The attached annotated bibliography offers a window into an ongoing conversation about what libraries—both physical and virtual—will look like in the future. This discussion speaks to the profession's evolving ideas about what library space should be, how it should serve users, and how users interact and work in library space today. An increasingly connected world combined with shifting pedagogy practices call for library spaces that are open, configurable, social, and comfortable. These spaces are designed to support group study practices that are more often than not a “social activity” with students learning through conversations and collaborations. This productive discourse around the interplay of space and learning, as reflected in the annotated bibliography below, brings into focus the intersection of space, technology, and pedagogy when planning effective library learning spaces.

The dialog occurring in library science literature and practice in some instances, contribute toward a learning-centered paradigm, in which users engage in individual and group learning, often with multiple digital resources; and away from a book-centered paradigm, which has its origins in nineteenth-century industrial techniques of paper production and printing. This transformational shift has generated a tension that is evident in many library
environments today: a library building that reflects a twentieth-century book-centered paradigm, while supporting a population of students who continuously adopt new learning-centered technologies and study practices.

Accordingly, this summary report provides a synthesis of the recent literature in an attempt to inform and align (learning centered paradigm—students) discussions and processes when planning and designing a new library building. What follows are actionable conclusions that emerged from a brief review of the literature. The annotated bibliography below coupled with data from a qualitative survey and travel log (attached) advance these recommendations for further scrutiny and consideration by the Chabot College Library staff, Building 100 Project Team and campus community at large.

(Note: the recommendations below are presented in no particular order)

1. Engage Chabot’s campus community (students, faculty, staff and administrators) using a participatory design approach.

A participatory design approach is recommended as a way of engaging members of the campus community, primarily those who will use the designed space the most. Moreover, this approach establishes a methodology of sharing information and authority in the design process. Although few and far between, a recent publication (2016) of a three-year study across a three-campus community college district in Montgomery County, Maryland (see annotated bibliography below), demonstrates the use of ethnographic methods to engage campus stakeholders. The focus of the study
centers on *how students do their academic work and use their campus library*. One of the project’s many strengths was its inclusion of a wide cross-section of students, staff, faculty members, and administrators. This is reflected in the report itself, which includes sections written by a wide variety of stakeholders: librarians, engaged in ethnographic studies; anthropology faculty and students who conducted complementary studies; architecture faculty who used study findings studio projects; and college leaders and administrators. Overall, the structure of the project created ties among a multitude of individuals and departments throughout the college while providing innovative teaching and learning opportunities and producing data upon which to base improvements to libraries on all three campuses. From a scholarship perspective, the Montgomery College studies are particularly valuable because they represent the most comprehensive such project yet conducted on community college campuses. While at the ground level, it provides practitioners a concrete example of an ethnographic study, conducted by the stakeholders involved, which can bring to light the new practices and needs that are emerging under today’s rapidly changing conditions.

2. **Integrate changes in teaching and learning (pedagogy) with new information and communication technologies (ICTs) in designing and supporting library learning spaces.**

Evolving pedagogies coupled with new ICTs are creating opportunities for libraries to connect directly to the local curriculum and support students who are being asked to work in new ways. This usually results in library learning spaces that ensure easy access,
and overview of services and experiences, flexibility, and a smooth flow of users through the building. In most cases, these spaces can be organized into different work zones. For example, the most social and active zone is often near the entrance, bustling and spacious with quick access to tutoring services, information services, computer labs, cafe lounge, exhibitions, new books, and self-service borrowing and returning. In the next zone you may find an area offering guidance and professional librarian services (reference desk) in close connection with the physical collection. The third zone usually offers peace and quiet, with study desks, small group study rooms, and a reading room; while a fourth zone may consist of spaces for various additional activities: rooms for listening to music, rooms for watching films, conference rooms, multimedia studios with editing facilities, fabrication labs, and a local history room. This model and/or variations of the zoning concept has become increasingly popular in US libraries (i.e., Portland Community College); thus, merits a careful consideration.

3. **Design flexible and versatile spaces that build community, foster inquiry, and make learning visible.**

Research shows that the majority of college students seek environments that enhance their ability to do academic work. Most students seek spaces that support a variety of academic activities by ensuring some combination of quiet, privacy, comfort, and furnishings that are appropriate for a myriad of learning tasks—in both formal and informal contexts. This type of active learning calls for learning spaces that are open, transparent and flexible to allow students (and faculty) to move seamlessly between
different modes of learning. Such behavior is reflected in the architectural evolution taking place in library settings; these changes include: a move toward building transparency; use of visual rich images and high-end technology; and learning spaces that are increasingly social and interactive.

4. **Employ a library design consultant that specializes in building space planning to facilitate the design process.**

If the goal is to envision and design an academic library in a way that goes beyond incremental improvement to true innovation, special emphasis needs to be placed on the design process. This requires engaging major stakeholders in the design process, particularly students. Until recently, the design of the academic library has long been in the hands of a small group of "experts" (e.g., architects, senior administrators, and perhaps the library director). It is worth noting that in my recent visits to recently completed and/or renovated library buildings I encountered such instances of uneven power dynamics. Thus, in an effort to work in a truly collaborative way with those expected to use the facility later on, employment of an external library design consultant is recommended. The consultant works closely with the project stakeholders on the visioning phase of the new building. Examples from the research include: use of charrettes as a participatory designing process; campus-wide town hall brainstorming sessions; and hands-on design workshops. This is a critical first step before moving forward with the design process and eventual hiring of an architect. It is recommended that the library design consultant be separate from the architect involved in the project.
When selecting a consultant, consider the following criterion: considerable library experience; understanding of library buildings and how they function; ability to listen; excellent oral and communication skills; political skills; and that the building consultant not be an employee of the architect.

5. **Make energy efficiency and sustainability a high priority in the library design process.**

Energy efficiency and sustainability have become a major consideration for any new building project. In most cases, the physical dimensions and architectural qualities of library space are dictated by demands to reduce energy flows. Today’s focus on energy efficiency has placed an emphasis on high levels of daylight, natural materials, social harmony, and contact with nature. Taken together, these architectural elements contribute to a building’s quality of environmental design, which according to recent studies, affects the attitudes and behavior of library staff and users, particularly in areas such as productivity and concentration levels. For example, there is increasing evidence that daylight affects the ability to focus, especially at the interface between paper and digital media. This usually results in highly glazed facades (i.e., Hayward Public Library), which help reduce the use of electric lighting, and in turn, decrease heat build-up. It is worth noting that the ratio of glass to solid panel is typically 50 percent. Other sustainability efforts include, the use of solar panels on the roof of the building to generate electricity; similarly, using the roof to collect rainwater to flush toilets. Case in point, the new Hayward Public Library, scheduled to open May 2018, will be Net Zero Energy, which means that 100% of the energy consumed by the building will be offset.
by solar energy produced onsite with rooftop solar panels. According to the Library
Director, this will essentially eliminate energy bills, saving over $100,000 per year.

These examples reflect the increasing impact that environmental accreditation is having
on contemporary library design. Consequently, almost every new library project strives
to achieve environmental certification. LEED (Leadership in Energy and Environmental
Assessment Method) is the assessment tool commonly used to anticipate the
environmental credentials of projects in the US (i.e., LEED Gold Design).

6. **Emphasize accessibility and universal design to create physical and virtual spaces that
can be used by as many people as possible.**

Accessibility and universal design (UD) are two separate, but related, concepts that are
meant to consider the needs of different types of people and users. Accessibility puts an
emphasis on supporting users with disabilities, whereas UD is broader, taking into
account differences such as users' gender, age, native language, and learning
preference, to create a physical or virtual object that can be used by as many people as
possible. When used together, accessibility and UD result in inclusive, barrier-free
products that also meet legal compliance efforts (i.e., ADA). Libraries can adopt
accessibility and UD guidelines to make services, teachings, and spaces more user-
friendly, especially when planning and designing a new facility. For example, a growing
number of libraries have implemented UD practices to improve study space furnishings,
create or revise courses, design new websites, and update staff training. The end goal is
to increase the flexibility for learners while removing barriers to learning, an effort that requires continuous training and support from all stakeholders involved.

7. **Include post-occupancy assessment measures to systematically gauge how students’ learning needs and successes are being impacted by the creation of new library learning spaces.**

Post-occupancy assessment often receives minimal attention and investment. In many cases, resources for post-occupancy evaluation fall outside the project’s original budget. The attached survey data, while not significant and generalizable, points to a lack of assessment and reflection on the successes or failures of building projects. At first sight, the completion of a new building may appear as the culmination phase of the project; however, the construction and operation of a new facility is simply another point in the building life cycle.

8. **Plan a second, in-depth visit to library facilities reviewed in this report (see Travel Log) that closely mirror Chabot’s campus culture and demographics.**

A return visit to libraries selected from the attached Travel Log is recommended for spring 2018. Upon review of the Travel Log by Chabot Library staff and members of the Building 100 Project Team, a selected list of libraries will be suggested. Funding for a second trip would allow more time to visit with each library staff, librarians and administrators. Moreover, a return trip should include a visiting team made up of their library counterparts: staff, librarians and administrators.
9. **Embrace the originality of student input to design a truly user-centered library facility.**

   This responds to student diversity in a community college setting and seeks to support learning environments that enable students to participate to their full potential regardless of their socio-cultural background. This acknowledges the diverse knowledge, experiences and practices that students bring to library learning spaces. An example from the literature, illustrates this point: a group of academic librarians at a campus with a large international student population envisioned an “international tea house” within the library as a space of learning and inclusion. This space was developed through an ongoing participatory design process with the students. The end result, was an informal space in an environment of formal learning in which students found a sense of community that embraced learning related to their study and life in general. The tea house provided a space to share ideas, news, music, and movies. This required the space to be flexibly furnished to allow changing interests and uses. Inclusivity was generated through digital displays of students’ artwork or multilingual messages. What’s more, educators and librarians offered pop-up learning support as needed. The success of the “international tea house” demonstrates how formal and informal learning can coexist in a library building due in part by embracing student input throughout the design process.
10. Incorporate more research studies that focus on Generation Y.

