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Information Commons: Meeting Millennials' Needs

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Abstract

Information commons are popular with Millennial or Net Generation students, who often work in groups, use technology avidly, and combine their academic and social lives. Enhancing the configuration of services for the information commons can assist in leveraging the value of the available content, hardware, software and physical setting to support learning and academic programs. Understanding Millennial students' style is key to developing a robust service program to engage and support them.

Keywords: Millennials, Net Generation students, information commons, learning commons

Introduction

The development of information commons in academic libraries precedes the attendance of students in the Millennial cohort at colleges and universities, but often those two phenomena – Millennials and information commons – are discussed as if they were stimulus and response. It is likely that this association is due to the close synergy between the characteristics of information commons spaces and the way that Millennials conduct their academic and social lives. Information commons provide reinforcement for the social aspects of learning, offer abundant technology and digital content, and provide students with a physical setting that is often available 24X7. College students of the Millennial generation often do their academic work either with or around their friends or classmates, make ample use of technology and digital content, and focus on their academic work late in the day and into early morning.

While students in the 18-22 years old age group represent only a portion of undergraduates in colleges and universities today, they are having a great impact on the way that higher education institutions are thinking about the technology infrastructure that they offer for students (and faculty) and on the types of learning environments, both physical and virtual, that they provide. These students, part of the Net Generation or Millennial generation, have been characterized and criticized by many in higher education and society at large. Some think that institutions are unduly catering to students they believe are undisciplined and seeking easy answers to academic work through facile use and over-use of technology. However, others have a more positive view and find parallels between some of the characteristics of these students and capabilities for deeper learning. They also recognize that students with technology skills will

often be sought after in the job market of their chosen profession. The more that libraries can promote a close connection between digital content, technology, and academic and professional work, the better they can contribute to the education and job readiness of their students. As librarians plan information commons or refresh their existing commons, they need to think carefully about how to provide the best learning environment, linking the physical space, technology, library services, and content to Millennial users' educational needs and work style. (Lippincott, 2005)

Millennials – Who Are They and What Do They Want?

Many authors have written about a generation variously labeled Millennials, Net Generation, Gen Y, or Digital Natives and have portrayed the habits and style of this group who grew up with technology from their earliest years. (Prensky, 2001; Oblinger and Oblinger, 2005; Palfrey and Gasser, 2008) This generation, born between 1982 and 1991, includes students currently enrolled in colleges and universities, recent graduates, and future college students. While some may believe that the characterization of an entire generation constitutes a stereotype or is just plain erroneous, others accept that there are some common ways in which many of this current generation of students are different from those who came before. Drawing on many authors, a recent book describes some of the Millennials' attributes in a way that is particularly relevant for libraries: "They are joined by a set of common practices, including the amount of time they spend using digital technologies, their tendency to multitask, their tendency to express themselves and relate to one another in ways mediated by digital technologies, and their patterns of using the technologies to access and use information and create new knowledge and art forms." (Palfrey and Gasser, 2008, p. 4) Libraries need to understand the style of their Net Generation students in order to provide environments conducive to engagement and learning; these include how libraries present access to their collections and licensed materials, how they instruct students, how they promote services, and how they configure their spaces.

Marc Prensky, a leading writer in this area, contends that the brains of Millennials actually work differently than those of individuals of earlier generations, as a result of their intense activity with video games and other digital media. This distinction results in their speed with technology, their multi-tasking capabilities, and their interest in interactive information products. (Prensky, 2001) The Pew Internet and American Life Project reports that 50% of individuals ages 18-32 do play some type of online game and even more, 78% of online teens 12-17, play online games. (Jones & Fox, 2009) While we may not have complete understanding of whether or not the brains of our college students of today process information differently than earlier generations, most use technology daily for a multitude of purposes. For example, 98.5% of college students own a computer, 85.2% interact with Facebook or a social networking site, generally daily, and 91.9% say they use Powerpoint software frequently. (Salaway & Caruso, 2008)

