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Evaluation of Sources: a New Sustainable Approach Using Argument Analysis and Critical Thinking

Sharon Radcliff
CSU East Bay

Elise (Yi Ling) Wong
Saint Marys College of California

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Evaluation of Sources: A New Sustainable Approach Using Argument Analysis and Critical Thinking

Sharon Radcliff, CSU, East Bay
Elise Y Wong, Saint Mary’s College of California
Project overview

- A new approach to teaching evaluation of sources within English Composition courses
- Incorporates critical thinking questions about the sources
- Trains students to analyze arguments using the Toulmin method and evaluate articles for quality, bias, and “myside” bias in their own writing
Research questions

• How effective is the Toulmin method in the evaluation of sources for their accuracy, credibility, reliability, and bias?

• Are the critical thinking and argument analysis elements adopted in one instructional design sustainable for use in a variety of information literacy instructional settings?
**Critical Thinking:** includes the processes of analysis, synthesis and evaluation necessary to understand and acquire knowledge. Students will learn to recognize, formulate and pursue meaningful questions about their own and others’ ideas, and incorporate logic, careful observation, reflection and experience in the process of developing arguments.

**Information Evaluation and Research Practices:** students will gain an understanding of the standards by which information is evaluated. Students will learn to judge the authenticity, validity, reliability, and originality of the sources of information they use.

**The Toulmin method:**
A systematic argument analysis to evaluate the effectiveness of an argument's claims, reasons, evidence, and the anticipated objections and rebuttals.

**Confirmation or myside bias:**
A tendency for people to favor information that confirms their preconceptions or hypotheses regardless of whether the information is true.
David Perkins, a geneticist, coined the term "myside bias" referring to a preference for "my" side of an issue. (Baron 2000, p. 195)
Threshold concepts:
The term refers to the core ideas and “ways of thinking and practicing” that are characteristic of a discipline but that students often find difficult to grasp. Once grasped, threshold concepts create a new and previously inaccessible perspective and understanding in that discipline. (Townsend, Brunetti, & Hofer, “From Stumbling Blocks to Building Blocks: Using Threshold Concepts to Teach Information Literacy,” ALA annual 2014) “5 Things You Should Read About Threshold Concepts” (ACRL Instruction Section, 2014)
Evaluation of sources using critical thinking and argument analysis

Highlights from research studies

- Students who are taught argument schema using the Toulmin model construct better arguments with more alternative viewpoints and rebuttals. (Nussbaum, 2007)
- Students who learn to critically analyze arguments and alternative viewpoints in dialogue can better avoid “myside” or confirmation bias. (Wolfe, 2009)
- Students who are also taught to generate critical thinking questions based on argument schema create better arguments. (Song, 2012)
Flipped teaching describes a method in which students are exposed to new coursework content before class, through reading or listening to a lecture. Students then come to class with questions and work with their instructors on their assignments or exercises.

Branch, Dahlen, and Ransom, 2014 CCLI panel.
http://www.slideshare.net/dsransom/flipped-library-instruction

Flipped teaching/Flipped classroom: the phrase was coined high school science teachers Jonathan Bergmann and Aaron Sams of Woodland Park, Colorado in 2007

Lage, Platt and Treglia: a group of Economic professors at Miami University, Ohio
More resources on flip teaching

- ACRL. (2013, Jul. 15). Keeping up with...flipped classrooms
- Faculty Focus. (2012, Oct). Understanding the flipped classroom
- Educause Learning Initiative. (2012). 7 things you should know about flipped classrooms
- Campus Technology. (2013, Jan). 6 expert tips for flipping the classroom

Resources:

Flipping the classroom (University of Washington Center for Teaching & Learning) http://www.washington.edu/teaching/teaching-resources/flipping-the-classroom/

Flipping the classroom (Vanderbilt University Center for Teaching) http://cft.vanderbilt.edu/teaching-guides/flipping-the-classroom/

What is a flipped classroom Center for teaching and learning (Univ. of Texas at Austin) https://ctl.utexas.edu/teaching/flipping_a_class/what_is_flipped


