



Re-envisioning the Library for the 21st Century:

Learning, Research, & Community

Joan K. Lippincott

Coalition for Networked Information

Georgia Tech

August 8, 2013



Libraries provide spaces to support the active, social aspects of learning

U. Utah



Georgia Tech





Spaces like these where students can create digital projects

GIS Station – NC State U.



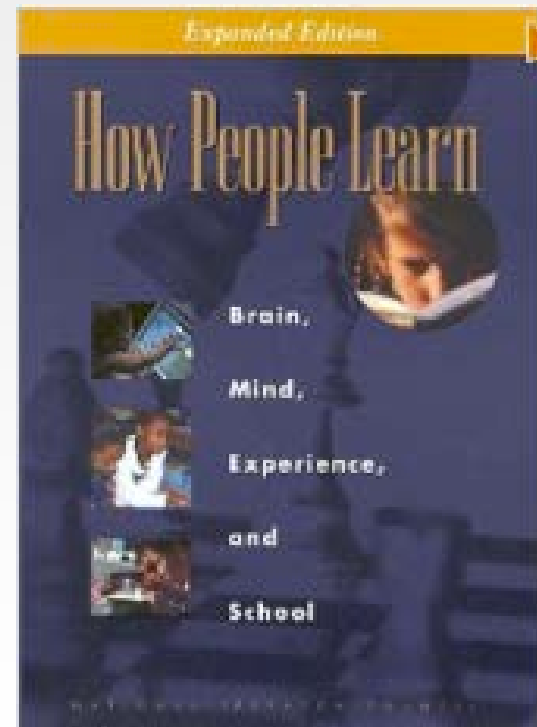
Media Commons – U. Virginia





Guiding principles

- Learning is an active, not passive process
- Individuals do not learn in isolation – learning is a social process
- Learners build on a foundation of previous knowledge and understandings to achieve deeper learning
- http://books.nap.edu/catalog.php?record_id=9853





Relationship of spaces to learning

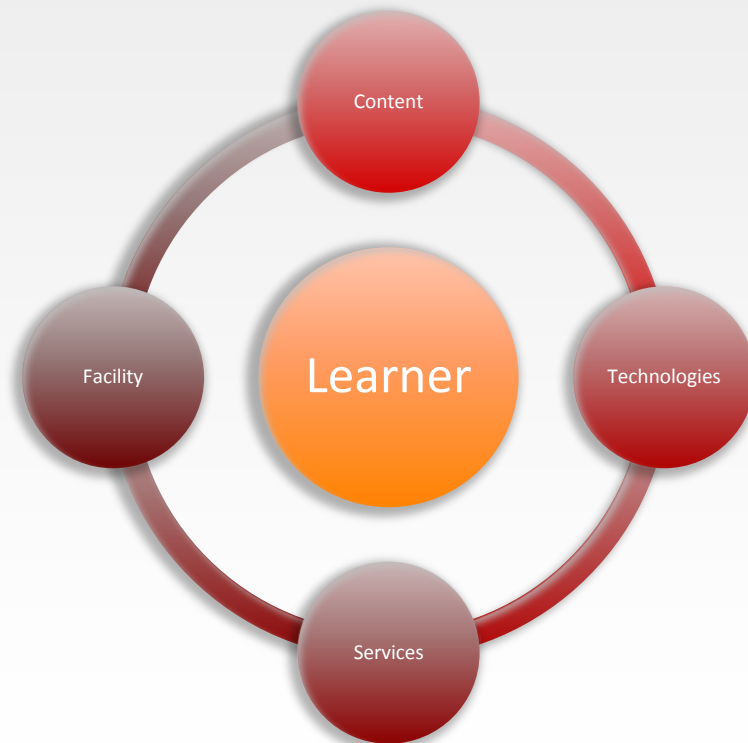
Learning Principle	Application in Spaces
Collaborative, cooperative	Small group work spaces
Active	Table space for tools
Encourage discovery	Availability of technologies, content

Adapted from Malcolm Brown, "Learning Space Design Theory and Practice,"
EDUCAUSE Review, 2005

<http://www.educause.edu/ero/article/learning-space-design-theory-and-practice>



The Library as an Informal Learning Space





Libraries

- Provide spaces where students can work collaboratively and access technologies
- Provide services supporting use of information and technologies
- Serve all departments and colleges of the institution
- Provide welcoming, safe spaces for many hours of the week
- Offer expertise in curriculum development



A range of spaces for groups

U. Pennsylvania



Tilburg U. - Netherlands





Spaces where students can get work done together

U. Virginia



San Francisco State U.





