



---

Volume 54 | Issue 2

Article 9

---

9-2011

# Moving Target: Academic Library Design and Services in Response to Evolving Technologies and Student Expectations

Linda Poston  
*Nyack College, Nyack*

*The Christian Librarian* is the official publication of the Association of Christian Librarians (ACL). To learn more about ACL and its products and services please visit <http://www.acl.org/>

Follow this and additional works at: <http://digitalcommons.georgefox.edu/tcl>

---

## Recommended Citation

Poston, Linda (2011) "Moving Target: Academic Library Design and Services in Response to Evolving Technologies and Student Expectations," *The Christian Librarian*: Vol. 54 : Iss. 2 , Article 9.  
Available at: <http://digitalcommons.georgefox.edu/tcl/vol54/iss2/9>

This Article is brought to you for free and open access by Digital Commons @ George Fox University. It has been accepted for inclusion in The Christian Librarian by an authorized editor of Digital Commons @ George Fox University. For more information, please contact [arolfe@georgefox.edu](mailto:arolfe@georgefox.edu).

# Moving Target:

## Academic Library Design and Services in Response to Evolving Technologies and Student Expectations

Linda Poston  
Dean of Library Services  
Nyack College  
Nyack, New York

### ABSTRACT

This article provides a brief overview of several current trends in academic library design, a description of several paradigms for library services, and a discussion of the impact on library design of evolving technologies and changing student expectations for library resources and services. The article explores opportunities and challenges that new technologies provide and the impact of the digital environment on academic libraries and the learning experience of students. Observations from a focus group and site visits to six academic libraries constructed, renovated or planned within the past five years provide examples of factors influencing library design and address both positive and negative outcomes of various designs.

### Approaches to Library Design

Library design historically has been concerned with providing space to house and access growing physical collections in multiple formats and creating a quiet space for reflective scholarly research. With the evolving online environment and “digital natives” expecting new service models, library design has become a moving target. Indeed, contemporary approaches to learning have required higher education to take a new look at what libraries are all about.

Scott Bennett (2007) notes that communication technology “has changed all of our calculations about space.” He sets forth three models to address the “Designing for Uncertainty” challenge of integrating virtual library space with the physical space of libraries.

1. **Service and Instructional Approach:** This model provides instruction and service to students to assist in navigating the challenges of research in the virtual and physical environment and has led to the popularity of Learning or Information Commons. The “Commons” model fosters a collaboration of interdepartmental services, including library services, information technology, tutoring, and academic support, to provide a “One-Stop” point of help for students.
2. **Marketing Approach:** This model sees the behavior and preference of library users as the driving force for library design.
3. **Mission-based Approach:** This model focuses on the ends, rather than the means and on the institutional mission of creating a culture of learning (Bennett, 2007, pp. 15-17).

I believe the “Mission-based Approach” is the best alternative. Instead of asking what services the students need, or what the students want, we should be asking ourselves what will optimize the learning experience. What does it look like? Where does it happen? How can we cultivate it? Such a focus is on the “end” which is “learning”, and thus design decisions will enhance how learning takes place. Depending on the institution, the answers will vary. Design options intended to cultivate a learning environment will look different for different student populations (adult, residential, commuter, or distance education).

### Impact of Evolving Technologies

The design of library services and space is also greatly impacted by evolving technologies which provide both opportunities and challenges. Goodyear and Ellis (2008) note that each new technology provides new opportunities but we often put the “technological cart before the educational horse”, looking for problems we can fix with the new technologies. This approach lends itself to a “comparison and replacement” philosophy, rather than an “analysis and integration” philosophy ( pp. 141-152). An example of this would be the ongoing discussion of e-books. Instead of asking the question, “will the e-book and e-journal replace the print book and print journal?,” we should be asking, “how can we integrate the e-book and other digital resources into traditional resources in the most effective way for our users? And what type of information is best suited for a digital format?”