The Inverted Classroom, by Robert Talbert, Education Reform, May 2012.
Benefits and challenges of flipped teaching

- Facilitators work with students in an inquiry-based and interactive environment
- More responsive to student learning needs
- Encourage independent thinking and cultivate a deeper active learning experience
- Planning for homework materials can be time-consuming and technologically challenging
- Students don’t always come to classroom prepared
Project background

Originated as 2013-2014 ACRL Assessment in Action project at Saint Mary’s College of California

<table>
<thead>
<tr>
<th>Saint Mary’s College of California</th>
<th>California State Univ., East Bay</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Library instruction in “Argument and Research” course (3 sections)</td>
<td>• Hybrid two-unit Information literacy course</td>
</tr>
<tr>
<td>• Project SAILS</td>
<td>• Pre/Post tests</td>
</tr>
<tr>
<td>• Experimental instruction with “Flipped” teaching</td>
<td>• “Flipped” teaching</td>
</tr>
<tr>
<td>• Pre-session materials, in-class exercise, assignment, and research paper</td>
<td>• Pre-session materials, in-class exercise, assignment, and research paper</td>
</tr>
</tbody>
</table>
### Institutional profile comparison

<table>
<thead>
<tr>
<th>Saint Mary's College of California</th>
<th>CSU, East Bay</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 years Catholic, Lasallian, and Liberal Arts college</td>
<td>Undergraduate (50 programs), &amp; Graduate (36 programs) California State University</td>
</tr>
<tr>
<td>Undergrad/grad programs</td>
<td>Total Enrollment: 13,848</td>
</tr>
<tr>
<td>Total enrollment: 4257</td>
<td>Total tenured &amp; tenure track faculty: 313/ non-tenure track: 448/coaches: 33</td>
</tr>
<tr>
<td>Total FTE students: 3746</td>
<td>Class size varies: for LIBY 1210: 30 maximum</td>
</tr>
<tr>
<td>Total full-time faculty: 213</td>
<td></td>
</tr>
<tr>
<td>Student-faculty ratio: 13:1</td>
<td></td>
</tr>
<tr>
<td>Average class size: 20</td>
<td></td>
</tr>
</tbody>
</table>
### Student population comparison

<table>
<thead>
<tr>
<th>Saint Mary’s College of California</th>
<th>CSU, East Bay (undergrads)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Female:</strong> 59%; <strong>Male:</strong> 41%</td>
<td><strong>Female:</strong> 61%; <strong>Male:</strong> 39%</td>
</tr>
<tr>
<td>White: 43%, Latino: 25%, Asian: 14%, African-American/Black: 2%</td>
<td>African American: 11%; American Indian/Alaskan Native: 2%; Asian/Pacific Islander: 25.6%; Hispanic: 25.6%; White: 20.3%; Multiple/other/unknown: 10.5%; International: 6.8%</td>
</tr>
<tr>
<td>87% freshmen from California</td>
<td>full time: 10,505/part-time: 1,555/</td>
</tr>
<tr>
<td>99% of freshmen living on campus</td>
<td>most students live off campus</td>
</tr>
<tr>
<td>Tuition and fees: $39,890</td>
<td>Tuition: $6,540</td>
</tr>
<tr>
<td>% of full-time undergraduate receiving financial aid: 86%</td>
<td>Receiving financial aid: 74%</td>
</tr>
</tbody>
</table>

[http://www.stmarys-ca.edu/about-smc/facts-figures](http://www.stmarys-ca.edu/about-smc/facts-figures)
Saint Mary’s College of California

- Project overview
- Project design
- Results reported from traditional and experimental library sessions
- Discussion on the effectiveness of traditional and experimental library instructions
Project overview

- Seeks to strengthen the connection between English Composition courses and library instruction sessions to achieve information literacy learning goals and positively impact student success.
- Compares and assesses two versions of library instruction in teaching information literacy in ENGL5 “Argument & Research” sections.
Research questions

