

Environmental Audit:

Pattee Library Knowledge Commons

Hilary Chubb and Jordan Jozwik

The Pennsylvania State University

“Knowledge commons are not computer labs, nor are they study halls-- they offer far more value to students” (Knowledge Commons).

The Knowledge Commons at the Pennsylvania State University is located on the first floor of Pattee Library and was launched in 2007. The planning committees looked into what students wanted and needed in this developing age of technology. One of the goals of this space is to provide a single place where students can access library staff, technology, IT consultants, tutors for technology and writing, and multimedia specialists (Knowledge commons report). Additionally, according to Joe Fennewald, the head of the Knowledge Commons, other goals include collaborative learning, a welcoming space, and transparency (J. Fennewald, personal communication, September 13, 2013). The space was designed to achieve and promote these things. During the planning, Penn State looked at what other institutions, such as the University of Pennsylvania and the University of Delaware, were doing with their libraries (Patishnock, 2013).

During the Spring 2013 semester the Knowledge Commons tracked over 70,000 students logging into computers and over 84,000 in the Fall 2012 semester. The average time students spent logged in to computers during these semesters was between 76 and 85 minutes, meaning that students typically spent over an hour in this space. Also tracked was a monthly count of wireless use, to account for students using the space on their own laptops, iPads, and other devices. In April 2013, over 27,000 wireless users logged on using almost 400 different device types (Knowledge commons report).

Figure 1 shows the layout of the first floor of Pattee Library and highlights (in orange) the space which is the subject of this environmental audit.



Figure 1

Methodology

In order to conduct an environmental audit of the selected space within the Knowledge Commons portion in the Pattee Library we used three methods. We first looked at documents available to the general population and also documents we were given access to by Knowledge Commons staff. This included the “Guide to the Libraries” brochure, available from the Penn State library; the library webpage; and the 2012-2013 Annual Report for the Knowledge Commons provided by Joseph Fennewald, Head of the Knowledge Commons. By far, the most informative document was the report provided by Fennewald. The Guide to the Libraries brochure yielded only information about locating the Commons. The library webpage produced similar results with the addition of an organizational chart of the libraries, and a small amount of information about the services and technologies available in the Knowledge Commons.

The second method for conducting the environmental audit was four different observations of the space. These observations were done in two parts; one part during peak hours and one part in off-peak hours. We then split these two parts down further to conduct off-

peak observations from eight to nine AM and nine to ten PM, and peak hour observations from one to two PM and four to five PM. All observations were done between Monday and Friday and on different days of the week. This allowed us to see students and staff interacting with the environment not only at different times of day but also varying days of the week to view a full spectrum of behaviors.

The third and final method of our audit was short interviews with users of the space. We conducted interviews with both students and staff members. Students were Raymond, 2014; John, 2014; and Julie, 2015 and the staff member was Joseph Fennewald, director of the Knowledge Commons. Interviews were conducted in context of observations in order to gain the most insight into the participants' opinion and experience.

Physical Environment

The student workspace in the Knowledge Commons is comprised of four areas; the Quick Access Service Area, Living Room Areas, Windows PC Lab, and Group Study Rooms. The existence of four areas within one space allows for a number of interactions and demonstration of multiple aspects of the physical environment.

The Quick Access Service Area is near the entrances from the Leisure Reading Room and the main library entrance, which confirms its purpose in being an easy and fast area for students to access computers for use. Observations revealed however, that this space is not used to its fullest potential in two ways. First, students typically used these spaces for periods of time greater than 45 minutes. Secondly, although the website pictures students using this space standing (Figure 2), as the tables are easily adjustable, throughout all observations only once was a student seen using a computer in this space in a non-seated position (Figure 3).



Figure 2



Figure 3

The idea in the design was that students could use the computers in either position (seated or standing), but obviously students prefer seated over standing, likely because of the length of time they are using the access for. This clearly demonstrates possibilism, which is the concept explaining that environment can hinder certain behavior but also promote behaviors, because the

environment allows for certain behavior (quick access and usage while standing or sitting) but the usage is mostly used for longer periods of time and from a seated position. This space is also set up in a way that makes it difficult to work with another person unless you are using two separate computers. In a newspaper article, Fennewald was quoted as saying, "One of the things that we make a real effort in doing is not telling students how to use the space, but letting them tell us how they're using the space" (Patishnock, 2013).