Spaces where students can access hardware and software



U. Nebraska Engineering Library



Spaces for problem-based learning

“Solving problems on the frontiers of science does two things: it motivates students tremendously, and has a very interesting impact on identity.”

Wendy Newstetter, Georgia Tech

http://www.pkal.org/documents/PBL_GeorgiaTech.cfm



U. Washington Group Study Room



Sharing ideas outside the classroom

- Providing spaces where students can share ideas in public locations promotes peer learning
- These settings can also serve as areas for informal teaching sessions



U. Washington Research Commons



Active experimentation with new technologies in public spaces encourages people to learn from one another

NC State Technology Sandbox



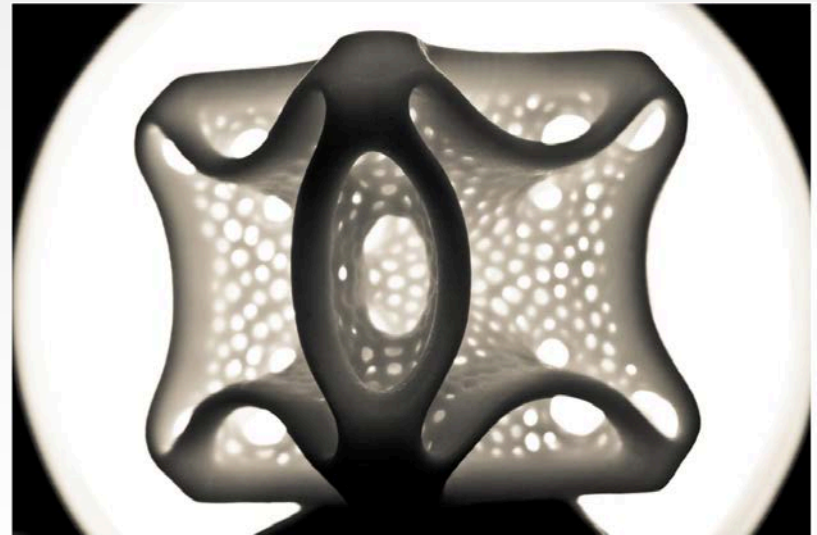
U. Calgary Digital Media Commons





Makerspaces in libraries

- U. Nevada Reno Library
- Center for informal learning
- Open to all
- “A makerspace is a safe place to learn... the experimentation in the makerspace is inquiry-based. It is learner-driven. It is cross-disciplinary and as such undisciplined in the best possible way.” Audrey Watters, “The Case for a Campus Makerspace” Feb. 2013
<http://hackeducation.com/2013/02/06/the-case-for-a-campus-makerspace/>



UNR Sci/Tech Library product of 3-D printer
http://www.flickr.com/photos/dstl_unr/7685236604/



Inspiring curiosity

Intellectual curiosity is a strong predictor of future academic performance

“A hungry mind’ is a core determinant of individual differences in academic achievement”

Based on meta-analysis of 200 studies

Perspectives on Psychological Science as reported in *CHE*, 10/27/11



MIT Stata Center



Spaces for innovation

High-end hardware and expensive software available for all

Trained staff available for one-on-one and group assistance

Liaison staff work with faculty to develop synergies with the course assignments





Developing and supporting new types of assignments provides opportunities for students to combine content & technology

Assignment development – information commons staff work with faculty

Instructional program – staff provide workshops

Facility – high-end equipment and trained staff are available for follow-up

Outreach – annual workshop of faculty presentations on their course assignments



Media Center – U. Pennsylvania





Close ties to the curriculum help libraries engage students

McMaster U. Lyons Media Centre

Facility: Gaming room supports 3 academic programs that study game creation and use

