The Innovative Instructor

Pedagogy

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What this is

The Innovative Instructor is an article series (https://ctei.jhu.edu/ii) and a blog (https://ii.library.jhu.edu) related to teaching excellence at Johns Hopkins

Article categories

Best Practice

How to use technologies and apply innovative instructional methods

Pedagogy

Hopkins professors share successful strategies for teaching excellence

Technology

Information about emerging technologies, who is using them, and why you should know

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About the CTEI

The Center for Teaching Excellence and Innovation partners with faculty, postdocs, and graduate students to extend instructional impact by connecting innovative teaching strategies and instructional technologies

CENTER for TEACHING EXCELLENCE & INNOVATION

JOHNS HOPKINS UNIVERSITY

Getting to the Source of the Problem

Bill Leslie, Professor, Department of History of Science and Technology

The issue

Even the smartest undergraduates need to be taught that everything worth knowing won't be found on a smart phone. Luckily, the Homewood campus offers endless opportunities for teaching from primary sources. The Hamburger Special Collections and Archives has everything from rare books, official university records, and historic photographs to films and artifacts, including a growing collection devoted to undergraduate life. Beyond the library there's another world of primary documents to discover—artwork, memorials, even the very buildings where our students live and learn. With the right tools, and some help from the Center for Teaching Excellence and Innovation (CTEI), I tried to bring these sources to life for the students and get them out of the classroom to experience the campus in an entirely new way.

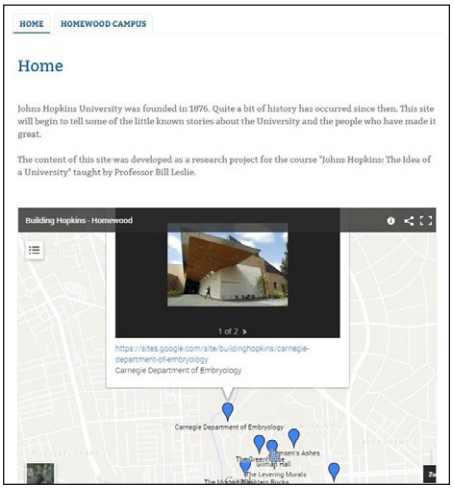
Why does it matter

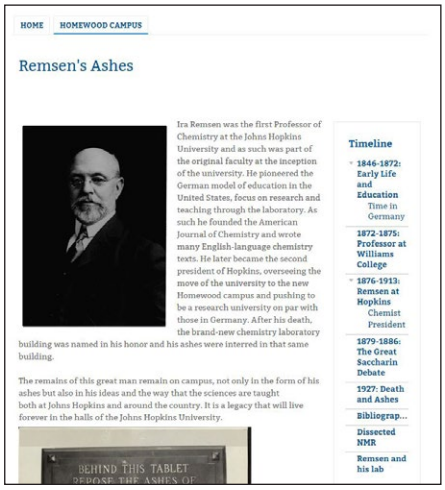
Using new media, our students can interpret and showcase these primary documents in ways that are exciting, relevant and accessible. For students accustomed to Google searches and textbooks, confronting a primary document, on paper or on site, can be a real eye opener. Reading about chemist Ira Remsen is one thing. Putting your hands on his original letter to Daniel Coit Gilman seeking employment at the new Johns Hopkins University is another. So is poring over his original laboratory notebooks and student lectures. Suddenly his ashes and the accompanying memorial plaque in Remsen Hall look very different. You can walk by the Greenhouse and the President's Garden for four years and hardly notice. Spend some time with the photograph collection and the records of the McCollum-Pratt Institute and you realize that here was the first laboratory on the Homewood campus, a working botanical garden, and the birthplace of molecular biology at Johns Hopkins. Follow a freshman student during his or her first year at the university through a film, and you appreciate how much has changed since then, and how much has not.