Many public service librarians believe that they have a good idea of what kinds of spaces, technologies, and services their students need in an information commons, but one of the most important things a library can do as part of its planning process is to conduct some type of needs assessment of its student population. It is important to collect information on the actual needs of students and not just on needs perceived by librarians, who are frequently from a different generation. There are many needs assessment models available, and some institutions that have notable efforts include the University of Rochester, Georgia Institute of Technology, University of Massachusetts, Amherst, Ohio University (focusing on technology and services), and New York University (focusing on graduate students). The Association of Research Libraries (ARL) has released a compendium of needs assessment techniques aimed at assisting college and university librarians to better understand their user communities. (Stuart, 2008) Staff at the University of Rochester are well-known for the anthropological approaches to studying students they employed as they prepared for a library renovation. They studied students in a holistic manner, focusing broadly on how they did academic work and not just on how they used the library. They noted “a new philosophy of ‘don’t guess, just ask’ has helped us place our students in the center of our design process, whether the objective is a service, website design, or facility renovation. Consequently, we can say with confidence that our academic library is aligned with the needs of our Net Generation students.” (Gibbons, 2007, p. 98) Librarians are often surprised by some of the attitudes and priorities of students, such as their tolerance of noise in designated areas, etc. (Designing, 2006)

In addition, it is important to consider the needs of all students, including returning students (older adults) and other groups with particular needs, such as commuter students, foreign students, or students with disabilities in the information commons planning process. An information commons is often comprised of a variety of space configurations, and some separate areas may be needed to address the needs of specific user groups.

The Information/learning Commons Model

A new type of facility emerged in some academic libraries in the early 1990s, notably at the Leavey Library of the University of Southern California (USC) and the University of Iowa. These physical spaces, called Information Commons at USC and Information Arcade at Iowa, offered users a wide range of hardware and software, unlike most academic libraries of that time, and provided service desks staffed by individuals from both the library and information technology campus units, enabling them to handle a wide range of questions and problems. In addition, the physical spaces were arranged to encourage collaboration and information sharing; they were not the typical quiet library spaces of that era. These facilities sparked great interest by other academic libraries in converting some traditionally configured library spaces into similar collaborative, technology-enabled facilities, often called information commons.

I use the terms information commons, learning commons, and commons interchangeably since there does not seem to be a generally agreed upon definition of each variation of terminology. In fact, some libraries that eschew the “commons” terminology have facilities that most would identify as information or learning commons. While some believe that it is important to use the term “learning commons” in contrast to “information commons” to identify these new spaces, there is an argument that the particular value of these facilities in the overall learning process and their specific connection to libraries is to reinforce the link between information and learning. (Lippincott, 2006; Lippincott, 2009)

A well-respected voice in this arena, Beagle states “*Information Commons* is used to denote a new type of physical facility or section of a library specifically designed to organize workspace and service delivery around an integrated digital environment and the technology that supports it.” (Beagle, 2006, p. 3) He situates the physical information commons within a context of a virtual commons, offering electronic resources and services, and a cultural commons, which is a socio-political concept that embraces such values as shared knowledge and free speech. In addition, he states “the true promise of the Learning Commons model lies in its interweaving of collaborative social resources with enhanced physical spaces, digital toolsets, and expert human support.” (Beagle, 2006, p. 35)

As librarians plan for a new commons or revisit an existing commons, aligning the vision statement and goals of the facility to student learning and the needs of Millennials can be a profitable exercise. For example, the California State Polytechnic University's commons' goals are commensurate with some important principles related to Millennials and learning. “...this flexible, multiuse space accommodates teaching with technology, promotes cross-disciplinary social interactions that encourage academic and intellectual pursuits, promotes collaborative projects, and creates a sense of community where students and faculty both contribute to and benefit from a knowledge creation and dissemination process.” (California, 2009, p. 76)

While it may seem obvious that libraries should have a clear conception of what they hope to accomplish by implementing the information commons model, one study found that only 65% of respondents indicated that their project was influenced by an overall vision statement. (Bennett, 2003) Often there is a rush to figuring out the physical layout of the space and the choosing of equipment and furniture rather than an initial focus on vision and goals. This is a missed opportunity and can lead to consequences down the road. In particular, services to support learning with digital content and technology may not be adequately aligned with the new facility's resources.

The Social Aspects of Learning and the Information Commons

There are a variety of ways to reinforce the social aspects of learning in the information commons. Millennial students blend their in-person interactions and

their virtual interactions in a way that is uncommon for individuals from older generations. (Palfrey & Gasser, 2008) For example, they may be working together in a small group in the commons while interacting with some other students via instant or text messaging, video chat, or other mechanisms. The ubiquity of technology and tacit permission to talk in the library encourage this combination of simultaneous interactions and make the information commons collaborative spaces appealing to Millennial students.