Collection: Games are available in adjacent area

Services: Staff support technology and use in coursework





Specialized spaces can support academic programs

U. Toronto Mississauga Finance Learning Centre

Encourages active, experiential learning

Specialized information resources

Dual screen workstations

Available for class/workshops and walk-in use

The screenshot displays the University of Toronto Mississauga website. At the top left is the university's crest and logo. To the right is a search bar with options for 'Search All', 'Catalogue', 'Article Search', 'eJournals', and 'Site Search'. Below the search bar is a navigation menu with buttons for 'Home', 'About Us', 'Research', 'Explore by Subject', 'Services', 'Faculty', and 'How Do I...'. The 'Services' section is expanded, listing: 'Borrow, Renew, Recall', 'Collections', 'Computers & Connecting', 'Learning Commons', 'Data-GIS', 'Finance Learning Centre', and 'Book a Study Room'. A large photograph of the Li Koon Chun Finance Learning Centre is shown, featuring students at dual-screen workstations. Below the photo is the text 'Li Koon Chun Finance Learning Centre'. At the bottom, there are three columns: 'Overview' with links for 'Mission', 'About Us', 'Staff', and 'Student Assistants'; 'Partners' with links for 'Business Advisory Board' and 'Donors'; and 'Departments' with links for 'Department of Management' and 'Department of Economics'. A small 'UTMlibrary' widget is visible in the bottom left corner of the screenshot.



Faculty/student involvement in planning takes into account curricular interests

“We can’t wait for the Hunt Library to open so we can further bolster our program by using the whole ecosystem of visualization spaces in the building,” Michael Young, Assoc. Prof. Computer Science whose classes design large-scale games.



Hunt Library, North Carolina State U., Raleigh



Scale-up classrooms are the trend

U. Nebraska Library



Virginia Tech Library





Planning Questions: Teaching & Learning

- What can the library provide that enhances the teaching and learning capabilities of academic departments?
- How are you integrating instruction and individual assistance into technology-enabled spaces? What literacies do you foster?
- What partnerships will strengthen student learning?
- How can you promote the use of content (including digital)?



Planning suggestions: Gain a deeper understanding of your user community

- Understand your students' study, active learning, and specialized learning needs
- Focus attention on curriculum and faculty
 - Gather information on the direction of the curriculum
 - Target faculty who give or would like to give assignments that have a strong information resources component
 - Develop specialized spaces and services for particular groups and needs – one size does not fit all at all times



Libraries Provide Public Spaces for Creating and Disseminating Scholarship

Sponsored summer institute

UCLA Library





Digital Scholarship Centers support graduate work and foster interdisciplinary communities

Offer a range of services

- Fellowships
 - Cohort of students
 - Daily interaction with staff
- Workshops, courses, certificate programs
- One-on-one consultation
- Online tutorials
- Create a community

U. Va. Scholars' Lab

The screenshot shows the University of Virginia Library website. At the top left is the 'UNIVERSITY of VIRGINIA LIBRARY' logo. To its right is a search bar with the text 'Search for books, articles, digital materials, and more.' Below the search bar are links: 'Go to Virgo for more options >>', 'Also try: Journal Finder', 'Databases A-Z', and 'Subject Guide'. A navigation menu below the search bar includes 'U.Va. Home', 'Libraries', 'Hours', 'Map', 'Depts./Contacts', 'Questions? Ask a Librarian', and 'Check My Account'. On the right side, there is a box with 'Hours: Open 9am-5pm Mon-F', 'Contact: (434) 24', and 'Directions | Fax &'. The main content area features the 'SCHOLARS' LAB' title in large red letters. Below the title is a photo of students working at computers in a library. Underneath the photo is the text 'Digital Research & Scholarship in Alderman Library' and a paragraph: 'The Scholars' Lab caters to the digital research and scholarly analysis needs of faculty and advanced students in the humanities and social sciences. Staffed with friendly, expert consultants from the U.Va. Library's Digital Research and'.



Libraries Can Provide Spaces for Talking through Ideas

Think Tank



U. Virginia Scholars' Lab





Libraries Can Invite Users to Interact with Big Data



- “As we create more and more digital content, there’s a question of how do you get people to even realize we have it and then to interact with it in new ways.” Sayeed Choudhury, JHU Libraries



Describing opportunities for innovation

Information on Spaces

Fourth Floor

Lecture Hall

An auditorium-style presentation room within the Institute for Emerging Issues with fixed seating for 92 people.

Fishbowl

A seminar room uniquely designed to promote the open exchange of ideas. Offers a Perceptive Pixel multi-touch display and transparent walls that allow others to experience the activities taking place inside.

Lake Raleigh Learning Commons

Computer workstations for individual and collaborative work in a light-filled space with floor-to-ceiling windows on three sides. Features comfortable, colorful furniture and views of Lake Raleigh to the south.