The changing function of academic libraries is closely tied to the information seeking behavior of students from Generation Y. Thus, the need to place special emphasis on millennials given that they are the largest child generation in American history and the fact that they make up the majority of students currently enrolled in colleges and universities, recent graduates, and future college students. Millennials refer to a generation born after 1982, they are also labeled generation Y, the net generation, the digital generation or the eco boom generation. The common attributes of this generation that can be particularly relevant to libraries are: ethnically/racially more diverse than previous generations; internet savvy; always "connected" to social media; and tendency to multitasking. Furthermore, millennials often do their academic work either with or around their friends or classmates, making ample use of technology and digital content and working on schoolwork late in the day and into early morning. Consequently, libraries need to better understand the learning styles of new generations and provide spaces like information commons or learning commons to reinforce the social aspect of learning by combining technology, service and atmosphere to create a dynamic, comfortable, and collaborative environment.
Annotated Bibliography


This article discusses the academic skills and learning spaces students will need to read for a degree in an environment that is predominantly electronic. The authors assert that the relationships between the learner, their background, the resources, and their media as well as the places in and from which students learn are dramatically changing. These spaces, whether virtual or physical, need to demonstrate significant agility to meet the needs and expectations of diverse student cohorts. According to the authors, this requires aligning pedagogy with technology, resources, and space. The authors provide many examples of library space planning where pedagogy and resource access influenced design. Case in point, the Bournemouth University Library in the UK, has taken full advantage of the changes that e-resources and self-service technology have brought. In redesigning services, the focus has been on taking risks. For example, library assistants were released from counter duties and began working in new ways to facilitate access to e-resources. What's more, three years after the building first opened, a new job description and person specification was agreed upon that incorporated enhanced skills and a range of duties that are expected to evolve as service delivery continues to develop.

In terms of space planning at Bournemouth University, it was important to utilize the space freed by reducing physical collections to increase social learning spaces in a variety of informal clusters. As anticipated, these are now some of the most popular study
spaces. Additionally, the use of zoning guides helps users to the service points, book stacks, open access computers, and study areas. The addition of informal seating clusters and techno booths, each with an interactive whiteboard and plasma projection screen have been well received by students as well. These changes support a zoning model where social study space is located in the ground and first-floor active zones, while the upper floors have become silent zones. In short, identifying the learning styles has proved vital in developing the learning space to accommodate learning by reflection, learning by doing, and learning through conversation. As articulated by the authors, the interactive nature of the learning process in the electronic environment demands a broad view when it comes to academic library design planning. The success of Bournemouth University Library can serve as a reference point when designing a new library building.


In the face of changes in teaching and learning, academic libraries are responding with innovative changes. New pedagogies are creating opportunities for libraries to connect directly to the curriculum and support students who are being asked to work in new ways. Such was the case at Auburn University, where a project to construct a new classroom building specifically for Engaged Active Student Learning (EASL) classes provided the library with an opportunity to renovate its main floor. In this report, the authors review the methods used, discuss the findings, and share the implementation ideas developed by the project team. The project utilized four information-gathering methods: faculty interviews, design workshops, student interviews, and student reply cards. Faculty
members who use active learning approaches were interviewed in order to understand their teaching practices and what they expect of their students. The interviews included open-ended questions related to curriculum, course assignments, expectations regarding student preparation and participation, and resources and physical spaces that would support and facilitate the work of the class when students are not in class. This information-gathering method was coupled with several design workshops in which faculty members (20), library staff (20), and undergraduate students (20) used art materials to depict an ideal non-classroom space after being prompted with a scenario. Individual student input was gathered through interviews at various locations around campus. Students were randomly selected for ten-minute interviews about their most recent-out-of-class schoolwork sessions. Lastly, students from the project team distributed color-coded survey cards in pre-selected areas of the library. The areas selected for inclusion were carrels, computer workstations, tables, sofas/easy chairs, and study rooms. The methods used in this study offer a roadmap or template for other academic libraries to follow when planning and designing new library learning spaces. Some of the findings worth noting, include: most students seek environments that enhance their ability to do academic work. Students seek spaces that support academic tasks by ensuring some combination of quiet, privacy, comfort, and furnishings that are appropriate for particular tasks. In sum, the themes related to envisioned spaces are: supporting classwork; enabling a variety of work configurations; and allowing students to meet physical needs and achieve mental readiness for work as well. Also worth noting are the learning resources and technology in the envisioned space: computers (including Apple computers); gain access to the internet (Wi-Fi saturation); make and watch

This paper is based primarily on a presentation by the author at the Forum for the future of Higher Education in 2005. Although the analysis presented here is over a decade old, the questions the author raises are still applicable today. His proposal of a new context for learning is prefaced by a discussion of the factors driving the evolution of learning environment in the 21st century. First, he urges us to recognize that today's students are very different from their instructors. Students in the 21st century have a new vernacular--a digital vernacular. Given that today's students learn in ways that are different from how we learn, he raises the question, "how can we begin to take advantage of those differences?" His second major point is that we must realize that most students today are not going to have a fixed, single career; instead, they are most likely going to follow a working trajectory that encompasses multiple careers. Thus, they will need to pick up new skills outside of today's traditional educational settings. Again, the author begs the question, "how as educators do we capitalize on these opportunities?" The third point he makes is that since nearly all of the significant problems of tomorrow are likely to be systemic problems--problems that cannot be addressed by any one specialty--students will need to feel comfortable working in cross disciplinary teams that encompass
multiple ways of knowing. Once again, "how do traditional educational institutions support continuous learning. Lastly, according to the author, one of the big challenges we face is how to encourage institutions of higher learning to become learning institutions themselves. This prompts the question how do we design and build learning facilities on college campuses (i.e., library)? To this end, the author suggests new learning models, for example, a studio-based learning environment akin to an architecture studio. In this environment all work-in-progress is always made public. As a result, every student can see what every other student is doing. Moreover, every student witnesses the thinking processes that other students are using to develop their designs. This type of active learning calls for spaces that are open, transparent and flexible to allow students and instructor to move seamlessly between lecture, experiment and discussion. In sum, to fully utilize a new space and/or technology, you often need to invent new teaching practices as well ("build pedagogy").


This research article draws together conceptual innovations emerging from the work of a group of researchers focused on the relational approach to information literacy (IL), more recently labeled "informed learning." The authors present the key directions which they have developed and integrated this concept; these include: the expressive window for IL; information experience design; cross-contextuality and experienced identity; informed learning design; spaces for inclusive informed learning; and informed systems. Taken
together they form new constructs that have emerged from a focus on the relational approach to IL. The relational approach to IL comprises ways of thinking about IL, IL research and IL education that are grounded in understanding variation in people's experience of that phenomenon. As the approach gained traction and a range of studies presented inspired insights into people's IL experience in different contexts, the relational approach came to be represented as "informed learning." A key conceptual innovation is the idea of "information experience," which is inseparably intertwined with "learning experience" as core elements of the experience of IL. In short, "informed learning" builds upon the understanding that using information to learn is a complex and varied experience. In drawing on learners' experiences of using information to learn, "informed learning" provides a conceptual framework for both formal and informal learning contexts across academic, workplace and community settings. Of particular interest is the focus on library spaces for inclusive informed learning. This idea responds to learner diversity in higher education and seeks to support learning approaches and environments that enable students to participate to their full potential irrespective of socio-cultural background. Extending beyond tokenistic nods to cultural or social differences, inclusive informed learning embraces the diverse knowledge, experience and practices that learners bring. It also acknowledges the influence of environment on students' learning experience and outcomes. Thus, the need to consider this theoretical concept when planning and designing new library learning spaces. In sum, purposefully designed inclusive informed learning approaches and spaces have the potential to support social learning and the development of cross-cultural fluency across the university. For example, a group of Denver librarians envisaged an "international tea house" within the library as a space
where inclusive informed learning could occur continuously in many ways. Here students would find a safe, informal space for informed learning related to their study and life in general. They might gather in this space to share ideas, news, music, and movies. Inclusivity might be generated through digital displays of students’ artwork or multilingual messages. Educators and librarians could participate socially whilst offering pop-up informed learning support as needed. The space would be flexibly furnished to allow changing interests and uses. To be truly inclusive, the space would be developed through an ongoing participatory design process with students.


This article elaborates on the concept of informed learning and locates it in educational, workplace and community settings. Moreover, the authors discuss the support needed in these contexts in order to make informed learning possible. The research presented in this article points to critical experiences of informed learners in each of these three settings. Lastly the article proposes a set of guiding principles for developing informed learning and learners. The concept of informed learning advances people’s understandings of information literacy that incorporate the broader concept of using information to learn: those understandings that go beyond the traditional information literacy paradigm and draw attention to the transformational, situated and critical aspects of information literacy. In short, and as it relates to an academic library environment, a student's prior knowledge and information-seeking dispositions combined with his/her information context within and outside an educational setting, need to be considered when delivering
library resources and services. The same approach can be extended to the planning and
designing of new library learning spaces in a new facility. This requires conscious
attention to the use of information in the learning process by all those involved:
instructors, librarians and staff. The end goal, is the same, support life long learning and
information literacy curricula. The growing interest by library professionals and
increased discussion in professional publications speaks to ongoing issues and limitations
with current information literacy agendas. Information literacy instruction has tended to
focus on standards and skills-based instruction, not always extending attention to helping
students engage with content through their information use processes indigenous to their
local surroundings. Similarly, insufficient attention has been given to understanding and
supporting the experience of engaging with information outside an educational setting. In
sum, this critical research represents growing interest in information literacy representing
different forms of information engagement, thus emphasizing transformation in people's
learning experience. To this end, informed learning should be a major discussion point
among all stakeholders involved, including students, when envisioning and designing a
new library building.

