Living in a 21st Century Library: Princeton University’s Peter B. Lewis Library

Anne Langley, Head Librarian, Science & Technology Libraries, and Jane E. Holmquist, Astrophysics, Mathematics and Physics Librarian, at the Peter B. Lewis Library, Princeton University, discuss how the library’s striking architecture and interior design impact how students, faculty, researchers, and staff use this space.

Many academic libraries worldwide are actively engaged in the process of reinventing themselves for the 21st century. No longer just repositories for print books and journals, primarily because of the explosion of online information in the last several decades, the use of physical spaces is evolving to serve the changing needs of the library community in different, and sometimes exciting ways.

While many academic institutions are formulating strategies to create the 21st century library, students, faculty, researchers, and staff at Princeton University have already been “living” in a 21st century library since the opening of the Peter B. Lewis Library in September 2008.

REALIZATION OF THE 21ST CENTURY LIBRARY

The Lewis Library, a bold departure from existing architecture on the Princeton campus, was built through a generous gift by Peter B. Lewis and designed by internationally acclaimed architect Frank Gehry. The multistory, 87,000-square-foot science library is the hub of Princeton’s “science neighborhood,” and enabled former branch libraries in astrophysics, biology, chemistry, geosciences, mathematics, physics, statistics, and psychology to be merged into one science and technology collection.

“Princeton’s commitment to science and technology is embodied by the library,” noted Anne Langley. “This exciting facility offers new technologies for teaching and research, bright and inspirational spaces for study and collaboration, services that bring information and resources quickly to our patrons, and an environment reflecting the integrated nature of science at Princeton.”

More sculpture than building, the library features curving lines, juxtapositioning of roof and wall, bold use of color, innovative use of both natural and artificial lighting, and an unconventional marriage of stainless

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steel and brick. The “technology towers” and the way they intersect with other spaces are symbolic of how the building diverges from the old style library model. Intentionally there is almost no artwork displayed in the building; the building is the art.

FUNCTION INFLUENCES DESIGN

The interior of the building was designed for research and teaching in the electronic age, keeping in mind that work in the sciences is increasingly interdisciplinary and more dependent on computational tools and digital information. Classes, lectures, and other events held at the library draw attendees not only from science and technology disciplines, but also from

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the arts and humanities. It fosters the type of interdisciplinary collaboration and communication that often drives innovation. During the design phase architects met with students, faculty, and librarians to determine current and future library users' needs and wants – to create a variety of spaces conducive to reflection, studying, teaching, conducting research, and even sometimes catching a quick nap! Productive workspace for library staff was also a priority.

The result was the creation of innovative study, research, classroom, and work spaces. Gehry designed the library's built-in furniture, working with staff to test the designs. He also collaborated with librarians on the selection of soft and hard seating that can be arranged into different configurations to suit specific needs. Typeface for signage and interior color schemes are also Gehry designs.

**DESIGN INFLUENCES FUNCTION**

The Lewis Library has become a center for the student experience at Princeton. It provides patrons with a light and airy environment that gives people a sense of space as well as a warm, safe, and comfortable environment that inspires. "It's where people can come to think, contemplate, and reflect," commented Jane Holmquist. "Many faculty and students have favorite spaces where they feel most productive and they return to them time and time again."

One gets the sense that the entire facility is a quiet zone and hushed tones or no talking at all seem the norm. This is self-policied by the library's users.

When you want people to think outside the box, don't put them in boxes. Although the building's interior space is measured in square feet, almost none of the spaces are actually square. This is evident in a number of group study rooms of varying shapes and sizes that are designed to facilitate collaborative learning. Innovative design gives the feeling of expansive space in relatively small areas. Rather than high tech solutions for sharing information, here students have surprisingly opted for low tech chalk boards.

Classrooms and seminar rooms are multifunctional with furnishings, workstations, and instructional tools that can be adapted to accommodate many uses, from lectures by visiting professors, to “orphan” classes that span departmental boundaries and seminars conducted by the library staff.

In order to accommodate the breadth of the community spaces, some print books had to be moved into storage. However, this has not proven to be problematic and access solutions are largely user driven. The ReCAP (Research Collections and Preservation Consortium) service enables patrons to request books delivered the same day. In some instances material is scanned, converted to PDFs and delivered electronically.

**LEWIS LIBRARY HOUSES:**

- Broadcast Center (video and audio studio)
- Council on Science and Technology
- Digital Map and Geospatial Information Center
- McGraw Center for Teaching and Learning
- New Media Center
- PiCSiE (Princeton Institute for Computational Science and Engineering)
- TIGRESS (Terascale Infrastructure for Groundbreaking Research in Engineering and Science)

According to Anne Langley, “My colleagues and I feel privileged to work in this 21st century library with its intelligently designed physical spaces and virtual information flowing all around us.”

For more information about the Lewis Library visit scilib.princeton.edu/about.

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Anders earned his Ph.D. in physics at Humboldt University Berlin, Germany, in 1987, and is currently a senior scientist and leader of the Applications Group at Lawrence Berkeley National Laboratory. Throughout his career, Anders has been the recipient of numerous prestigious awards and is a prolific contributor to the literature. Read Dr. Anders’ editorial, “Journal of Applied Physics in a changing world of scientific publication.”

In September 2014, Applied Physics Letters (APL) welcomed a new editor-in-chief, Reuben T. Collins, an accomplished materials scientist specializing in renewable energies. Properties of nanostructured and lower dimensional systems have been an underlying theme of his scholarship. Collins is a professor at the Colorado School of Mines and is associate director of the Renewable Energy Materials Research Science and Engineering Center (REMRSEC). He is a dedicated educator and mentor of many undergraduate and graduate students and postdoctoral researchers. Read Dr. Collins’ editorial, “Building on excellence: A vision for the future.”

Collins joins APL as former editor-in-chief Nghie Lam steps down after two decades of leadership. During his tenure, APL was the most highly cited journal publishing full-length articles in the Thomson Reuters’ Applied Physics category. Read Lam’s editorial, “Reflections on my tenure as Editor-in-Chief of Applied Physics Letters.”

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