The publishing industry itself is going through a huge paradigm change both for authors and readers. It is interesting to note that “according to a 2010 R.R. Bowker study, 764,448 self-published and micro-niche titles came out in 2009. That’s more than twice the number

– 288,355 – of traditional books published that year” (Havens & Storey, 2010, p. 4). With the ease of the Internet, self-publishers have many venues for marketing their books and the number of self-published works will most likely continue to grow.

Technology has also provided the opportunity to consider the “on demand” approach to collection development rather than the traditional “just in case” approach, which often results in the majority of purchased titles gathering dust on the shelves. With an initial investment of \$100,000, the Espresso Book Machine is able to produce a 300 page gray-scale book with a color cover in about four minutes. The “on demand” approach affects the amount of shelving needed for print volumes and doesn’t assume a consistent growth of the collection based on the annual book budget.

In addition, technology significantly enhances communication with social networking tools and expands access to increasingly diverse library resources such as streaming audio and video and QR codes for smart-phone access to library information and resources.

Thomas Sens identifies several major trends in library design to consider when planning:

1. “Envision the library as place”:  
The library can serve as a place for collaboration and individual study as well as for specialized services external to the library.
2. “Plan for change”:  
Make flexible space and infrastructure choices, consider movable furniture and temporary wall dividers, and leave options open to acquire the latest models of desired computer or A/V equipment as the project moves forward.
3. “Optimize spaces between spaces”:  
Use a corridor for an art gallery, create small student gathering places, or use unused wall space to house a bulletin board or electronic signage.
4. “Consolidate emerging specialty spaces”:  
If space is available, house areas such

as tutoring and writing centers, group study rooms, presentation rooms, seminar rooms, distance learning rooms with video conferencing, café, student and faculty lounges, radio station or podcast facilities or art galleries.

5. “Rethink library programming”:  
Use the first floor as “prime real estate” for public areas, commons, group study area etc.; use the basement (“lower-end real estate”) for archives and stacks, and use compact shelving to save space; have a 24/7 area with security for hours the library is not open; and keep floor plans open and spacious (Sens, 2009).

These trends indicate a shift in focus on seeing the library as a place for housing materials to seeing the library as a central place on campus to promote learning. Much of this shift is in response to characteristics of the current college generation and the availability of online resources, which require less physical space.

### Characteristics of Generation M

The generation born in the early 1980’s through the mid-to-late 1990’s has been called the “Millennials” (by Howe and Strauss) or “Generation M” (Media, Millennials, Mobile, Multitaskers, Multisensory) as noted by Cvetkovic and Lackie in *Teaching Generation M: A Handbook for Librarians and Educators*. While a number of authors question whether it is possible to categorize generational cycles with similar characteristics on a linear time-line, there appears to be a number of significant common characteristics of the current generation of college students.

Howe and Strauss identify seven characteristics of Millennials: “specialness”; strongly tied to parents, family and friends; confident; team-oriented; conventional; multitaskers; and wanting structure from within and without to guide them. In addition they are more ambitious, optimistic, ethnically diverse, and favor different values and learning styles (Ricketts, 2009, pp. 7–18).

*[T]echnology significantly enhances communication with social networking tools and expands access to increasingly diverse library resources such as streaming audio and video and QR codes for smart-phone access to library information and resource*

*Librarians  
will need to  
continuously seek  
ways to integrate  
information in a  
more interactive or  
visual way.*

This generation is much more connected and willing to share their thoughts, pictures and media with the world, which will promote a more collaborative research environment. Perceptions of copyright and fair use, however, have become more muddled in such an open environment and will eventually need to be addressed.

It is also important to note how Millennials use information and how they interact with libraries. Abram and Luther (2004) wrote an insightful article entitled “Born with the Chip” to demonstrate how the next generation is influencing libraries. They posit that young people today are “format agnostic”, “nomadic”, “multitasking”, “experiential”, “collaborative”, “integrative”, “principled”, “adaptive” and “direct”(pp. 34-37). The impact on the library profession is significant. First, the fact that format does not matter has affected the understanding of what they are viewing online, whether it be an online e-book, chapter of a book, article from a journal, blog entry, website etc. Because “online” is the “format,” students often have a difficult time understanding the difference between the journal name and article title in a citation because they are not handling a physical journal and only care about accessing snippets of information they see as valuable for their research.