The article reports on the outcome of a recent gathering of library administrators,
academic leaders, and facilities personnel at the 2017 Academic Impressions Academic
Library Planning and Revitalization Institute. Participants met to discuss trends
characterizing modern library spaces. The group identified four key areas needed in order for modern academic libraries to better serve student users: 1) libraries should put students at the center; 2) libraries should make learning visible; 3) libraries should model a learning community; and 4) libraries should model the academic vision. The author does acknowledge that while library revitalization projects do vary significantly in size and scope, institutions with diverse academic missions and student populations who participated in the discussion were in agreement that these four core principles must be accounted for in facility design. The template provided by the group provides an entry point into broader conversations and trends that can help facilitate a visioning or brainstorming session on library design at our own campus. Moreover, work by the participants of this conference can be further researched and followed. Also, if funding available, plans could be made to attend the next Academic Library Planning and Revitalization Institute Conference in 2018.


This book is a compilation of lectures delivered by academics and librarians as part of the King James Library Lecture Series. The talks, audiences’ enthusiasm confirmed the feeling that lots of people still love libraries and want to know more about them. These discussions were sponsored by the University of St. Andrews Library to mark the 400th anniversary in 2012 of the founding of its historic King James Library. The essays were collected between 2009 and 2013, against a backdrop of the economic stringency that saw many public libraries throughout the United Kingdom close. These essays were
written, too, at a time when technological change has created the popular perception that there is no longer any need for libraries or librarians. The authors' contribution is an attempt to address recurring questions such as "why libraries" and "what are they for?" With the loss of their traditional role as intermediaries between information source and user, librarians seek new purposes for their skills, and new arenas of usefulness. In general, the essays focus on what libraries were used for, why they were needed, why they were meaningful, and provide impressions rather than analysis of their value in the changing chronological contexts. The text helps raise awareness among librarians and library administrators, especially, if charged to imagine and design a new library building. Moreover, the contributors of this text remind us to acknowledge and learn from the paradoxes and contradictions in the library's many meanings; and thus be able to navigate and reconcile the plurality of such tensions. For example, today's internet offers information freedom to users, whereas, libraries have historically invested in organization and control of information. It is important to recognize that libraries can be nurturing to some while threatening to others. Similarly, libraries need to offer both quiet and loud spaces to accommodate various reading and learning styles. Moreover, libraries can be both, confusing and orderly. In short, there is a paradox about what libraries are and what they are trying to do, but we must defy the contradiction and carry forward. To this end, the book draws attention to four focal pillars of librarianship: 1) curation of information; 2) engagement with teaching and learning; 3) research and publishing; and 4) the management of spaces for both users and collections. This focus, according the underlying theme of the book, will ensure the library’s relevance in the digital age.

*Creating Research Infrastructures in the 21st-Century Academic Library: Conceiving, Funding, and Building New Facilities and Staff* is part of the Creating the 21st Century Academic Library series from Rowman & Littlefield. The major premise of the book is twofold, first identifying patrons' needs, and then moving toward solutions that reinvent library spaces. This approach implies re-assessing the role of librarians and the expectations of library users. Sharing the widely held assumption that academic libraries in the new millennium should focus primarily on facilitating research, the authors consider how the roles of academic libraries and librarians have been transformed by rapid technological change. Chapter 2 in particular, "Re-Engineering Relationships with Faculty and Students: A Social Contract for Digital Scholarship" calls attention to redefining interactions with patrons, which impacts how facilities are designed and staff are trained. Emphasis is placed on collecting and maintaining operations data and presented as the most valuable services for justifying the resources needed to implement change because administrators speak the language of data and budgets. As academic libraries compete for scarce funding, it is a frequent frustration that many problems can really only be solved with additional monies. For example, prices for electronic resources rise annually, and there are continuing demands to upgrade or purchase new technology. This text provides insight into identifying and justifying new investments and managing the funds once they have been secured. Overall, the book is a valuable read and addition
to the discussion on reevaluating and redefining the institutional role of the academic library in the twentieth-first century.


The article explores the interaction between library architecture and sustainability by discussing the many complex strategies employed for saving or recycling evermore scarce natural resources. These topics are discussed mainly in the context of public and university libraries built over the past decade. The author identifies commonly used environmental assessment methods such as BREEAM (Building Research Establishment Environmental Assessment Method), commonly employed in Europe; and LEED (Leadership in Energy and Environmental Assessment Method), the assessment tool frequently used to anticipate the environmental credentials of projects in the United States. This is a reflection of today's focus on energy efficiency, which is driving contemporary library design to place emphasis upon high levels of daylight, natural materials, social harmony, and contact with nature. To this end, the author provides various case studies, libraries in both Europe and the United States to illustrate this point; for example, the new library at Aberdeen University (UK), which achieved a BREEAM excellent rating, employs photovoltaic solar panels located on the roof of the building to generate electricity. The roof is also used to collect rainwater to flush toilets. This library, according to the author, is typical of the increasing impact that environmental accreditation is having upon design. In short, this has become a major consideration for any new building project. In most cases, the physical dimensions and architectural
qualities of library space are dictated by demands to reduce energy flows. Moreover, the author reminds us that it is now widely accepted that the quality of environmental design affects the attitudes and behavior of library staff and users, particularly in areas such as productivity and concentration levels. For example, the author cites a number of surveys that highlight the importance attached to more natural light conditions inside buildings, which show an increasing evidence that daylight affects the ability to concentrate, especially at the interface between paper and digital media. This usually results in reading rooms facing north as an ideal orientation, and where otherwise, extensive solar protection is needed. This trend has resulted in highly glazed facades as evident in the Seattle Public Library. The use of glass facades helps reduce the use of electric lighting and hence heat build up. The ratio of glass to solid panel is typically 50 percent. One major benefit of the open and transparent library is the way it signals that libraries are for people and not just for books, an important message to communicate through library design.


The Association of College and Research Libraries (ACRL) Tips and Trends winter issue is dedicated to the subject of accessibility and universal design (UD) in academic libraries. The issue offers an informative introduction into the discussion and practice of these two interconnected concepts. Accessibility and UD are two separate, but related, concepts that are meant to consider the needs of different types of people and users. Accessibility puts an emphasis on supporting users with disabilities, whereas UD is
broaden, taking into account differences such as users' gender, age, native language, and learning preference, to create a physical or virtual object that can be used by many people as possible. When used together, accessibility and UD result in inclusive, barrier-free products that also meet legal compliance efforts (i.e., ADA). Libraries can adopt accessibility and UD guidelines to make services, teachings, and spaces more user-friendly, especially when planning and designing a new facility. For example, a growing number of libraries have implemented UD practices to improve study space furnishings, create or revise courses, design new websites, and change staff training. Flexibility is the driving force behind each of the three principles of UD in Learning UDL: representation, engagement, and action and expression. These principles mean that information is presented to students via multiple methods (e.g., auditory, visual, etc.), the students learn via different interactions, and students demonstrate via varied modalities that they have acquired new knowledge. At the end, this approach accommodates for a range of learning styles and often, but not always, uses technology. In short, the idea behind UD is to increase the flexibility for learners while removing barriers to learning, an effort that requires continuous training and support from all stakeholders involved. Although AD may new territory for many libraries, there are tools and resources that can help; for example, CAST's (Center for Applied Special Technology) UDL on Campus website focuses on UD in higher learning (http://udloncampus.cast.org/home#.WlVg9jdG3Ig).
The author of this article raises the question: What would it be like to design an academic library based not on precedent but on everything we can learn right now about the work practices of people who already use academic libraries, while also taking into account education's highest ideals and purposes? This question stems from the author's earlier research which suggests that the design of the academic library has long been in the hands of a small group of "experts"--architects, senior administrators, and perhaps the university librarian. In most cases, the approach is to avoid the mistakes of the past but in the case of libraries we might want to avoid some of the successes. However, so much has changed in the world of information that we would not want to build a 21st century academic library on a 20th century model--even a very successful one. Thus, the author urges us to envisage and design academic libraries in a way that goes beyond incremental improvement to true innovation; in order to do so, we must engage the entire community in the design process--specially students. Including the community in library design projects has emerged only recently. In most cases, including users beyond the designated expert group has been done to achieve buy-in rather than to work in a truly collaborative way with those expected to use the facility later on, or even to test assumptions about what users might need to be able to do in and with the space. To this end, the author proposes basing new projects on information about users' work practices and purposes. This offers a powerful two-pronged design approach: one side of the process revolves around the tasks users plan to do in the building and the exigencies of various information formats; while the other addresses the community's mores and its highest
academic ideals. The latter should help guide the work of architects. This requires using a participatory design approach as a way to understand and incorporate information related to both sides of what the community needs—the practical and the transcendent—into the design process. Participatory design refers to a way of sharing information and authority in the design of technology, spaces, services and resources in all kinds of workplaces, including libraries. The author employs two recent projects to exemplify this process and demonstrate its values and possibilities: the library system of both the University of Maryland and Purdue University have integrated participatory components into their design processes to yield better library design. These two projects should serve as points of reference for any future library design projects in an academic setting, including a community college environment.


