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The Learning Commons Model
Determining Best Practices for Design, Implementation, and Service

Sabbatical Study – Spring 2007

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Sabbatical Report

Libraries in Transition: Evolving the Information Ecology of the Learning Commons

❖ Introduction

The continual evolvement of digital technologies, and more importantly, the ways in which these tools are being used to access, select, manipulate and produce scholarship has caused many librarians to rethink their roles, facilities, and organizational structures. By focusing on the larger social and spatial context in which technologies are used to enhance the learning process, university libraries across the country are beginning to realize the possibilities of what a library can be. Whether they call themselves an *Information Commons*, *Learning Commons*, *Knowledge Commons* or simply *Library*, they are envisioning new spaces and new partnerships to create environments that can support the integrated service needs of the digital generation. "As a new model for service delivery, it is not about technology per se, but how an organization reshapes itself around people using technology in pursuit of learning." (Beagle 2006, p. xv)

In looking at libraries from an ecological perspective, Bonnie Nardi and Vicki O'Day ask librarians to consider strategic questions to ensure that technology supports, rather than controls, the evolution of their information ecology. Ecology is a meaningful term for representing continual change or evolvement within a habitat. The metaphor "information ecology" calls on communities to continually examine their values and motivations as they evaluate technology use within their own setting. (Nardi and O'Day 1999) Understanding the Library as an integral information ecology supporting knowledge creation, librarians have been asking these strategically aligned questions in creating new spaces that support the use of technology in a way that is appropriately integrated with the needs of their users. Viewing their spaces as vital, collaborative learning environments, all librarians interviewed for this study indicated that their commons' ecology continues to evolve to fill new unanticipated needs.

The Learning Commons model functionally and spatially integrates library services, information technology services, and media services to provide a continuum of services to the user, a blending of staff knowledge and skills, and referral to appropriate areas of expertise. This new paradigm extends the boundaries of the Library's information ecology and calls for a restructuring of services and physical and virtual space focused on the learning needs of our user community.

❖ Planning for the Learning Commons Environment

Before designing and implementing a Learning Commons project, librarians and their partners must first engage in planning initiatives that can help them conceptualize new environments and define an underlying rationale for the Learning Commons. Identifying and working with partners early in the planning process helps to move away from a library-centric approach and think more holistically about the spaces and the services that support the University's mission and vision. To be both far-reaching and transformative, the Learning Commons must be strategically aligned with the university's core values and learning-centered goals. A clearly articulated vision, a philosophy of service, and a charter plan that incorporates cross-campus constituencies and puts student learning at its focus are essential to the success of the Learning Commons model.

In the Information Commons Handbook, Don Beagle identifies two essential phases in planning for the collaborative Commons environment: (1) strategic planning, which is conceptual and envisioning, providing the framework for incorporating cross-campus goals and objectives and (2) tactical planning which is more practical and useful for designing the LC. He further defines a planning template that involves five steps: 1) self discovery - which involves gathering user feedback through referral analysis, focus groups, and surveys; 2) scenario building - for envisioning new services that can positively impact learning outcomes; 3) projecting the future commons among the scenarios - using scenarios to inform the conceptual and spatial development of the LC; 4) managing the campus conversation - which is the beginning of the design process where stakeholders identify the purpose and objectives for the spaces that will comprise the LC; and 5) drafting and disseminating the program documentation which pulls together the results of your self-discovery and scenario building and clearly defines a proposed solution which includes the project's scope, goals and budget. (Beagle 2006, 62) Steps one, two and three are formative in nature and help inform strategic planning, while steps four and five move learning commons development into the tactical planning phase of design and implementation.

Each library involved in this study has taken its own path through this planning process, some working in partnerships with other campus departments while others have moved forward as a primarily library based project. Some have described multi-year planning that has resulted in new buildings or extensive renovation projects while others have engaged in a more concentrated and compressed planning process that have introduced the LC model by repurposing an area or floor of the library. A few, such as Connecticut College, Bucknell and Mt. Holyoke, have been evolving their information/learning commons over many years as they work within existing buildings to create new spaces and services that support technology enhanced learning. In all cases, the commons had a "project shepherd" or shepherds -- a group of interested stakeholders that investigated this new paradigm by studying the literature and existing IC/LC facilities in order to inform the establishment of a planning committee. Using much the same planning process described by Beagle, these IC/LC planning committees drafted charter documents that were instrumental in moving their project forward. Without exception, every library indicated the need for inclusiveness in the planning

process. Library staff, information technology staff, potential campus partners, students, faculty, and administrators should all be involved at some level in the planning process.