Malcolm Brown draws connections between some traits of Net Generation students, learning theory principles, and learning space and information technology applications. For example, he links the Net Generation proclivity for group activity and interaction to the learning principles of collaborative, supportive learning with compelling and challenging material. He suggests that social learning can be supported through small group work spaces (interaction among peers) as well as access to experts (interaction between faculty or professionals). The physical spaces may also offer workstations that provide some applications that support the social aspects of learning, including instant messaging or chat, virtual whiteboards, shared screens, and a wide variety of resources to challenge students' imaginations. (Brown, 2005) Information commons meet his criteria for spaces that support group activity and collaborative learning; they provide hardware and software that promote learning in a group context, they have physical configurations where groups can comfortably work, they have easy access to challenging content resources, and they usually provide access to experts (from both library and information technology units) to assist with learning.

The access to experts noted by Brown above can include access to librarians, yet many academic libraries are finding that their reference statistics are plummeting as more students find their own information, unaided, online. The information commons can serve as a mechanism to reinforce access to information professionals. At times, Millennials are accused of withdrawing from in-person social interactions and indulging themselves in endless online connections with their peers. However, most Millennials want a blend of in-person and online interactions and find real value in making connections with people through peer or other networks. Some say that they might make more use of reference services if there were expanded promotion. (Connaway et. al., 2008) This demonstrates two important considerations when developing services for the information commons: personal connections between library staff and users and promotion of library services. Librarians and other staff can provide various types of in-person and virtual reference service at an information commons service point and can also promote their services in ways that will engage Millennials. An excellent model for surveying students about their use of and potential interest in technologies for library applications is provided by a study at Ohio University. (Booth, 2009) Some colleges have printed cards that look like baseball trading cards for each reference librarian, complete with photo, areas of specialization and contact information. Other librarians provide online

video introductions to themselves on the library website and/or YouTube; some librarians provide their Facebook contact information as a mechanism for follow-ups to information literacy class sessions. These methods emphasize the opportunity to have a personal connection with a librarian, which is important for many Millennials. No single mode of service will address the style of all Millennial students; librarians will need to experiment with a variety of options and assess their effectiveness.

There is a distinction between the use of the information commons by students for *socializing* and the use of the commons for *learning in a social context*, although at times the two can be intertwined. Socializing in the information commons connotes activities in which students can congregate to chat, make plans for non-academic activities, relax on comfortable furniture, or drink coffee in a café while talking with friends. Information commons can be comfortable places for this type of socializing, which may enhance the community aspects of the library and may provide a much-needed venue for relaxed socializing by some student groups, such as commuters. The information commons can also support the social aspects of learning. Increasingly, educators highlight the importance of interaction between people as a key aspect of learning, whether that interaction is student peer-to-peer, interaction between students and faculty, or interaction between students and members of the community or a professional group. By offering collaborative work space, either in group study rooms or with tables in public areas where talking is clearly encouraged, information commons provide a venue for students to work together on assignments or group projects. In the technology-rich environment of the commons, students can assist each other with technology since interaction is a built-in part of the environment. Even cafes can promote social aspects of learning if they become a venue where students and faculty can have easy impromptu interactions. A challenge for librarians is to ensure that the ambience of the commons and the service program reinforce the area as one for learning, not solely a place to socialize; otherwise the commons would just become a glorified student union or dorm common room facility.

In addition to spaces for socializing and learning in a social context, some information commons also include event spaces that reinforce community. (Wedge & Blackburn, 2009) These types of spaces, for faculty readings or talks, lectures by visiting scholars, concerts, art exhibits, game nights, or even dances, can bring new users into the library and information commons space and serve as a non-threatening way for them to familiarize themselves with the library, its program, and its staff.

In some renovated libraries the social use of spaces has led to concerns about noise and general non-academic socializing. (Bennett, 2003) Ideally, signage should clearly delineate both quiet spaces and academic/social spaces. Gathering input from both Millennial students and those of other generations

early on can assist in identifying the proposed noise level of various spaces and useful mechanisms for conveying that information to library users.

Technology, Content, and Student Learning

Another important aspect of the information commons for Millennials is the capability it provides them to both access and produce digital content. Through the physical spaces, hardware, software, digital and print collections, and expert help, students can create a wide variety of projects for their classes, including print papers (with embedded images or audio, if desired), Powerpoint presentations, videos, podcasts, charts and spreadsheets, and websites.

