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Promoting Critical Reading with Double-Entry Notes: A Pilot Study

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Promoting Critical Reading with Double - Entry Notes

A Pilot Study

Helena Hubl, Lindsey Ives, and Taylor Mitchell
Embry-Riddle Aeronautical University
ERAU Context

- “world’s largest university specializing in aviation and aerospace”
- seven primary fields of study cover an array of aviation-related and non-aviation-related industries
- Daytona Beach Campus enrolls approximately 6,000 students
- 106 possible General Education courses, 70 of which fulfill Critical Thinking Competency

**Critical Thinking:** Students will synthesize and apply knowledge in order to define and solve problems within professional and personal environments
Problem Statement

Nationwide: Reading Practices

- Critical reading is key to success in academic life and engagement in civic life (Carillo, 2017; Horning, 2007).
- Only 20-30% of undergraduates complete assigned readings (Kerr & Frese, 2017).
- Faculty across disciplines should do more to instruct and scaffold student reading (Ihara & Del Principe, 2018).
- Students are more motivated by “learning log” assignments that ask them to analyze, synthesize, and respond to readings than by reading quizzes (Carney et al., 2008).

ERAU: Critical Thinking/Problem Solving

- NACE survey lists critical thinking as the first of seven competencies
- **Critical Thinking/Problem Solving**: Exercise sound reasoning to analyze issues, make decisions, and overcome problems. The individual is able to obtain, interpret, and use knowledge, facts, and data in this process, and may demonstrate originality and inventiveness.
Active reading strategy that allows students to record their responses to and impressions of texts as they read.

Students write down quotes or paraphrases from their assigned reading in one column and respond in some way in another column.

The strategy is also known as dialectical notebooks (Berthoff, 1981) double-entry notebooks (Bean, 2011), double-entry journals (Friedman, 1991) and two-column notes (Evering & Moorman, 2012).
In their “critical thinking, reading and composing” outcome, the Council of Writing Program Administrators defines critical thinking as “the ability to analyze, synthesize, interpret, and evaluate ideas, information, situations, and texts” (WPA Outcomes Statement,” 2014).

Research Question

Do double - entry notes facilitate critical thinking about primary and secondary sources?

Direct and Indirect Measures:
Coded artifacts using NVivo
Surveyed students’ perceptions
<table>
<thead>
<tr>
<th>Class</th>
<th>Sections</th>
<th>Sets of DEN Assigned</th>
<th>Assignment Purpose</th>
<th># of DEN samples coded</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM 122: Freshman composition</td>
<td>1</td>
<td>3</td>
<td>1&amp;2: Prep for assigned reading &amp; written response; 3: Analyze sources for research argument</td>
<td>26</td>
</tr>
<tr>
<td>HU 144: Studies in Art</td>
<td>2</td>
<td>1</td>
<td>Analyzing source for final Art Appreciation Essay</td>
<td>50</td>
</tr>
<tr>
<td>COM 221: Technical Writing</td>
<td>2</td>
<td>1</td>
<td>Analyze sources for the analytical report</td>
<td>27</td>
</tr>
<tr>
<td>HU 395: Contemporary Texts</td>
<td>1</td>
<td>5</td>
<td>Analyze scholarly sources to better understand the primary texts</td>
<td>79</td>
</tr>
</tbody>
</table>

Methodology: Case Study with Multiple Cases
Studies in Art

Critical Thinking Aspects

- Understanding primary/secondary texts
- Making connections between primary artifact, historical context, or other texts/events
- Evaluating credibility of secondary text
- Challenging or qualifying secondary text
- Relating to primary or secondary purpose

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Thesis</td>
<td>Lorenzo Romero Arciaga’s <em>The Cup of Coffee</em> is a controversial piece because of the possibly illegal nature of its provenance, but that only adds to the emotional reaction Cuban exiles feel towards the vibrant and historically important painting.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Signal phrase, credential, quote, and in-text citation</th>
<th>1. In which specific section(s) will you use this and how (say something new)? 2. What other research does this quote require/inspire?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. According to Juan Martinez, from the University of Florida, “Lorenzo Romero Arciaga was born in 1905, in Havana, where he still resides. He studied painting and sculpture at the Academy of San Alejandro in Havana, abandoning it in the late 1920s for the informal teachings and primitivism of Victor Manuel” (92).</td>
<td>1. I’ll use this quote in my Biography and Historical Context sections, but I think I can also use it in the Artist’s Influences section once I find out more about Victor Manuel. Since he was born in 1905, it’s clear that he doesn’t still live in Cuba, but at the time this book was published (1994), he did. So, that tells me he never left Cuba during any of the political upheaval during Batista’s or Castro’s reign. Also, if he left school, that probably means he wasn’t interested in classical modes of creating art, which is evident in the unique style of this famous painting. 2. Why didn’t Arciaga ever leave Cuba? Did he support Batista? What is the San Alejandro Academy? Is it a famous university? What is “primitivism”? Who was Victor Manuel? What influence did Manuel have on Arciaga and this particular painting?</td>
</tr>
</tbody>
</table>
Composition &
Technical Report

Critical Thinking Aspects

- Understanding primary/secondary texts
- Making connections between the source, personal experiences, or other texts/events
- Evaluating the text’s argument
- Articulating the text’s relevance to the research question and intended audience
- Considering the text from multiple perspectives

<table>
<thead>
<tr>
<th>Location</th>
<th>What it says</th>
<th>What I think</th>
</tr>
</thead>
<tbody>
<tr>
<td>Works Cited Entry</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Composition

Questions you might answer in the right column might include but are certainly not limited to the following:

- How does this quote or paraphrase relate to your research question?
- How does this quote or paraphrase relate to your experiences?
- How does the quote or paraphrase relate to other sources that you have read?
- Do you agree or disagree with the quote or paraphrase?
- Does this quote make you think about your topic differently than you did before?
- How might someone from a different culture, discipline, or generation see this topic differently than the author quoted here?