❖ **Transforming Spaces to Enhance Learning, Scholarship, and Collaboration**

A key purpose of an information commons is to leverage the intersection of content, technology, and services in a physical facility to support student learning. For example, a student in a 20th century film course might develop a paper, primarily text that embeds film clips and related images from other sources (perhaps illustrating events or costumes from the era of the film) and draws on film criticism from books and journals, or a student in a marketing course might create a PowerPoint presentation using data from the U.S. Census, statistical software, images to illustrate points, and materials from business journals to develop the presentation. Then, the student can rehearse the presentation in a specially designed practice presentation room set up with a podium, computer projector and screen, and chairs for an audience of friends who can critique the presentation. For projects like these, students need access to hardware, software, print and digital content; assistance from individuals with a broad range of expertise; and a place in which all these things are available. (Lippincott 2006, 7.1)

In designing the dynamic and interactive spaces proposed by the learning/information commons model described above, librarians must begin the planning process by asking the right questions. Instead of focusing on floor plans and furniture, it is better to ask the questions about the types of activities that users will be engaged in and what services will be needed to support those activities. With this understanding, we can engage and plan for campus partners, the location of service areas, and types of support staff needed to achieve our goals. (Lippincott 2006, 7.1 - 7.18) In strategically aligning new library spaces with the nature of the educational experience, the planning focus has shifted – it has become less about library operations and collections and more about student learning. “Librarians want to think less about the “stuff” that their building will house, but rather ask “What do we want to happen in this building.” (Bennett 2007, 24) In his 2007 article, *First Questions for Designing Higher Education Learning Spaces*, Scott Bennett poses some questions to help us think:

- How might this space be designed to encourage students to spend more time studying and studying more productively?
- What position on the spectrum from isolated study to collaborative study should this learning space be designed?
- Should this space be designed to encourage student/teacher exchanges outside of the classroom?
- How might this space enrich the educational experience? (Bennett 2007, 15-21)

By aligning our spaces to match the needs of today's student, who is characterized as being digital, mobile, independent, social and participatory we encourage students to spend more time in these new learning environments, increase their engagement, and ultimately improve retention. (Lomas, 2006, p.5.2) Today's students mix their social and academic activities. Growing up in a digital world with technologies at their ready, today's students have the ability to multi-task in ways that were never thought possible. As a result of his research on learning space design, Malcolm Brown, has cited the following spaces as preferred by the net generation.

- Small group work spaces
- Access to tutors, experts, and faculty in the learning space
- Table space for a variety of tools
- Integrated lab facilities
- IT highly integrated into all aspects for learning spaces
- Availability of labs, equipment, and access to primary resources
- Accessible facilities
- Shared screens(either projector or LCD): availability of printing
- Workgroup facilitation (Van Note Chism 2006, p.2.5)

Although every Information/Learning Commons facility studied during this project was uniquely different; from new library buildings to addition/renovation projects to repurposing of existing facilities, they all had created spaces in support of the characteristics of a generation of students who crave social, technologically infused spaces that are flexible and comfortable enough to accomplish a variety of learning centered tasks. "The emphasis on learning means that we must also think about the learner. Learning spaces are not mere containers for a few approved activities; instead, they provide *environments for people*. Factors such as the availability of food and drink, comfortable chairs and furniture that supports a variety of leaning activities are emerging as critical in the design of learning spaces" (Brown and Long 2006, 9.1) To invite the learner into their space, designers have used plenty of natural lighting, low shelves for visibility, and large expansive spaces that offer a combination of computer work areas, comfortable seating, and strategically placed collections. Way finding is enhanced through the use of color, light, signage, furniture arrangement, and in carpet patterns and color. The renovation project at Bridgewater State College made excellent use of color on the walls and in the carpeting to help users navigate through the building. Blue carpeting has been used to indicate traffic flow through the building ("the river") and red carpeting indicates service areas or work areas ("lily pads") with a more neutral tone used for the collections ("the land"). They also used curved edges in their desk areas and other design elements to offer a more aesthetic flowing feel to an otherwise angular building. Signage and large window areas let in plenty of natural light and serve as axis points for aligning services. At Dickinson College, the architects used clean and simple lines combined with the natural limestone, marble, extensive use of white trim, and light colored furniture to create large, airy curving spaces that are both attractive and inviting. The spaces throughout the Belk Library at Elon benefit from the natural light provided from a central elliptical skylight and many arched windows throughout. The low shelving on the first floor opens the view all the way from the entrance to the back windows. The use of soft colors in blue, green and yellow coupled

with cherry wood in the stacks and computer furniture provide a warm and comfortable atmosphere.



Bridgewater State College

Use of carpet color and pattern to denote traffic flow and work/service areas



Dickinson College

Large windows in white trim accented by original building limestone and light furniture and carpet

In visiting the eighteen libraries included in this study, the following components of the Information/Learning Commons were identified.