- How effective are our traditional library sessions in helping students meet their ENGL5 Information Evaluation and Research Practices (IERP) learning objectives?
- Does our “treatment” in experimental library sessions have any effect building student Critical Thinking (CT) skills?
Project design (Spring 2014)

Faculty survey (all ENGL 5) → 3 faculty volunteers (6 ENGL 5 sections) → Project SAILS cohort test

Data report & discussion ← Qualitative & Quantitative assessments ← Traditional & Experimental library sessions
Faculty survey: extended research essay

- 15/17 responses 88%
- 11 request 2-3 drafts (scaffolding) prior to final version
- 14 include student peer review sessions
- 11 require students to consult and cite specific type of sources (books, magazines, peer-reviewed articles etc.)
- All require students to demonstrate the use of multiple or competing viewpoints
IERP and CT as defined in ENGL5

- Develop search strategies and use library catalogs and databases to find relevant materials for research
- Practice evaluating sources critically
- Seek and identify confirming and opposing evidence relevant to own hypothesis
- Evaluate and synthesize evidence for the purpose of drawing valid conclusions
- Demonstrate academic honesty and safeguard the intellectual property of others by properly integrating and citing sources
1: not important, 2: somewhat important, 3: important, 4: very important
1: not effective, 2: effective, 3: very effective

<table>
<thead>
<tr>
<th>How important is the library session on covering the following learning outcomes?</th>
</tr>
</thead>
<tbody>
<tr>
<td>- IERP 1: important to very important (3.6)</td>
</tr>
<tr>
<td>- IERP 2: important (3.4)</td>
</tr>
<tr>
<td>- IERP 3: important (3.07)</td>
</tr>
<tr>
<td>- IERP 4: important (3.07)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>How effective is the library session on covering the following learning outcomes?</th>
</tr>
</thead>
<tbody>
<tr>
<td>- IERP 1: effective to very effective (2.67)</td>
</tr>
<tr>
<td>- IERP 2: effective (2.2)</td>
</tr>
<tr>
<td>- IERP 3: not effective to effective (1.8)</td>
</tr>
<tr>
<td>- IERP 4: effective (2.13)</td>
</tr>
</tbody>
</table>
What is lacking and should be covered in the library session?

- More coverage of databases and relevant search techniques
- More attention on evaluating sources critically, and why we emphasize peer-reviewed academic journals
- At present, the library sessions do not cover the evaluation, synthesis, and ethical use of sources
- Add another library session if necessary
- Prefer for students to have more time during the session to explore what was covered on their own
The SAILS (Standardized Assessment of Information Literacy Skills) test is a nationally-organized assessment of information literacy skills. It was culminated in 2006 at Kent State University in Ohio.
Results by SAILS skill sets

Student performance in the order from Best to Worst

- Documenting sources
- Retrieving sources
- Understanding economic, legal, and social issues
- Using finding tool features
- Searching
- Evaluating sources
- Selecting finding tools
- Developing a research strategy
### Student performance by group

<table>
<thead>
<tr>
<th>Traditional sessions</th>
<th>Experimental sessions</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Using finding tool features</td>
<td>• Developing a research strategy</td>
</tr>
<tr>
<td>• Evaluating sources</td>
<td>• Selecting finding tools</td>
</tr>
<tr>
<td></td>
<td>• Searching</td>
</tr>
<tr>
<td></td>
<td>• Retrieving sources</td>
</tr>
<tr>
<td></td>
<td>• Documenting sources</td>
</tr>
<tr>
<td></td>
<td>• Understanding economic, legal, and social issues</td>
</tr>
</tbody>
</table>
## Traditional vs. Experimental library sessions

<table>
<thead>
<tr>
<th>Focus on IERP</th>
<th>Focus on IERP + CT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Little pre-session work</td>
<td>More pre-session work</td>
</tr>
<tr>
<td>• Developing a topic</td>
<td>• Developing a topic</td>
</tr>
<tr>
<td>• Formulating search strategies</td>
<td>• Considering alt. viewpoints</td>
</tr>
<tr>
<td>• Using databases</td>
<td>• Evaluating scholarly articles: claim, evidence, reasoning/assumptions, alt. viewpoints, rebuttal, credibility, &amp; reliability</td>
</tr>
<tr>
<td>• Evaluating sources: credibility, reliability, accuracy, &amp; bias</td>
<td>• Citing in MLA</td>
</tr>
<tr>
<td>• Ethical use of information; citing in MLA</td>
<td>• Citing in MLA</td>
</tr>
</tbody>
</table>
Poll: did flip teaching work?

