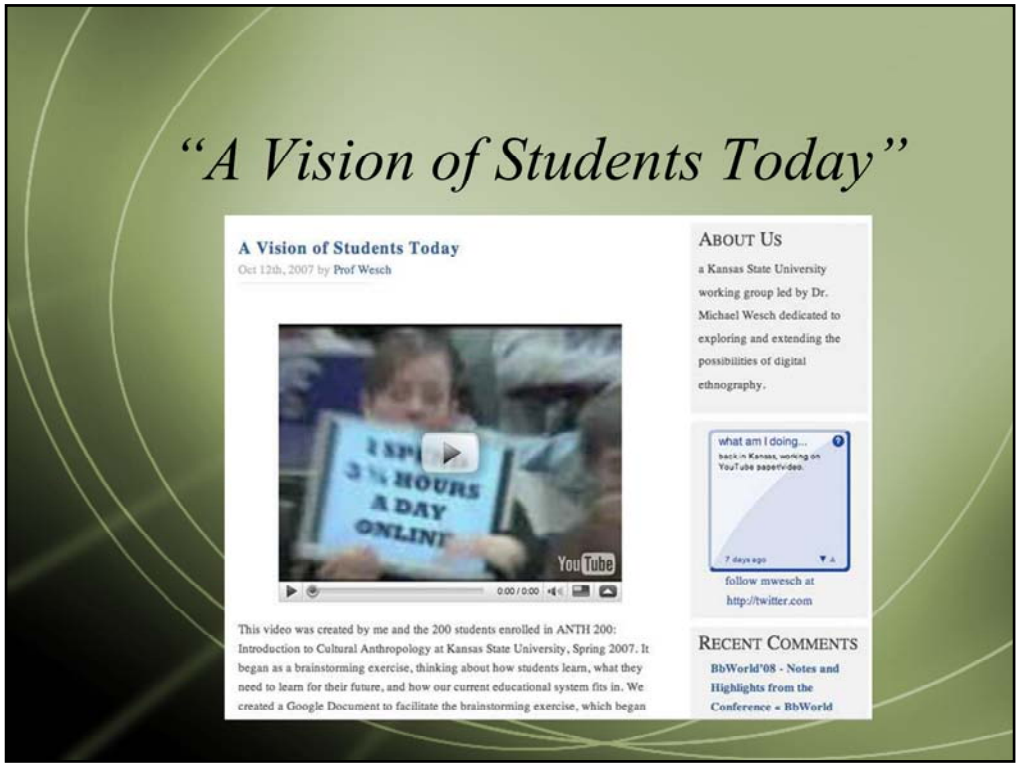
Today I'll share with you a few space redesign projects I've led, focusing specifically on how they support the new way students work.

Learning space design is not new. With the advent of computing in libraries, the first Information Commons was unveiled over twelve years ago. These gradually evolved into Learning Commons which often expanded the services available in these spaces to academic advising, writing programs, media post-production studios, presentation rehearsal studios, adaptive technology centers, and centers for teaching and learning, writing programs and other student-oriented activities.

One recurring theme in most learning space design work this past decade is the renewed focus on human-centered design. With the impact of technology in these spaces, we also call this "user-centered design."

So let's turn our attention to our users. What is different about our users - our students and faculty - today that requires such radical re-engineering of our classrooms, labs, libraries and informal learning spaces?

