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Overview

Surveys of academic library construction reveal significant growth in the numbers of information commons and learning commons. This ECAR research bulletin reviews six recent user studies of the commons model on different campuses, with three highlighted as exemplars. While the studies used varying methodologies, their cumulative results indicate that the commons model cannot be evaluated by focusing only on design aspects of “learning spaces” or perceptions of “library as place.” These features must be balanced by qualitative reviews of service effectiveness and quantitative measures of service delivery. This bulletin concludes with a consideration of change theory as a possible means to extend service evaluations and spatial appraisals to assessments of learning outcomes.

Introduction

The growth of the commons model (both information and learning) is reflected in two major studies of academic library development. Between 1995 and 2002, Shill and Tonner conducted a nationwide survey of academic library renovation, expansion, and construction.¹ When they began, the information commons was not deemed sufficiently established to warrant a query in their questionnaire, and it received only passing mention in the researchers’ 2004 post-survey analysis.² Six years later, in the national survey of academic library construction projects issued in late 2010 by the Association of College and Research Libraries (ACRL), respondents were asked to list types of spaces in their new buildings “...best representing the library’s role in the academic life of the institution.” Respondents identified 18 types of library spaces.³ The type labeled “information commons/learning commons” was ranked third of 18, behind only “library classroom and instruction labs” and “group study/collaborative space.” Moreover, library classrooms and group collaborative areas are frequently components of current commons model development.

In discussions on the INFOCOMMONS-L listserv, one researcher estimated more than 90 instances of the model across the United States and Canada, and a PhD candidate preparing a national survey has privately reported 152 instances.⁴ The model continues to be adopted in new locations, with Yale University and Johns Hopkins University recently announcing commons projects.⁵ Examples have also appeared in Europe,⁶ the United Kingdom,⁷ and the Pacific Rim.⁸ Some of the most innovative recent library commons include the remarkable Rolex Learning Center at École Polytechnique Fédérale de Lausanne and the ICMC/IKMZ of Cottbus University. Articles and reports by the developers of these facilities cite literature from U.S. library journals and monographs dating back to the 1990s as their sources of inspiration and guidance.⁹

Learning commons initiatives have been described using a technology management theory called strategic alignment.¹⁰ The commons aligns the library with the university's strategic goals in the digital age through collaborative service delivery that supports

- digital content identification and retrieval,
- digital content manipulation and interpretation, and
- original digital content creation and presentation by students and faculty.¹¹

This schema parallels the ACRL competency standards for information literacy and the related I-Skills framework adopted by the Educational Testing Service. These more detailed frameworks encompass a student's ability to

- define an information problem;
- access, collect, and/or retrieve information in digital environments;
- evaluate information based on authority, bias, timeliness, and relevance;
- manage, manipulate, and organize information to accomplish projects and assignments;
- integrate new information into one's knowledge base;
- create new knowledge in various representations; and
- communicate information effectively and with an understanding of its legal and ethical dimensions.¹²

In the information commons project begun in 1997 at the University of North Carolina at Charlotte (UNCC), student dissatisfaction with constant referrals between library, IT, and Media Services led to a collaborative service framework between the three departments. This brought productivity software onto information commons workstations, secured direct IT support for students using the commons, and established on-site consultation with Media Services staff. Several of the studies included here credit the UNCC project as a guiding influence. As more campuses have adopted the model, libraries have also begun using the commons to reposition themselves as change agents for cooperative instructional support with writing centers, academic skills or tutorial centers, and faculty development centers.¹³