- 46 responses from 3 experimental sessions

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
<th>Not sure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Did you do the Considering Viewpoints worksheet?</td>
<td>23</td>
<td>16</td>
<td>7</td>
</tr>
<tr>
<td>Did you read over the PowerPoint?</td>
<td>7</td>
<td>22</td>
<td>17</td>
</tr>
<tr>
<td>Did you read the annotated article?</td>
<td>8</td>
<td>23</td>
<td>14</td>
</tr>
</tbody>
</table>
Total papers collected from students who attended library sessions: 76 (37 E, 39T)

Preliminary results based on 36 papers (18 E, 18T) thru blind review

- Popular articles from the Web: 46.78% (TRAD) over 43.53% (EXP)
- Popular articles from library: 9.94% (TRAD) over 5.29% (EXP)
- Scholarly articles from the library: 18.71% (TRAD) over 11.76% (EXP)
- Scholarly articles from the Web: less than 2% for both
- Books: 15.29% (EXP) over 8.19% (TRAD)
- General & authoritative Websites: 14.71% (EXP) over 9.94% (TRAD)
Paraphrasing vs. Quoting

<table>
<thead>
<tr>
<th></th>
<th>QUIK</th>
<th>PARAPHRASES</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXIT</td>
<td>62.66% (QUIK 54.44%)</td>
<td>37.34% (PARAPHRASES)</td>
</tr>
<tr>
<td>TRAD</td>
<td>56.60% (QUIK 45.58%)</td>
<td>43.40% (PARAPHRASES)</td>
</tr>
</tbody>
</table>
Based on:
Bibliographic analysis on the quality and the types of sources used on the work cited page
Citation analysis on the quality of in-text and bibliographic citations
Content analysis on the inclusion of alternative viewpoints and how well students integrate and use evidence to support their claims

1: Beginning 2: Developing: 3: Accomplished 4: Exemplary

Students from traditional sessions did better in IERP1 and CT2a
Students from experimental sessions did better in IERP2, IERP3, IERP4

None has achieved the “accomplished” level (based on average ratings)

IERP1: Develop search strategies and use library catalogs and databases to find relevant materials for research
IERP2: Practice evaluating sources critically
CT2a: Seek and identify confirming and opposing evidence relevant to own hypothesis
IERP3: Evaluate and synthesize evidence for the purpose of drawing valid conclusions
IERP4: Demonstrate academic honesty and safeguard the intellectual property of others by properly integrating and citing sources
Post library session questions:
1. What are your impressions of the two different library sessions I taught? What were the most helpful and least helpful aspects?

2. For one session, students reviewed a slideshow of concepts related to evaluating an article, as well as a scholarly article that had been evaluated, and they completed a topic development worksheet and a considering alternative viewpoints worksheet. For the other session, students just completed the topic development worksheet. Do you think the pre-session materials are helpful in preparing the students for the library session? Were they too difficult or too easy?

3. In one session, we integrated critical thinking with the information evaluation & research practice skills we normally teach, by having students identify and evaluate the components of an argument in a scholarly article. Do you think this had an impact on student learning?
Faculty feedback on library sessions

- “In the [experimental] session, the contextualization was helpful. The students seemed more engaged...and I think they understood more of the theoretical whole of citation from that experience.”
- “I like the more extensive session—it felt more interactive and thorough. It showed them an argument in "real life" and once they saw that I think it helped them relax a bit and not be intimidated by what up to that point might even seem abstract.”
- “The new [experimental] session is my preference, with a few tweaks to the presentation and the pre-materials.”
- “I liked both [sessions] for the emphasis on critical thinking in terms of finding key words to search, examining some of the many databases...and in finding and evaluating articles. The teach back sessions are great.”