Group Study Rooms

Everything that groups need to work and study together: whiteboard walls; flat-panel display; thin-client computer; web-based video conferencing; table cubby with laptop, power, and auxiliary connections; speakers; and touchpad controller.

Teaching and Visualization Lab

A "black box" for high-definition visualization and simulation, offering seamless 270-degree immersive projection on three walls for a total of 80 linear feet of display surface, 3D display, a professional zoned audio system, and cameras for real-time video capture, broadcast, and collaboration. [More Details.](#)

Makerspace

Create working prototypes, architectural models, and other objects with tools including 3D printers, a 3D scanner, and a laser cutter. "If you can draw it, you can make it!" [More Details.](#)

Creativity Studio

A flexible, "white box" space that can be easily reconfigured and transformed to support a variety of activities in many disciplines, with high-definition, 3D-capable projectors, movable and writable walls, a full theater lighting kit, and many interactive tools that can be configured for simulations and virtual environments. [More Details.](#)

Video Seminar Room

Features a telepresence video collaboration suite to facilitate meeting with others anywhere in the world.

Graduate Student Commons

Designed specifically for graduate students, with lounge seating, open study spaces, group study rooms, computer workstations, and lockers. A valid Wakeup One Card is required for access.

Media Production Studios

Located on the fourth floor near the Oval View Reading Lounge, these two rooms offer state-of-the-art tools for creating and editing digital media, including a "green screen" curtain system, studio lighting, and a 4K video editing suite.

Music Rooms

Located near the Media Production Studios, four Music Rooms are fully equipped for audio recording, creating and mixing music, audio and video transfer, and digital media editing, with full 88-key MIDI keyboard, microphones, and digital media workstations.

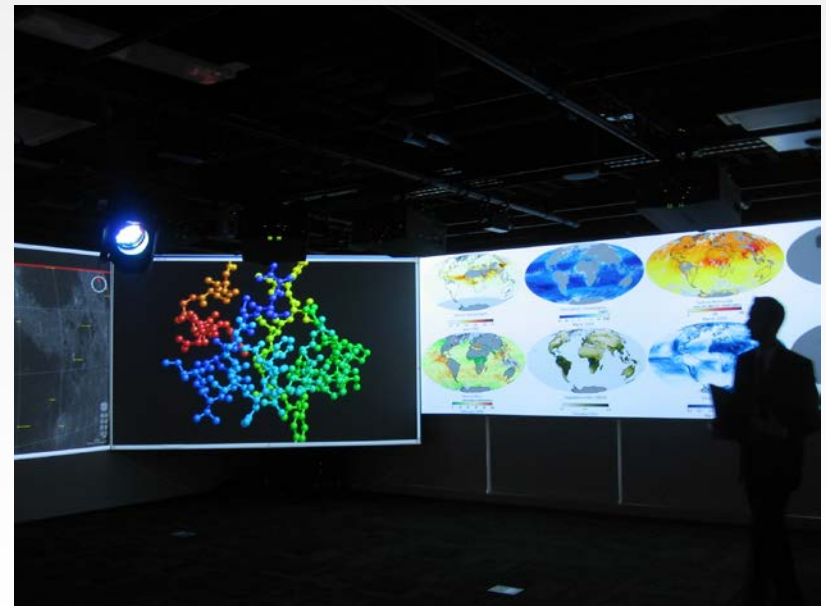
Usability Lab

Located near the Music Rooms and equipped with video-capture cameras and tools for assessing user interaction with software and interfaces. This room is available for collaborative groups of 2 to 4 when not in use for usability studies.