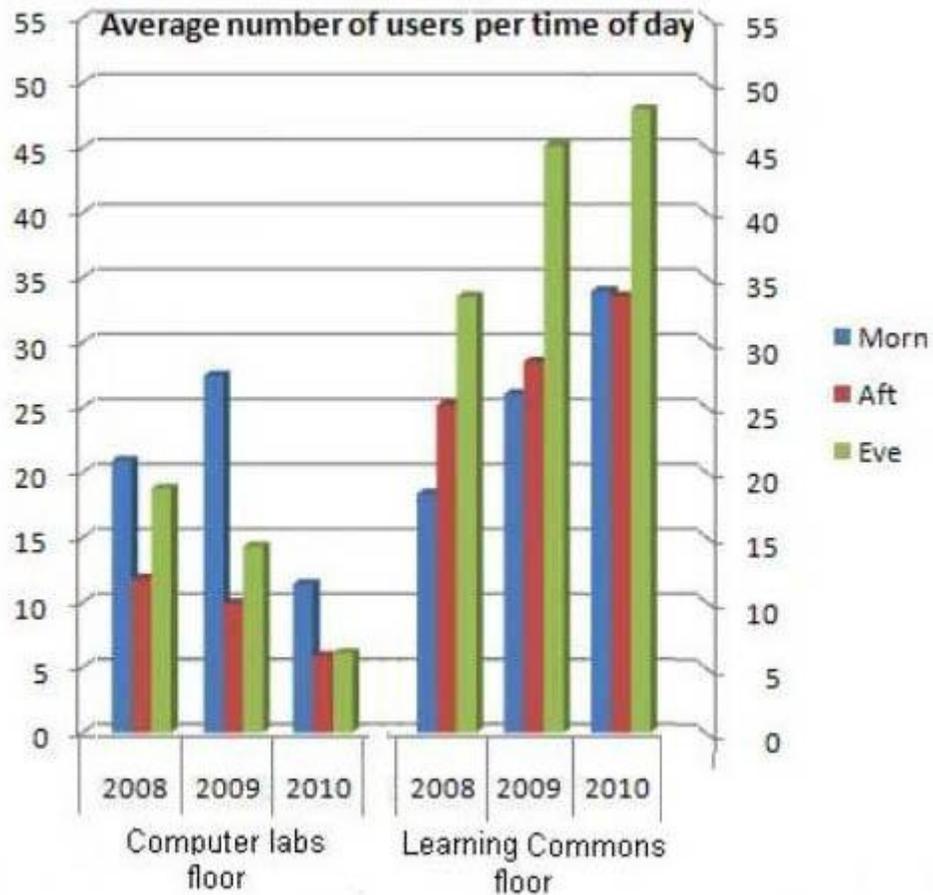
Distinguishing Commons from Computer Lab

Commons spaces typically feature workstation arrays in multiple configurations, and, superficially, they look like stylish computer labs. Some observers have contended that this label best represents the commons model (often alongside a coffee shop), and more than one critic has complained of a "labization" of the library.¹⁴ But when the focus shifts from physical spaces to services, the gap between labs and commons widens to a gulf, due to the complexities of information literacy and I-Skills support. Multiple lines of evidence now clearly refute the "computer lab with coffee shop" canard. In the 2010 ACRL survey of recent library construction, the same table that ranked information/learning commons spaces third in the list of 18 also identified library space for computer workstations as a separate type of space; this type of generic computer lab ranked 17th of the 18 types listed.

The distinction can also be seen in libraries where computer labs and learning commons exist simultaneously, such as at Salve Regina University (SRU) in Newport, Rhode Island. SRU's McKillop Library, built in the early 1990s, featured two legacy computer labs. The learning commons at

McKillop Library opened in 2008, but both legacy labs continued operations, permitting subsequent usage comparisons. Figure 1 compares use of the computer labs floor with use of the learning commons floor over the years of learning commons operation. The continuing decline in computer lab use led to one lab being converted to an instructional classroom. At SRU, the commons is bringing about the “de-labization” of the library.

Figure 1. Use of Computer Lab and Commons Spaces in McKillop Library



User Studies from North Carolina State University and the University of Connecticut

Assessment of information/learning commons not only entails use of the commons itself, as at SRU, but also may include its impact on other library services. Trinity University reported in 2004 that after opening its new information commons, print circulation rose 2% (following five years of steady decline) and reference queries saw a 5.8% increase; use of the building overall rose 14.56%. The most dramatic increase came in “searches in electronic resources,” which rose a remarkable 56.21%.¹⁵ The outsized impact of a commons on use of digital resources flies in the face of early predictions that Internet-based research would ultimately render any sort of physical library facility irrelevant.

Consequently, a key challenge for information/learning commons assessment is to explore drivers of student usage at more meaningful levels than facile clichés about “computer labs with sofas and coffee.”¹⁶ This can be glimpsed in studies of learning commons at North Carolina State University (NCSU) by Sherman and at the University of Connecticut (UConn) by Fuller. The two studies share some key parallels. Both were conducted as projects by graduate students in Library and Information Studies programs at other institutions (Sherman at UNC–Chapel Hill and Fuller at Southern Connecticut State University). Both were undertaken approximately one full calendar year after their target learning commons opened. Both studies revealed profiles of learning commons user groups that closely resembled university enrollment while showing higher use by undergraduates.