Secondly, students have grown up on video games and prefer a visual and interactive presentation of information. Librarians will need to continuously seek ways to integrate information in a more interactive or visual way. The recent use of LibGuides is an example of integrating multiple formats such as YouTube links, video guides, links to websites and library databases all accessed on one page. Prensky provides another example of interactive information which utilizes gaming-based software entitled “Monkey Wrench” to teach the CAD software to engineering students (Prensky, 2001).

Thirdly, librarians need to be prepared for “principled” students who may demand

recycled paper in the printers, or petitions for fair trade coffee in the cafes.

Fourthly, it is essential that librarians assist students in the development of strong critical thinking skills rather than respond and adapt services to accommodate multi-tasking and shallow, fragmented, research. Nicholas Carr (2010), in his recent book *The Shallows*, warns of the Net’s ability to “seize our attention only to scatter it” and that the “Net’s cacophony of stimuli short-circuits both conscious and unconscious thought preventing our minds from thinking either deeply or creatively” (pp. 118-119).

Lastly, this generation is not shy about demanding respect and quality service. Librarians can be proactive by coming up with customized standards of excellence for library resources and services that reflect their respective institutions’ mission and core values.

Susan Gardner (2005) reports on a number of findings from an undergraduate user survey regarding student use of the library. The survey reveals that the top three reasons students used the library were to study alone (80.6%), use a computer for class work (61.3%), and to study with a group (55.2%). Only 12.6% of respondents said that they come to the library for research assistance. When asked the average length of time the user stayed at the library, 73.8% of undergraduate users reported staying at the library for 30 minutes or less.

### **Site Visits to Academic Libraries**

The author visited seven academic libraries in Virginia, Illinois, Nebraska, Pennsylvania, Georgia, and New York (varying in size from 406-9673 FTE) during the summer and fall of 2010. Each of these libraries had renovated current library space, built a new building, or had plans for a new building within the past five years. The purpose of the visits was to identify factors influencing the newly designed library space, note the impact the new design has had on the library users, and identify what worked well and what didn’t work well with the new design.

The two strongest factors influencing design were 1) a desire to create an inviting, comfortable “academic living room” feel to the library, and 2) a desire to create space for collaborative work as well as providing multiple types of spaces for both individual and group study. Other significant factors included a desire for more open space, a more efficient use of space, the need to increase technology, the need to provide additional seating, improved lighting and wiring, determining what needs to be adjacent to what, and incorporating learning commons with presentation, art gallery, and café areas.

*Positive results of newly-designed library space include:*

- Ability to accommodate multiple learning styles and seating preferences
- Use of compact shelving to free up more “open” space for comfortable seating
- Incorporation and use of technology such as video conferencing, smart boards, public scanners, outlet lamps on tables for laptops
- Creation of a 24/7 room with keyed access for after-library hours
- Incorporation of green technology such as an air fountain/light well, solar panels, computerized airflow and prairie grasses in the landscaping
- Establishment of a learning commons model with other campus departments
- Separate sections or floors for quiet study and group study
- Higher gate count
- High usage of group study rooms
- A more “open” feel due to choice of furniture with low backs

*Negative results of newly-designed spaces:*

- More group study rooms needed
- More outlets needed
- Decorative carpet cutouts pull up; carpeting and furniture were inexpensive but have not proved very durable

- Automatic light sensors produce perception that library is closed
- Security gate at emergency exit was an un-needed expense
- Undesirable “Pink noise” (overhead A/C and heating)
- Security gate too far from the Reference Desk
- Noise rises in open spaces and is distracting
- Central lighting switch needed to make closing the library easier

Although each institution has a different student population, needs, budget and building limitations, it was interesting to see the common thread influencing the designs. A significant design choice was to make the collaborative learning area the central visual focal point of library space rather than the resources themselves.