The Living Room areas are situated along the south walls and include comfortable chairs, a low table in the center of chair groupings as well as smaller tables which students often use to hold their laptops while they work (Figure 4). Interestingly these areas, although set up with chairs facing each other, were not observed to be used as social areas or even group study/work areas. The observed work students were completing in this area tended to be reading and occasional computer work.



Figure 4

The Windows PC Lab takes up most of the space in this area of the Knowledge Commons, and is used extensively during peak hours (Figure 5). The design and layout of the computers, desks, and chairs, in this area was clearly well thought out. Desks are large enough

to allow students to spread out multiple books or materials, or to work in pairs. Desks are organized in triads which allow students to be sitting approximately 10 paces from another student because they are essentially around a corner. This also minimizes distractions for students based on what is going on at the desk next to them, since there is not desk directly next to them.



Figure 5

The down side to this arrangement is that it takes up a great deal of space, reducing the amount of computers available for student use in this space. During peak time observations students were seen to hover, waiting for computers to be available. While students were observed to wait up to ten minutes for a computer, computers were not ever observed to be open for more than two minutes. Raymond Chappetta, a senior, was observed waiting and quickly claiming a computer which became available. He shared that he usually avoids this area because he can never find a computer to use (R. Chappetta, personal communication, September 16, 2013). At the entrance to this area as well as in the both the Mall and Curtain Road entrances to

the library there are screens showing the availability of computers in this area and other areas in the library. Students were not observed using this resource during any of the observations.

The Group Study Rooms are possibly most interesting because they were built with movement in mind. Joseph Fennewald, director of the Knowledge Commons, shared that the walls around these spaces were built specifically to be non-weight bearing in order to facilitate possible reconfigurations of the space (J. Fennewald, personal communication, September 18, 2013). The Group Study Rooms are a sub-environment within the larger selected area of the Knowledge Commons. Students using the space can reserve it online or at the help desk. Making these reservations is typically the most interaction students have with the space outside of the study room.

Human Aggregate Environment

The information provided to us by the library staff only provides the number of people who used the different services in the Knowledge Commons. So what we are able to know about the characteristics of the people who use that environment is from our observations. While the overall hours that the Knowledge Commons is open is listed in the report, there is no mention of what the “capacity” of the different services in the Knowledge Commons is so as to make a comparison to the actual usage.

While knowing who is using the Knowledge Commons is important to determine a human aggregate, it is also important to know who is not using the Knowledge Commons. With the limited data the staff has collected, which student populations are absent is even more difficult to determine. It is commendable that the Knowledge Commons collects as much data as it does, but it could be doing much more to get a clearer picture of who is using the space and whether they are meeting their purposes.

The most consistent verbal interaction we witnessed was between students and a staff member. Students who came in to use the services purposed for group work have a large amount of verbal interaction but it is with those who are in their group and isolated from students working individually. Students who were using the individual computer stations had little or no verbal interaction with those other students, which is likely due the physical nature of the space (i.e. individual desks), even though extra chairs are available. The Commons also still has a quiet library feel. That may suppress some of the verbal interaction within the open space. Visitors to the Knowledge Commons may be under the assumption that people go to a library to focus on something and that it would be rude to interrupt them by engaging in conversation. This point, in addition to being a part of the human aggregate environment is also part of the constructed environment of libraries and of this space specifically.

It is not likely that students using the Knowledge Commons spend a large amount of time looking at everyone around them. From our observation, visual cues can offer insight as to some of the characteristics of students that make up the human aggregate. What they are working on? (homework, emailing, social media, online shopping, etc.) How focused they are they at the task they are working on? Do they have any identifying clothing on? (Athletics, student organizations, another school, etc.) What is their age, race, and gender? What is their learning style?

Given the generalist functions of the Knowledge Commons, there are certain student needs that cannot be met, leaving those students to find other suitable spaces. Students working on art projects may be found in a studio or students working on design projects or simulations may be found in an area closer to where their academic unit is housed where they have access to specialty computer programs.

The degree of homogeneity between users of this space is difficult to measure because of limited interaction that happens in this space. We believe the Knowledge Commons is a differentiated environment since it actively reinforces its own characteristics which are similar to the characteristics of the building in which it is housed, a library.

Since there are many other options of areas to do work for students aside from the Knowledge Commons, they will likely choose to use the space that has the highest level of congruence for them. It is easier to leave the space to find a more congruent space than to change the environment in the Knowledge Commons.