The two studies confirm increased use overall. Sherman commented, “By far, the main result of implementation of the Learning Commons as perceived by students was increased use of the library.”¹⁷ At a lower rank, other statistically significant results related this increased usage to service delivery, including “...individuals reporting that the Learning Commons (as opposed to other parts of the library) was now their primary destination for research,” and “...respondents reporting improved study skills.” NCSU students reporting that the commons caused them to increase their use of the library (57) outnumbered the students reporting that it caused decreased use (5)—due to factors in the physical environment like noise or distraction—by a factor of 10 to 1.¹⁸

Fuller’s 2009 study of the UConn learning commons reached similar conclusions. Her most striking findings are that “...84.3% of undergraduates feel the Learning Commons has helped them successfully complete academic assignments,” and “Most are visiting several times a week (45.7%) or daily (12.9%).”¹⁹ Fuller, like Sherman, found that students use the commons for four characteristic activities: individual study, library research, group study, and computing. The relatively low level accorded to generic “computing” is yet another indicator of how the commons has distanced itself from the computer lab.

Highlights

While numerous commons assessments include user surveys typified by those at NCSU and UConn, three recent studies are highlighted here for their depth, extent, and range of methodologies.

LibQUAL+® Assessment of the Information Commons at Buffalo State College

Buffalo State College (BSC) is a Carnegie Master’s-L institution with a total enrollment (fall 2009) of 11,714 students, with 9,822 undergraduates, as well as 1,882 graduate students enrolled in more than 60 post-baccalaureate programs. Prior to commons model development, the institution’s E. H. Butler Library already featured the largest computer lab then on campus, with more than 200 workstations.

By 2002, Butler Library was receiving warning signs from its user community. Researchers Harvey and Lindstrom described “...an unprecedented decrease in gate counts, reference desk statistics, and library material circulation,” coupled with an increase in technology-related complaints. “Students with these types of problems had such a confusing time resolving them that the process was given a name — ‘The BuffState Shuffle.’” Harvey and Lindstrom also specified that “[the frustration] also contributed to students staying away [from the library].” Crediting UNCC as its example, Butler’s management addressed these problems with the development of a commons that offered collaborative service delivery.²⁰

Prior to implementing its commons, Butler ran an initial iteration of a comprehensive user survey known as LibQUAL+®,

...a conceptual model based on the SERVQUAL instrument, a popular tool for assessing service quality in the private sector. [...] The 22 core survey items measure user perceptions of service quality in three dimensions: Affect of Service, Information Control, and Library as Place. For each item, users indicate their minimum service level, desired service level, and perceived service performance.²¹

It should also be noted that BSC designated academic faculty, not librarians, to conduct the first level of data collection and analysis to avoid perceived or actual bias.

The BSC longitudinal study includes three iterations of the LibQUAL+® survey spanning a period from 2003 (pre-information commons) to 2006 (shortly after information commons implementation), followed by a third in 2009. In the first iteration, "...compared against the instrument's national norms, Butler Library fell short of average in all 3 service areas (i.e. Affect of Service, Information Control, and Library as Place) by up to 10 percentile points." Following information commons implementation, the 2006 and 2009 surveys showed that "Total Perceived Service Quality" in all three categories had risen to nearly equal to, and then moved above, the instrument's national norms. Across the board, the BSC findings demonstrate

- a substantial improvement in perceived library service quality from below national norms to above national norms after commons implementation; and
- a continuation of the high service quality ratings in the follow-up survey years later (e.g., the information commons proved not to be a "marketing fad").

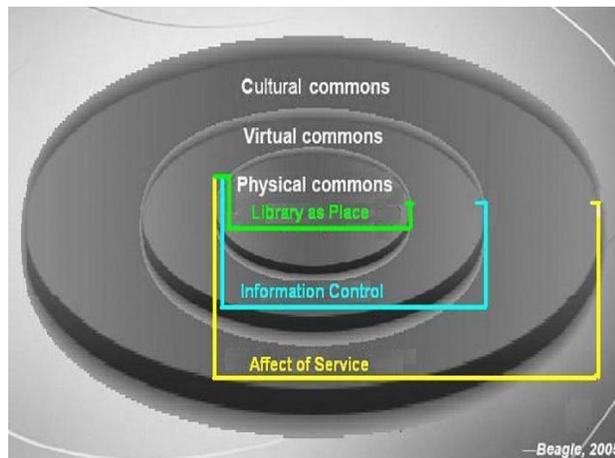
Subsequent interpretation by Harvey and Lindstrom offers further key findings:

The Information Commons model would seem to fit more into the "Library as Place" dimension of LibQUAL+®, yet scores in "Affect of Service" and "Information Control" also improved significantly. Perhaps the physical, virtual, and cultural "repackaging" of services indirectly affected users' perceptions of these two areas, too.

