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Peg Cook

Elmhurst College, cookm@elmhurst.edu

Mary Barbara Walsh

Elmhurst College, walshm@elmhurst.edu

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COLLABORATION AND PROBLEM-BASED LEARNING

Integrating Information Literacy into a Political Science Course

Peg Cook
Elmhurst College

Mary Walsh
Elmhurst College

ABSTRACT

This paper details the collaborative efforts of a reference librarian and a political science professor to meld seamlessly the study of politics with the acquisition of information literacy skills using a problem-based learning approach. Students in an introductory American Government class were engaged in a group project in which they acted as media consultants for the political candidate of their choice. Two information literacy sessions were embedded into the project. ACRL Information Literacy Standards were used to generate and assess performance outcomes. Student feedback, as well as pre-test and post-test results, indicate that a problem-based approach to enhancing information literacy in political science courses effectively engages students interest and improves students' information literacy skills.

INTRODUCTION

Students in the 21st century classroom are bombarded with information. Students of politics are no different. With the click of a mouse, or tap of a pad, students can follow a bill through Congress or find all recent executive orders issued by the President. The same click may also lead them to a Photoshopped image of Barack Obama cruising with Osama Bin Laden or to a rant about the US government insiders behind 9/11. A recognition of the increasing ease with which information, and misinformation, is communicated points to a necessary component of the education of any student of politics: information literacy (IL). An education in politics requires foundational skills in distinguishing credible from less credible sources and in distinguishing biased from less biased sources. Acquisition of the skills necessary to navigate the information – or misinformation – highway is an important tool for future citizens and students of politics to master.

This paper details the collaborative efforts of a reference librarian and a political science professor to meld seamlessly the study of politics with the acquisition of information literacy skills. A problem-based learning approach provides an avenue for engaging political science students in an exploration of political processes while honing information literacy skills. To this end, students in an introductory American Government class were engaged in a group project in which they acted as media consultants for the political candidate of their choice. Two information literacy sessions were embedded into the project. ACRL Information Literacy Standards were used to generate and assess performance outcomes. Student feedback, as well as pre-test and post-test results, indicate that a

problem-based approach to enhancing information literacy in political science courses effectively engages students' interest and improves students' information literacy skills. Overall, this approach provides an opportunity for students to practice and examine the information literacy skills necessary to participatory democracy.

REVIEW OF LITERATURE

Problem-based learning (PBL) is student-directed learning in which the instructor acts as the facilitator and students pursue questions and solutions of their own choosing within the parameters set by the instructor and the project (Bell, 2010). PBL began in medical schools as a result of dramatic and continuing changes in the field. Medical schools found that they were training students for a field in which the knowledge base and skills were evolving so quickly that the content and techniques mastered during medical school were often obsolete by the time the students actually practiced medicine. As a result, some medical schools in the 1960s adopted a PBL approach with its emphasis on the skills necessary to life-long learning. They presented students with simulated patient scenarios of ever increasing complexity. In tackling the problem, students improved their diagnostic and prognostic skills and acquired content along the way (Spence 2004). Necessary to a successful response to the problem is collaboration where together students weigh options, information and outcomes (Savery, 2006). This reflects real world situations which require team work, collaboration, interpersonal skills and the motivation of various team members toward a common goal.

In the last 40 years, PBL has spread well

beyond medical instruction. PBL's emphasis on higher-order critical thinking skills, such as understanding and application, proved attractive to teachers of every grade level and across academic disciplines. Studies investigating the effectiveness of PBL indicate that students of this approach acquire better problem solving skills (Bell, 2010; Ravitz, 2009). Moreover, students taught using PBL were more likely than those in more traditional classrooms to report an affinity for the topic of instruction. For example, a study of 270 physics students engaged in self-directed activities reported a more positive attitude towards physics than those students in a teacher-directed class (Erdemir, 2009).

PBL provides a structure for integrating active learning techniques into information literacy instruction; this can often be daunting to librarians faced with limited classroom time and much material to cover (Munro, 2006). As early as 2001, Macklin was describing variations on implementing PBL into information literacy instruction. Building on the use of PBL techniques in medical school, Koufogiannakis et al. (2005), among others, studied the efficacy of taking the PBL teaching technique and extending it into information literacy instruction delivered to medical school students. As PBL-based instruction moved into other disciplinary environments, such as engineering schools, librarians expanded their IL teaching to include PBL instruction for these students. In the context of disciplines that were already heavily invested in PBL instruction, the extension of this technique into the IL environment seemed organic. Studies (Hsieh and Knight, 2008) indicate that engineering students, already familiar with group-centered, task-focused, collaborative technique, find that their research skills also are improved with the use of PBL instruction.