Oval View Reading Lounge

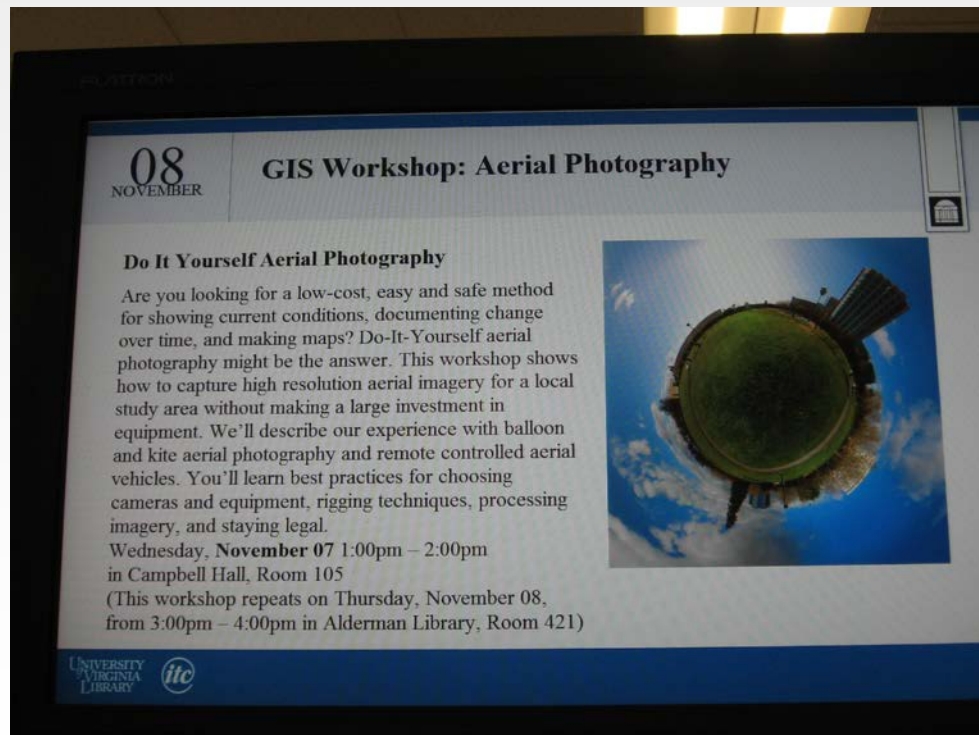
Browse recent publications in computer science, textiles, and engineering, selected print journals from publishers such as the Institute for Electrical and Electronics Engineers (IEEE), and seminal titles such as *Science* and *Nature*.

Teaching & Visualization Lab





Libraries can offer workshops on specialized methods




08
NOVEMBER


GIS Workshop: Aerial Photography

Do It Yourself Aerial Photography

Are you looking for a low-cost, easy and safe method for showing current conditions, documenting change over time, and making maps? Do-It-Yourself aerial photography might be the answer. This workshop shows how to capture high resolution aerial imagery for a local study area without making a large investment in equipment. We'll describe our experience with balloon and kite aerial photography and remote controlled aerial vehicles. You'll learn best practices for choosing cameras and equipment, rigging techniques, processing imagery, and staying legal.

Wednesday, **November 07** 1:00pm – 2:00pm
in Campbell Hall, Room 105
(This workshop repeats on Thursday, November 08,
from 3:00pm – 4:00pm in Alderman Library, Room 421)



UNIVERSITY OF VIRGINIA LIBRARY 

U. Virginia Digital Scholarship Center



Libraries Can Showcase Research Output and Library Resources

Mann Library, Cornell U.



McMaster U.



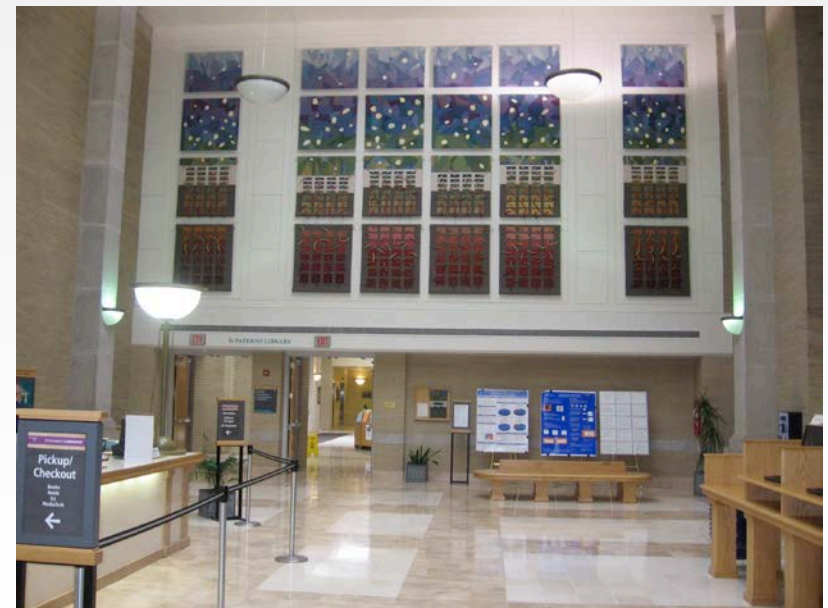


Posters Displayed in the Library Highlight Research

U. Washington



Penn State





Libraries Can Create Quiet Places for Graduate Students and Faculty



Faculty study – U. Colorado, Boulder



Libraries support research by providing

- Places for interdisciplinary work
- High-end technologies regardless of academic department
- Expertise and services
- Means for sharing and celebrating work products