- Computer workstations clusters
- Collaborative learning spaces
- Presentation support centers -- sometimes called Multi-Media Presentation Centers, Digital Media Studios or Advanced Technology Labs
- Instructional Technology Centers for Faculty Development, i.e Teaching Learning Centers

- Electronic Classrooms
- Soft seating
- Writing Centers and other academic support units
- Cafes
- Spaces for meetings, seminars, receptions, programs, and cultural events

Computer Workstation Clusters. No longer looking like the computer lab configurations of the 1990's, computer work areas are now being designed to functionally and spatially integrate into the library's overall design concept. Even in the larger schools, such as UMass Amherst, large computer row areas are complemented by a variety of computer workstation configurations throughout the space of their Learning Commons. These configurations are commonly referred to as pods or clusters. They allow ample space for students to spread out their materials. Elsewhere, other successful arrangements have been done in serpentine or zig-zag formations, clover leaf, Y shape, circular or octagonal pods, curving rows, short straight rows, or a variation on a square design with four separate work points. Places that have used the more traditional row configuration have complemented the computer furniture with other furniture used in the building to give a unified and contiguous feel to the entire space. As can be seen from the photos below, there are many ways to delineate work space areas, including furniture design, semi-transparent partitions, and landscape panels.



Hamilton College –

Computer workstations designed in serpentine rows allowing plenty of space for students to spread out – again using glass.



Elon University

Using wood and curves to complement the layout of the first floor. Notice elliptical skylight that allows plenty of natural light.



Binghamton University

Use of landscape paneling and Herman Miller furniture. Plenty of space for two individuals to spread out or to accommodate a group of four.



Bridgewater State College

Clover leaf work areas designed around building support columns offer lots of space for individual or collaborative work. Some of these clusters also include scanners.

Adding productivity software to all computer workstations in the library is a hallmark of the information commons model, allowing students to work on assignments from inception to completion. With the use of USB ports or network drives, students move easily between the computers in a classroom lab, their dorm room or within the library. Computer workstations in the Commons generally contain web browsers, Microsoft Office Suite, Macromedia Dreamweaver, SPSS, and any other software that is commonly used at the university.

Support is an essential component of the computer workstation environment. In using technology to complete a series of tasks, from identifying and locating information resources to producing a text-based or multi-media end product, students need both research and technological assistance. Librarians and information professionals are fulfilling these support needs by integrating service at a single desk or by staffing separate but co-located desks. The size and placement of the service desk and the configuration of the reference print collection may have to be altered to accommodate a more spacious environment for computer workstations. In designing the service desk, careful consideration should be given to the types of activities that will be happening at this desk. Will this space allow for in-depth research assistance, or will research consultations take place in another area or office? Will students receive in-depth assistance at this desk with complex software packages? Where will students go for networking help with their laptops?

Collaborative Learning Spaces. A major difference in the spaces designed for the LC as opposed to those of the traditional library is the influx of group study spaces which facilitate collaborative learning and satisfy students desire to mix social interaction with work. Students will often congregate around a single computer to work on a class project. Scott Bennett's article, *First Questions for Designing Higher Education Learning Spaces* takes a close look at the *National Survey of Student Engagement* to understand how students study and learn today. "Active and collaborative learning is one of the NSSE benchmarks of effective educational practice. Working with classmates outside of class to prepare class assignments is one of the specific behaviors that contribute to active and collaborative learning." (Bennett 2007, 18)

In all of the libraries studied, there were several types of spaces created for students to work collaboratively. Among the most easily recognized of these spaces in the "group study room." Most libraries offer both small and large group study rooms that accommodate from four to twelve users. Each room is equipped with a whiteboard, a projector, a table with laptop ports or a computer workstation with a shared monitor, and sometimes media viewing equipment. The need for more group study rooms could not be more heavily emphasized. Most librarians agree, that you will need double or triple the amount of group study rooms that you had originally planned. Elon has found their rooms are most heavily used by individuals or very small groups. Because of the need to create more of these smaller rooms, they have opted to physically split some of their larger group study rooms into two smaller rooms. The number of group study rooms varied from institution to institution, but all agreed – fit as many as you can into your design.



UMass Amherst - Group study room



Bridgewater State College - Large group study room with movable furniture



Simmons College - Group study room with projection, ports, media viewing and whiteboard

In addition to enclosed rooms, collaborative learning spaces are found throughout the commons. Using a variety of furniture configurations, spaces have been created that are clearly designed to enable collaborative work. At the minimum, collaboration is encouraged by having computer work areas large enough to seat two to three users comfortably around one computer – extra chairs for each computer are available. Appalachian State has intermixed two computer configurations throughout its Information Commons to delineate computer work space designed for individuals and groups. Bucknell has a “Technology Courtyard” with each work area accommodating up to four users. These collaborative spaces are semi-enclosed by tall panels that provide some barrier to noise levels. In addition to the more soundproof group study rooms found along the periphery of their Learning Commons, UMass Amherst uses modular

furniture with landscape panels to create a variety of work areas for collaborative work. Each work "pod" has a shared computer workstation with additional ports available for laptop use. Mt. Holyoke has collaborative work spaces in designated areas of their Commons that provide large screen monitors. Successful spaces for collaboration also include tables with central electrical wiring for laptop use. Since most buildings are now wireless, it is not necessary to include data ports in these tables.



