-style-type: none"><li>▪ <b>Design a poster</b></li><li>▪ <b>Create a graphic</b></li><li>▪ <b>Color code</b></li><li>▪ <b>Make a collage</b></li><li>▪ <b>Create a banner</b></li><li>▪ <b>Design an ad</b></li></ul>	<p><u><b>Bodily/Kinesthetic Cube</b></u></p> <ul style="list-style-type: none"><li>▪ <b>Create a dance</b></li><li>▪ <b>Role-play</b></li><li>▪ <b>Design a manipulative</b></li><li>▪ <b>Build a model</b></li><li>▪ <b>Play charades</b></li><li>▪ <b>Create a celebration</b></li></ul>

# References



- Cowan G. and Cowan E. (1980). *Writing*. New York, NY: Wiley.
- Moore, D. W., Bean, T. W., Birdyshaw, D., & Rycik, J. A. (1999). *Adolescent Literacy: A Position Statement for the Commission on Adolescent Literacy of the International Reading Association*. Newark, DE: International Reading Association.
- Tierney, R. J., & Readence, J. E. (2000). *Reading strategies and practices: A compendium* (5th ed.). Boston: Allyn and Bacon.
- Vaughan J. & Estes, T. (1986). *Reading and Reasoning Beyond the Primary Grades*. Boston, MA: Allyn and Bacon.



# Literacy Resources



Thank you for attending our session!  
For more information on Literacy Resources, please visit our website:  
<http://forpd.ucf.edu>