Technology underlies many aspects of the ways that we conduct academic work today, from using word processors to create text documents to searching online library catalogs and databases to locate information to using multimedia editing software to create a video. Libraries began to offer public access computer terminals several decades ago and since that time, the desire for increased access to technology often seemed insatiable. In response, many libraries developed plans to create information commons or learning commons, which offer an increased number of computer workstations and often access to specialized software. In the commons, librarians often teamed up with campus information technology staff in order to provide services for the increased technology capabilities.

There is debate over how well these Millennial college students use technology generally and digital information resources particularly. While many librarians believe that these students need assistance with information literacy skills, a recent study reveals that a high portion of college students (79.5%) believe that they are very skilled or expert at using the Internet to effectively and efficiently search for information. On the other hand, only 56.4% report that they are very skilled or expert at using the college library and only 37.9% feel proficient in graphics software such as Photoshop or Flash. Only 35.2% of students believe that their instructors understand the IT level of their students and slightly less than half believe that by the time they graduate, the IT they use in their courses will have adequately prepared them for the workplace. (Salaway & Caruso, 2008) Strong liaison between faculty and information commons staff can begin to address some of the lack of skill proficiency of many students. At the University of Pennsylvania's Weigle Information Commons, the staff of the digital media lab have strong relationships with faculty and work closely with the faculty to plan class sessions to address the information and technology needs in a variety of courses and to offer individualized consulting services as part of the commons mode of operation. (David B. Weigle, 2009)

As members of the generation following the Millennials arrive on campus, it is possible that a higher percentage will have a wider range of technology skills than current students. However, faculty, librarians, and information technologists will still have a role to play in facilitating these students' transition to producing

digital content suitable for college-level work, and there will still be some disparity in skills in sub-groups of students, whether they are in the traditional college-age cohort or older students. As Palfrey and Gasser write, "Digital Natives will move markets and transform industries, education, and global politics... The biggest concern... is the impact of the participation gap. The digital world offers new opportunities to those who know how to avail themselves of them. These opportunities make possible new forms of creativity, learning, entrepreneurship, and innovation." (Palfrey & Gasser, 2008) Libraries have traditionally played a role in leveling the playing field for their users; students who do not have adequate skills can find assistance at the library; students who do not have adequate resources to purchase materials related to their academic work can borrow them at the library; the information commons can provide an updated model of equalized access to important resources for education for all students.

Continuous Technology Change

It can be frustrating to an older generation of librarians that Net Generation students adopt and sometimes discard technologies at such a rapid pace. There are also significant strategic planning and budgetary challenges to address in the rapidly changing technology environment. Keeping the information commons and its services current with users' practices will be key to its success. The software available, the hardware replacement cycle, and the ways in which support are offered need continual attention. Gibbons suggests that in order for libraries to keep pace with continual technological change, they need to embrace a research and development (R&D) mindset, which includes a mandate to staff to keep up with new developments in technology and higher education as a core job responsibility (not something on the periphery), have mechanisms in place for experimentation, and maintain a culture and environment that encourages "out of the box" thinking. (Gibbons, 2007)

Librarians will find that there is a need not just for changes in technology over time but for changes in the physical configuration of spaces during any day or semester depending on changing needs; therefore, spaces such as group study rooms that can be configured as small classrooms or practice presentation rooms when needed are desirable. The spaces in the information commons also need to provide variety to accommodate changes in user behavior, both changes when users are doing various types of work (studying vs. multimedia production) and at various points during the year. (Designing, 2006; Wedge & Blackburn, 2009) Net Generation students do not always work in groups or with technology; these students still benefit from some traditionally configured spaces for quiet contemplation and study in libraries.

The Challenges Ahead

Beautifully renovated library spaces that offer students state-of-the-art technology and areas for collaborative work are almost certain to be popular with Net Generation students. However, not all students will have the skills to avail themselves of the available resources and some will not easily seek assistance

from librarians at a service desk. Students may be unaware of the riches the library has to offer to enhance their course projects or general educational growth and they may find the standard library catalogs and databases overwhelming or difficult to master. The end result is that some students will fully exploit the information, technology, and service resources of the commons and others, for various reasons, will not. Millennial students will be expected by future employers to have a certain degree of sophistication with technology and may have an edge in the job market if they can demonstrate to employers that they have created serious academic work that is enhanced through digital content and technologies. Librarians need to consider whether they would be satisfied to offer a heavily used study hall/computer lab to students or whether they want to design a complete learning environment that includes in-person and virtual services to complement the physical space and technology. This enhanced environment would employ a variety of virtual and in-person modes of communication and would promote the resources of the commons in ways that would engage students. The services would enhance students' information, technology, and media literacies and support their academic work. Librarians have an opportunity to help mold some of the existing capabilities of Millennial students into more sophisticated and academically appropriate behaviors, and the information commons provides the environment in which to succeed.