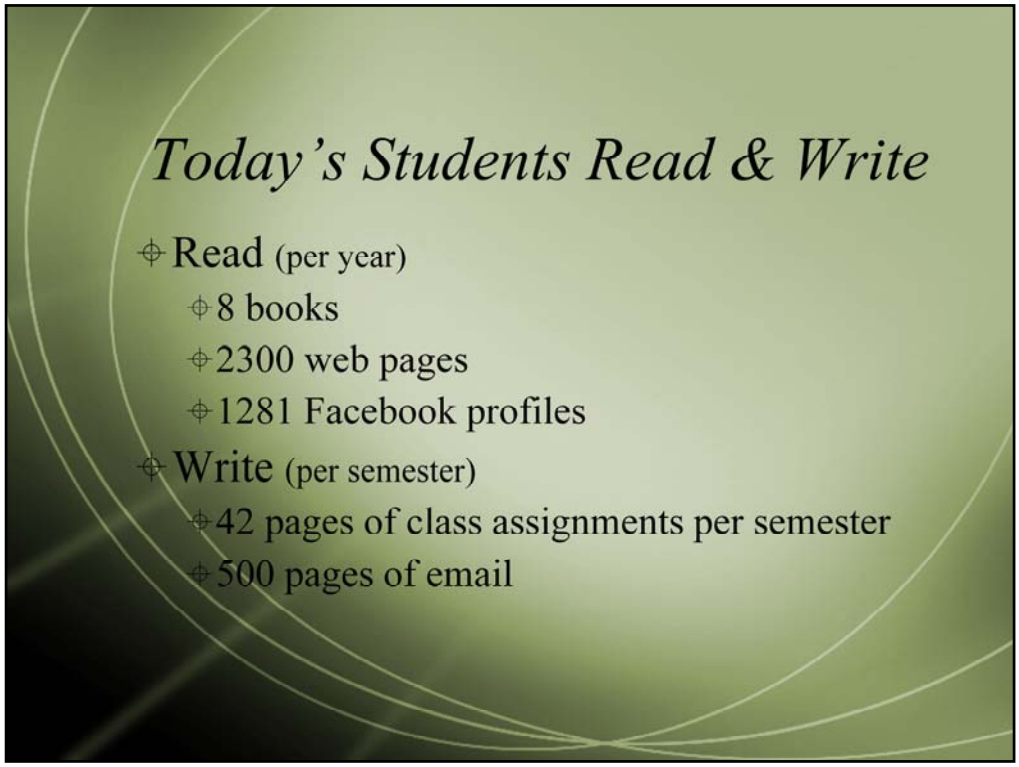


Michael Wesch, an anthropologist at Kansas State University, taught an introduction to Cultural Anthropology course last fall where 200 students brainstormed, collaborated and surveyed themselves using Google Docs. The result is this video.

This is what a sizable group of college students are telling us about how they work.

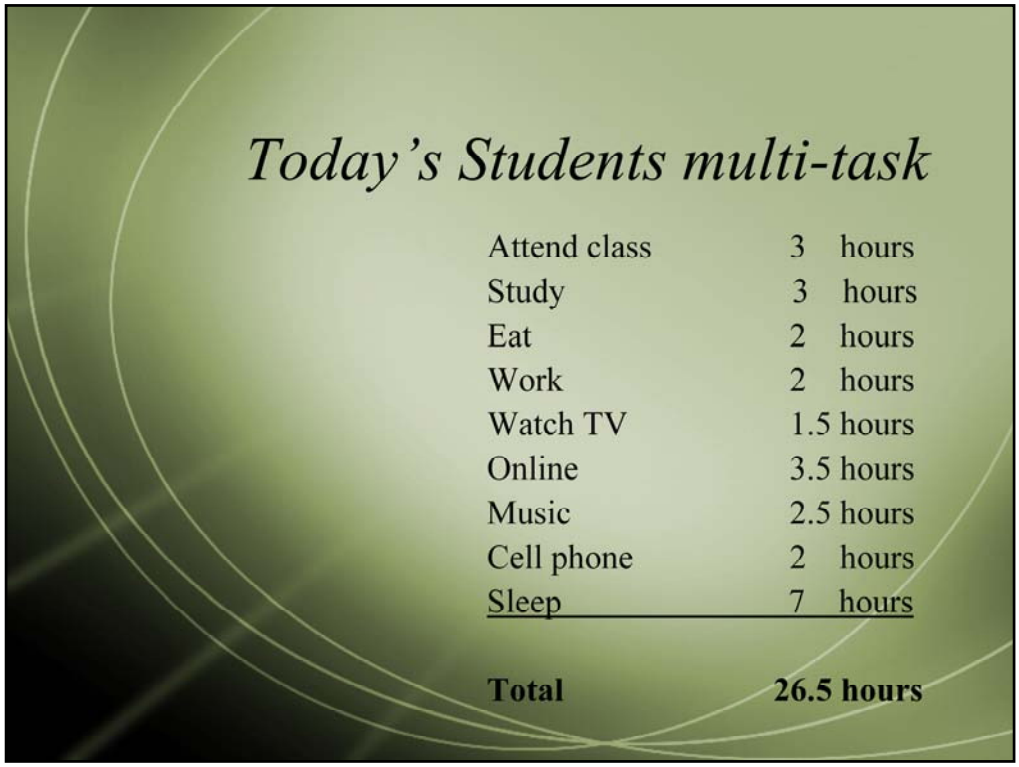
Reference:

Wesch, Michael. "A Vision of Students Today." http://mediatedcultures.net/mediatedculture.htm. Accessed July 20, 2008.



