

BRIDGE 2010-2011
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COM 215 Computer-Assisted Reporting

1. **Identify class level, specify whether core, elective, or major requirement, any other pertinent information on class demographics.**

I selected Computer-Assisted Reporting (COM 215) as the course I wanted to focus on in the BRIDGE Faculty Development Program. COM 215 is required of all Journalism majors in the Department of Communication and Journalism. The course is taught in one of the Department's computer labs, thus 18 students generally take the course (there are 18 computers in the lab). Most of the students who take the course are junior and senior journalism majors.

2. **What problems or questions about my students' learning and my teaching strategies did I address?**

The problem I wanted to address during my participation in BRIDGE involved a CAR course objective: "Students will become familiar with Internet research, spreadsheet programs, basic math often used in reporting, and data on the Internet."

For some background, Computer-Assisted Reporting (or CAR) involves teaching journalism students how to report and write news stories based on data downloaded from the Internet. An example would be a news story discussing the increase in the number of Type II diabetes cases over the past 10 years based on data from the Center for Disease Control. (One of my students wrote this story this past semester.)

CAR was a new course for me when I came to Rider in the fall of 2009. I taught the class for two semesters prior to my participation in BRIDGE. Before I taught the course for the first time, I reviewed textbooks, CAR articles, and CAR syllabi from other successful journalism programs and decided to divide the course into three sections: the first section taught students the basics of the Internet, including how to download databases, Excel, and basic math, such as the calculation of percentage change and rates; the second section taught students how to interpret the data; the third section discussed how to write a CAR news story. Numerous in-class and out-of-class assignments allowed the students to practice these skills. The course also involved three quizzes based on the material they learned in the course, and students were required to submit a final 1,800-word CAR article, which included at least one interview and was uploaded to a course website.

During my first two semesters teaching the course, I found a vast difference in the skill level of the students. Some students were comfortable performing mathematical calculations, while many were not. Some students had used Excel prior to taking the course or easily learned the program, while others did not. The ability to use math and Excel is critical to the students' successful performance for the rest of the course. I needed to find a way to ensure that all students learned these skills without losing the interest of students who came into the course at a higher skill level in these areas. I also needed to help some students overcome their fear of numbers and spreadsheet programs (e.g., I had two students give up on their Excel quiz one semester). Lastly and most importantly, I wanted to be sure that students were integrating their knowledge. I wanted them to not only learn Excel, but to understand the meaning behind the numbers and to convey their significance to a broad audience.

3. **Did I rethink my course goals?**

I rethought my approach more so than my goals. I reconsidered the course design as a result of our discussions and readings in BRIDGE. I redesigned my course syllabus and weekly schedule using backward design. I began by considering one goal that I wanted my students to be able to accomplish by the end of the course: to be able to report and write a CAR news article.

To achieve my new objectives, I knew I wanted the students to go beyond becoming familiar with Internet research and Excel. The students needed to begin writing news briefs and articles based on data earlier in the semester. The writing aspect of CAR involves an understanding not only of the inverted pyramid structure of a news story, but also an ability to download databases, interpret data, and understand the results and implications of data analyses enough to clearly and concisely explain them to mass audiences. The critical thinking skills necessary to write about data and their implications needed to be practiced earlier in the semester so that I could better achieve the outcome I wanted. Also, students would catch math and analytical errors in the writing process, so writing earlier on helped to achieve my original objective.

Thus, CAR students for the 2011 spring semester practiced not only becoming familiar with Internet research and collecting and analyzing data, but – earlier in the course – interpreting, synthesizing and evaluating data for mass audiences. For example, for the fourth class meeting this past spring semester, students wrote a 300-word profile of a person in the news based on Internet research. The profile was required to be written as a news story, with the most compelling and important information in the lead. Another writing assignment was due for the ninth class meeting this spring, and another was due for the 11th class meeting. The latter two writing assignments were blogs based on the interpretation of data analyses the students conducted as part of the class. In addition, the course's quizzes required students to write news briefs based on data. When I taught CAR during the 2010 fall semester, students began their writing assignments after the midterm.

4. **What methods did I use to gain information?**

I sought information about how well students were performing toward the goal through their performance with the writing assignments. News writing assignments are similar to Content, Form and Function Outlines and Analytic Memos suggested in our Classroom Assessment Techniques handbook. In Content, Form and Function outlines, students carefully analyze the “what” (content), “how” (form), and “why” (function) of a particular message (p. 172), or, in this case, of a particular set of data. In Analytic Memos, students analyze a particular problem or issue (p. 177). Both methods assess the students' skills at separating, analyzing and interpreting data.

5. **What examples or evidence of student performance can I offer to illustrate how I drew conclusions?**

It is clear that students in the 2011 spring semester have significantly improved their writing and analytic skills since the start of the course. The leads and level of research evident in their final news stories are much stronger than in previous semesters.