Planning Questions: Research and Scholarship

- What can you provide to enhance research capabilities, especially related to e-research, of graduate students and faculty?
- How can you foster interdisciplinary interactions?
- What staff do you need to have in place for leading edge technologies and services?
- How can you celebrate the research achievements of your community, especially drawing attention to the links between research and information?

LISA AND MARK SNELL GALLERY



How Do Libraries Nurture Communities?

Oklahoma State U.





Food for students studying many hours

U. Toronto Mississauga



U. Calgary





Places to meet with students and faculty – Duke U.





Encouraging a sense of belonging



Brigham Young U. Library



Collaborations



Brigham Young U. Library



Building a sense of community: The Third Place

- A place outside of home or workplace
- Free or inexpensive
- Welcoming & comfortable
- Highly inclusive – a “mixer”
- Food (usually)
- Intellectual fora
- “Nothing contributes so much to one’s sense of belonging to a community as much as ‘membership’ in a third place.”
- Ray Oldenburg, *The Great Good Place*, 1999



Inviting community in outdoor spaces

U. Colorado, Boulder



UC Santa Cruz





Cornell Mann Library Garden





Art for Inspiration
at Northwestern U.



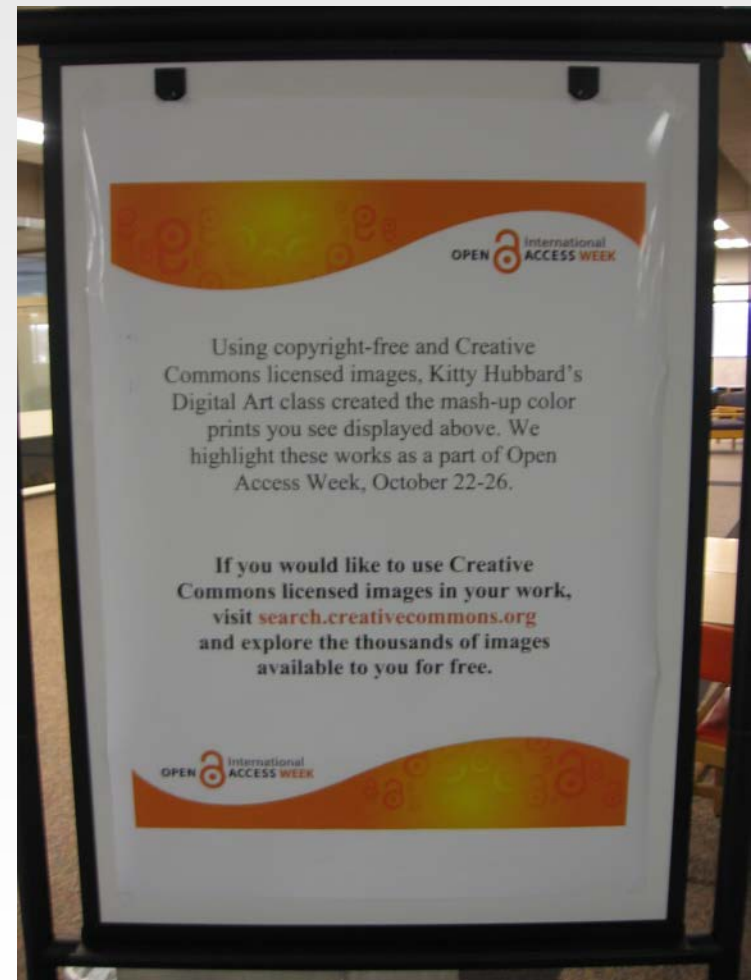
Charles Addams at Penn State U. Libraries



Displaying student art work

Project included a lesson on use of copyright-free images, which were used in mash-ups and then the use of Creative Commons licenses for the works produced by the students.