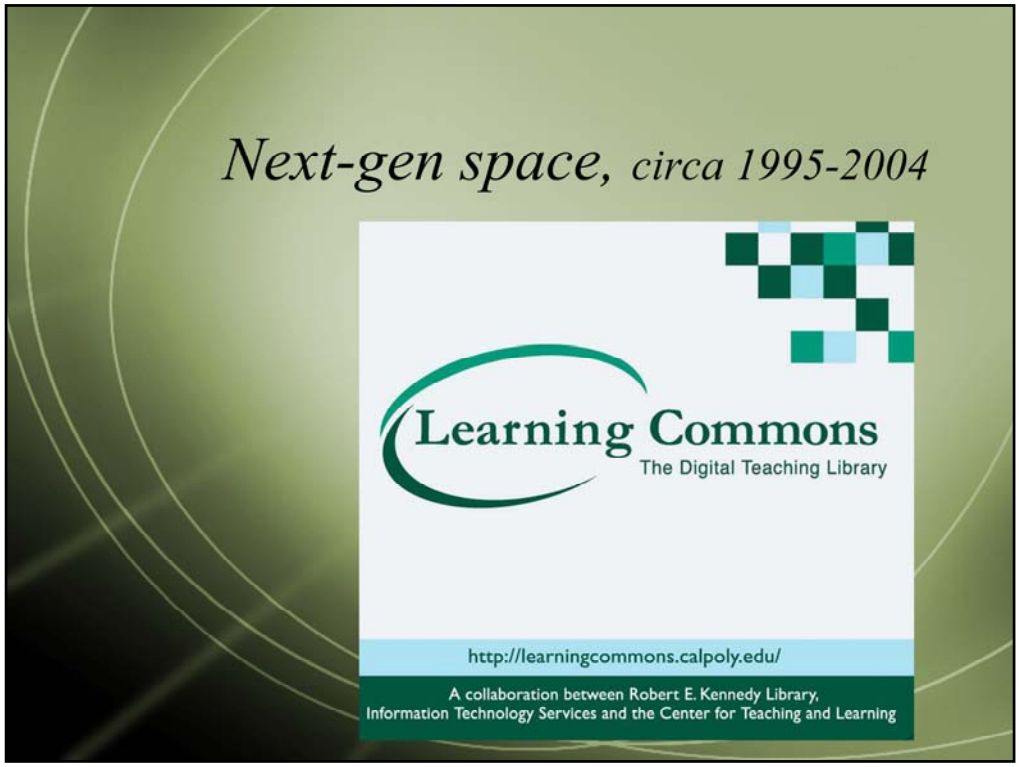
Good news! Students still read and write!

Let's look at what they're reading and writing. What does this tell us about the way students work? They're consuming and producing huge amounts of information.



"[They're] multi-taskers. They have to be."

So how do we design learning spaces that help students do what they do more efficiently and more effectively?



At the Learning Commons at Cal Poly San Luis Obispo, the Library worked with Information Technology Services (ITS) and the Center for Teaching and Learning (CTL) to launch the Learning Commons in 2005. Working within a multitude of constraints, the project team was driven by user-centered design to create a space that meets the demands of Cal Poly's undergraduate, polytechnic students.

California Polytechnic State University in San Luis Obispo is a large, mostly undergraduate polytechnic university, with approximately 20,000 students - mostly undergraduate but with some master's students - and a hundred faculty and staff. Cal Poly is particularly known for its engineering, agriculture and undergraduate architecture schools.

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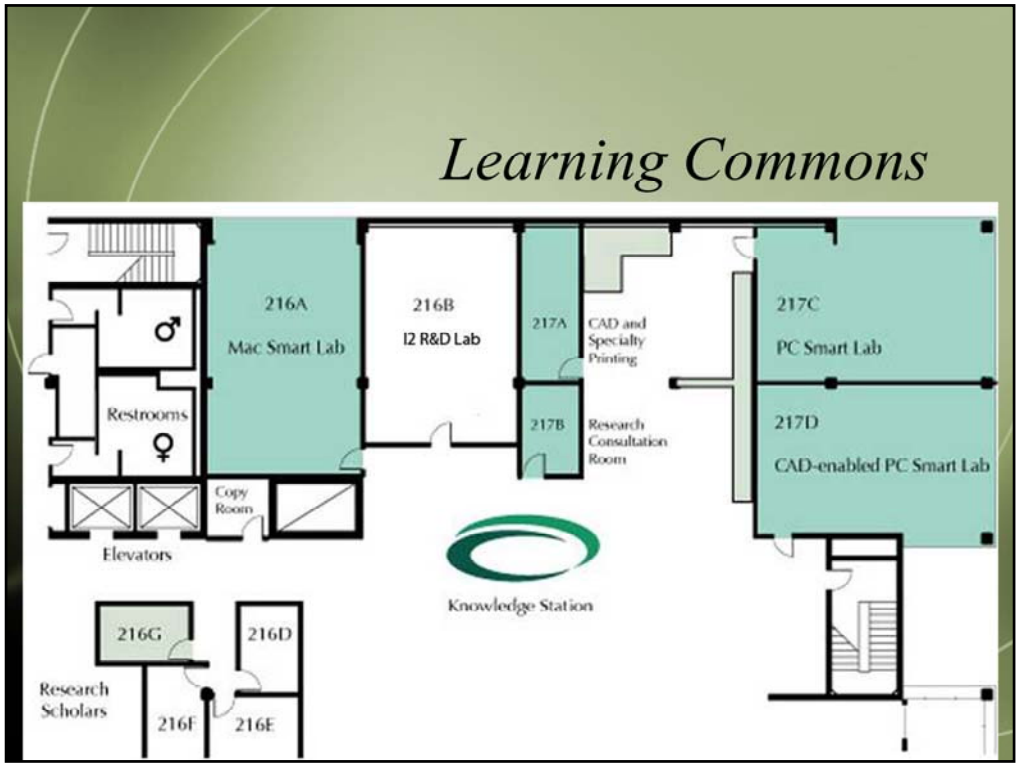
Project Sponsors: Hiram L. Davis, Dean of Library Services; Jerry Hanley, CIO; Joe Grimes, Director, Center for Teaching and Learning; Tim Kearns, CIO.