Kenney (2008) provides a framework for using PBL in the traditional "one shot" library session. Using PBL, she argues, benefits all constituents in the information literacy process; students learn more, librarians have more opportunity to engage with students, and classroom faculty members are pleased with the results. Enger et al. (2002) discussed the benefits of incorporating PBL into information literacy sessions and also addressed the challenges inherent with 50 minute one-shot sessions, suggesting that longer sessions and more involvement in the structure of the course would be beneficial. Pelikan (2004) suggests some pragmatic approaches to implementing PBL in the IL setting. He suggests carefully crafting the flow of the session and preselecting the most helpful and useful resources for students to explore. Snaveley (2004) discusses some of the challenges inherent in incorporating PBL techniques in the information literacy setting, including the necessity for more content development and preparation time.

In the context of political science, a problem-based learning approach enhances the push, over the past two decades, to integrate active learning into the political science curriculum. In 1991, John Wahlke, issued a report for the American Political Science Association and the Association of American Colleges in which he identifies purposes in political science education. These include the maximization of "students' capacity to analyze and interpret the significance and dynamics of political events" and the ability "not merely to understand, or to manage their effects . . . but also to evaluate and seek to shape them" (Wahlke, 1991, p.49). Wahlke's report suggests that the mastery of content is empty (or at least diminished) without the acquisition of skills necessary to interpret and synthesize new information. These

critical thinking skills, at their best, serve as a bridge to creative thinking in which the student arrives at conclusions which are uniquely his/her own. Students of politics need not only to interpret and synthesize new information, but also to respond to the dynamic and changing political environment. Kurt Burch (2001) notes how a PBL approach not only promotes the acquisition of skills but also models behavior essential to participatory democracy. The student collaboration, diversity of perspectives, discussion and resolution necessary to the PBL project are the skills necessary to active citizenship. Political science classrooms, at their best, transmit the value of, and excitement in, political participation. Dynamic, engaged political science classrooms open the door between passive and active citizenship; PBL can furnish that door.

So, the PBL emphasis on higher-order critical thinking skills, the increased interest in the subject matter and the stress on collaboration all translate well to a political science classroom. Information literacy is the skill that brings these elements together. A successful, adequate response to the PBL problem requires the ability to distinguish information from misinformation and credible from less credible sources. Alexander (2009) emphasizes the importance of information literacy in a political science context: "I contend that political literacy and information literacy are inextricably linked and impossible to separate" (p. 11).

One of the most useful ways to integrate IL instruction into the political science classroom is to have the IL instruction become a seamless part of the research project process. Cheney (2004) describes a collaborative effort between librarians and faculty at Penn State's School of

Information Sciences and Technology. In this process, the librarian and faculty collaborated on creating an assignment for the course that had information literacy goals as intentional steps in the overall research project. Students followed the collaborative PBL model in researching IT-related research questions, and then used what they had found in their class projects. On this basis, Cheney, and others (Spence, 2004) call for more integration of PBL techniques in IL instruction to increase beneficial collaboration between librarians and faculty and also to increase students' abilities to effectively complete college-level research projects.

In summary, PBL effectively brings information literacy and political science together by resisting the separation of subject and process (Cheney, 2004). PBL demands that students collaborate to respond creatively to a problem; it also requires that faculty and librarians collaborate to generate problems that engage students in an exploration of the subject while acquiring and practicing skills.

THE PROJECT

This case study describes a problem-based learning project implemented in three sections of an introductory-level American Government course offered at Elmhurst College. Elmhurst College is a private four-year liberal arts college located in the Chicago suburbs of Illinois with an FTE of just over 3000 students. The A.C. Buehler Library of Elmhurst College has a very active Information Literacy program (over 200 sessions a year). One of the goals of the librarians in general is to incorporate as much active learning instruction as possible into IL sessions.

This librarian (Peg Cook) was approached

by Dr. Mary Walsh of the Political Science Department to conduct an information literacy session for her American Federal Government class in 2008. In discussions about how to best assist students in the class, we discovered our common pursuit of PBL learning strategies. Mary Walsh revealed that she was revising a currently implemented PBL project to include more sequenced steps in the process and more explicit learning outcomes. Both perceived an opportunity to collaborate in order to improve political science and information literacy learning outcomes, as well as student engagement.