4. After this experience, do you have a preference between the two sessions?
Faculty feedback on student papers

- “I saw measurable improvements. Both classes really did great jobs establishing the credibility of their sources as well as backing up their own arguments with the evidence they found. I do think they could have used more diverse viewpoints--that seemed to be a risk that could have been taken more.”
- “Overall they did an effective job of using their sources to support an argument they made in their own words (rather than having the sources make the argument for them).”
- “I did not see a distinguishable difference as yet. One major factor is that the two classes were not equal controls. The one place where I think the ‘new’ class did better was choosing sources.”
- “Overall I was a little disappointed with the topics chosen by students in both classes, but I think they did a good job of identifying and using sources that related to their topics and they attempted to have a variety of opinions.”

Post paper grading:
In reading the extended research essays, did you see any difference between your two classes (or any difference between them and previous English 5 classes you’ve had) in terms of:

- their ability to identify the evidence and arguments in their sources?
- the diversity of viewpoints they included in their sources?
- their ability to back up their own arguments with evidence using logical connections?
- the credibility of sources they used?

Were there any other differences you noticed in the quality of the work between the two classes?
Questions for both sessions:

6. How has the way you look for information changed after completing the work for this course? Specifically, what have you learned from conducting research for this paper/project that you will most likely use in the future?
Student reflection on finding myside bias & alternative viewpoints

- “I found good counter arguments & I discovered that I have a bias toward my argument as well.”
- “I found competing arguments, which helped me create a stronger argument!”
- “During the research I did find some articles that do compare against my article which is good because I have other things to write about such as a rebuttal.”
- “While working on this paper I realized some of the competing viewpoints and I actually changed my topic to side with a competing view.”
- “I didn’t have biases. I found possible viewpoints but I didn’t specifically use any of them for resources.”
- “I realize that I haven’t thought about this subject in depth, but now I am interested.”
Student reflection on critical thinking exercises

- “The critical thinking questions were indeed helpful in looking for arguments that were being made, & alternative viewpoints in the paper itself. However, the alternative viewpoints were always more difficult.”
- “The topic development worksheet was very useful in teaching me how to find counterarguments and rebuttal paragraphs in long articles.”
- “They were somewhat useful, but I already knew some of the information before the presentation.”
- “I’ve been taught through several other library presentations to ask these questions of the articles/sources. It was a review.”
Further reflection

- Did flip teaching work?
- Did the Toulmin method work?
- What were the challenges and what did we learn?

Challenges:
Lack of faculty volunteers
Lack of student incentives
# of library sessions vary
Too little time/too much materials
Some materials maybe overly complex

What we learned:
A “common syllabus” should be established in library information literacy instruction
The methods and materials used in library instruction should be flexible enough to be tailored to each class
The relevancy and significance of information literacy should be conveyed to faculty and administrators in shared terminologies
Campus wide buy-in is essential
Discussion

- The differentiation of library session for English 5 from that of English 4 is not all clear.
- The library session needs to align more specifically with the curriculum of English 5, and should be more integrated with the teaching of English 5.
- Librarians should collaborate with faculty on assessing student skill level and any “pre-requisites” that should be covered prior to attending the library session.
- How to avoid students getting repeat content in their library sessions.
Critical thinking and argument analysis

- Does the teaching of critical thinking and argument analysis have a positive impact on student performance in research writing?
- What should librarians do to ensure that the teaching of critical thinking and argument are sustainable for use in a variety of information literacy instructional settings?
Future directions for research

- Explore collaborative opportunities available for librarians to work with faculty in other departments on assessment
- Design library instructions aligned with the threshold concepts in the new ACRL framework
- Consider using hybrid learning model to make one-shot instruction more effective

Six frames of threshold concepts (2\textsuperscript{nd} draft Framework for Information Literacy for Higher Education, June 17, 2014):

1. Scholarship is a Conversation
2. Research as Inquiry
3. Authority is Contextual and Constructed
4. Format as a Process
5. Searching as Exploration
6. Information has Value
California State Univ., East Bay