Connecticut College - Collaborative Space



Mt. Holyoke College - Collaboration with shared plasma screen



Bucknell University - Technology Courtyard



Plymouth State - Tables with central "hot jacks" to plug in laptops

Internet Cafes provide an informal collaborative environment. Cafes often include both a wireless environment for laptops and a few computer workstations

configured for guest login. Comfortable and inviting upholstered furniture provides a wonderful opportunity for students to gather informally for discussion and group collaboration. Having the furniture on wheels allows students to move it around into whatever configuration is needed to accommodate their numbers.



Appalachian State - Comfortable seating in Borkowski Reading Room



Bridgewater State College – soft seating



Appalachian State – Cyber café



Elon University - Comfortable seating at down a curving hallway at the far end of the first floor.

Presentation Support Centers. An important feature of the learning commons ecology is the inclusion of an advanced technology facility to support students in developing multi-media projects. These presentation support centers are often called Multi-Media Presentation Centers, Advanced Technology Labs, Digital Studios, Media Authoring Lab, Technology Courtyards, Special Projects Computer Labs, etc. There is usually a mix of high end PCs and MacIntosh computers in these spaces with full suites of Macromedia

Software and other image and editing software. A good example of a highly equipped technology lab is at Hamilton College. Their MultiMedia Presentation Center (MPC) is equipped to support a variety of high-end multimedia enhanced projects including digital and audio editing, large format printing that can be used to create posters for conference and seminar presentations, web content development with video, audio, and animation, and medium format color laser printing. Hardware includes 21 Apple PowerMac G5s running MacOS X, 2 Epson Large Format Printers, 3 HP Medium Format Laser Printers - 1 B/W and 2 Color, 2 large format scanners, 4 photo flatbed scanners, digital cameras, 8 mini DV VCR players, 2 VHS/DVD players, a Video Monitor, headsets and microphones. Software includes QuickTime Pro, iLife, iMovie, iPhoto, iWeb, Final Cut Pro, DVD Studio Pro, Motion, Sound Studio, Adobe Photoshop, InDesign, After Effects, Dreamweaver and more. (Hamilton College Information Technology Services 2007)

Although the list of hardware and software available at Hamilton's MPC is impressive, what is most important is the pedagogy behind its development. As a joint project of the Library and Information Technology Services, librarians and instructional technologists collaboratively work with faculty in this space. In order to allow time to work collaboratively and ensure the availability of staff to work with students on class projects, faculty wishing to use the MPC must plan their course content far in advance and work with members of the HILLGroup. The HILLGroup (Hamilton Information & Learning Liaisons) is a collaboration of the Library, Instructional Technology Services and Oral Communication. "The goal of the HILLgroup is to support faculty in the identification, selection, and use of technologies and content applicable to their teaching or research needs." (Hamilton College 2007) To learn more about the HILLGroup use of collaboration to support academic success, refer to their web site at <http://onthehill.hamilton.edu/academics/hillgroup/index.html>. This semester the MPC is supporting 18 courses and 6-10 independent projects. A graduation requirement that requires every student to make a public presentation has made the MPC a valuable campus resource.

Libraries offering high end presentation labs usually have a high degree of collaboration with their Information Technology departments. These labs are staffed with information technologists or instructional technologists and/or student employees from the I.T. department. Libraries without this strong partnership, were less likely to have such fully realized labs, but did offer student presentation support services by incorporating scanners and other image editing equipment and software within specified areas of their Commons computer workstations environments.

Instructional Technology Centers for Faculty or Teaching Learning Centers. In addition to the Presentation Support Centers described above, some institutions offer separate services to support faculty in using technology in the curriculum. Teaching Learning Centers are often supported by Instructional Technology departments. They usually remain somewhat separated from the mainstream areas of the learning commons. Staff from Elon's Instructional Design and Development Department share library space and have an electronic lab devoted to faculty workshops. When not in use, a connecting door is open to accommodate overflow from the Student Instructional Technology Lab which is adjacently located. This lab, and others like it, offers help in instructional design and strategies for teaching with technology, presentation support and multimedia

development, and assistance with course management software, digital technologies, and various software packages.



Hamilton College –

Multi-media Presentation Center. High end Macs, digital editing equipment, scanners, large format printers (not shown)



Elon University –

Student worker helping another student at a shared monitor in the Student Instructional Technology Lab

Electronic Classrooms. Not only are electronic classrooms integral to Information Literacy initiatives, they play an important role in offering additional campus learning opportunities such as staff training and occasional classroom support. Many institutions enjoy more than one classroom space. These electronic teaching rooms have been configured in a variety of ways to support different functionalities. Classrooms designed for library instruction usually have between twenty and thirty workstations. Additional classrooms may be smaller or be designed for laptop use, having just the projection and instructor's workstation permanently fixed in the room. The trend has been toward more careful integration with the public spaces of the LC, rather than tucking them away down a corridor or behind walls. In making these areas more transparent, it is easier to allow open access when the classroom is not being used for instruction. The use of glass walls helps students know of their availability and helps staff keep track of activity. The main library classroom at Elon is circular, glass enclosed, and strategically located amongst the computer workstations on the main level of the library. Its prominent and

transparent placement serves to promote the availability of library instruction classes and encourage usage when classes are not in session. The use of modular and flexible furniture at Appalachian State University allows users to reconfigure the environment to suit their needs.