Organizational Environment

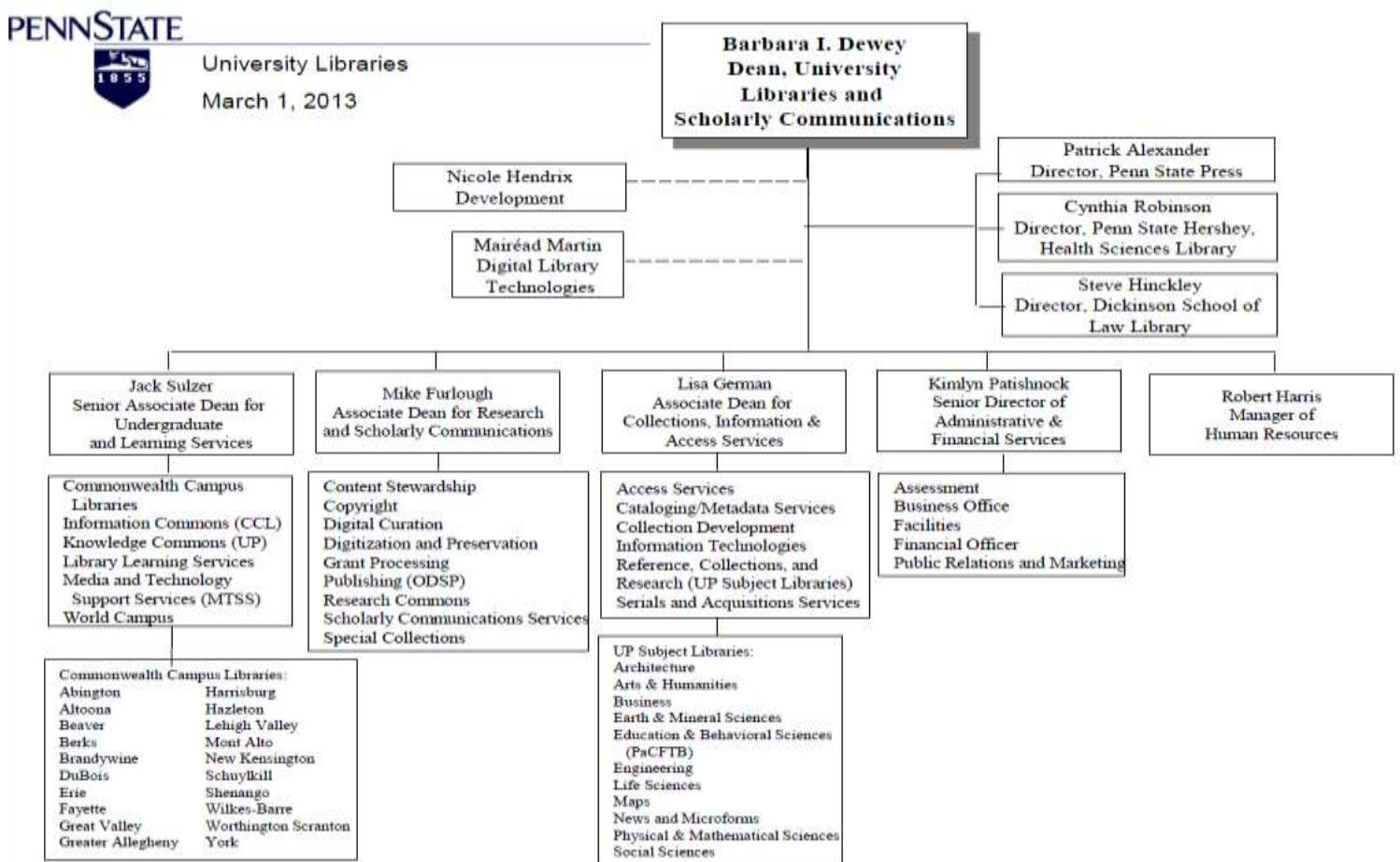


Figure 6 shows that the Knowledge Commons are organized under the Senior Associate Dean for Undergraduate and Learning Services which falls under the Dean of the University Libraries and Scholarly Communications. The available documents, the annual report specifically, reveals surprisingly little about the organizational environment of this area. As an observer or a student using the space there is no apparent formalized power structure. There are no restrictions on how long space can be used, with the exception of a three hour time limit on the reservation of group study rooms per day (Policy UL-AD25 Group Study Rooms). Additionally, staff members do not monitor or enforce any volume control. Finally, there are not posted rules and unlike other areas in the library students are permitted to eat, suggesting that this is an informal area of the organization.