In fact, while the information commons raised ratings in all three dimensions, it raised student perceptions of quality of "Information Control" to an even greater degree than it raised "Library as Place." The actual data points show that students initially ranked "Information Control" lower than "Library as Place" in BSC's 2003 pre-information commons survey, but subsequently ranked "Information Control" higher than "Library as Place" in the 2006 and 2009 iterations after the information commons began operations. This indicates that service delivery, more than any sense of place or space, differentiates the BSC information commons from the generic computer lab it supplanted.

Harvey and Lindstrom's comment about the physical, virtual, and cultural "repackaging" of services references a conceptual model known as the "Three-Domain Diagram" introduced in *The Information Commons Handbook*.²² This diagram graphically presents the library commons as centered in a physical facility positioned in defined relationship to a surrounding virtual domain, and both physical and virtual domains equally positioned within a surrounding cultural domain. The LibQUAL+® dimensions can be mapped onto the Three-Domain Diagram as shown in Figure 2.

Figure 2. Three-Domain Diagram



“Library as Place” maps directly onto the physical domain of the commons. “Information Control” relates to how effectively the library empowers students to use tangible toolsets in that physical domain to query, access, retrieve, and manipulate information from the virtual domain. Student perceptions of “Affect of Service” are interpreted within physical and virtual contexts but extend to a wider cultural arena, including their understandings of the legal and ethical aspects of information use. At the same time, this cultural domain is also the source of a constant influx of innovative media and technologies (video games, smartphones, tablets, cloud-resident content, etc.) that filter back and continually reshape tangible toolsets and constructivist pedagogies within the physical domain of the commons.

Ethnographic Study of the Information Commons at Brandeis University

The information commons study report from Goldfarb Library at Brandeis University was issued almost simultaneously with the presentation from Buffalo State College (October 2010) and, like BSC, credits UNCC as an influence. It is not a summative usage assessment but a needs assessment and must be interpreted in that narrower context. Unlike the widely tested LibQUAL+® instrument used at BSC, the Brandeis study enlisted onsite anthropologists to customize a variety of instruments and methods for their internal use. “This qualitative research study employed the following ethnographic research methods: survey intercepts, observations, interviews, focus groups, and flip-chart questions.”²³

The baseline success of the commons at Brandeis is presented as a given: “Everyone, including those that do not otherwise spend much time in the library, reported using...the Commons. ... [T]he computer clusters were filled during many observation periods.” But the study’s overview of commons equipment use, supported by Library and Technology Services (LTS), unearthed one key result that refutes predictions by some critics that laptops and mobile devices would drastically reduce commons use: “While nearly all of undergraduates have their own laptop, many do not carry their laptops with them frequently. Though they might bring their laptop to the Commons for more extended work sessions, more often they use the public computer clusters.” Similar findings are being reported from many campuses.

Most of the needs identified at Brandeis relate to service delivery, as the report summarizes from the outset (on the first page), with bullet points including

- “Design coherent services that the community can understand and trust;
- “Communicate clearly and cogently with the Brandeis community about LTS services; and
- “Improve service delivery through effective internal planning and communication.”

Spatial considerations are not ignored, however, and the tensions inherent in a facility that incorporates both social and individual learning modalities are examined. A quote from one Brandeis student shows the seemingly contradictory challenges faced by information/learning commons planners in reconciling divergent student learning styles: “I don’t really like studying in the library because I get easily distracted by people around me, or I don’t like how quiet it is. I like to be able to set my own atmosphere for doing work.”

Learning Commons Service Assessment at the University of Massachusetts–Amherst

The learning commons at the University of Massachusetts (UMass) Amherst’s W.E.B. Du Bois Library opened in October 2005. It produced one of the largest hikes in student use yet reported in the literature, with library gate count increasing by more than 200% (for example, single-month gate count for April 2005 was 39,376, but soared to 118,867 in April 2006, as noted in the UMass study results).²⁴ This wave of increased use offered UMass researchers an interesting opportunity to field-test one or more models of service delivery in the commons environment. The high gate count suggested that even if a relatively small fraction of students actually sought service desk assistance, a sampling of these users could still produce meaningful results.

On opening its commons, UMass created the Reference and Research Assistance Desk (RRAD), staffed entirely by librarians, to handle walk-up questions. The RRAD is backed by a glassed-in room for lengthier consultations, sometimes by appointment. All other directional and tech support questions are handled at a nearby desk staffed by student assistants and instructional technology staff. The UMass study described RRAD as “...characterized by high visibility, immediate human contact with friendly experts, and proximity to other desks providing expert help with technology, writing, advising, and more, which the Library brought into the Learning Commons.”