References

Beagle, D.R. (2006) *The Information Commons Handbook*. New York: Neal-Schuman.

Bennett, S. (2003) *Libraries Designed for Learning*. Washington, DC: Council on Library and Information Resources.

Booth, C. (2009) *Informing Innovation: Tracking Student Interest in Emerging Library Technologies at Ohio University*. Chicago: Association of College & Research Libraries.

<http://www.acrl.org/ala/mgrps/divs/acrl/publications/digital/index.cfm>

Brown, M. (2005) "Learning Spaces." . In Oblinger, D. and Oblinger, J. (eds.) *Educating the Net Generation*. Boulder: EDUCAUSE.

<http://www.educause.edu/educatingthenetgen>

California State Polytechnic University Robert E.Kennedy Library. (2009) (Description). In Forrest, C. & Halbert, M., eds. *A Field Guide to the Information Commons* (pp. 75-79). Lanham, MD: Scarecrow.

Connaway, L.S., Radford, M., Dickey, T.J., Williams, J.D., & Confer, P. (2008) "Sense-making and Synchronicity: Information-seeking Behaviors of Millennials and Baby Boomers." *Libri*, 58 (2), 123-135.

David B. Weigle Information Commons. Success Stories (web page) (2009).
<http://wic.library.upenn.edu/about/success.html>

Designing Spaces for Effective Learning. Joint Information Services Committee (JISC). (2006) Bristol, UK: HEFCE.
www.jisc.ac.uk/uploaded_documents/JISCClearningspaces.pdf

Gibbons, S. (2007) The Academic Library and the Net Gen Student. Chicago: American Library Association.

Jones, S. & Fox, S. (2009) "Generations Online in 2009." Pew Internet Project Data Memo. Washington, DC: Pew internet & American Life Project.
<http://www.pewinternet.org/Reports/2009/Generations-Online-in-2009.aspx>

Lippincott, J.K. (2009) Information Commons: Surveying the Landscape. In Forrest, C. & Halbert, M., eds. A Field Guide to the Information Commons (pp. 18-31). Lanham, MD: Scarecrow.

Lippincott, J.K. (2006) Linking the Information Commons to Learning. In Oblinger, D. (ed.) Learning Spaces. Boulder: EDUCAUSE.
<http://www.educause.edu/learningspaces>

Lippincott, J. K. (2005) Net Gen Students and Libraries. In Oblinger, D. and Oblinger, J. (eds.) Educating the Net Generation. Boulder: EDUCAUSE.
<http://www.educause.edu/educatingthenetgen>

Oblinger, D. & Oblinger, J. (eds.) (2005) Educating the Net Generation. Boulder: EDUCAUSE.
<http://www.educause.edu/educatingthenetgen>

Palfrey, J. & Gasser, U. (2008) Born Digital: Understanding the First Generation of Digital Natives. New York: Basic Books.

Prensky, M. (2001) "Digital Natives, Digital Immigrants, Part II: Do They Really Think Differently?" On the Horizon, 9 (6), 1-9.
<http://www.marcprensky.com/writing/>

Salaway, G. & Caruso, J.B. (2008) The ECAR Study of Undergraduate Students and Information Technology. Boulder: EDUCAUSE.
<http://www.educause.edu/ECAR/TheECARStudyofUndergraduateStu/163283>

Stuart, C. (2008) ARL Learning Space Pre-Planning Tool Kit. Washington, DC: Association of Research Libraries. <http://www.arl.org/rtl/space/>

Wedge, C.C. & Blackburn, J. (2009) Breaking Down Barriers to Working and Learning: Challenges and Issues in Designing an Information Commons. In

Forrest, C. & Halbert, M., eds. A Field Guide to the Information Commons (pp. 32-40). Lanham, MD: Scarecrow.