For example, one student wrote a CAR sports story with the following draft lead:

The National Basketball Association announced back in 2010 that the NBA Salary Cap for the 2010-2011 season will be \$58.044 million. The tax level for the 2010-2011 season has been set at \$70.307 million. Any team whose team salary exceeds that figure will pay a \$1 tax for each \$1 by which it exceeds \$70.307 million. There seems to be a trend every year for the NBA to increase the salary cap.”

When prompted to base his lead on his data analysis, the student wrote this revised lead:

There has been a consistent rise in the salary cap in the past 20 years for the NBA, and it is not uncommon to see more and more teams exceeding the salary cap.

The revised lead reflects a competent analysis of the data and an ability to synthesize and evaluate the most important information for the audience.

Students also were able to clearly explain the significance of their data analysis as a result of consistent practice with interpretation and writing. One student, writing about earthquakes, started her article with the following three paragraphs:

LAWRENCEVILLE, N.J. – The recent earthquake in Japan and subsequent devastation has left many people questioning if earthquake severity and frequency is increasing.

But while it may seem as though there is reason for concern about an increase in earthquakes, data from the National Geophysical Data Center (NGDC) show there is nothing unusual about the number or intensity of earthquakes the world is experiencing.

Data from the NGDC show that since the 1900s, there has been a decade average of 95 earthquakes worldwide reaching a magnitude 7.0 or higher. Although data from 2000 to 2010 shows a slightly higher number than the decade average with 115 earthquakes, geologist Dr.

Jonathan Husch attributes this to “normal statistical fluctuations”. The data from NGDC support this explanation, as decade averages run from as high as 132 earthquakes in 1900-1910, and as low as 67 earthquakes from 1980-1990.

In a few short paragraphs, the student was able to effectively interpret her analysis of the data and explain their meaning to the reader. She also was able to provide context for the data through her interview. Writing earlier in the semester resulted in the students being able to interpret and clearly explain the data more effectively.

By having students write earlier in the course, I also have been able to more quickly identify students who are struggling with their data analyses and writing. Thus, students who need help have been able to receive it earlier in the course and many have improved by the end of the term.

Another benefit of requiring students to write earlier in the term is that they can learn specific technical skills while completing more complex analytic tasks. For example, one writing assignment this semester required students to sort data and calculate percent changes in Excel, then interpret and write about the relevance and significance of changes in the data. Another assignment, which was designed to provide students with practice inserting links and charts into a WordPress post, (which they are required to do for their final papers), was combined with a blog assignment to research and discuss how digital technologies are changing the field of journalism.

6. What theories or debates about learning frame or illuminate my inquiry?

Bloom’s taxonomy (1956) discusses levels of intellectual behavior important in learning. Bloom’s hierarchy begins with knowledge, including the ability to arrange, define and recall information, to evaluation, which involves the ability to appraise, argue or predict. Bloom found that more than 90 percent of test questions student encountered at the time that he constructed the taxonomy required them to think only at the lowest levels of the cognitive domain. The assignments and construction of the CAR course for the spring were designed to require students to think toward the higher levels of Bloom’s taxonomy, specifically, analysis, synthesis and evaluation. Rather than recalling how to conduct Excel operations, the students earlier in the semester moved to higher levels in Bloom’s cognitive domain, including analyzing the data, interpreting them and coming to some conclusions, and evaluating the data’s significance by writing a news story starting with the most important information in the lead.

The early writing assignments also reflect Nelson’s (2003) call for a pedagogy that will stimulate critical thinking. In his article, “On the Persistence of Unicorns: The Trade-Off between Content and Critical Thinking Revisited,” Nelson argues that students’ cognitive development can move into realms where they understand that nothing, even so-called facts, is black and white. Students involved in exercises that require critical thinking eventually grapple with what Perry and Nelson term “contextual relativism,” or the ability to make decisions based on relevant criteria and come up with “the best answers that they can provide within the rules of our field” (p. 173). Students then move to “commitment,” or the ability to take responsibility for the validity of their beliefs.

Students in CAR learn that numbers are not facts, but can be interpreted in different ways by different people. Thus, by analyzing and interpreting data, then interviewing an expert in the field about the issue at hand, students transition toward contextual relativism. They then write about the subject in a news story, using a journalistic objective approach and employing fairness and balance, thus moving toward commitment, not so much of their own beliefs but in taking professional responsibility for discussing the subject matter to a broad audience.

7. What have I learned / what new hypotheses have I developed so far?

Students need to analyze, synthesize and evaluate information early on in a writing course in order to improve not only their writing but their critical thinking skills.

8. Where will I go from here?

I will be developing new journalism courses over the summer. I will use the information we’ve discussed in BRIDGE and my experience with the CAR course when I design the courses. Backward design, Bloom’s

taxonomy, and Nelson's and Perry's contextual relativism and commitment are some of the concepts I intend to incorporate into the new courses.