Leading library scholar Nancy Foster draws attention to the lack of research, particularly among the growing number of ethnographic studies of college students, that focuses on community college students. Moreover, fewer studies look specifically at how these students do their academic work and use their campus library. This is despite the fact that community college students constitute an enormous and important group. In her blog post (2016), the author cites the National Center for Education Statistics to remind her readers that about 7.2 million of the 20.5 million undergraduates in the US are enrolled in community colleges. Thus, the need for more research studies on community college
students' library and information behavior. These studies are needed to further understand their work practices and information needs so that resources and services in community colleges are designed to support their success. Case in point, a recent publication of a three-year study across all three campuses of Montgomery Colleges in the state of Maryland. This study makes an important contribution to this effort, adding to the literature while generating actionable data for decision-making and effective implementations in the college's four libraries. According to the author, one of the project’s many strengths was its inclusion of a wide cross-section of students, staff, faculty members, and administrators. This is reflected in the report itself, which includes sections written by a wide variety of stakeholders: librarians, engaged in ethnographic studies; anthropology faculty and students who conducted complementary studies; architecture faculty who used study findings in studio projects; and college leaders and administrators. Simply put, there is much to learn about community colleges and the undergraduate experience more generally in these documents shared by Montgomery College (https://libguides.montgomerycollege.edu/ethnographic).

---


The author of this report provides reflections on a recent ethnographic study conducted at the Montgomery Community College in Montgomery County, Maryland. The study encompasses all three of its campuses over a three-year period. The research gathered information from students and faculty members on how students do their academic work and how library resources, spaces, and services support this work. The approach followed
was truly collaborative and participatory in nature. The research involved multiple stakeholders across the campus community. The project comprised studies conducted by librarians and library staff using ethnographic methods and additional ethnographic studies by classes of anthropology students, as well as design work based on study findings by architecture students. Overall, the structure of the program created ties among a multitude of individuals and departments throughout the college while providing innovative teaching and learning opportunities and producing data upon which to base improvements to libraries on all three campuses. From a scholarship perspective, the Montgomery studies are particularly valuable because they represent the most comprehensive such project yet conducted on community college campuses. At the ground level, it provides practitioners a concrete example of ethnographic studies, conducted by the stakeholders involved, which can bring to light the new practices and needs that are emerging under today’s rapidly changing conditions. To this end, a project team was recruited and trained to gather feedback using cultural probes and ethnographic methods: interviews with students; design workshops with faculty members, library staff, and students; and reply cards distributed through several areas of the library. Across all methods the objective was to understand student work practices and needs in connection with schoolwork done in the library and in other locations. In addition, as librarians were conducting these studies, anthropology students were conducting complementary studies. Also, several classes of anthropology students conducted observations and interviews to understand current use of the libraries, student and faculty needs and expectations, and whether any changes to library services and facilities could improve concentration, comfort, and outcomes. Based on the studies planning groups on all three campuses have
been able to formulate a number of improvements to existing libraries. For example: extended hours, upgraded technology (equipment, devices, and power), improved access to electronic resources, more textbooks on reserve, and a better “ambiance” (paint, carpet, furnishings, artwork, and so on). Future changes will focus on more extensive renovation and reconfiguration, more Wi-Fi coverage, and more outreach to library patrons to track and respond to their changing needs. In sum, this project shows that engaging the whole college community around designing the library to help students do their best is an enterprise that works for everyone involved.


This study supports four main traits attributed to Generation Y, which are discussed within the context of library use and satisfaction: 1) they have great expectations, 2) they expect customization, 3) they are technology veterans, and 4) they utilize new communication modes. As discussed in previous articles, the majority of college students are now part of a new generation born in or after 1982. Moreover, they are the largest child generation in American history and they are also the most technologically savvy. Accordingly, today's undergraduates are pushing the academic library to rethink the ways in which it presents its most basic services. This is coupled with the growing perception that the physical library is no longer so essential to the educational experience since students increasingly rely on the Internet and technology for their learning and communication. The focus of the study was to determine in what ways the Thomas and
Dorothy Leavey Library at the University of Southern California (USC) has been successful in its quest to be an innovative, user-oriented library and computing center. At its core, the study examines the following key questions: Is it true that they use us only as a computing facility and study hall? Are we meeting their unique new learning needs? What do they like and dislike? The total number of responses was 1982, of which 1267 were undergraduates (approx. 64%). Survey results corroborate the notion of Generation Y being more ambitious than previous generations. When asked "Why do you visit the library?" The number one response among undergraduates was to study alone (80.6%), followed by use a computer for class work (61.3%) and study with a group (55.2%). Students clearly use the library as a place to study, and they would like to see the facilities improve in this regard. Of the 514 undergraduates surveyed, 63 noted a lack of enough individual and group study space. It is worth noting that according to the survey, only 12.6% of the respondents said they came to the library to get research assistance. Such a low number might be attributed to what the authors refer as ATM attitude; in other words, students want research to be fast and easy. Students view information as a commodity and compromise on quality in favor of low cost (in terms of time and effort) and convenience. The survey also confirms a new focus on teamwork, students prefer working together rather than alone. For example, the third most popular response (55.2%) to the question "Why they visit the library?" was to study with a group. What's more fifty-nine respondents answered that they wanted more collaborative workrooms in the library as a suggestion for improvement. In sum, this study provides a framework for understanding how academic libraries can be more responsive to Generation Y needs as learners and researchers, and it points in the direction of further research.
This article examines projects at two academic libraries where space use data was collected multiple times per day for several months. Although the two projects were designed and carried out independently, both shared the same purpose: to better understand how students were using library spaces in order to improve student experiences. The data collected provided a baseline understanding of user behavior in their respective spaces. What is space use data? The authors define space use data as simply information about how and where people are using library space. For example, specific seats occupied, conversation levels, tools or materials in use. Collecting space use data can be useful because it can answer very basic questions about how students use the library's physical space and prompt librarians to further explore why students do the things they do within library spaces. This understanding can subsequently be used to improve user experience (UX) within an existing space or inform design decisions for new spaces. Moreover, space use data can be used as a baseline against to measure the effects of changes made to physical space. Similar to web analytics, space use data can provide an important baseline that can both support and drive other forms of user research. Taken together, both studies presented in this article arrive at four major conclusions: 1) there are multiple ways to collect and apply use space data; 2) results can vary even among similar institutions; 3) collected data can be used to drive library policy; and 4) this research can be conducted regardless of organizational structure. More
specifically, results from both studies showed higher individual use of space and less collaborative work than was expected. This demonstrates the importance of the flexibility needed when designing any library space; in one research setting, students are able to modify library space to meet both individual and group study needs. This also shows that despite the popularity of new spaces, many of the older and more traditional spaces remain in high demand. Lastly, the authors strongly encourage other librarians to conduct similar studies, they remind us that it's not so important that our methodologies are perfect, or that our results are statistically significant. What is important is that we make the choice to do this work.


This report, sponsored by a Strategic Research Grant from the University of Washington Information School, identifies approaches, challenges and best practices related to planning and designing today's academic library learning spaces. As part of the Project Information Literacy (PIL) Practitioner Series, qualitative data is presented from 49 interviews conducted with a sample of academic librarians, architects, and library consultants. These participants were at the forefront of the same 22 recent library learning space projects on college and university campuses in the US and Canada between 2011 and 2016. Most library projects had allocated space for supporting at least one of these four types of academic learning activities: collaborative, individual study, tutoring by campus learning partners, or occasional classes taught by campus instructors.
Successful collaboration between the architect and the librarian was fostered by their shared commitment to meeting users' needs. Most interviewees reported facing some common challenges during their project planning and implementations. One challenge was translating design goals into tangible designs while trying to resolve issues of noise mitigation, shared space allocations, and providing enough electrical power for IT devices. Another challenge was ensuring effective communication practices with planning teams as well as campus-wide constituents throughout the project. Additional challenges included building consensus, compensating for project interruption and inadequate knowledge about both architecture and library IT issues, and having too few a priori evaluation metrics for linking learning outcomes to goals of the library space projects. Taken together, the success of library learning space projects depends upon shared knowledge and understanding of the sweeping learning, pedagogical, and research changes facing the academy. In sum, librarians and architects need to work together to apply that knowledge and understanding to the unique environment and learning and teaching needs of their specific institution.


Academic and public libraries are much different today than they were even 15 years ago. At the same time, there is an increased expectation that libraries demonstrate accountability, collaborate more with stakeholders and other libraries, and, in some instances, generate alternative sources of revenue. This opening statement by the editors raise a recurring question in the literature, "how should libraries respond to such
pressures?" The essays presented in this book urge library professionals that these times call for dramatic transformational change and the creation of a vision of the future that excites library staff and stakeholders. Accordingly, the book offers portrayals of the future of libraries, both public and academic, through short-range scenarios, stories projected a maximum of fifteen years ahead. These case studies contain elements or threads grounded in the present that libraries can use as they piece together a story that is relevant to local circumstances and can be linked to strategic planning and change management. In short, the scenarios in the book are not presented as "one-size-fits-all" but rather as entry points into supporting literature, and in turn, get practitioners to think deeply and proactively about these challenges, specifically what the library infrastructure (staff, collections, technology, and facilities) will resemble in the future. Taken together, these scenarios can be used as a tool for library administrators to generate discussion within the organization and with stakeholders as they prepare for a transformation that requires forming new partnerships, collaborating, staking out new service roles, and ensuring the workforce has the required skills, abilities and knowledge to cope with change. If building a new academic library, Ch.6, Perspectives on Trends and Scenarios: Academic Libraries" provides appropriate scenarios for library space planning. Six possible scenarios are presented by the author of this chapter: 1) The Present is the Future, 2) Press a Button Library, 3) The Library is a Learning Enterprise, 4) Expanding Service Roles (especially those external to the library), 5) The Library as the Campus Scholarly Communication Publisher, and 6) The Library as a More Active Research Partner. In a community college setting, scenario #3 offers the most applicability. The primary motivation for this scenario is to position the library as an institutional partner in
student learning, recruitment, and retention, as well as to collaborate with faculty on teaching and research. Lastly, Appendix A and Appendix B, offers two recent case studies of libraries where library envisioning was successfully applied.


