

Marsha Spiegelman and Richard Glass

Gaming and learning

Winning information literacy collaboration

Academic librarians have embraced Web 2.0 technology as the engine of change. We post and poke, friend and follow to maintain relevancy in the new millennium. These applications help us organize our materials, engage our users, and enhance internal functions. Information literacy (IL), once the driving force in academic libraries, has been moved to a side rail in the process. At the same time, gaming has begun to gain mainstream acceptance in academia because today's students are team players who thrive on the interactive nature of social networking and use games as "social/socializing activity."¹ In this collaboration Marsha Spiegelman, instruction librarian, and Richard Glass, math/computer science classroom professor, sought to get IL back on track by integrating games and Web 2.0 tools into IL instruction.

Spiegelman gives the librarian's perspective

A recent analysis of the Educational Testing Service Information and Communication Technology Literacy Assessment found that students' use of, and confidence with, the Internet did not correlate with skills needed in the online research milieu. In essence, they appeared to be techno-savvy experts at ease with the Web when, in fact, their search and evaluation skills were still lacking.² Curriculum-based IL has been my mantra since attending the ACRL/SUNY Immersion Institute in 1999. In that close environment, under the tutelage of Mary Jane Petrowski, Deb Gilchrist, Randy Hensley, and Eugene Engeldinger, participants were transformed

into IL missionaries. We came away from that experience knowing what our faculty and students needed; most of our students who turned to the Web for research had little ability to evaluate what they found and limited exposure to scholarly sources, while most of our faculty still thought of research in print modalities.

Several years later, my experiences on the college's middle states committee (2003–05) further highlighted the ascendancy of IL as the relevant assessment tool for libraries and the standards by which students' research skills would be evaluated.³ Having taught credit-bearing library courses and one-shot instruction sessions, I knew that a deeper connection with a class and a specific discipline gave the material the context it needed. Ann Grafstein had written about the importance of interdisciplinary collaboration⁴ and my previous work with our reading department bore that out. Now, however, I was embarking on collaboration with a department that clearly did not fit the research mold.

Glass gives the classroom instructor's perspective

As a graduate student, research to me meant browsing the stacks, picking up books, and looking at the indices in a most random attempt at research. I don't believe I knew

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many scholarly indexes. I found journal articles by locating references in books and papers and asking the librarian to get them. I didn't realize that the librarian was there to help me with the research. I thought the librarian was just a ... librarian.

As a college professor, I felt many of my courses should require at least one research assignment, but discovered such assignments were causing more harm than good. Everything from multiple students citing (if they cited) the same article or Web page to the endless query of how many pages should it be would draw from valuable class time. Some students felt that since it was a small fraction of the grade they couldn't be bothered since it was not really math or computer science. So for a time, I dropped such assignments.

Several factors set me upon this task of resurrecting the research assignment in my courses. First, students today are faced with exponentially more information and increasing access and the tools to find it. Information repositories such as Wikipedia are readily available though not necessarily authoritative, and electronic databases have replaced stacks, card catalogs, and indexes. The researcher of tomorrow must have the skill to extract the required information from these sources in an effective and efficient manner, while evaluating and using it ethically. The need to lay a foundation in IL is critical especially in the areas of mathematics and computer science, where research is generally ignored until the upper undergraduate levels and beyond. Additionally, math courses are often seen as dry equations on the board with no connection to the person-ages behind them. Above all, I wanted the class to realize that the reference librarian was a professional with an advanced degree whose function it was to assist a researcher in his or her task throughout the process.

The collaboration is born

Spiegelman and Glass began working together on the college-wide curriculum committee several years ago. As members

of the executive committee, they weathered an arduous and sometimes contentious process to reform Nassau Community College's General Education program. Glass stressed the importance of math and computer science in the program, while Spiegelman emphasized the need for IL throughout the curriculum. Throughout the five-year process, we learned from each other and discovered we had more in common than not. Both early adopters of the Internet and Web applications, we shared a passion for new technologies that ultimately led us to Web 2.0.

During the fall and spring of the 2005 to 2006 academic year, we attended workshops and conferences on Web 2.0, read, worked, and absorbed as much as we could. At the SUNY Conference on Instructional Technologies we learned about podcasting with Audacity, blogs with Blogger and WordPress, Wikipedia, and those funny little orange RSS buttons. We attended Wikimania that summer and heard Meredith Farkas extol the virtues of academic wikis. Back on campus that fall, we held faculty workshops, gave hands-on sessions and spoke about the benefits of Web 2.0 to all who would listen. We recognized the usefulness of these tools, but were unsure of how we might apply them in an instructional setting.

