

Kristin Heath and Gloriana St. Clair

Increasing student satisfaction

Student innovation at Carnegie Mellon University

Most academic libraries care about student satisfaction and consult a student advisory group to help achieve it. Here at Carnegie Mellon University (CMU), student satisfaction has increased from 66 percent in 1997 to 92 percent in 2009. The thesis of this article is that student creativity can be tapped to increase satisfaction most effectively. We

philanthropy to CMU. It began about 50 years ago, when Roy A. Hunt and his wife offered to build what would be the first central library on campus. Flanked by the classical yellow brick buildings of the original campus plan, the postmodern five-story Hunt Library has been a distinctive campus focal point since 1960.



Hunt Library by day. View this article online for color images.

The Hunts' original deed of gift stipulated that nothing would be built between the library and the neighborhood thoroughfare, Forbes Avenue, for 50 years (1960–2010). Not surprisingly, the Roy A. Hunt Foundation of Pittsburgh has retained an abiding interest in Hunt Library and the university as a whole.

focus on three recent CMU library projects: an innovative lighting installation that has changed the whole look and feel of campus, custom designed and built fin seating, and study tables transformed into whiteboards. While some of these ideas might be difficult to replicate, the basic takeaway—allowing students to drive and design change—can be implemented on many other campuses.

Backstory: Carnegie Mellon's Hunt Library

Pittsburgh's Hunt family, founders of the Alcoa Corporation, has a long history of

Relighting Hunt

In 2009, a Hunt grandson noted in an e-mail to CMU President Jared Cohon that Hunt Library would be more of a visual asset to the campus if it were better illuminated at night. Cohon forwarded that remark to a lighting professor in the schools

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of drama and architecture, who engaged a group of three students to do a lighting study and propose a whole-building sustainable LED lighting system. The study revealed that savings from retrofitting the library's interior lighting would pay for operating dramatic exterior lighting of the library façade and entrance canopy. The plan included replacing traditional lantern-style sidewalk lamps around the library with energy efficient, dark sky-compliant LED site fixtures.

After reviewing the students' presentation, the Hunt Foundation provided the funds to design and install programmable exterior LED lighting to honor Hunt Library's 50th anniversary. The façade lighting was launched in November 2010, when the university celebrated the library's golden anniversary with the Hunt Foundation, family, and friends. Cohon took the opportunity with all parties present to announce that the historic "view corridor" from the library to Forbes Avenue had been codified as part of the university's master plan.



Hunt Library transformed by night. For a video of the Hunt Library Light Show visit: www.youtube.com/watch?v=tO2ul3JBoTg.

Student input

Naturally, the library's dramatic façade lighting has attracted a great deal of attention from students. A few voiced concerns to the dean of students: Who's paying for it? How is this green? But most just wanted a say in how the lights would be programmed. So the dean of students asked the library to solicit comments and survey students about what events or holidays should be recognized with special lighting. At a university diversity retreat, it was further suggested that we post text on the

library homepage explaining the significance of the lighting displays for featured events and holidays.¹

In deference to one of CMU's diversity guidelines ("Avoid focusing celebrations on religious beliefs. Even if you expand your event to include more than one major religion, you're likely to forget or offend someone."), our invitation to comment asked students to suggest secular holidays.

Students responded, "You don't have to be so sensitive. It's all good!" and "If people notice different colored lights, they might wonder why and learn something new about a fellow community member's beliefs. I think it would showcase CMU's diversity, and just be pretty cool."

We advertised a two-week comment

period, during which we took anonymous comments online and conducted random in-person interviews with students in the library. More than 200 students responded, suggesting 96 different events or holidays to observe. Twenty-two occasions were nominated four or more times. The libraries' Student Advisory Council (SAC) discussed the results, and prioritized 17 occasions to be celebrated on a holiday schedule or as they occur during the year.¹

Some of the events share color schemes (U.S. holidays, Lunar New Year, and Valen-

tine's Day), helping to achieve maximum satisfaction within the parameters of a limited number of available lighting presets, including a default "every night look."²

Students also voiced concerns about the lighting being "green." Engineers on the project replied in terms of an overall increase in dark sky compliance and the energy savings of LED fixtures, concluding that exterior lighting costs about as much to operate as a coffeemaker. However, to complete the sustainable whole-building lighting system that students initially proposed, the library's interior lighting must be retrofitted. This larger project has yet to be funded.