American Federal Government is a 200

level course which carries general education credit and is required of all education majors at the College. The class fills to capacity each semester at 30 students. Most students in the class are freshmen or sophomores and few of the students in the class are political science majors. A major assignment in the class involved a PBL project in which students adopted the role of media consultant for a political candidate. This PBL project was adapted from one of the suggestions found on the Buck Institute of Education's website (http://www.bie.org/tools/units/pbg_curriculum_units). This initial trial with the PBL project revealed that while students recommended the project for future classes as an enjoyable learning experience, they would recommend incorporating more sequenced steps. This librarian and faculty member decided to integrate sequenced steps into the project based on ACRL Information Literacy Competency Standards and outcome goals. We hoped that integrating steps focused on information literacy challenged students to

pursue skills necessary to politics without diminishing the creative choices necessary to the end product. After receiving IRB approval, the PBL project was implemented in the three sessions of American Government examined in this case study.

Key to implementing this project was the integration of ACRL standards and learning outcomes. ACRL's Information Literacy Standards provide a roadmap to creating and assessing the problem-based learning activities. In this case, ACRL standards became "hooks" on which to hang information goals related to the overall project. Every step of this PBL process

EVERY STEP OF THIS PBL
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AND INTEGRATE INFORMATION.

requires that students acquire, evaluate and integrate information. From the very beginning of the process, students make choices about candidates and issues in the context of information searching and assessment. In the end, they write up a formal annotated credibility bibliography demonstrating their acquired information skills. The final media product requires the creative integration of acquired information and skills. The information literacy sessions became just another step in the overall process. The problem-based learning approach allowed us to integrate the standards seamlessly from both inception to assessment. Primarily this project addresses Standards 1-Know, 3-Evaluate, and 4-Use.

A total of 68 students participated in this case-study which melded information literacy with the acquisition of political knowledge. In small groups, students choose which candidate to support, how to market their candidate and which issues to explore. They decide how to divide the

work and how to present their conclusions. The students' task as a group is to take on the role of media consultants for a candidate in a current election. The students determine the best way to market their candidate to the public. They choose among media instruments, examples including a television ad, a radio ad, a campaign speech and/or a campaign poster. In addition, each group must: supply a written explanation of the target audience and explain how this influenced the media instrument; identify three issue positions the candidate holds, frame them for public consumption and also frame a response to possible retorts from opposing candidates; and finally provide an annotated "credibility" bibliography. At the culmination of the project, groups present their product to the class. Post-presentation, each individual student submits a five page paper reflecting on and detailing his/her own contributions, discussing the things the student found most helpful or challenging about the collaborative process and a personal analysis of each of the three issues tackled by their group.

Over the course of the PBL project (6 – 8 weeks), each section of American Federal Government attends two separate 65 minute sessions in the library. One session focuses on searching for and identifying appropriate sources. Another session focuses on evaluating sources, particularly in terms of credibility and bias. Both these sessions are structured in order to give students an opportunity to find and evaluate information that they need to successfully complete their project (a bonus from their perspective).

The primary aim of the first library session is to give students an opportunity to begin their research as a group. Beginning with an overview of some of the library resources and a very brief tour of a library resource web page (link: [POL 201: American Federal](#)

[Government-Walsh](#)), the session quickly moves to an exercise. This in-class exercise, developed to address ACRL Standard 1, asks students to search for an "overview article" on a current-events topic relevant to their candidate using five different search tools: Google, Academic Search Complete, the *New York Times* database, the *New York Times* website, and their candidate's campaign website or the website of the political party representing the candidate (link: [American Federal Government Exercise #1](#)). The topics that students are asked to research vary, but are chosen from current events "hot topics" that have either been featured in recent news articles or have been discussed recently in the course. Some examples of typical topics include health care reform, Don't Ask, Don't Tell, budget reforms, etc. In the context of the group search results generated by the exercise, class discussion revolves around several topics including the characteristics of an overview article, the information an overview article contains that is useful in researching a topic, and instructions how to chase information through citations. The class also discusses strategies for identifying search terms that would help a searcher locate an article in Google or in a database source.