Elon University –

Library Classroom in the round, placed amongst the computer workstations in the Information Commons area and in clear view of the Information Desk.



Appalachian State University –

Flexible tables and chairs on wheels help make this classroom space highly versatile for a variety of activities.

Writing and Academic Support Services. Combining a variety of student support services makes good sense in the learning commons model that boasts the availability of “one stop” service to students. Nine of the eighteen libraries in this study had established partnerships with the campus Writing Center or other academic support units, such as Academic Advisement, Tutoring, and Service Learning. They intentionally incorporated these services into their learning commons environments. Three other libraries stated that the Writing Center and other support services existed in the same buildings as their libraries, but were not part of the Library. SUNY at Cortland

consciously designed their Learning Commons to be a centralized place for all student support services on campus.



SUNY at Cortland –

Office of Advisement & Transition, Including several student support services located near to the reference desk in their learning commons.



UMass Amherst –

Academic Advising and Career Services Desk is one of four main service desks in the LC.

The other three are the Reference and Research Assistance Desk, Learning Commons and Technical Support Desk, and the Writing Center.

Spaces for Meetings, Programs, and Cultural Events. Offering spaces that create a sense of community and exchange of ideas should not be overlooked when designing the learning commons. These spaces reinforce the identity of the student as an integral part of the scholarly community and provide new ways for students, faculty, and community members to interact. Not only do these spaces enhance student learning outcomes outside of the classroom, but they put the Library at the heart of intellectual and cultural life for the campus community and beyond.

Cafes and Lounge Areas. Though many may view the availability of food and drink as inconsequential, cafes and the availability of comfortable soft seating are mainstays of the learning commons model. In encouraging our students to spend more time in spaces designed to accommodate the research process from inception to conclusion, we need to provide them with an opportunity for a quick break and social networking.

Spaces that focus on human centered design and encourage learner participation will become increasingly important as we evolve a “commons” model that puts an emphasis on our community of learners and the range of services they require. “The learning commons is human-centered. The term learning signals a significant change: the focus is not just finding information but applying that information in productive ways to deepen and strengthen learning as well as to construct knowledge. Learning, not information, is increasingly the focus.....learning spaces in the 21st century need to foster discovery, innovation and scholarship, not simply contain them.” (Brown and Long 2006, 9.4) We need to realize that space is transitional and that it will keep changing as user needs dictate. As Duke University plans for new learning environments, they caution that you need to envision your space and then envision it again and see how it can be reconfigured as future needs dictate.

❖ **Sustaining the Commons Ecology – Developing Communities of Service, Fostering Partnerships and Nourishing Staff**

“Functional integration requires staff flexibility and adaptability sufficient to support the new patterns of service.” (Bailey and Tierney, 2002)

Integration of service is a key ingredient of the learning commons. In this new paradigm, communities of service are established when distributed staff come together in a centralized location with the essential skills to help students complete a series of learning tasks – from information resource identification to scholarly production. Staff working in these new collaborative environments report that a renewed focus on customer service helps to identify essential partners and drive progress in implementing the learning commons. Successful partnerships offer different perspectives for improving service, help to resolve problems more quickly, and allow for more accurate referrals. Most importantly, they can help to remove barriers between organizations with different cultures and values to meet the needs of a combined user audience. Collaboration opens new avenues for achieving goals that are not available to individual departments working in isolation. “Collaboration itself is the most effective way to overcome the cultural divide....Collaborative activities improve mutual understanding, increase respect for the expertise embodied in each organization, open up the possibility of commonly agreed upon solutions, enable more effective use of resources, and as a result of all these, build trust relationships that foster further collaboration.” (Regenstein & Dewey 2003, p. 70)

The types of staff that are co-located in the collaborative working environment include reference librarians, information technology staff, instructional technology staff, media/AV staff, faculty development staff, student peer tutors, academic advisors, and student information desk consultants. All but one library in this study offered

technology support, either at a separate service desk or at an integrated service desk. Student information technology workers were used almost exclusively for providing front end assistance at technology support service points. A combination of library staff and student technology workers was the baseline for staff support in the isolated information commons model. "The most important characteristics of students hired in the information commons, are a good customer service attitude, adaptability to change, and a continuous desire to learn new skills. Of secondary importance are the skills necessary for the specific position. Each student needs a certain depth of knowledge in all area of the Commons, with specific training and knowledge required for their area of responsibility. No student is hired with all the skills, but they are taught and learn quickly through training sessions and assigned tasks." (Whitchurch, Belliston, and Baer 2006, 271) As libraries become successful in establishing new partnerships across academic support units, we see the inclusion of services, such as teaching & learning centers, peer tutoring, writing centers, and multi-media presentation centers and their staff included in the learning commons. The table below represents the percentage of different staff types employed in the information/learning commons facilities that were visited during this sabbatical project.