Backstory: SAC and "Help Hunt"

A couple of years ago, the dean of libraries was surprised by an over-the-transom proposal from three engineering majors who liked to study together in Hunt Library. Charged to "do something for good" as a group project for class, they had brainstormed and talked with fellow undergrads about the library. Then they wrote "Help Hunt," a proposal that outlined a number of creative low-cost ways the library might be made better and more appealing for students. The dean invited the students in to talk about their ideas with the newly formed SAC, and SAC decided to move forward on several of the projects. The dean was able to provide \$50,000 from a discretionary fund to pay for the projects, which were implemented over two years. Several Help Hunt ideas remain on the drawing board, pending funding from interested donors.

Fin seating at Hunt

Hunt Library's aluminum and glass construction is supported by structural columns—fins—spaced four feet apart. One of Help Hunt's ideas was that it would be great to have seats installed between the fins in some windows overlooking a quiet garden area. Subsequently, the Help Hunt engineers recruited three of their friends from the school of architecture

(the Archies) to give legs to the proposal. The Archies came up with an ingenious modular seating design that incorporated shaped ergonomic seats, adjustable desk surfaces, and task lamps. Over several semesters, they iterated their design with their advising professor, Help Hunt, SAC, and library administration. After the final design was approved, they built and tested a prototype.

To complete the project, the Archies created milling specifications and had the modular pieces for ten units cut from plywood by a commercial firm. Over the summer and fall, they constructed the seats (gluing the plywood pieces together to create solid laminated surfaces, sanding and hand-finishing them, and bolting together the freestanding units). Finally, they transported the carrels to the library and installed them. Within hours, the seats were in use as if they had always been there. Because they are up against the windows, using them during a Pittsburgh winter takes a strong constitution, but everyone loves these window seats!

Tables into whiteboards

Another idea Help Hunt students proposed was transforming ordinary library study tables into whiteboards, and making whiteboard markers and erasers available at the library circulation desks—in temporary exchange for the student's CMU ID. After investigating options, from whiteboard paint (least expensive) to high-pressure laminate whiteboard surfaces (most expensive), Help Hunt chose a medium-cost solution, a self-adhesive whiteboard film that they could install themselves. They tested it on one table in fall 2008 and learned two things: the material was tricky to apply (hard to line up with table top and apply without bubbles), and students loved the whiteboard functionality. So Help Hunt persevered, learning to work with the material and having better success with each table. By the end of spring 2009, ten tables had been converted to whiteboards—and

they were in constant use. However, heavy use took its toll; by the end of 2010, the surfaces were peeling and could no longer be erased clean.

The Hunt Library experience with converting tables to whiteboards inspired staff at the Engineering and Science Library to convert three of their study tables into whiteboards using water-based whiteboard paint. Unfortunately, this experiment was unsatisfactory from beginning to end (from smelly wet paint through rapid product failure).

Because of the overwhelming popularity of whiteboard tables for informal group study in the library, SAC and Help Hunt have recommended upgrading to the most expensive and most durable option: high pressure whiteboard laminated to ½"-inch fiberboard, cut to fit and attached to table tops with a band of metal trim. This option increased table height slightly, and required installation by university facilities services. With this implementation, in an effort to extend the life of the new surfaces, the library is making available whiteboard cleaner, as well as markers and erasers.