The second library session focuses on the "Credibility Bibliography" which students complete as part of their final product. In this exercise, students tease out clues to credibility and bias in sources. Students are directed to another library course page (link: [Walsh Credibility Exercise](#)) with links to four different web sources ranging from credible and unbiased (CNN) to credible but biased (Huffington Post) and two sources that are "unknown" in terms of credibility but clearly biased. Sources vary from semester to semester but recent examples include firedoglake.com—a liberal blog site,

and SmallGovTimes.com, a libertarian “news source.” Using audience-response clickers (link: [Turning Point slide examples](#)) students vote on whether each source shown is credible or not and biased or not. The class then discusses what criteria, such as language, placement of stories on the page and use of photos and ads are helpful in determining credibility and bias in the sources. This session concludes with a class discussion asking students to identify the clues they used to judge credibility and bias and to distinguish between the two.

This discussion elicits a shared class understanding of credibility and of bias. Credibility is typically identified by the students with believability or trustworthiness. The course instructor and librarian help students to both identify the clues (e.g., word choice) and to generalize the clues into broader concepts (e.g., objectivity). By the end of this discussion a number of concepts relating to credibility are identified. The number and specificity of these concepts vary from class to class, but in concluding this portion of the discussion, concepts linked to credibility should include, at the least, the following: accuracy, authority, objectivity, currency and coverage (Metzger, Flanagin, Eyal, Lemus, & McCann, 2003).

Students typically identify bias with partiality. Class discussion here reveals a number of clues students use to assess bias (e.g., lopsided or one-sided perspectives) and students are encouraged to generalize those clues into overarching categories or concepts (e.g., completeness). In this project we focus on three: language, message discrepancy and information quality. In terms of language, Metzger et al. discuss various studies which have shown correlations between intensity of language and bias in messages. Metzger et al. also

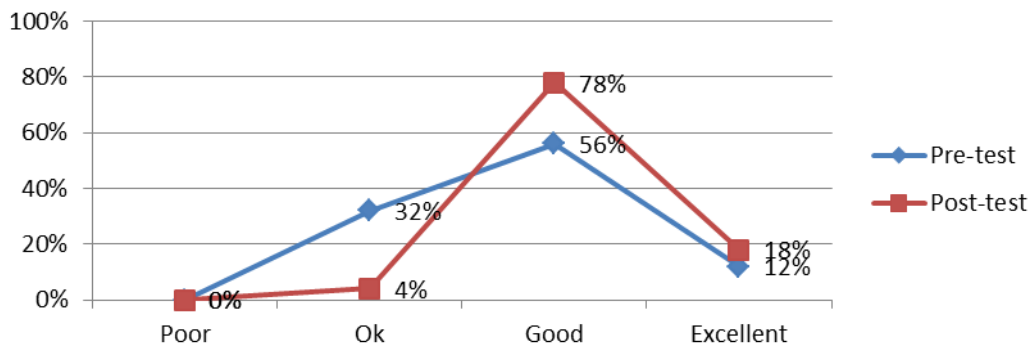
discuss the idea of message discrepancy as an indicator of bias. Message discrepancy is defined as “the distance between the perceived position of the source and the premassage position of the receiver” (303). In other words, when the message received conflicts with other information, knowledge or experience available to the receiver, message discrepancy exists. A final clue to bias is the quality of the information conveyed. High quality information is complete, verifiable, and presents multiple viewpoints.

OUTCOMES

Learning outcomes were assessed in three sections of the American Federal Government class via a pre-test and post-test administered using an online survey instrument (link: [Pre-test and post-test example](#)). Pre- and post-tests both contained measures of student confidence in their ability to judge credibility and bias as well as open-ended questions asking students to identify markers of credibility and bias. The online survey instrument also provided an opportunity for student feedback. In addition, the authors used assigned reflection papers to gather student feedback on the strengths and weaknesses of the project.

In both the pre- and post-test, students were asked “How would you rate your skill at determining whether or not a source of information is credible?” Student confidence in their ability increased overall with the biggest gain in students describing their ability as “good,” as compared to “okay” (pre-test 32% = okay; post-test 4% = okay; pretest 56% = good; post-test 78% = good). (See FIGURE 1) In terms of bias, students were asked, “How would you rate your skill at detecting bias in sources?” Student confidence also increased (pretest

FIGURE 1 — CREDIBILITY CONFIDENCE



37% = good; post-test 64% = good) (See FIGURE 2). In the post-test, no students reported “poor” confidence in either credibility or bias.