This article explores the potential of the charrette as a participatory designing process and learning approach for libraries and other educational contexts. This qualitative case study focuses on postgraduate students' experience of learning space design through charrettes in a library-related unit of study at an Australian university. The findings of this study are of potential interest to library managers, practitioners, educators and researchers concerned with innovative learning and/or participatory designing approaches. Case in point, this case study methodology will be applied in my Library Skills course (LIBS 1) this coming spring semester (2018) to learn from students' reflections about libraries and their own library experiences; and in turn, inform the library space designing of Chabot's future library. The article provides a deeper understanding of participatory research methods appropriate for educational contexts, particularly a library environment. The author begins by defining key terminology relevant to the creation of learning spaces that respond to the needs of the intended users. For example, the terms *learning environment* and *learning spaces* are often used interchangeably; in this study, *learning environment* is defined as a holistic eco-system that integrates educators, learning processes, content and resources. *Learning spaces* are areas within the wider *learning environment* and may be indoors, outdoors, digital, built and natural. Additionally, a *learning space* has a social
dimension sustained through relationships between the learners and teachers who inhabit a particular space and the ways they use it. In a library context, the reference area serves as an example of a learning space. Learning spaces are often claimed to influence learning outcomes, although there is no evidence of a direct link between them; however, the author indicates that spaces can shape relationships and create the conditions for physical and mental well being that are conducive to learning. To this end, LIBS 1 will serve as a vehicle to gather a sample of student input, primarily their perceptions and relationships with existing library spaces, which in turn, will inform the overall library learning environment.


This book chapter highlights the varied scope of research and research methodologies in the emerging information experience domain. More specifically the author presents a selection of qualitative approaches which are suited to investigating information experience; these include: action research, constructivist grounded theory, ethnomethodology, expanded critical incident report, phenomenography, and qualitative case study. Each methodological approach is illustrated by a respective snapshot or research scenario. The author associates information experience with the concept of informed learning. According to the author, principles and characteristics of informed learning also apply more broadly to information experience. For example, both are understood to be multi-faceted, inclusive, contextualized and reflective; thus, the use of
qualitative research methodologies. Under this conceptual framework, information is manifold: spoken and written words, gestures, smells, pictures, memories, melodies, clothing, ambient sounds, etc. In short, students' information experiences are colored by the social, political, technological, and cultural influences of their daily lives. This begs the question, how do we best capture and make sense of these information experiences in order to enhance student learning? Additionally, how do we design library learning spaces that facilitate such learning? To this end, the author suggests six potential qualitative methodologies. Action research in particular is the approach most applicable to a library design project given its socially inclusive research approach, which aims to achieve transformative outcomes, especially in educational settings. Moreover, it supports problem solving in real contexts. Various forms of action research have been developed, but common features are that it involves a collaborative or participatory process. In addition, collective or co-learning by researchers and participants is an important aspect of action research. In sum, action research resonates with informed learning, sharing a common goal to explore real life experience and promote transformative outcomes.


In an age where some members of the academic community question the value and expense of a library, it is our challenge to make them expect more and to deliver the expertise, services, and resources that will be differentiators in their academic lives. To
this end, the author proposes the liaison model across academic libraries. According to the author, the past decade has witnessed the development and evolution of the library liaison model as full time collection development and reference positions gave way to combined and expanded duties characterized by greater outreach to students and faculty. The evolution of the liaison model is aligned with the ongoing shift from a collection-centric to an engagement-centered model for librarianship. New roles include scholarly communication, online learning and digital tools, outreach, fundraising, and the like. Others have added new dimensions as new needs among faculty and students arose, while others have assessed librarian position descriptions with the construction of a new facility. The latter offers an opportunity to identify new forms of relationship building and engagement with students an faculty. Although the examples provided come from university settings only, the need for reassessing a library's liaison model remains. One emerging theme in the continuing refinement of liaison roles is the recognition that the current liaison model is inadequate to the new demands and expectations. The majority of liaison models today are informal, fluid, with no dedicated funding, no formal training, no assessment tools, and no measures of performance. Moreover, as demands and expectations rise with the introduction of new programs (i.e, First Year Experience), it is clear than no one liaison can do it all; thus, some libraries have begun to pair disciplinary experts with functional specialists and are teaming up with others on campus, including information technologists, IT, and instructional designers. The author provides the following suggestions: 1) look at the indicators that are guiding your university/college; 2) partner with those on campus who collect and assess such data (i.e., Institutional Research Office); 3) develop library intervention strategies at points of pain and need; 4)
scale labor intensive efforts (i.e., developing online tools); 5) quantify goals and progress toward success, where possible; 6) build iteratively. In sum, as we move from a collection-centric to an engagement-centered model for librarianship, it behooves us to consider the means for measuring how such engagement improves the lives of students, faculty and staff.


Although anecdotal in nature, the author of this column offers an honest, candid analysis of today's reference services at US public libraries, particularly at White Plains Public Library (NY), where he serves as Library Director. He makes several critical observations that can be used to spark conversation on this topic at both public and academic libraries. His first point is that although the library remains a trusted institution, library users' expectations have changed--and continue to change. Clinging to outdated reference services, according to the author, has left many libraries struggling to meet these new expectations. His critique is followed by an interesting observation: even as traditional reference transactions continue to decline, the use of their building is surging, increasing about 20% every year. This phenomenon is not new and has been well documented by library science literature over the years. Moreover, this observation often applies to both public and academic libraries. Thus, the need for libraries to continually monitor reference activity, and similarly, assess its frequency and effectiveness. Perhaps the first step for many librarians, public and academic, is to have an honest conversation
and self-critique of its references services--both face-to-face and online. As is the case at White Plains Public Library, library users today can now access information quickly and easily through mobile devices, however, we continue to interact with a growing number of patrons each year. So, as the author states, "what do people want from us?" In his environment, people want help doing things, rather than finding things. In an academic environment this points to a shift away from a book depository approach (collection-centric), and instead, a move to learning-centered environment. This change in MO is having an impact in the design and construction of new library spaces. The author closes with one last point: librarians have been poring over virtual reference transcripts for clues to the future, and yet little formal research has been conducted on what’s actually happening at reference desks today.

Khoo, Michael J., et al. "A Really Nice Spot”: Evaluating Place, Space, and Technology in Academic Libraries." College & Research Libraries, vol. 77, no. 1, Jan. 2016, pp. 51-70. This article describes a qualitative mixed-method study of students’ perceptions of place and space in an academic library. The approach is informed by Scott Bennett’s model of library design, which posits a shift from a “book-centered” to a technology supported “learning centered” paradigm of library space. The author discusses two distinct and contrasting models of place: a more traditional model based on individual study near stacks of books, and an emergent technologically-supported group study model. Additionally, the author identifies a myriad of factors that contribute to this shift; primarily, students' adoption of information and communication technologies (ICTs). This factor coupled with an increasingly group-based model of learning are producing a
demand for library spaces that are open, configurable, social, and comfortable. The author describes these library spaces as "soft spaces," which are neither stacks nor computer labs. Such spaces are designed to support group study practices that are more often than not a “social activity” with students learning through conversations and collaborations. The study's findings further support Bennett's model of library design and contribute toward a learning-centered paradigm, in which users engage in solo and group learning, often with digital resources; and away from a book-centered paradigm, which has its origins in nineteenth-century industrial techniques of paper production and printing. This tension is evident in many library environments today, where you have a library building that reflects a twentieth-century book-centered paradigm, while at the same time a population of students adopting new learning-centered technologies and study practices; thus, the author calls for alignment of the two when designing a new library building. According to the author, a new building under this new paradigm should yield "good public spaces" in libraries. A "good public space" supports student learning in two ways, 1) learning that is social and immersive in nature, and 2) intentional learning, in which acquiring learning as a skill and practice becomes part of the student’s motivation for engaging in study. The end result is an alignment with Bennett’s learning-centered paradigm. This involves a major rethink in many areas of service and space design, including a focus on spaces for learning. Lastly, the author's research offers valuable guiding questions to consider when undertaking a similar project, particularly, how do students perceive and use space in the library, and what might this tell us about library space paradigm change?

The author introduces the Four Space Model, a conceptual framework that is more commonly discussed and applied in a public library context. The model consists of four overlapping spaces: the inspiration space, the learning space, the meeting space, and the performative space. These four spaces' overall objective is to support the following four goals for the public library in the future: experience, involvement, empowerment, and innovation. Additionally, the four spaces are not to be seen as "concrete rooms" in a physical sense, but rather as possibilities that can be fulfilled both in the physical library and in cyberspace. Although considered a public library model, the conceptual underpinnings of this framework may be applicable to an academic environment. The Four Space Model has its roots in Europe, Danish Library and Information Scientists, Dorte Skot-Hansen, Henrik Jochumsen, and Casper Hvenegaard Hansen introduced the model to describe the transformation of the public library from a passive collection based space to a more active space for experience and inspiration and a local meeting point. At its core, the four goals for the public library of the future apply to the academic library of the future; at the very least, the model can inform academic library design. If we examine these four goals more closely we may see a closer alignment between the two institutions. Under this model, experience is defined as the quest for meaning and identity in a complex society; while involvement is expressed as a desire for participating and contributing. Similarly, empowerment is described as the development of strong and
independent citizens who are able to solve everyday problems; and lastly, innovation has
to do with finding new answers to practical problems or developing new concepts,
methods or artistic expressions. In sum, the success of the Four Space Mode in public
libraries merits further research and potential use in an academic setting.