The main consideration on organizational environment of this space is the production. “The knowledge commons will...facilitate information discovery, collaborative learning, and knowledge building with a focus on undergraduates” (Knowledge Commons: About). With that mission in mind, in considering production the quality of that discovery, collaborative learning, and knowledge building. The alternative is the number of students who are able to participate in that discovery, learning, and building within the designated space. The overall amount of space dedicated to the Knowledge Commons makes it clear that the intent for the space was to not only strike a balance between quality and quantity but to achieve both. However, in this particular section of the Commons there is more of a balance, where if more computers were added it would inhibit the quality of production. Additionally, the amount of usage and the fact that some students have stated they purposely avoid that area calls into question if the quality is already damaged.

The most logical frame through which one can consider this environment is through the structural organizational frame. The primary reason for this is because of the leadership components. There is no visible, formal leadership in the space as a user, but rather, typical social hierarchy and approved behaviors can be observed. The challenge for leadership is to focus the environment on the goal: discovery, learning, knowledge building. The Knowledge Commons are just one part of the machine that is the University Library system, and this specific space within the Commons is yet another part within that part of the machine.

Constructed Environment

In order to understand the constructed environment of the Knowledge Commons, the most effective tool was our observations. Our communications with Joe Fennewald were helpful in learning about what the environment was designed to be. The space was meant to be comfortable for students, which for many students it clearly is, based on the great amount of usage.

The Knowledge Commons as a space is a physical artifact of the culture of academics. While not all students study or do class work there, the students who do utilize the library largely use this space. This communicates the value that technology and community has in education at Penn State. The Knowledge Commons are a well-known space across campus and that speaks to its status as an artifact as well. As mentioned in the human aggregate environment, part of the constructed environment is the 'quiet library feel'. An interesting note is that some of the areas of the Knowledge Commons are perceived to be meant to be quieter than others. During an observation, two women were seen stopping at the edge of the PC lab area, before entering the adjacent reading room to finish a conversation. After the conversation ended they proceeded silently into the reading room.

Recommendations

Through observations, review of materials, and interviews with users, we have concluded that overall this portion of the Knowledge Commons is a well-designed, well-planned space. Due to the fact that it is a sub environment within the larger university environment, the physical environment and constructed environment are the most substantial parts of the overall environment. Changes to the other aspects of the environment (human aggregate, organizational) would be very difficult from a sub-environmental perspective. The recommendations we will be making focus mainly on the physical and constructed environment of this space for that reason. As one of the biggest issues in this area is lack of computer availability due to high usage, our recommendations begin there. While we do not suggest adding additional computers as that will reduce the quality of the experience, we have multiple recommendations to help students.

The library already provides screens in three places (both library entrances and the entrance to this area of the Commons) which display computer availability. The screen at the entrance to this area of the Commons should be more prominent, as it is currently off to the side (Figure 7). We acknowledge that if many students were using the screen and stopping in that area to view it, the location would be more advantageous. However, as it was already stated, not one student was observed viewing the screen during four hours of observations.



Figure 7

Another recommendation we initially had about this information, since it is already available, is to include it on their webpage. We felt that by doing this, it would allow students to check computer availability in the desired study space before coming to campus or leaving their residence hall. This recommendation is inspired by the availability monitors available for the equipment in the fitness centers on campus through those webpages. In the last month, however, the library did institute this.

To reduce the usage of computer but maintain or increase the use of the Knowledge Commons as a whole we recommend additional signage two technologies/services already available in the library. Signage should be created which promotes the availability of wireless printing so that students who have brought their own laptops are more aware of the capability. Currently the only sign we observed is at the back of the space, near the printer. Posting signs alerting students to the option to print wirelessly (and the instructions) in the areas students sit with their laptops is our recommendation. Students can check out both laptops and iPads, which would be alternatives for using library desktops. Newer students are much less likely to know about this and the wireless printing. By advertising this, student will be encouraged to use this space (and the larger Knowledge Commons) even when desktop computers are not available in this particular area.

Our final suggestion involves further assessment. One of the first things the Knowledge Commons should do to enable thorough assessment is develop specific learning outcomes for this space. While there are some goals already, clearly stated outcomes would benefit the space and allow for better and more accurate assessment. One of the things they should look at in an assessment is a comparison to similar spaces on campus. For instance, the Krause Innovation

Studio. Usage patterns could be compared as well as available technologies, student satisfaction with the space, and achievement of learning outcomes.

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