The UMass study methodology included surveys, a focus group, reference question transcriptions, and type-of-question tallies. The results demonstrate that students are attracted to the Du Bois Library learning commons not for mere access to computer workstations but “...for its comprehensive suite of academic support services, and its individual, quiet, and group study areas.” The study also found that 39% of 717 respondents surveyed said they asked reference questions at the RRAD after entering the facility. Learning commons users in the study’s focus group affirmed that their information and research support needs had been satisfied by the RRAD. When these participants were asked, “Did you get the answer you hoped for?,” 90% gave positive responses. According to the authors, “A striking finding was how highly students valued learning the research process during the reference interaction.”

What It Means to Higher Education

The commons has become a focal point for collaborative service delivery on more than a hundred campuses. Ongoing assessments of this model are essential to leverage its benefits to higher

education. Can survey findings be consolidated for deeper understanding? One approach has been to interpret them using one or more theories of change. An example is the “Typology of Change” developed by researchers with the American Council on Education (ACE) in their study of IT-driven academic innovation in the 1990s, *Taking Charge of Change*.²⁵ This typology benchmarks an initiative as adjustment, isolated change, far-reaching change, or transformation by relating it to one axis representing depth of impact and a second axis representing pervasiveness of impact. The ACE typology underlies the ongoing learning commons assessment at Belmont Abbey College, where the commons has been a centerpiece of the college’s Quality Enhancement Plan and a key part of the college’s successful reaccreditation by the Southern Association of Colleges and Schools.²⁶ The integration of collaborative services in the learning commons meshes with Belmont Abbey’s emphasis on an integrative curriculum that educates the whole person—mind, body, and spirit. Figure 3 shows students accessing online information literacy tutorials in the commons. (It also illustrates how laptops, netbooks, tablets, and smartphones are augmenting, not displacing, use of desktop workstations).

Figure 3. Learning Commons at Belmont Abbey College



A different theory of change is used in Fraser’s ethnographic study of the information commons at the University of Sheffield in the U.K., which integrates observations about service delivery with considerations of spatial design. Typically, the Sheffield information commons began through collaboration between the library and computing services. Fraser reported student experiences of the information commons echoing earlier studies: “The IC had a positive impact on the day-to-day student experience, and empowered students to study as and how they wished, with the design of the IC contributing strongly to these outcomes.”²⁷ The influence of service delivery surfaces through Fraser’s interesting observations about how use of the information commons is negotiated:

Use of the Information Commons is negotiated, either explicitly or otherwise, among students, and between students and the University, and it was considered important that the nature of the analysis reflected subjective, communally, and dynamically negotiated understandings of the Information Commons’ purpose.

But the goals of 1) integrating assessments of services and spaces, and 2) relating these to learning outcomes remain challenging because the commons is a moving target that continually incorporates new technologies and pedagogies based on the social construction of knowledge. About this, Fraser commented,

[T]he social side of the IC is seen as a benefit by students, and can even fuel study by supporting ad hoc collaboration. The positive impact of the Information Commons upon these students’ study is an endorsement of the importance of social space for information commons projects everywhere, and provides concrete evidence that students do use and

benefit from this aspect of information commons design, despite the complexity of finding a balance between social and academic activities.

The use of change theory in assessments at Sheffield and Belmont Abbey affirms that the commons is not about technology, per se, but how an institution reshapes itself around people using technology in pursuit of learning.

Key Questions to Ask

- What collaborative services are being delivered, or should be delivered, in the commons? Which stakeholders must collaborate?
- Is the commons intended to produce an isolated change in library use and effectiveness or to be the driver of a transformational change initiative across campus? Are assessment methodologies scaled accordingly?
- Can the commons best serve its users through a unified integrated service desk or through a cluster of specialized service desks?
- Does the history of IT and library management on your campus present special challenges or opportunities for co-location and collaborative service delivery?
- Does your commons address the needs of both social and individual learners? Are busy open environments sufficiently augmented by accommodations for group process learning and quiet study?

Where to Learn More

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26. The SACS Commission on Colleges identifies the Quality Enhancement Plan (QEP) as an essential requirement for reaffirmation of accreditation. According to *The Principles of Accreditation: Foundations for Quality Enhancement*, an institution's QEP *must* be submitted four to six weeks in advance of on-site review. This plan "...identifies key issues emerging from institutional assessment" and "...focuses on learning outcomes and/or the environment supporting student learning and accomplishing the mission of the institution..." (p. 7). In a multi-year internal process, Belmont Abbey faculty, staff, and students identified information literacy as the key issue to be addressed and the proposed learning commons as an appropriate environment to support student learning and accomplish the institution's mission. Source: <http://sacscoc.org/pdf/2010principlesofaccreditation.pdf>.
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