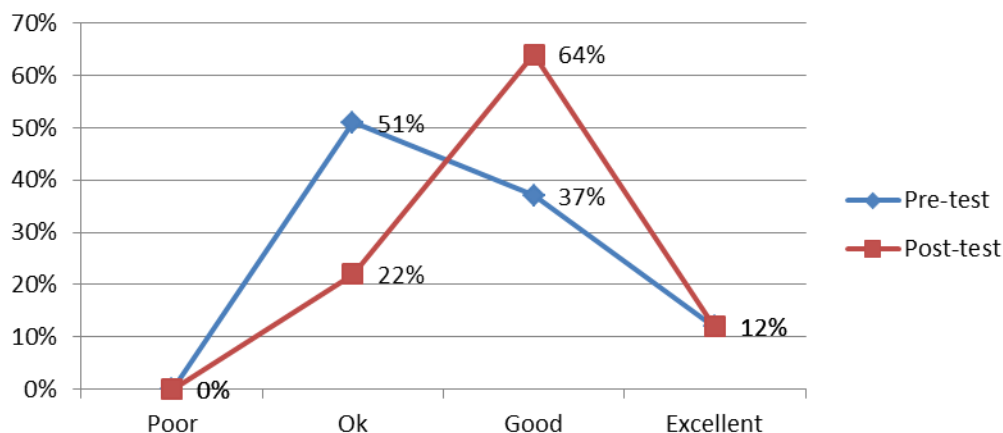
“As a newly registered voter, I am now aware of how important it is to analyze and research candidates BEFORE you vote for them.”

In the post-test, students were asked to judge the usefulness of the information literacy sessions in grasping concepts of credibility and bias. Two-thirds of the students found the sessions helpful in both regards. Two of the students’ comments were:

“Yes, this project taught me how to look for credible research. From this project, I learned that some research isn’t credible enough to read.”

Self-reported assessments of confidence or ability, however, are insufficient to gauge actual ability. We also wanted to measure students’ acquisition of concepts describing credibility and bias. In both the pre- and post-tests, students were asked to list three strategies for determining credibility and bias. In order to determine whether students’ actual ability to assess sources improved, we looked for breadth in their open-ended identification of strategies which indicate credibility and bias. We did not simply count the number of strategies

FIGURE 2 — BIAS CONFIDENCE



students listed, but rather looked for students' ability to identify qualitatively different clues to credibility or bias.

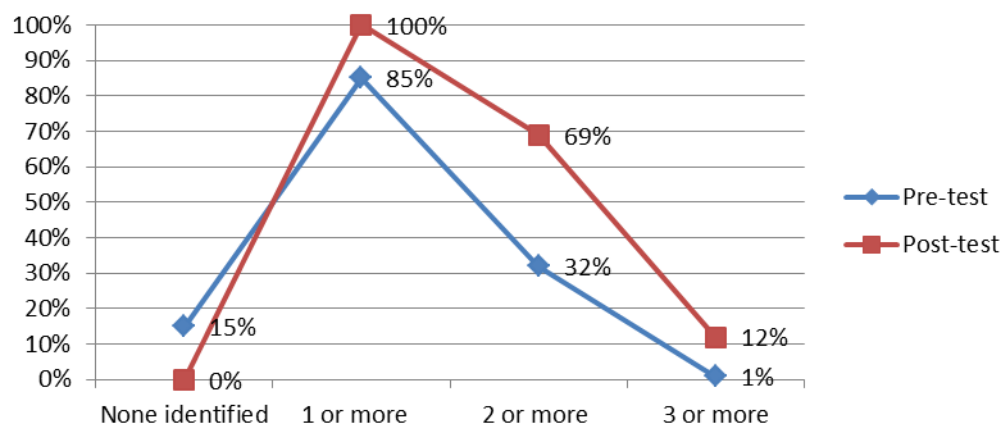
In the pre-test and post-test gauging students' ability to identify clues to credibility, the authors coded each student-identified strategy into one of five categories, based on the standardly accepted evaluation criteria. The five categories are accuracy, authority, objectivity, currency and coverage (Metzger et al., 2003). The authors hoped to find greater breadth in numbers of strategies in the post-test. In the pre-test, 6% of students could not identify any criteria of credibility. This dropped to 0% in the post-test. Moreover, in the post-test 70% of students could identify two or more qualitatively different strategies for assessing credibility compared to 65% in the pre-test. Whereas these numbers are not remarkable, they do suggest some improvement in student critical thinking skills. Moreover, the numbers are far more dramatic in student ability to detect bias in sources.