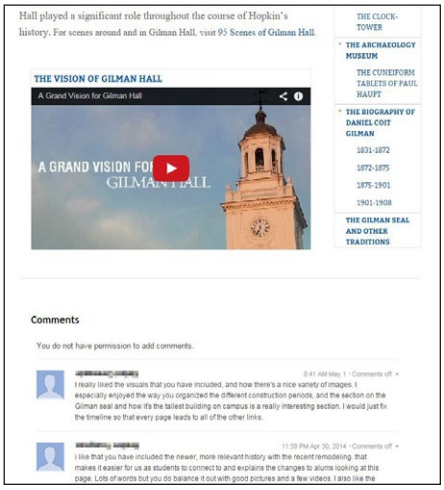
Faculty solution

For my course *Johns Hopkins: The Idea of a University*, I wanted the students not only to master new research skills, but to learn from one another and to present their findings in a novel way. There were sixteen freshmen in this writing intensive course, co-sponsored by the Program in Museums and Society. The students came from the sciences, social sciences, engineering and the humanities; some were tech savvy and others not. The students selected 'hot spots' on the Homewood campus, places where something significant had happened. We discussed their initial choices collectively, did further research to assess existing primary sources, then narrowed the list to eight, with two students assigned as a team to tell the story of each 'hot spot'.

I wanted an environment where students could share their research using a collaborative, web-based platform. In consultation with the CTEI, we selected Google Sites, which provided robust functionality with a low learning curve and short setup time. Since the projects had a strong spatial component, we also included Google Maps so that the students could identify the location they were researching on the campus map and have it embedded in the Google Site. As the students began discovering sources they wanted to include (video, historic documents, photographs and their own interviews), they would upload them to







a class folder in Google Drive, which integrates well with Google Sites. Over time, each team amassed an impressive collection of primary materials.

Early on, I told the students that the site would not be public so that they could focus on learning without feeling the whole world was looking over their shoulders. To foster a collaborative atmosphere, I had the students critique one another's work each week and provide written feedback right on the project pages. Did this image work well? Was that document clear? Could you edit down the interview without losing anything important? What kinds of primary material did you still need to tell the story more fully? The students also gave each other valuable technical tips on how to use the site efficiently. Working together, the class had almost no difficulty learning how to post content and design the layout.

Results

The student reaction to the project was overwhelmingly positive, judging from class evaluations and personal discussions with individual students. Several of the students asked to continue working on their projects after the class had ended. Students often discovered hidden talents and developed new skills. One student did such a fine job interviewing a faculty member that I asked if he'd ever considered a career in filmmaking. Not until now, he answered! All of the students learned how to tell stories in words, images and sounds, and a few turned out to be gifted web designers. Working with tight word limits also honed their writing skills.

The three Google applications worked extremely well together. The students almost immediately felt comfortable with the technology and could draw on a "how-to" workflow developed by the CTEI for this course. CTEI staff met with the class early in the term and answered student questions over the course of the semester. Initially, we used the Google Site storage allotment. The sheer amount of material collected by the students quickly overwhelmed it. With the help of CTEI, we changed the workflow for uploading material by setting up a private class folder in Google Drive. This proved to be an efficient solution since embedding resources from Google Drive into the Google Site was simple, allowing all of the resources to be stored in one place. An additional advantage was being able to archive what the students had collected.

This was my first class project using Google applications, but it won't be the last. Next semester we'll look at 'hot spots' in the history of Johns Hopkins medicine. For the first assignment, I will have the students take a look at what their predecessors have done and critique it. We could scale up the applications for a larger class, but for now I'm more comfortable with the seminar format. I just returned from a professional society meeting where I shared my experiences with the Google Sites tools. My colleagues showed as much enthusiasm for the approach as the students, so we may see similar 'hot spot' maps popping up at other universities in the near future. Stay tuned.

Author's background

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Bill Leslie has taught at Johns Hopkins since 1981. His favorite courses include "Monuments and Memory", "Las Vegas: The Eight Wonder of the World" (with field trip), and "Science on Display". He is currently writing a history of the university. His upcoming spring course, a freshman seminar on Johns Hopkins medicine, will build on the innovations discussed in this article.