Technical Report Writing

Questions you might answer in the right column might include but are certainly not limited to the following:

- How does this quote or paraphrase relate to your research question?
- How does the quote or paraphrase relate to other sources that you have read? Does it back up information from another source? Contradict it? Present a different angle? etc.
- To which evaluation criterion is this quote most relevant and why?
- Does this quote make you think about your topic differently than you did before?
- Why might this quote be of interest to your audience?
Graphic Literature

Critical Thinking Aspects

- Understanding primary/secondary texts
- Making connections between primary text, personal experiences, or other texts/events
- Evaluating credibility of secondary text
- Challenging or qualifying secondary text
- Relating to primary or secondary purpose

<table>
<thead>
<tr>
<th>Works Cited Entry for Article:</th>
<th>Overall Argument of Article:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quote/Page # from Scholarly Text</td>
<td>Explanation of Selection</td>
</tr>
<tr>
<td>• Copy and paste quote that stands out to you in this box.</td>
<td>• Why did you pick this quote?</td>
</tr>
<tr>
<td>• Put the page number of the quote in ( ).</td>
<td>• What strikes you about this quote?</td>
</tr>
<tr>
<td>• Find quotes that “speak” to you for some reason. Maybe the quote clarifies something you’ve been trying to articulate. Maybe the quote is just an example of beautiful language. Maybe the quote is written in super confusing academic language, and you don’t know what the quote means.</td>
<td>• Is the quote a basic definition or explanation of the primary text?</td>
</tr>
<tr>
<td></td>
<td>• Is the language understandable?</td>
</tr>
<tr>
<td></td>
<td>• Is this quote a good example of analysis?</td>
</tr>
<tr>
<td></td>
<td>• Is this quote a sweeping generalization?</td>
</tr>
<tr>
<td></td>
<td>• Does this quote need more</td>
</tr>
</tbody>
</table>
Indirect Measure: Survey Questions

1. To what extent were you familiar with double entry notes before this course?
2. To what extent did double-entry notes help you more carefully analyze (think critically about) texts and/or images in this course or others?
3. To what extent did double-entry notes assist you in evaluating the credibility of source or the source's overall argument/purpose?
4. To what extent did double-entry notes help you integrate quotes/sources into a final product such as a paper/essay?
5. To what extent did double-entry notes help you synthesize (combine) information from multiple texts and/or images into a final product such as a paper/essay?
Indirect Measure: Survey Results

72% of respondent were not familiar with Double-Entry Notes
<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Understand</td>
<td>Knowing the article/assignment</td>
<td>“This paragraph will be more or less involving how the class overall has helped me gather a greater understanding of the arts, and how I feel I have achieved that this semester.”</td>
</tr>
<tr>
<td>Name</td>
<td>Description</td>
<td>Examples</td>
</tr>
<tr>
<td>-------</td>
<td>-----------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Apply</td>
<td>Applying information to the thesis, research question, personal experience, primary text, or anything outside the text</td>
<td>“This is related to “cost” criterion in the report. Obviously, the HSR [high-speed rail] fares are significantly lower than the air. “</td>
</tr>
<tr>
<td>Analyze</td>
<td>Doing something new with the source</td>
<td>“This quote explains why Marji feels insecure about herself when she looks in a mirror before facing people she truly admires...She may feel the need to mature quickly due to the events of the Iranian Revolution.”</td>
</tr>
<tr>
<td>Name</td>
<td>Description</td>
<td>Examples</td>
</tr>
<tr>
<td>--------------</td>
<td>--------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Evaluating</td>
<td>Assessing the source; refuting, credibility, hunting assumptions</td>
<td>“I picked this quote because this scene in Maus really stands out to me because of its portrayal of metafiction.”</td>
</tr>
<tr>
<td>Synthesizing</td>
<td>Putting source into conversation with other sources</td>
<td>“This quote serves to support a similar quote (seen in the last entry) by Plumer. . . . It serves to show that we are getting closer and closer to [self-driving cars’] acceptance of use in everyday society.”</td>
</tr>
</tbody>
</table>
Direct Measure: Codes according to Percentage of Samples
Conclusions

Process:

- Collaborate more efficiently on coding materials
- Consider making DEN tools more similar
- Review “mismatched” understanding of synthesis between direct and indirect measure
- Add child nodes
- Code for calibration

Critical Thinking:

- Remove lower-level thinking questions on DEN
- Reinforce difference between summarizing and analyzing
- Practice ways to evaluate
- Demonstrate more examples of synthesis
- Adjust expectation for amount and depth of analysis and application
- Incorporate DENs more thoroughly into the classroom
Question 22

You will be missed. Think about your future self. Answer the following question for three points:

In five years from now, what is one specific activity, lesson, or discussion that you might remember about our class?

Your Answer:

While the DFN's were hard to do, required a lot of time, and were overall an unenjoyable assignment, they taught me how to analyze other people's text and how to interpret what that specific author is trying to convey to their audience, not only about the specific novel, but the inter-workings of it as well. In my career field, it is important to be able to analyze others works to help myself think critically about the same subject.


References