It was only after Glass attended one of Spiegelman's faculty database workshops that the first seeds of the collaboration began to sprout. As Spiegelman explained the use of Boolean logic for effective database searches complete with Venn diagrams on the whiteboard, a light went on. Glass explained, "This was a topic that I taught in the General Liberal Arts mathematics course and one that we could use to foster IL in a math course." The hook to engage his students would be a course blog on which students would post their work and everyone could comment. A game would further attract their interest. We determined that if we could use their understanding of social networking to make "their space" a "learning space," we could have a successful collaboration that

would meet both the needs of the math class and the goals of IL.

Dead men tell no tales and other research assignments

The goals of our collaboration were simple:

- place the subject matter in a human context,
- reinforce skills needed for other courses,
- provide a venue for IL instruction, and
- embed Web 2.0 technologies.

We developed several research questions for both the general liberal arts math and the more advanced math and computer science students that would require using library databases, scholarly sources, and Web sites. Writing assignments, to be done on a course blog (we later transitioned to a class wiki), required specific research sources, references, and proper MLA citation. Gaming elements included reality show techniques in which students had to work in teams, locate information, and vote on the best results. To connect the subject matter to the library skills, students worked on problems that involved well-known mathematicians, scientists, and classic problems related to their coursework. In one instance, the game required expert use of Boolean logic.

We invented scenarios that evoked students' creativity and humor. The Dead Mathematicians Hall of Fame called upon the student as a relative of a long-lost but famous persona in the field of logic to write an acceptance speech for that notable, but dead, historical figure. In the acceptance speech, the writer had to include the honoree's work, relationship to the field, and any influential mathematicians with whom he may have worked. The calculus class played the Grateful Dead Scientists Game in which each had to research a scientist, create a course that one of them might teach, and then register for the course they would most want to take. The winner, as in academia, was the course with the greatest enrollment. Last winter, we

introduced the History of the Times Game in which students were given clues to important events in the past. Using the Historical *New York Times* database, they located the front page story, found an amusing story or advertisement from that issue, and voted on the best results.

Implementation

For basic instruction on the use of databases, Web evaluation and citation, Glass brought his students to the library for an IL instruction session early in the semester. The students in his logic class used advanced search techniques in the databases to quantitatively demonstrate the laws of logic. Web evaluation techniques were stressed, as well. Students in the advanced math and computer science classes also received an introductory session. Spiegelman met with them a second time, later in the semester, on their turf in one of the math department labs to answer questions and help them refine their searches. Glass spent a minimal amount of class time teaching the groups how to use the course blog or wiki. Although some had never used these Web 2.0 applications, they quickly learned the necessary editing techniques.

Throughout the semester, students posted their work on a course blog or wiki. Glass was listed as the instructor of record because Nassau Community College does not allow team-teaching across disciplines, while Spiegelman was listed as the course librarian with complete contact information. Everyone was free to comment and make editorial suggestions.

Although students used anonymous screen names, when privacy was required, e-mail substituted for the public Web site. As expected, students felt more comfortable writing to the librarian about research questions, and sometimes admitted that, "Dr. Glass has been railing on how we'll be graded on the accuracy of our citations. I think mine are correct, but I'll sleep much better with a professional's opinion that they are correct."⁵

Results and recommendations

Post-semester assessment surveys reported positive outcomes among all classes involved in our collaboration. The general liberal arts students agreed that connecting logic to database searching increased their understanding of the subject matter and would help them with research in other disciplines. Interestingly, they commented that it was a good change from the regular material when, in fact, it was really just a new way to present that same material. The more advanced students used the blogs and wikis to post animated GIFS and PowerPoint presentations and pursued discussions of tangential topics for which there was limited class time in the required syllabus.

Everyone enjoyed the gaming aspects of the projects, and the public sharing of their findings fostered pride in their work. One student noted, "... it was very innovative for a math class, to not only do traditional math work but to add more technology in math class. In this day and age there should be more classes that make use of current technology." Another responded, "It was a nice break from straight lecture and it applied the material to real life."⁶ Suggestions for future implementation included increased instruction on the databases and more hands-on work with the software.

Conclusion

Web 2.0 technologies, games, and innovative thinking were the keys to making this collaboration work. A strong commitment to the students' education and a desire to learn new technologies were the impetus for our partnership, while the ability to set aside egos and learn from each other were vital components. Glass breathed life into the technical information and formulas often exhibited in the textbooks, while not distracting from the syllabus or impinging on class. Spiegelman extended the contact zone of the librarian, gained the students' trust, and infused IL outcomes within the context of educational games. Unknowingly, we had adopted Jenny Levine's "gamer ethos."

That is, we were willing to take some risks, unafraid to fail and try again, eager to learn from others and willing to be flexible.⁷

Almost a decade ago, Betsy Wilson pronounced the death of the lone ranger,⁸ and today, NextGen librarians Friedman and Booth suggest that by creating "cultures of play," librarians will have the tools to collaborate with faculty to "implement user-centered library content and instruction."⁹ Successful projects like ours require that you leave the confines of your library walls. Approach like-minded colleagues, attend cross-disciplinary conferences, and turn on your inner gamer to make productive collaboration happen.

Notes

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