## Conclusions

To design successful and effective academic library space, librarians must intentionally have an informed design, a mission-focused design, a detailed design and an open and flexible design.

An “informed design” includes site visits to newly designed or renovated library space to provide a visual and physical “experience” to collect ideas that may adapt to individual institution’s space, budget, and demographics. In addition, recent articles in the professional literature about academic library design and a familiarity with the expectations of the current college generation contribute to an “informed design”.

A “mission-focused design” assures that the design promotes the institution and library’s mission, vision and values and cultivates a central hub on campus where authentic learning can thrive.

A “detailed design” will include research into specific details of furniture, colors, function of

*Librarians can be proactive by coming up with customized standards of excellence for library resources and services that reflect their respective institutions’ mission and core values.*

space, grades of carpet, “green” options, etc. taking plenty of time to gain user feedback as well. It has been suggested that sample chairs or furniture be requested of the vendor and “tested” by library staff and students before making the final decision.

An “open and flexible design” is one which creates the greatest feeling of space and openness in “prime real estate” areas of the library. Flexibility is key in designing space to be easily reconfigured to accommodate changing technology, updated equipment, furniture, or service points.

So how might we apply what we have learned in this study? Let me suggest three design priorities based on the data included above.

First, intentionally provide multiple types of seating, both for quiet, reflective individual study, as well as *interactive study areas*, useful for working on group projects. Movable, collaborative tables and stackable chairs, combined with large-screen monitors, smart boards, and other interactive media cultivates a peer-learning environment.

Secondly, since the majority of students choose to do research online rather than in the physical library, the user-friendliness and mobile compatibility of the *library website* is a priority. Chat or text reference is also an option for assistance online. In addition, librarians need to work closely with IT to ensure that disruptions in service to online library resources and services rarely occur and are resolved in a timely manner.

Thirdly, to increase the length of time students use the physical library, librarians can be proactive as “*Roving Librarians*” offering research assistance in person. They can also expand *training of student assistants* to promote quality first-level research assistance, as students often turn to peers first.

Yes, library design may be a moving target as librarians consider evolving technologies and changing student expectations for library

resources and services, but librarians are known for research skills. Who else would be better equipped to keep up with our changing environment? †

#### LIST OF SOURCES USED

Bennett, S. (2007, March). Designing for uncertainty: Three approaches. *The Journal of Academic Librarianship*, 33(2). Retrieved from <http://firstsearch.oclc.org/ezproxy.nyack.edu>

Goodyear, P., & Ellis, R. A. (2008, August). University students' approach to learning: Rethinking the place of technology. *Distance Education*, 29(2), 141-152. doi:10.1080/01587910802154947

Havens, A., & Storey, T. (2010). Future of publishing: Libraries and the changing role of creators and consumers. *Nextspace*, (16), 4-9.

Sens, T. (2009, December 1). 12 major trends in library design [Web log post]. Retrieved from NEEHSLs\* and beyond: <http://newemergingmedicallibraries.wordpress.com/2010/01/01/12-major-trends-in-library-design>

Rickes, P. C. (2009, January). Make way for millennials! How today's students are shaping higher education space. *Planning for Higher Education*, 37(2), 7-18. Retrieved from <http://proquest.umi.com>

Abram, S., & Luther, J. (2004, May 1). Born with the chip. *Library Journal*, 129(8), 34-37. Retrieved from ABI/INFORM Global database.

Prensky, M. (2001). Digital natives, digital immigrants. *On the Horizon*, 9(5). Retrieved from <http://web.me.com/nancyoung>

Carr, N. (2010). *The shallows: What the internet is doing to our brains*. New York, NY: W.W. Norton & Company.

Gardner, S. (2005, July). What students want: Generation Y and the changing function of the academic library. *Portal: Libraries and the Academy*, 5(3), 405-421. Retrieved from <http://proquest.umi.com/ezproxy.nyack.edu>