Display in the library in celebration of Open Access week





Catalog art at U. Colorado, Boulder





Reading Art BYU



Book art at Deakin U. - Australia



Photo courtesy of Deakin U. Library



Building community virtually

My #HuntLibrary on Instagram



<http://d.lib.ncsu.edu/myhuntlibrary>



Planning Questions: Community

- How can you make your space welcoming, comfortable, and inspiring?
- How can you use art or symbols to link the library to art or the culture of your institution?
- How do you signal the unique *library* aspects of your Third Place?



Planning resource: Learning Space Toolkit

The screenshot shows the homepage of the Learning Space Toolkit. At the top right, there are links for "About", "Contact", "Sitemap", and "Downloads". The main header features the "LEARNING SPACE TOOLKIT" logo with the tagline "A Resource for Designing and Sustaining Technology-Rich Informal Learning Spaces". Below the logo is a navigation menu with "Roadmap", "Needs Assessment", "Space Types", "Services", "Technology", and "Integration".

The main content area is divided into several sections:

- Image:** A large photograph of the Artwork Saltire Centre at Glasgow Caledonian University, showing a modern, open-plan learning space with people working at tables.
- LSTK STORY:** A section titled "The toolkit is for:" with four icons representing "Library/IT Staff", "Designers", "Administrators", and "Facility Managers".
- LSTK ON FLICKR:** A grid of small thumbnail images showing various learning spaces.
- LSTK AT-A-GLANCE:** A small version of the Learning Space Toolkit logo.

Below the main image, there is a "Getting Started" section with the sub-heading "Orientation". It contains a text box: "Not sure where to begin? Get oriented to the Toolkit. Below are the six components of the Toolkit:". This is followed by a grid of six cards, each representing a component of the toolkit:

- Roadmap:** Typical project phases, stakeholder roles and communication resources to successfully plan and implement learning spaces.
- Needs Assessment:** What activities are envisioned for a learning space and assessing how well spaces are working to support those activities.
- Space Types:** The building blocks that make up technology-rich learning spaces.
- Services:** Services provided within spaces to support their users.

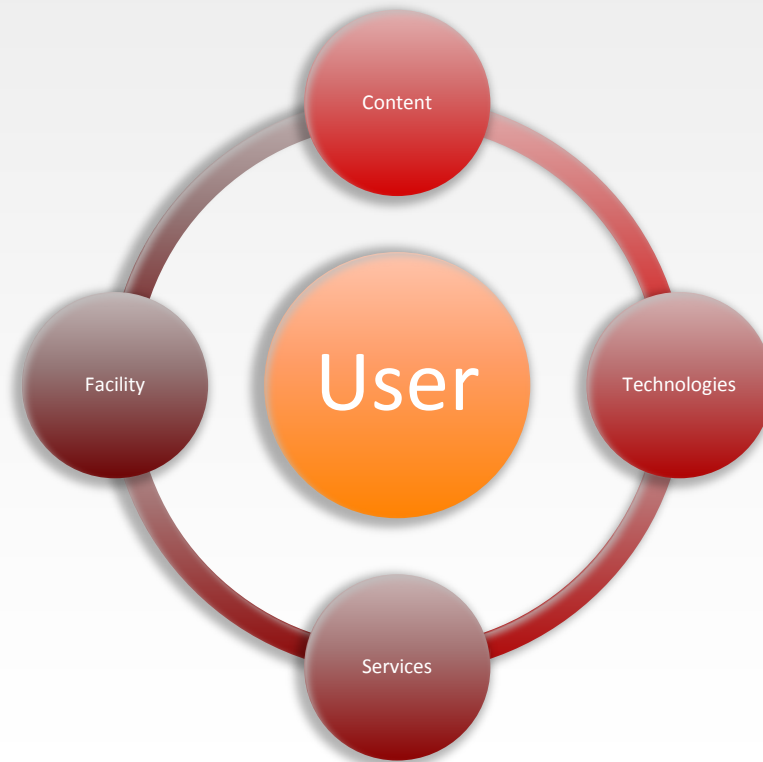


When your building project is completed, will people say:
“This library attracts ideas!” Donna Livingstone, U. Calgary





Finally, as you plan, keep things in balance





Thank you!

Joan K. Lippincott (at NCSU Hunt Library)

joan@cni.org

<http://www.cni.org/about-cni/staff/joan-k-lippincott/>

All photos are my own unless noted