Latimer, Karen. "Collections to Connections: Changing Spaces and New Challenges in
In this article the author echoes a recurring trend in contemporary library design, the
move from the collection dominated library buildings of the nineteenth and twentieth
centuries to the service-rich, user-focused ones of the twenty-first century. Drawing on a
number of mainly UK and other European examples, the author examines the effect of
increasing availability of e-resources, new technology, and changing methods of teaching
and learning. The author also draws attention to changes in space planning as it relates to
interior space, fittings and fixtures. Focus is also placed on the need to reflect on the
success or failure of building projects through post-occupancy evaluation. These trends
and their significant impact on the development of the design of academic library spaces
and services have shed light on users and their spaces rather than the domination of
collections space--both in the UK and US alike. The modern university library, according
to the author, is all about making connections, connections between different groups of
library users, connections between library users and library staff, connections between
library users and resources. To this end, the author provides examples of creative
responses to the challenge of drawing people into libraries in the electronic age. It is
worth noting that most examples come from large national or public libraries; case in
point, the Seattle Central Library, which opened in 2004, gives equal priority to both new and old media through the provision of a four-tier book spiral with stacked and overlapping platforms, that are described "trading floors" with a "living room entrance". The users are surrounded by information sources, and there is maximum interaction between them and the librarians who can provide expert help using all resources whether printed or electronic. This approach is as relevant to academic libraries in today's world as it is to any other type of library--large or small. Lastly, the library as meeting place is another well-recognized trend in library design. The concept of the library as a "third place"--a place away from both the workplace and the home to study in peace, work collaboratively, or socialize--has been well documented. Similarly, cafe culture in a library context has been embraced. Learning cafes have been successful in many institutions as they serve as a neutral or reconciliation site between the monastic mission of academic libraries and the commercial realities they face. In short, the creation of exciting and attractive library spaces has been shown to bring people into the physical library to use the virtual resources.


The purpose of this paper is to examine undergraduates' perception and use of two distinct library spaces--social and communal--in an academic library in order to provide more customized services. Emphasis is placed on millennials, who make up the majority of students currently enrolled in colleges and universities, recent graduates, and future college students. Millennials refer to a generation born after 1982, they are also labeled
generation Y, the net generation, the digital generation or the eco boom generation. The common attributes of this generation that can be particularly relevant to libraries are: ethnically/racially more diverse than previous generations; internet savvy; always "connected" to social media; and tendency to multitasking. Furthermore, millennials often do their academic work either with or around their friends or classmates, making ample use of technology and digital content and working on schoolwork late in the day and into early morning. Thus, libraries need to understand the learning style of new generations and provide spaces like information commons or learning commons to reinforce the social aspect of learning by combining technology, service and atmosphere to create a dynamic, comfortable, and collaborative environment. The authors also assert, that while students are intensely engaged in using new technologies, they also want to enjoy the library as a contemplative oasis. To this end, the study categorizes spaces in an academic library into two distinct spaces: "communal space" and "social space," and explores how undergraduate students perceive, adapt to, and use these spaces. D.H. Hill Library at North Carolina State University (NCSU) was chosen as the study site since it has been considered a model of successfully incorporating social and communal spaces. The findings of this study can be used to improve and redesign the two distinct spaces in the D.H. Hill Library as well as other libraries that plan to reinvent social spaces to meet the individual needs of end users, particularly millennials. This study confirmed the findings of other studies that undergraduate students frequently use the library in their everyday life. These results imply that the library is still in the center of students' campus life, and that reinventing "social spaces" in a library may be a right strategy in response to the notion of "deserted libraries" that emerged in the late 1990s. In sum, both communal
and social spaces appear to be well used for many different activities. Additionally, the scope and kinds of activities in which students can engage are much broader than those in a traditional library that narrowly focuses on information access. The study also reveals that students perceive librarians as highly organized, accurate, and credible, while less accessible or updated. Moreover, the findings indicate that some librarians may be ill-informed of new and evolving perceptions of the students, which in turn, points to the need for training and equipping them with necessary tools so that they can adequately serve new user needs.


The Leeds University's Edward Boyle Library (UK), specifically the Library's Research Hub, a recently repurposed space, speaks to the profession's evolving ideas about what library space should be, how it should serve users, and how users interact and work in library space today. As in many academic libraries, the Edward Boyle Library held extensive collections of print books, which took premium floor space at a time when more and more students are turning to digital collections. Consequently, the library had to change in order to support them. Like other similar projects, the development of the Research Hub was shaped by the users' needs and requirements. A student survey was conducted as part of the planning of the refurbishment of the library. As a result, the Research Hub was designed to provide opportunities for individual or collective working spaces. For researchers working independently, the Hub has ten individual study rooms each equipped with a PC. Generous desk space, with individual lighting and plenty of
sockets to charge mobile devices, are available in large silent study area. For those who prefer collaborative working, seven IT-enabled group study rooms, with large screens linked to Airmedia software, enable users to share data from up to four mobile devices simultaneously. All study rooms are available on demand through an online booking system. In addition, two large research meeting rooms are equipped with excellent presentation equipment, including a white board wall and lecture capture technology. The end goal is to create an atmosphere and a sense of place and belonging for all those who visit. The Research Hub serves as a "third place" (neither home nor work). It is a place where students can work, relax, socialize, showcase their work, share ideas and seek a range of training, advice and support. Once challenge is noted however, how to to balance the use of the study space (silent, individual and group rooms) with the desire to foster an environment of interdisciplinary research, networking and collaboration among students. In sum, this case study offers multiple strategies when it comes to developing a library learning space to support students changing information behavior and study habits. As with similar cases studies, these changes in space design point to a more profound change: a shift from a collection-centric model to a more user-centered approach.

McIntosh, Ewan. "Clicks and Bricks: How School Buildings Influence Future Practice and Technology Adoption." Educational Facility Planner, vol. 45, no. 1&2, 2013, pp. 33-38. This article places digital development principles and strategies front and center when planning a new building. If we apply the principals of digital development--how we attract attention, retain it and turn that attention into some kind of learning value--to
physical learning spaces, we can the imagine a totally different means of designing and constructing new buildings. The author pushes us to think critically and creatively about how might digital approaches to engagement within the building space help promote teaching and learning practices in schools, including libraries, by leaps and bounds. To help answer this question, the author identifies the following spaces to consider when planning a new building: secret spaces, group spaces, publishing spaces, performing spaces, participation spaces, and watching spaces. These spaces are closely aligned with students' digital media choices and practices. What's more, these spaces provide a fresh format for asking students what they would like to do in a new building allowing us to design a flow between the right mix of spaces for the projects they will undertake.

According to the author, when students are engaged in secret spaces sending text messages for example, as opposed to public publishing spaces, their body language is totally different. Privacy is hugely important to teens in particular, more than adults tend to comprehend. Thus, maybe we need to think about temporary secret spaces, like the inflatable igloos (walls) of Glasgow's Saltire Center? Or how about spaces that can be totally revamped according to the theme of work that term or semester. Similarly, group spaces can be designed to emulate digital group spaces, specifically designed around a particular focus. To this end, how can help people find their friends, converse and share information in a physical space? At Stanford for example, the d.school connects the existing groups and communities by leaving the space as wide open as possible and place the furniture, objects, lighting or moveable, hanging walls that are required on the side, and on. Need a wall? Simply take one. Need to gather folk around? Bring your own seat. Want a secret space? Make one. Need more whiteboard? Paint some (see ideapaint.com).
These thought provoking ideas should be strongly considered when planning new group spaces in any educational setting. Equally important, performing spaces should closely mirror digital behavior; for example, in World of Warcraft you can be grouping with hundreds of other warriors to win battles of epic proportions, while by day you're a computer science teacher. Unlike traditional performing spaces (i.e., concert hall), imagine the opportunity to transform learning spaces into temporary universes where we can immerse ourselves in a "imagine if" environment. In short, it's about turning learning spaces into more of a game, especially for those who are new to them.


Academic Libraries continually struggle with how to make the best use of their space, and most recently, collaborative study spaces have been added to support the perceived requirements for group projects. Case in point, the University of Nevada, Reno (UNR) wanted to know what kind of spaces students actually need to do their work, and brought in Ithaka S+R to help them explore this question. Using the methods of design anthropology, collecting artifacts, and conducting interviews, the research team made recommendations on ways to meet the academic and social needs of undergraduate students in their context. One of the most important findings of the team is that while collaborative study space is needed, it is not used in exactly the way librarians imagined. Taken together, the aim of such findings is that academic libraries are able to make better, more informed decisions about the design of facilities and services to support student work practices. The study's background research provides a more nuanced
description and definition of what constitutes collaborative work in the library beyond students working on the same task. For example, the research also observes other activities, including "intermittent exchanges," where students converge to study independently but then periodically discuss issues pertaining to their work with the group; "serendipitous encounter," where students have brief exchanges during change meetings in the library space; and "ambient sociality," where students working entirely independently prefer studying among others. Similar to other S+R studies, a participatory design approach was used. Participatory design is a way of engaging the people who will use a space or service in its design in order to capture expert knowledge of their work practices and needs. Work-practice study refers to a focus on the activities in which people engage when they accomplish their work. In this case, the focus was in the work practices of students; thus, student were engaged using the following information-gathering methods: spot interviews; reply cards; and group study snapshots. One major finding was that large numbers of students work in groups occasionally, with small numbers regularly needing to work with others on the same project. Greater numbers of students, however, simply prefer to work in proximity to their friends who are engaged in different tasks. Another finding worth noting suggests that students work in groups primarily when assigned a group project or when studying for an exam. Such groups on average include three people. The data are not conclusive but indicates a variable rate of assigning group projects in different majors or program areas. Overall, group work appears to be done face-to-face and is not uniformly dependent on technology but does call for space that allows respondents to gather and make some noise. Libraries attract students who must work in groups due to collaborative study or assignments or who
prefer to do so due to their own expectations of better outcomes. This drives a felt need for the expansion of space that supports sitting and working with others.