Staff working in the Learning/Information Commons

Library Staff	100%
Information Technology Staff	56%
Instructional Technology Staff – generally	44%
AV/Media	27%
Faculty Development Staff	39%
Academic Support Staff	33%
Student Peer Tutors	33%
Student Information Desk Consultants	94%

Notes: Percentages for Information technology staff does not include staff from libraries with their own Systems Departments – i.e. Duke, Appalachian State, and UNCC
It is difficult to determine separate Media Staff except in libraries that had specific AV/Media departments. Media Services is often a branch of Information Technology Services.

While partnerships are essential to the success of the learning commons, they do present challenges. In order for services to become synergistic and symbiotic, different cultures must go through a period of transition and assimilation. Learning to work together takes time and patience. This is especially true in the partnerships between library and information technology staff. The learning commons "requires a fundamentally new degree of collaboration between librarians and information technologists, who bring different professional training and cultures together in newly designed spaces that support student and faculty learning." (Bennett 2007, 166) One of the most important lessons learned in this study is that it is necessary to allow ample time and space for staff to transition to this new model --cultural differences will need to be negotiated for the best working relationships and service to patrons.

Constant communication and clear protocols or “memorandums of understanding” are two of the main components for successful partnerships. Hamilton College worked diligently to achieve staff buy-in for their information commons project. They involved everyone that would be staffing or supporting this area (from both the library and ITS) and actively sought their participation through committee work and retreats. Two retreats dealt specifically with bringing staff together from two very different cultures. An organizational consultant was brought in to help resolve issues and help all staff learn to work together. In addition to committees, workshops, and retreats, Hamilton established a listserv and used their Campus Share email system to keep all members informed about development in the IC. Informal conversations also help to keep everyone in the loop. These conversations became a matter of routine for sharing information, filling in gaps from committee minutes, and helping to build trust. When a procedure, standard or policy was agreed upon it was placed in a print manual. Additionally, Hamilton created a *Protocol for Conflict* which clearly describes a methodology designed to get people talking with one another to resolve their own issues of dispute. They have established guidelines for what ITS can expect of the Library and what the Library can expect of ITS and what the IC Steering Committee can expect from the staff as a whole, and what the whole can expect of the IC Steering Committee.

A person charged with coordinating the activities of the learning commons, either within an existing job or as a newly created position, is essential for ensuring the user's success within the commons environment. This person is responsible for coordinating communication amongst all service areas, looking for opportunities to fill unanticipated needs, making suggestions for continual evolvement, and facilitating paths to enhance services.

In his 2007 article, *Designing for Uncertainty: Three Approaches*, Scott Bennett reports the results of a survey concerning support services at 56 four year institutions with collaborative learning environments. In this survey he asked about three specific indicators for success in servicing a collaborative learning environment: cross training, increased spending, and changes in administrative structure. He found that cross-training was the most common indicator of success, with 82% of the institutions surveyed reporting that they provided cross-training opportunities. 55% of the institutions reported the need for increased spending, and interestingly, only 32% of the respondents had established changes in formal reporting lines with only 4 of those institutions reporting an organizational merger of library and information technology departments. (Bennett 2007, 167) The results of his survey were remarkably similar to the observations found in this sabbatical study. Administrative changes in organizational structure had little effect on the success of the learning commons model. Organizationally merging Library and Information Technology Departments is not essential and often requires an extended period of cultural transition before real working partnerships can be established. What is more important to the success of the learning commons, is the level of staff involvement and commitment. It is the hard work done by librarians and technologists throughout the planning and implementation phases that creates a successful partnership and service ecology. Several institutions reported that staff anxiety over new work spaces and responsibilities dissipated as they learned to work together. Furthermore, simply co-locating staff helped to breakdown institutional silos and encouraged shared problem solving.

"Whether libraries and computing are merged under a single management structure or have a productive, collegial working relationship as separate units is not the determining factor for success. The convergence of content and technology will change user needs and expectations. Meeting these needs and expectations in a world where rapid change is the norm, requires both institutional support and individual skills. The common goals of computing and libraries and the willingness of the staff both to embrace and lead change create and environment for success. While organizational structure must be agile enough to change according to user needs and expectations, information professionals must be prepared to work informally across units, re-imagine their responsibilities, and provide leadership and expertise." (Hardesty 2000, 125)