The pre-test and post-test gauging student ability to detect bias indicates great

improvement. The authors coded the responses for bias into three categories based on standardly accepted evaluation criteria. The three categories are language, message discrepancy and quality of information (Metzger et al., 2003). Again, the authors did not look at the total number of responses listed; instead they looked for breadth in the responses listed. In the pre-test, 15% of the students were unable to identify any strategy to detect bias. This drops to 0% in the post-test. In the pre-test, only 1% of students identified three qualitatively different strategies for detecting bias; that is, a strategy linked to language, message discrepancy and quality of information. This increased to 12% in the post-test. In the pre-test, only 32% of the students could identify 2 or more qualitatively different strategies while in the post-test, 69% of the students could identify 2 or more qualitatively different strategies. (See FIGURE 3)

In the pre-test, students overwhelmingly identified criteria for detecting bias which are linked to quality of information. This indicates a sensitivity to language as a factor in bias detection. In contrast, students in the

FIGURE 3 — ACQUISITION BY STUDENTS OF QUALITATIVELY DIFFERENT STRATEGIES FOR ASSESSING BIAS



post-test also describe looking for “language used/what is left out” or “liberal or conservative types of words” or, more generally, “for words that give away the stance of the author.” In addition, in the post-test students demonstrated an increased awareness of message discrepancy as a tool for detecting bias; references to message discrepancy doubled from pre-test to post-test (from 7 to 14 references). Students reported a need to “check a large number of sources and compare,” or to “research author’s opinions” and to pull “...out the flaws” in an argument.

The PBL exercise not only increased student sensitivity to the credibility and bias of sources, but some students also reported a greater likelihood to use these skills to engage in politics. One student remarked, “This is the first time that I have truly gathered evidence on a political race and tried to sift through everything and come out with a stance on matters . . . I am sure that I will continue this procedure for the rest of my life”. Many students reported a greater appreciation and excitement for politics overall. At the conclusion of the PBL project discussed here, one student reported how their group “became passionate” about supporting their chosen candidate. Another recounted the “excitement” of discovering their candidate’s membership on the House Ways and Means Committee. Other students related:

“As the group and I did more research . . . I found myself not only comprehending politics, but also starting to appreciate the idea.”

“Not only did this help me gain insight on different candidates, it also helped me gain insight on what the different political parties mean and

stand for. All in all, I know that doing this project has definitely made me a more aware voter and has made me well prepared to participate in future election.”

Some students claimed that they would now vote as a result of the PBL experience.

DISCUSSION

This paper elaborates on a successful collaboration between a librarian and a faculty member to develop a PBL activity integrating information literacy skills beyond the typical one-shot library session. This case study suggests that the integration of ACRL standards and learning outcomes using PBL can significantly ground the extension of information literacy skills into the wider curriculum. PBL provides a framework for the development of exercises and activities focused on information literacy in other disciplines beyond political science. The entire media consultant PBL activity intentionally integrates ACRL standards and learning outcomes 1, 3, and 4. In the following discussion, we reflect on some examples of how students met the learning outcomes of these three standards.

Standard 1—Know—requires that students evidence an ability to know their information and implement a plan for meeting those needs. The first information literacy session provides an opportunity for students to brainstorm the possible choices among candidates and issues. One student summed up the intent of this information literacy session extraordinarily well: “Beginning the project with the literacy sessions allowed us to brainstorm about our topics. Where would we get information? What issues would we address? How would we address these issues? How would we address the opposition?” More importantly

the exercise moves the students beyond an informal discussion of choices to an explicit determination of what they need to know and how they will acquire that knowledge, guiding students through a searching exercise that begins to acquaint them with the information available in various sources about candidates and issues. As part of this exercise students generate further search terms and plan future research. Finally, students reflect on their group plan in their final individual papers. This allows student self-assessment as well as teacher assessment of the learning outcome.

In the first library session, students begin a discussion about the varying quality of different information sources—a discussion that continues in the next exercise. For example, the first Performance Indicator of Standard 1 “defines and articulates the need for information,” lists an initial outcome of “identify an area of interest...” and a final outcome of “chooses among different methodologies and explains their relative merits.” Embedded in the project as a whole, the exercise leads students to focus on all these outcomes. The exercise also tangentially addresses ACRL Standard 2. In leading students through the process of exploring various sources, they are gaining some experience developing effective research strategies. However, the class discussion focuses more on students’ need to find certain kinds of information.