This article highlights the importance of a project team when planning a library building project. Put simply, for any building project to be successful, it requires the coordinated participation of a wide variety of individuals. To this end, the first step is the assembly of a project team. In most cases, this team will operate for the life of the project. In an academic setting, the planning team should include representatives from the administration, institutional architects, development office, legal office, faculty, and library staff. It's worth noting that student representation was missing from the author's suggested team composition. A glaring omission that would be difficult to ignore in most college campuses today, including Chabot College. Although team composition may vary, each project team requires a chairperson. The author recommends someone who understands group dynamics; is skilled in facilitation; has the respect of those on the planning team; and who leaves their ego at the door. This is critical given that the process of library building planning is long, and often very contentious. However, the focus is not solely on the chairperson, the author also discusses the role and expectations of the planning team. For example: examine the library's plan of service or strategic plan (i.e., Program Review); work with the library's governing body in the employment of a consultant to work with the library on the development of a space needs study. Both tasks emphasize a crucial first step before moving forward with the design process and
eventual hiring of an architect. It is recommended that the building consultant be separate from the architect involved in the project. In short, a consultant will bring considerable building and library experience to the development of a plan for the project. The architect employed will then use this building program document to develop the necessary architectural renderings (i.e., building schematics) for the construction of the facility. If a project team recommends employment of a consultant, the author provides criterion to consider, for example: considerable library experience; understanding of library buildings and how they function; ability to listen; excellent oral and communication skills; political skills; and that the building consultant not be an employee of the architect. In sum, the author ends with the following sage advise: "planning is challenging, time consuming, and fun. Enjoy your opportunity to be a part of developing a new library facility that will serve the community for years to come."


The 2017 Library Edition Report is a collaboration between the New Media Consortium, University of Applied Sciences (HTW) CHUR, Technische Informationsbibliothek (TIB), and ETH Library. The NMC also recognizes the Assoc. of College & Research Libraries (ACRL) as the official dissemination partner of the report. This annual publication offers broad statements
Six key trends, six significant challenges, and six developments in technology profiled in this report are poised to impact library strategies, operations, and services with regards to learning, creative inquiry, research, and information management.


This article focuses on the library's evolution, and on the spatial and design changes that lie ahead for the traditional library. Although emphasis is placed on European libraries, specifically Danish public libraries, the challenges and opportunities discussed in the article are relevant to US libraries as well. For example the author asserts that the library building is undergoing considerable change, this can be said of both Danish and US libraries. We are both experiencing a transition from the book and shelf dominated library to a broad cultural and knowledge-bearing holistic library, where the focus is on the user's stay in the library and on the user having access to both physical and digital resources. Improving existing services is no longer just about providing access to websites and online catalogs; it is also about librarians working with architects to consider carefully which design opportunities are available to accommodate new digital technologies. This opens the door to new ways in which the user can utilize the physical library space, which in turn could create brand new library experiences and services. According to the author, three conditions exist that make the rethinking of the physical framework and layout absolutely necessary: users' new media habits and changes in behavior; changes in the library's resources and tasks, which are often described as shifting from "collections to connections" and from "transactions to relations;" and the
transition from manual to automatic work processes, including the growth in self-service facilities. To this end, the author introduces an important new dimension in relation to the library's special universe, its development toward the "experimentarium." This means librarians working closely with architects, designers, and artists to create spaces for new interactive experiences related to print culture and other document formats, ultramodern art, and cultural heritage--space and facilities that stimulate academic and personal growth and play with arts, information, and knowledge as a new means of personal learning. The trend is toward connecting with society's growing interest in the "experience economy" as well as learning through creativity, reflecting the individualistic nature of modern society. One major consideration to ensure easy access, and overview of services and experiences, flexibility, and a smooth flow of users through a building, the library's public areas can be organized into different zones. The most lively and active zone is often near the entrance, bustling and spacious with quick access to information services, computers, cafe lounge, exhibitions, new books, and self-service borrowing and returning. In the next zone you may find an area offering guidance and professional librarian services in close connection with the physical collection. The third zone offers peace and quiet, with study desks; while a fourth zone consists of spaces for various additional activities: rooms for listening to music, rooms for watching films, meeting rooms, and multimedia studios with editing facilities. This model and/or variations of the zoning concept has become increasingly popular in US libraries as well (i.e., Portland Community College); thus, merits a more careful and detailed evaluation.

This author of this article discusses the architectural evolution taking place in library settings; these changes include: a move toward building transparency; use of visual rich images; architecture that reflects the local environment and ecosystem; applying curve surfaces and continuous creation. More specifically, the author provides the following concrete suggestions for designing future library settings: 1) creating a suitable library setting to welcome users by providing convenient furniture with appropriate colors and a coffee shop; 2) establishing skills center for exercising oral, written, visual and acoustic presentation reports; 3) improving and completing acoustic and visual multimedia spaces; 4) improving and promoting natural and artificial lighting; 5) applying inspiring scenes to create inspiratory settings for suitable study; 6) supporting study groups; 7) establishing a world class library with the accessibility to resources from inside and outside library settings. The author also sheds light on the activities that take place in a library setting. According to the author, in a behavior setting, activity will be combined with social, psychological, physiologist, and structural factors. The place like a library is defined by the system of activity related to a setting in which an activity is taking place. Although a setting cannot specify behavior, it can neutralize, prevent or facilitate a special behavior. The analysis draws attention to socio-cultural elements involved when designing a library setting, particularly in today's diverse college campuses like Chabot. The author reminds us that library settings are capable of influencing or creating mental images, identity, and quality of the environment. To this end, he recommends creating spaces for gathering and collaboration, settings that strengthen discourse and nurture bodies and minds. This
requires a student-centered library that caters to every type of learner by leveraging technological innovations, and ultimately supports serendipitous discovery. In sum, the appropriate design of library settings in the third millennium requires new knowledge and companionship of interdisciplinary fields (i.e., architecture).


In this article, the author asserts that bad design ideas come from many sources, not only architects and interior designers, but also librarians, library consultants, and various governmental bodies. He supports this assertion by describing some of the most commonly repeated design errors in library architecture and provides suggestions on how to prevent them in advance or deal with them after they are committed. The author's analysis is based directly on his personal experience as a library building consultant; and thus, provides very practical advice appropriate for a renovation and/or new building project. For example, although it may sound obvious, he states very succinctly that the design of libraries is fairly simple: "Libraries need to be strong, well-lighted, comfortable, safe and secure, flexible in use, expandable, and have low occupancy costs. The problems lie in the details." And this is exactly what the article provides, details about the most common dysfunctional design concepts. For example: skylights, atriums, staircases, courtyards, indoor water features, non-rectangular interior spaces, lighting, ceilings, multiple public entrances, service desks, furniture, sightlines, balconies, maintenance issues, and use of glass. The list is both exhaustive and detailed in nature, each real-life example provided by the author serves as a cautionary tale when designing
a new library building. What's more, he provides no-nonsense advise that will come in handy when working with the various stakeholders involved, most specifically, architects and building consultants like the author himself.


When asking library users "what they want from the library," asking the right questions is critical according to the author of this User Experience (UX) column. The author pushes pack on the tendency of libraries to give patrons "what they want." He raises the question that library patrons may know very little about librarianship, as we would know about "lawn care service," an example he uses to make his point. Asking patrons to create new library services may be unrealistic and unfair. According to the author, this shifts the burden of design to the user. These critical questions by the author lead to his main point: "instead of asking people about libraries, we need to ask people about their lives." For example, questions that focus on their lives (inside and outside the library), in short, their everyday context, which in turn, shape their information behavior. Questions such as, what did you do this weekend? Answers to these type of questions will expose patterns and help libraries learn about the lives of the people it serves. Only with this information can you then brainstorm and prototype relevant and meaningful new library services and spaces. Although time consuming, a participatory design approach that involves as many library users as possible will create a more student-centered library. To this end, ethnographic methods are now more commonly used in in combination with statistical
data (i.e., library gate counts) to paint a more accurate picture of who visits the library. Similarly, the use of participatory research methods are strongly recommended when planning and designing a new facility.