- Project overview
- Project design
- Results
- Discussion
The CSU East Bay Experiment:
- At CSU East Bay Librarian, Sharon Radcliff, continued and expanded on the original Toulmin flipped classroom experimental model of teaching information literacy, particularly evaluation of sources and awareness of multiple perspectives in the context of the 2-unit quarter length (10 week) information literacy course required of Freshman, LIBY 1210.
CSU East Bay Context:

- Students at CSU East Bay are very diverse with not one ethnic or racial group holding a majority.
- Many are the first student in their family to attend college.
- Many from lower SES (Social Economic Status) backgrounds.
- Many entering freshmen (about 80%) need to take basic (developmental) math and/or English courses.
LIBY 1210 is:

- LIBY 1210 is:
  - An information literacy course
  - Enrollment cap= 30
  - 10 weeks long with possible 11th finals week
  - Taught in both hybrid and online formats
  - Part of freshman cluster system (other classes include GE courses such as critical thinking, English, Math.)
  - Clusters have themes such: “Make a difference”; “Energy and the Environment”
Learning Outcomes for LIBY 1210

- Determine the Extent of Information Needed
- Access the Needed Information
- Evaluate Information and Its Sources Critically
- Use Information Effectively to Accomplish a Specific Purpose
- Access and Use Information Ethically and Legally and Understands that there are Ethical, Legal, and Socio-Economic Issues surrounding Information and Information Technology.
Project Design & Timeline

- The pilot study began in one section of LIBY 1210 in Winter Quarter of 2013; of 30 students over half signed consent to use their work in the study; then continued with two sections of LIBY 1210 in the spring of 2014, of 60 students, over 2/3 signed the consent form.

- Research questions and experimental instruction started out the same as Saint Mary’s College; additional elements were added to the experimental instruction by Spring of 2014 and additional research questions asked.
Image-Based Instruction

- Background: During the winter quarter, the librarian/researcher decided to incorporate images into the Toulmin argument and information literacy instruction.
- A new IRB was submitted and accepted to include two new assignments: one using photojournalism and one using advertisements into the research design, together with research log homework assignments; the course contained two additional visual assignments, infographics and political cartoons
Rationale for including images:

# Use of Images in Social Media

## The Landscape of Social Media Users

<table>
<thead>
<tr>
<th>Use Any Social Networking Site</th>
<th>% of Internet users who...</th>
<th>The service is especially appealing to...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use Facebook</td>
<td>67</td>
<td>Adults ages 18-29, women</td>
</tr>
<tr>
<td>Use Twitter</td>
<td>16</td>
<td>Adults ages 18-29, African-Americans, urban residents</td>
</tr>
<tr>
<td>Use Pinterest</td>
<td>15</td>
<td>Women, adults under 50, whites, those with some college education</td>
</tr>
<tr>
<td>Use Instagram</td>
<td>13</td>
<td>Adults ages 18-29, African-Americans, Latinos, women, urban residents</td>
</tr>
<tr>
<td>Use Tumblr</td>
<td>6</td>
<td>Adults ages 18-29</td>
</tr>
</tbody>
</table>

Source: Pew Research Center’s Internet & American Life Project Post-Election Survey, November 14 – December 09, 2012. N=1,802 internet users. Interviews were conducted in English and Spanish and on landline and cell phones. Margin of error is +/- 2.6 percentage points for results based on internet users. Facebook figures are based on Pew Research Center’s Internet & American Life Project Omnibus Survey, December 13-16, 2012. Margin of error for Facebook data is +/- 2.9 percentage points for results based on internet users (n=880).
Instructional Materials

- The following materials were used:
  - (same as SMC’s)
  - Topic development worksheet
  - PowerPoint on Toulmin method of analyzing arguments with applications to evaluation of sources.
  - In class group work on analyzing an argument article using Toulmin
  - Homework assignment: finding two articles with different perspectives on student’s topic.
Additional Materials