Standard 3—Evaluate—requires that students critically assess and incorporate information. The second library exercise introduces the students to a conceptual framework for assessing the credibility of sources. In this exercise students confront a variety of sources, collaboratively evaluating them using the clicker system. It becomes game-like to the students, but the skills acquired here are necessary to the

completion of the personal issue analysis and the annotated credibility bibliography. For example, the second Performance Indicator of Standard 3, “articulates and applies initial criteria for evaluating the information and its sources,” lists outcomes ranging from “examines and compares information from various sources” to “... understands the impact of context on interpreting the information.” The second information literacy session not only extends the learning of the first session, but also links directly to the final product and the ACRL Learning Outcomes. Students showed an awareness and appreciation of this direct linkage. According to one student, “The biggest advantage to participating in these sessions was the review of constructing an annotated bibliography and determining credibility.”

Standard 4—Use—requires that students use “information effectively to accomplish a specific purpose.” Producing the media instrument and presenting it to the class is the culmination of the pursuit of this standard. The third performance indicator for this standard “communicates the product or presentation effectively to others.” It lists only two outcomes. They are “chooses a communication medium format and vocabulary...” and “understands how to communicate ideas visually using charts, graphs, and images...” The group presentation of the media instrument displays the acquisition of these skills and allows assessment of these outcomes. This project brings together the skills acquired throughout the process. It requires acquisition, evaluation, and use of information. It also requires the discernment of the relevance, the credibility and the bias of information, as well as the creative use of that information to argue for a conclusion. Successful student projects present their conclusions in an accessible and

entertaining way. The effective use of information is apparent in the final media instrument and the students' final reflection papers. The depth of research, the quality of sources, and the skillful integration of information indicate student mastery of Standard 4.

Beyond the ACRL standards, this project illustrates the benefits of collaboration among students, and between faculty and librarians. Students benefit from collaboration in confronting a variety of perspectives, in dividing a larger project into manageable "bites," and in learning cooperative strategies. Students reported that because of the group project:

"We were able to get five perspectives on the economy, healthcare, and education."

"Everyone was able to do something different for the project. We all had different strengths and weaknesses."

"Doing anything in a group can be challenging. However working through it and compromising was great practice for the future."

This study also clearly establishes the benefits of collaborative efforts between librarians and classroom faculty. For faculty and librarians, this collaborative approach improves teaching, broadens research and publication possibilities, and enhances personal affiliations and friendships. Librarians benefit from collaboration by extending their reach well beyond the library walls into the classroom. By gaining a deeper understanding of coursework, student assignments and faculty goals, librarians are better able to serve the needs of both students and faculty. Faculty members benefit from the collaboration by

receiving assistance from the librarian in meeting course learning outcomes. This faculty member improved her own information literacy skills as a result of this collaboration and relished the opportunity to co-teach selected class sessions with the librarians. Indeed, students benefited through the exchange between the faculty member and librarian, who debated political issues as well as the credibility and bias of sources actively in the class. PBL provides the framework for this collaboration between students, and between librarian and faculty member.

CONCLUSION

Our assessment of these learning outcomes as well as the post-test results give us good cause to continue to integrate this problem-based learning approach with embedded information literacy instruction into future sections of American Federal Government. Students' comments demonstrate that they both enjoyed the project and recognized the benefits of the collaborative process. In the words of one of our students: "Honestly, before the library session I thought most sites other than Wikipedia or blogs were somewhat valid sources. It is humorous now, realizing that it is not difficult to check if a source is justifiable or not. The benefits of simply taking a few minutes to check a source, outweighs the result of using a source that is not reliable by a lot." An added bonus from the political science perspective is that student comments also point to an increased likelihood of future student participation in the political process. Moreover, although the post-test indicates only a modest increase in ability to detect credibility, the post-test suggests a noteworthy improvement in ability to detect bias.

The conclusions of this study are limited by

the number of sections and students tested. It is also limited as a case study, being representative of one institution and student population. It would be interesting to see if the results of this study could be replicated in larger institutions and/or bigger classes. Still, the results of this qualitative data encourage us to repeat this assignment in subsequent semesters. Our hope is to improve the project as well as improve our students' information literacy skills. We enjoyed the collaboration, as did our students; in their own words, they "made new friends" in the process and gained "a piece of knowledge that can go towards any class."

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