Nourishing the staff in the commons environment through cross-training and opportunities for staff development was a clear indicator of success in both Scott Bennett's survey cited above and in observations conducted during this study. Almost all libraries in this study reported some level of cross-training and indicated the need to do more. For instance, Appalachian State trains all interested employees to provide reference service at their Information Desk. They have found that by utilizing more library staff, rather than just reference librarians, at the reference service point they have freed up time for reference librarians to do more research consultations and develop web and instructional materials for both e-learning and library classroom instruction. Although a merged Library/I.T. organization was not found to be a clear indicator for the success of a learning commons, institutions that had been merged for a long time (10 years or more) were more likely to have a fluid organizational structure with greater job flexibility. For more than ten years, Bucknell has worked hard to develop cooperative working relationships amongst organizationally merged staff members. Success has been achieved through a staff-driven re-organization plan that involved numerous workshops, activities, retreats, and meetings and consequently resulted in a shared vision and values statement. Their collaborative vision and values provides a framework for effectively working together and puts customer service at its core. Individual staff members are encouraged to learn anything and everything that interests them. They are constantly in a learning mode and continually evolving to meet user demands. Job descriptions can change whenever necessary and people are encouraged to work in other areas depending on their skills and interests. To further staff development they have a shadow program for staff wanting to learn more about another position. Mt. Holyoke also has a vigorous staff development program. They believe in continuous training opportunities for their staff. Because of these training opportunities, some staff members have actually transitioned between library and information technology departments. As technology changes, so do positions and job descriptions. Staff continually update their job skills, enjoy learning and don't feel threatened by the changeable nature of their jobs.

Service Desk Models:

Depending on campus culture, organizational structure, and perceived user need, several different service desk models in the LC were observed. Many chose to maintain separate Reference, Circulation, and Technology Support Desks, sometimes even on separate floors of the library. Those libraries felt that each service desk was uniquely different, presenting different levels of user activity and requiring specific staff training that was not easily replicated in the integrated service desk approach. Heavily utilizing student workers at all three of its service points, Bucknell employs a 10% cross training rule. Everyone should be trained in the top 10% of each service area so that they can answer the most basic questions and perform base level operations. At the other extreme, some have eliminated their reference desk in favor of an integrated Help Desk that includes service points for reference librarians, paraprofessionals and technologists. Many have chosen to combine reference and technology support services at the same desk or in very close proximity of one another. Generally speaking, these libraries staff their combined "Information Desk" with reference librarians and students employed by the information technology department. One library, Plymouth State, very successfully combines the functions of circulation, reserves, technology, and multimedia presentation support in one integrated Information Desk. The only library function not integrated at this desk is Reference which still maintains a separate service point within sight view of the Information Desk. From their experience with four service desks located near the library's entrance (Information Desk, Reference, Presentation Support, and Circulation) UNC Charlotte, has noted that too many service desks result in confusion for the user and it is better to combine some service functions.

An interesting observation noted during this particular research was that institutions with merged library and information technology departments seemed to be very committed to maintaining separate service desks, rather than an integrated service point, deferring to the different types of staff and activities performed at each desk. Those institutions that had not organizationally merged, but had developed successful and collaborative partnerships were more inclined to move toward the integrated service desk model.

❖ Evolving the Commons: Assessment and Future Growth

With its focus on the enhancement of student learning, how can we measure the effectiveness of the learning commons and how will we know when we have achieved our goals? These are questions that assessment expert, Joan Lippincott, asks us to consider as we are planning for the commons environment. "Assessment begins during the planning stage with the needs assessment. It is important to clarify what the community wishes the information commons to accomplish for the institution, particularly in relation to learning priorities. When the facility is open, assessment can focus on a variety of things, including whether the space has accomplished its purpose(s), whether users are satisfied with the facility and what changes are desired." (Lippincott 2007) Assessment is important for clarifying the purpose of the project, demonstrating value or effectiveness, measuring user satisfaction, identifying needed changes, and providing data to administrators for future funding. (Lippincott 2007)

In her 2005 study of 25 information commons facilities Joanne Henning found that "few libraries have done formal assessments of their ICs; even fewer did a formal information gathering of potential users before implementing the IC" (Henning 2005). Two years later, assessment seems to be an issue that everyone is still grappling with. Many report that assessment activities have been limited to LibQual, the MISO survey for Library/IT merged organizations, gate counts and usage statistics. As Lippincott suggests, several people indicated that it would be beneficial to include a plan for assessment in the initial plans for a learning or information commons. Activities or data collection methods that are part of a comprehensive assessment plan include gate or usage counts, user feedback surveys, observational data, focus groups, case studies and interviews with students, faculty and staff. Lippincott's presentation to the Information Commons Study Group at ALA Midwinter 2007, available at <http://www.cni.org/staff/joan-pres/2007/0702.ICassess.lippincott.ppt>, offers valuable key points for using each of these methods in assessing our new learning spaces. (Lippincott 2007)

A few of the libraries investigated during this study have made substantial progress in assessing the learning spaces in their LC or IC. The University of Massachusetts at Amherst has an extensive assessment program which employs an impressive array of activities and methodologies. They have conducted observational surveys that compare usage in learning commons areas during Fall 2005 and Spring 2006 with observational surveys completed in 2001, prior to building their LC. They have collected data about use of their partnership services -- the Writing Center, the LRC, and the Cafe. They have average hourly use and typical week charts, daily and hourly usage figures, computer use counts, and gate counts. Focus group sessions and individual interviews were conducted in April 2006. Results of these sessions are available at <http://www.library.umass.edu/assessment/LCFocusGroupReportApril2006.pdf>. They also completed a Learning Commons Usage Survey in November 2005 and did a formal survey of the Library and Learning Commons in March 2006 that was designed and conducted by a student from the Simmons Graduate School of Library and Information Science. The 24 page analysis of this survey done by Student Assessment, Research, and Evaluation Office (SAREO) can be found at <http://www.library.umass.edu/assessment/SAREOAnalysisLCSurvey06.pdf>. UMass Amherst makes all of their assessment activities readily available from their web site at <http://www.library.umass.edu/assessment/learningcommons.html>.

