Toward a Taxonomy of Critical Thinking Activities: Writing, Researching, Designing, and Presenting

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Overview

• A Taxonomy of Critical Thinking Activities
• Writing Activities as Critical Thinking Activities
• Research, Design, and Presentation Activities
• Approaches to Using These Activities to Engage Students in Critical Thinking
• If Time Permits, a Brief Activity
• Discussion
Critical Thinking Activities

• Toward an Informal Taxonomy:
  • Out of class assignments
  • In-class assignments
  • Individual assignments
  • Collaborative or cooperative assignments
  • Varying Purposes
  • Varying Audiences
  • Varying Genres (Writing and Presenting), Focuses (Research), and Types (Design)

• Questions to Ask:
  • What features are common across types of activities?
  • What makes an activity effective?
Writing Across the Curriculum

The use of writing activities to help students learn, to engage with information and ideas, and to improve their professional communication skills.

Resource: The WAC Clearinghouse (http://wac.colostate.edu)
WAC: Writing to Learn

• **Definition**: Using writing to help students learn course concepts, conceptual frameworks, skills, processes, and so on.

• **Critical Thinking**: Tends to focus on remembering and understanding.

• **Question**: What kinds of writing assignments and activities can be used to support writing to learn?
WAC: Writing to Engage

• **Definition:** Using writing to help students work with and develop greater control of course concepts, conceptual frameworks, skills, processes, and so on.

• **Critical Thinking:** Tends to focus on applying, analyzing, and evaluating (and typically on the first two of these activities).

• **Questions:**
  - When would you use this kind of assignment or activity?
  - What kinds of writing assignments and activities can be used to support writing to engage?
WAC: Writing in the Disciplines

• **Definition:** Using writing to help students learn how to contribute to discourse within a discipline.

• **Critical Thinking:** Tends to focus on analyzing, evaluating, and creating.

• **Questions:**
  - When would you use this kind of assignment or activity?
  - What kinds of writing assignments and activities can be used to support writing in the disciplines?
Mapping Critical Thinking to Writing

- Creating
- Evaluating
- Analyzing
- Applying
- Knowing
- Remembering

Writing to Learn

Writing to Engage

Writing in the Disciplines
Research: Completely Different?

• **Definition**: Research and other inquiry activities range from learning what others already know (some lab activities, for example) to confirming what is suspected to discovering new knowledge.

• **Critical Thinking**: The full range of critical thinking skills.
Research: Completely Different?

**Questions:**

- What kinds of research assignments and activities can be used to support remembering and understanding?
- What kinds of research assignments and activities can be used to support the application of knowledge?
- What kinds of research assignments and activities can lead to discovery of new knowledge?
- When would you use research assignments or activities?
Design: Can it be Mapped?

• **Definition**: Design activities, like writing activities, involve anything from diagramming and reporting information to developing tools that can be used by others.

• **Critical Thinking**: The full range of critical thinking skills.
Design: Can it be Mapped?

• Questions:
  • What kinds of design assignments and activities can be used to support remembering and understanding?
  • What kinds of design assignments and activities can be used to support applied design? (For that matter, what is “applied design”)?
  • What kinds of design assignments and activities can result in the creation of new information and ideas?
  • When would you use this kind of assignment or activity?
Presenting: Can it be Mapped?

• **Definition**: Presentations of various kinds and for various audiences are necessarily an act of creation – but not every presentation is going to require a great deal of critical thinking.

• **Critical Thinking**: The full range of critical thinking skills.
Presenting: Can it be Mapped?

• Questions:
  • What kinds of presentation assignments and activities can be used to support remembering and understanding?
  • What kinds of presentation assignments and activities involve application, analysis, or evaluation?
  • What kinds of presentation assignments and activities can result in original thinking?
  • When would you use this kind of assignment or activity?
Mapping Critical Thinking to Research, Design, & Presentation

- Creating
- Evaluating
- Analyzing
- Applying
- Knowing
- Remembering
- Learning
- Engaging
- Contributing
Some Questions

- Are writing, research, design, and presenting equally able to call on students to think critically?
- Are there other activities that could be used to support the development of critical thinking skills?
- What are the trade-offs between the relatively low effort required by instructors to prepare multiple-choice exams and the higher effort required to develop assignments that focus on writing, researching, designing, and presenting? Is the extra effort worth it?
Hands-On Activity

**Goal:** Identify Critical Thinking Activities that Will Engage Students, Increase Time on Task, and Enhance Learning

1. Pick a Course and a Challenge
2. Outline an Engaging Assignment (e.g., writing, researching, designing, presenting)
3. Consider How this Will Lead to More Appropriate Challenge, Engagement, Interaction, and Feedback
Discussion

• Observations, Reactions, Comments