- (Not in SMC’s version)
  - Alternative perspective group & research log homework using photojournalism
  - Appeals, Claims & Evidence Group work and research log homework using Advertisements
  - Data analysis, perspective and bias group work and research log using Infographic
  - Bias and alternative perspective group work using political cartoons
Analysis

- To understand the effect of this instruction on students' knowledge and skills in information literacy, building a strong argument and avoiding “Myside” bias, the following were collected and will be analyzed:
  - Pre/post test scores on a multiple choice information literacy test (used by the department)
  - All worksheets associated with the experimental instruction (homework and in class group work)
  - Argument/Research essays with annotated bibliographies
  - Reflective question responses
Design of Image-Based Instruction

- In addition to the Toulmin-based instruction already described, the following four image-based instruction units were added on:
  - Photojournalism
  - Advertising
  - Infographics
  - Political Cartoons
- For more info go to: http://imagininingformationliteracy.wordpress.com/
- These included group work and homework (research log) relating to the students research paper topic
Photojournalism

- Learning objectives:
  - Learn to research news photo
  - Analyze photo for perspective on event
- Description: students given one news photo
  - use Google image for basic information
  - Use library databases for in depth information
  - Find another photograph illustrating an alternative perspective on the event.
Example 1: (photographer, Jeff Widener)
Example 2: Re-interpreting the assignment (photographer, Joe Rosenthal)
Advertising

- Learning Objectives:
  - analyze appeals in adds using Jib Fowles 15 appeals of advertising
  - Deduce claim(s) made by ad & prove or disprove claim

Description:
Students are given several ads on nutritional supplements and sports drinks
Students choose one to focus on
Find claims; then search library databases for evidence.
Example: Analyze appeals/claims/evidence via visual and information literacy

Pure Intentions.
Pure Health.
Pure Fish Oil.

Omega-3 (EPA + DHA), the essential fatty acids found in Nordic Naturals fish oil:
- Maintain cardiovascular health
- Assist with normal body fat metabolism, making it easier to manage weight and stay fit
- Promote positive mood and well-being
- Enhance joint flexibility

With unsurpassed purity, freshness, and taste, Nordic Naturals honors your path to wellness.
Political Cartoons

- Learning Objectives:
  - Learn to analyze political cartoon
  - Identify claim being made
  - Identify perspective or viewpoint of cartoon
  - Identify bias
- Description:
  - Students choose from political cartoons on a website
  - Analyze the cartoon and research the event or situation in the cartoon, analyzing perspective
Political Cartoons: Alternative Perspectives
Infographics
http://create.visual.ly/

- Learning Objectives
  - Discover how data can tell a story
  - Analyze sources and perspective/bias of infographic

- Description:
  - Students choose an infographic
  - Define the claims and evidence
  - Check for accuracy of source
  - Determine perspective/bias of infographic
Micheal Najjar: Nasdaq Dow Jones, Nikkei, Lehman Brothers; Argentinean Mountain Range
Q 1, 2, 4, 13 are topic development related; 9, 10, 12 are evaluation related; 17 & 20 relate to citing and 16 involves the research process.
Section 14 Pre/Post Test Scores
Research Paper/Annotated Bibliography Analysis

- The research papers will be evaluated using the same criteria as the SMC papers for sources and citing.

- The learning outcomes used for the rubric evaluation will be specific to East Bay and slightly different from those used by SMC.
Reflective Essay Analysis

- Reflective essays are analyzed by the department as part of their program level assessment, using one learning outcome, rotating in a new one each year.

- For this research, the reflective essays will be evaluated using learning outcomes:
  
  - With attention being paid to understanding of Myside bias and alternative perspectives.
Future Research Questions

- Comparison study between using Toulmin with and without the image component
- Comparing the instruction design using Toulmin to the newer Walton method which emphasizes teaching argument as dialogue
- Discovering if the use of images has an effect on motivation or level of engagement
- Exploring potential correlations between preference for visual learning and/or spatial ability and performance using image-based instruction
Questions and comments?

- Sharon Radcliff
  Sharon.radcliff@csueastbay.edu

- Elise Y Wong
  yw3@stmarys-ca.edu
  http://www.slideshare.net/EliseWong4