The Atkins Library at the University of North Carolina at Charlotte has recently completed an online survey of 24,000 students and faculty. They received 1500 returns from this survey and have collected good narrative data for their task force which is currently investigating phase two of their information commons. Even though they regularly conduct both formal and informal assessment, librarians at UNCC wish that an IC assessment plan had been in place when they first opened. Initially, they had only collection and database use statistics and gate counts. Today, they have a more formalized method for collecting statistics from all public service areas. A chart of UNCC public service cumulative statistics can be found in the Information Commons Handbook. (Bailey 2006, 196-197)

Wesleyan University has given careful thought to an ongoing assessment program for their information commons. Information Technology has developed a program that keeps detailed usage statistics for their support desk areas and offers several reporting features. Additionally, they collect user feedback about their IC via a feedback form that explains the Commons and asks for comments and suggestions about how to improve the Commons. Questions asked include: 1. What did you use the Information Commons for? 2. Please comment on the services, resources and facilities provided in the Information Commons. What services, facilities, group or individual workspace, etc., would you like to see in future phases of the Commons? 3. Do you have any other comments or suggestions? (Wesleyan University 2007) The Olin Library Information Commons Activity Project is also utilized to track how the workstations within the IC are being use, and how this usage changes throughout the semester. During this project, student workers track activities at four different times throughout the day.

Hamilton College is able to correlate learning activities with assessment from their collaborative HILLGroup (Hamilton Information & Learning Liaisons) partnership. As mentioned earlier, the HILLGroup is a collaboration of the Library, Instructional Technology Services and Oral Communication. Tying use of their Multimedia Presentation Center (MPC), a focal part of their Commons environment, to the goals of HILLGroup offers opportunities for assessing learning outcomes. Because faculty work collaboratively with librarians and instructional technologists in using this space for their courses, the library can access how services and resources are having a direct impact on scholarly production in the classroom. Librarians at Hamilton College report that the popularity of the MPC has grown with each semester as faculty realize its potential for enhancing learning outcomes.

In his chapter entitled *Assessing Success to Enhance Space and Improve Service* found in the Information Commons Handbook, Russell Bailey helps librarians plan for assessment by providing a good overview of the types of assessment and evaluation – formal and informal, quantitative and qualitative, needs assessment, and explicit and implicit assessment – that are necessary for the future continuation and enhancement of Commons facilities. (Bailey 2006, 193 - 212)

The Information Commons as it was formally conceptualized by Don Beagle in 1999 (Beagle 1999) has continued to evolve as colleges and universities around the world have been transitioning to this new paradigm. In their works, Bailey and Beagle discuss the transformation of the Information Commons, a physically located and library-centric facility that provides integrated services and a technologically rich environment to the Learning Commons which is not library-centric and is more fully aligned with the University's mission and vision. The Learning Commons brings external functions and activities (i.e. writing centers, faculty development centers, peer tutoring, etc.) into its environment and provides more seamless integration of services through collaborative partnerships throughout the entire building. Where the Information Commons is seen as isolated physical change, the Learning Commons represents far-reaching and transformative change.

The only thing that is constant is change. As libraries assess the activities of their commons environment, they are adapting to find new ways to accommodate unanticipated user needs. Many of the librarians interviewed in this study have achieved success in building a commons environment in phases. Dickinson College, University of Southern Maine, Hamilton College, and Mt. Holyoke College are among the universities implementing the second phase of their commons projects this summer. "Experimentation is a critically important way to build continuous learning and quality improvement into the design of learning spaces. It normally takes many years to secure approval and funding for renovating or building new campus spaces. By spending part of that time consciously experimenting with small-scale designs that explore alternative answers to the first questions about these projects, colleges and universities are the less likely to waste the rare opportunities they have to build and renovate." (Bennett 2007, 24)

Incremental phases can provide users with valuable new learning spaces and help you envision future spaces and services. As one librarian so succinctly put it – build it – try it out -- wait to see what happens and how it is used and then reconfigure as necessary. Flexibility is the key to success – not only in terms of space, but in staff attitude. "Because change seems the only constant in an information commons, all who are employed in the Commons must be adaptable and willing to embrace change." (Whitchurch, Belliston, and Baer 2006, 261-278) Although, transitioning to this model takes time and creates organizational challenges, it also invites exciting new opportunities for engaging our users and enhancing the quality of learning and scholarship at our institutions.

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