Conclusion

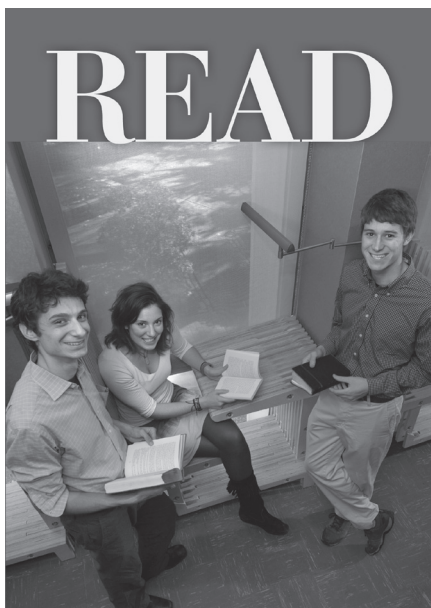
These experiences were, for the most part, unique to one university and to circumstances at a particular time. In the Hunt Library lighting project, we had the happy convergence of idea-anniversary-donor, as well as an ideal façade for dramatic exterior lighting. The new look advertises the library and our campus as a lively, modern, and fun place

for students, and we further have engaged students to ensure the lighting reflects their interests and concerns. With our SAC and the serendipitous advent of the Help Hunt group, we have been privileged to partner with enthusiastic, creative members of our target audience. By listening and responding within our means to student needs and priorities, we are transforming the academic library experience. Although our custom

fin seating is probably a unique Carnegie Mellon phenomenon, whiteboard tables and many other student-centric innovations are universal.

The takeaway—for any library, at any institution—is to engage, listen to, and work with your students. At CMU Libraries, working with students has been hugely positive. Student satisfaction with the library is remarkably high. Why? Not because we are spending more—which, of course, we are not—but because we are investing in the things that matter to students. Do we have a café? Yes. Are we open 24/5? Yes. Are we weeding collections and storing low-use materials to make room for students in the

library? Yes. Are we focused on the digital future of libraries? Yes. Do we support students working in groups? Yes—we have built some group study rooms, and hope to build more. We are soliciting donor support for our first group study equipped with projection and other technology so that students can practice presentations and panels, or watch videos for class. We continue to make the library, as a whole, a welcoming flexible collaboration space. Active use of whiteboard



Ten window seat study carrels were designed, built, and installed by three architecture students. The students and their work were featured on the dean's 2010 holiday greeting, sent to university colleagues, and library donors. Photo and design by CMU Communications Design and Photography Group.

tables indicates that they do help students to work or study together. Our university believes that students' learning to work together in groups is a key to their preparation for leadership in a global world. We are confident that these and future student-initiated innovations will push student satisfaction even higher.

Notes

1. Student-selected holidays: Lighting celebrations (number of suggestions) suggested color

Valentine's Day (36) red

St. Patrick's Day (26) green

Pittsburgh sports events (11) + Super Bowl (9) = (20) black 'n' gold

July 4 (19) red-white-blue

Lunar New Year (18) red

Christmas (15) red-green

Halloween (13) orange-black

Memorial Day (11) red-white-blue

Earth Day (10) go dark!

Presidents' Day (8) red-white-blue

Holi (7) TBA

Veteran's Day (7) red-white-blue

Diwali (6) TBA

Martin Luther King Day (6) TBA

CMU Carnival (5) CMU colors, moving

Flag Day (4) red-white-blue

Labor Day (4) red-white-blue

2. Other "Help Hunt" projects:

✓ = completed

• = pending

✓ Provide staplers and three-hole punches at copiers and printers.

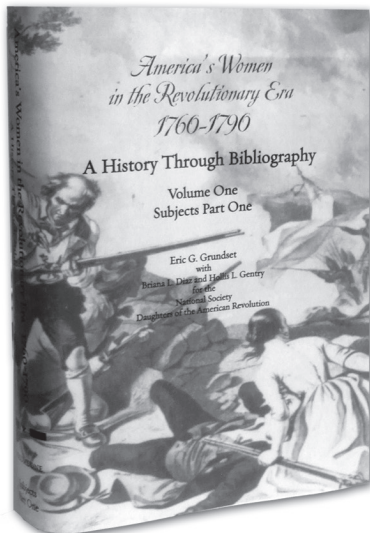
✓ Reconfigure some stacks to improve user space.

✓ Update study areas with tables and chairs that are easily moved around.

• Create additional casual, comfortable meeting and seating areas (pending donor support).

• Create a mural in the central stairwell of the Hunt Library (pending donor support). *zz*

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