In this useful primer, user experience (UX) librarians Schmidt and Etches identify 19 crucial touchpoints such as the library website, email, furniture, parking lot, events, and newsletters. Simply put, the user experience is how someone feels when using a product or service. Since most users interact with many different element of a service or product, there are many different factors that impact someone's overall user experience. UX is the latest approach to meeting users' information and library needs. Although libraries may not be in the business of "selling" a product, libraries do have a lot of touchpoints (services and resources) to design and evaluate. Moreover, the sum total of someone's experience with a library's touchpoints forms their overall experience--good, bad, or indifferent. The author, who do have a library science background, contend that the best, if not only, way to improve a library is to improve the UX. Although the book reads like a how-to-manual and to business-like at times, the chapters do cover a variety of performance assessment techniques, as well as practical suggestions for user-based upgrades. In addition, the ethnographic and other research techniques they mention throughout the book are very relevant and useful assessment tools, and can inform future usability studies. Given the novelty of this approach coupled with a lack of theoretical grounding, further research is needed to accurately gauge it's contribution to both, library
practice and library science canon. In the short term, however, the book does layout out, in a very accessible way, user challenges and user-based solutions for librarians working in both public and academic libraries. The core principles of library UX design apply to both settings: 1) You Are Not the User, 2) The User is Not Broken, 3) A Good UX Requires Research, 4) Building a Good UX Requires Empathy, 5) A Good UX Must Be Easy before It Can Be Interesting, 6) Good UX Design is Universal, 7) Good UX Design is Intentional, and 8) Good UX Design is Holistic.


The focus of this article is on the concept of discovery. According to the author, discovery is defined as the process and infrastructure required for a user to find an appropriate item. Discovery is an example of the challenges that libraries face both strategically and managerially as they navigate through large-scale change. For example, new technologies enable ambient discovery that is geographically aware, search that uses images rather than text, and a variety of other techniques. For all these functions and processes, discovery of information is very much in flux. Hence, the question in the title of the article, Does discovery still happen in the library? The author addresses this question by reporting on a 2013 survey conducted by Ithaka S+R. The results show that a vast majority of academic library directors continue to agree strongly with the following statement: "It is strategically important that my library be seen by its users as the first place they go to discover scholarly content." Although that share declined modestly from 2010, library directors seem to perceive continuing value in being seen to serve as the
starting point. Even while they find strategic value in being seen by users as the starting point, directors are less likely to agree that the library is always the best place for researchers at their institution to start their search for scholarly information. This suggests that many library leaders may recognize limitations to the vision or failures to date in executing on strategies that could work towards this vision. Although library services have innovated in recent years, for example, reference assistance is now provided online, search functions have moved to the network level, and whether it is through Google, Wikipedia, or a variety of other tools, a higher share of academic discovery that ever before is routed around, rather, that through the library. To date, the most important strategy for libraries seeking to realize this vision of serving as the research starting point has been the introduction of various systems designed to bring together as high a share as possible of the library's collections into a single search interface. As discovery systems continue to improve this is a good moment for academic libraries to step back to reconfirm (or reconsider) their vision for discovery, to ensure that their visions connect with information-seeking practices and preferences, and to determine whether they have a viable strategy in place, beyond the choice of systems, to achieve their vision.


In this article the author explores the cyclical "methods in action" orientation of participatory action research (PAR) by presenting examples from a North American academic library facility renovation initiative. The aim of the study is to introduce this research approach to library professionals interested in seeking meaningful and inclusive
ways of generating knowledge together in their individual settings. Under this research methodology, researchers combine action and reflection with theory and practice to improve local situations and enhance professional practices. To this end, the author provides practical advice on proposal planning and study implementation in real-life setting. This case study illustrates how to create an action research study proposal (i.e., envisioning a new library design) that anticipates project elements and establishes learning outcomes. Against the backdrop of ubiquitous information and communication technologies coupled with the increasing migration from print to electronic resources, the author shifts the focus to the widespread recognition among educators that disciplinary currency now requires knowing how to learn. As a result, professors increasingly require collaborative work that transforms students from passive information consumers to active knowledge creators. This prompts academic libraries to assume new missions in new or redesigned physical spaces for 21st century learners. The author herself, has been involved in three PAR projects since 2003, this particular case discussed in the article was initiated within an academic library in 2009 and continuing to the present. It is worth noting, that in an actual PAR project, the focus is not to make a high-level theoretical contribution to the field of knowledge, but rather, participants, including students in many cases, initiate a cycle of inquiry and action that ensures learning and, thereby, informs being and acting in the project through integrating local, on the ground theory and practice. This makes the process more accessible to those involved given its practical and emergent nature. In that spirit, the study's focus of inquiry was space utilization within an aging library building (opened in 1976). The project was motivated by the widespread recognition that libraries needed to better anticipate and support rapidly
changing practices in higher education. It followed that, as one consequence of
significant transformation in the external environment, library facilities must be
redesigned and, thereby, repurposed. This case study serves as a roadmap for any library,
public or academic, embarking in a new or renovation building project.

10-11.

This E-Content column is in response to David W. Lewis' library model of the future, a
model that depicted a compelling vision for academic libraries over the next twenty
years. His model recognized that libraries would continue to be heavily used by students,
though largely independent of print collections, and that librarians' roles would become
much more grounded in teaching and research enterprises, frequently outside the confines
of the library building. Many of us who work in academic libraries can immediately
relate to the vision and actions proposed by Lewis a decade ago, in 2007. Like the author
of the column points out, we spend increasingly large parts of our budgets on electronic
resources; we see huge demand for access to a variety of learning spaces (i.e., group
study space); we see rapid reductions in the use of print collections, and we face
increasing demands for more systematic assessment. The author points to research
studies conducted at the University of Queensland, Australia, where he serves as a
University Librarian, to discuss Lewis' model' strengths and limitations. More
specifically, these studies looked at how the use of space is connected to research and
learning activities; how space is used in association with "traditional" library services and
print collections; how space relates to the balance between self-directed study in quiet
spaces and group activity in active spaces; and how technology is used in all of these.

Although the research was conducted at a large research University outside the US, these same guiding questions can serve as a point of reference when assessing libraries in the US, particularly at a community college environment. One study in particular involved participants by asking them to keep a record during their time in the library, reporting why they had come to the library and what they had hoped to accomplish, what they actually did (where, and with whom), and on exit, what they actually did during their time in the library. Results showed that the library was a prominent feature in students' lives (1500 respondents): almost 60 percent visit the library each day, with around half spending between thirty minutes and two hours and almost a quarter spending more than two hours in the library. Research also showed that for group work, students sought access to bookable group rooms with plasma screens and data projectors, coupled with other technology to foster collaboration. They also wanted wireless networks, extensive access to electric sockets, presentation rehearsal facilities, and recording services. For individual study, student requested enclosed sound-proof rooms with lockable facilities so that they can store computers, notes and other materials when the need to take a brief break. Lastly, when preparing for exams, students wanted similar spaces, but enhanced by break-out areas with soft furnishings, couches, coffee, and fresh air. These findings support Lewis' library model of the future and are applicable across academic libraries. In sum, the consistent message from these space studies confirm that place is important. Students continue to be heavy consumers of online information resources, while at the same time, value the library as a place--somewhere that offers an academic ambience for
their work, a forum for engagement with others, and a flexible space that meets their shifting needs during the cycle of the semester.


The authors of this article present data from a recent study (2013) into the experiences of teacher-librarians, teachers, students and leaders of seven Queensland school libraries to explore the question, "how does the physical environment of school libraries influence pedagogic practices?" The research proposes that teachers explored new pedagogies within the spaces when there was opportunity for flexibility and experimentation and the spaces sufficiently supported their beliefs about student learning. The authors conclude that widespread innovative use of the new library spaces was significantly enhanced when the school leadership fostered whole school discussions about the type of learning spaces might provoke. This research has the potential to inform school designers, teachers and teacher-librarians to make the most of the transformative potential of next generation learning spaces. Against the backdrop of a dynamic, information-rich 21st century learning environment, many school libraries, similar to public and academic libraries, are assuming fresh identities, being reimagined as learning hubs, iCentres, and information or knowledge commons. School libraries that maintain traditional identities as book depositories or information access points, risk becoming unviable. The "commons" in this discussion is described as an intellectual space that everyone helps build and as both a physical and a virtual space. Moreover, the "commons" suggests shared community spaces and a dynamic connection among learners, learning,
pedagogies, and spaces. The concept of "built pedagogy" emphasizes the close relationship between learning environments and learning outcomes. Thus, the design and designing of learning spaces has the potential to manipulate and order the ways in which learners and teachers (and librarians) engage with each other and with cognitive, relational and material experiences of learning. This requires an understanding of pedagogy as an art rather than a science; in other words, it is interactive and emergent because student actions as well as teacher intentions shape the interactions. Pedagogy can therefore be described as the enacted philosophy or principles that describe how people participate in learning, and the practices that emerge through that participation. Understanding the views of the students and teachers (and librarians), as actors in the interactions, within their particular learning space, is therefore important when designing a new learning space, particularly within a non-classroom setting like a library.


The author of this book who is a former library director provides practical advice and resources on how academic libraries can better integrate technologies to meet today's student and faculty needs. As with similar texts and articles, the focus has moved to a more user-centered approach. To this end, the author urges librarians to reevaluate the role and function of library service desks, and in turn, implement staffing strategies to match customer expectations, as well as create new and effective promotional materials. She offers practical advice based on years of experience as a seasoned library administrator for a large county system. Her real-world examples provide valuable
insight on how to build leadership skills and a professional staff. Her target audience is clearly fellow library administrators primarily in a public library environment. However, many of the recommendations translate well to an academic setting; such as, strategies to transform libraries spaces on a limited budget and marketing techniques to better promote the library--physical and virtual. Both subjects are equally important particularly when planning and designing new library spaces accompanied by new and/or improved services and resources. Once section in particular, "Sharing Our Vision: Marketing the Academic Library," perhaps the most relevant, discusses how to formulate a marketing plan and identify and reach library users. Lastly, the author also provides a short, useful list of resources at the end of each chapter. Although the author touches on many recurring themes impacting libraries today, the book brings current ideas and resources together in one place. Also, as with any well researched text, the references provided point to further areas of research and expertise.