Project Team: Helen Y. Chu; Craig Schultz; Gregory L. Wilson; Dale Kohler; Mary Somerville; Franz Kurfess; Mark Smith; Tommy Demoville; Marya Figueroa.

Learning Commons Coordinator: Michael Price.

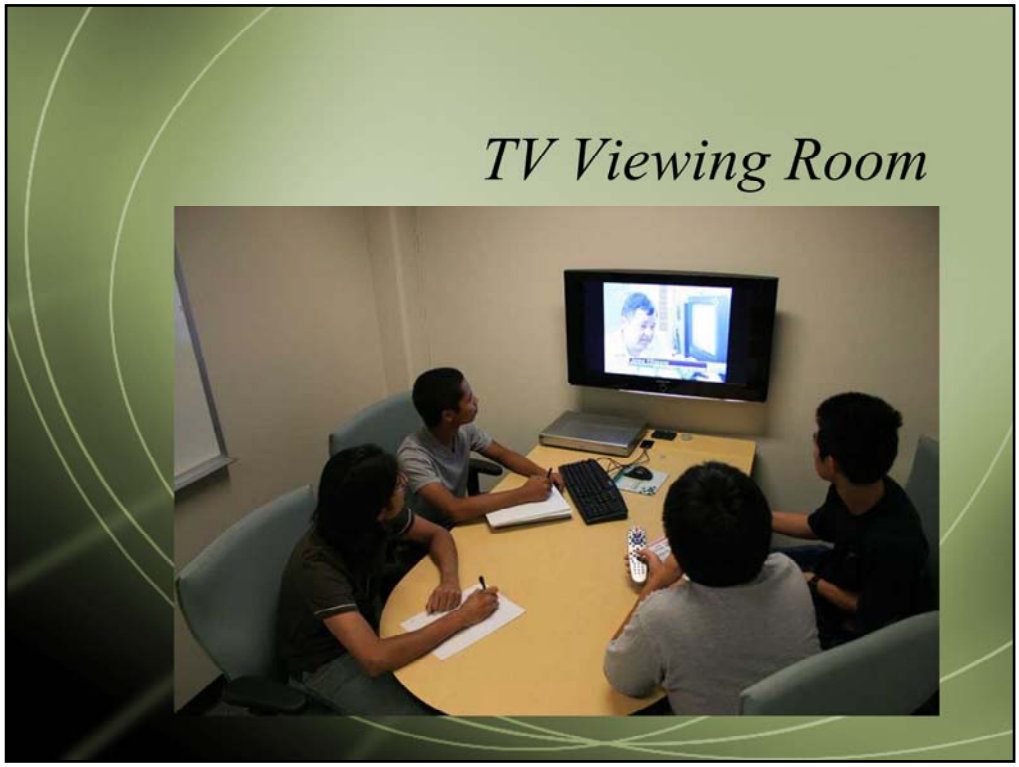
Artwork: Laura Crowhurst. California Polytechnic State University.



Phase 1 of the Learning Commons opened in the fall of 2005 with two instructional labs, one open-access lab, expertly staffed CAD printing services, an Internet2 Research and Development lab, a knowledge station where students and faculty could receive assistance with both reference and technical support questions, and a research consultation room for more in-depth reference assistance. Research Scholars in Residence - usually outstanding faculty emeriti from other universities - were in close proximity to the Learning Commons to provide grant writing support to Cal Poly faculty.

Artwork: Laura Crowhurst. California Polytechnic State University.

Photography: Helen Y. Chu, Marya Figueroa.
California Polytechnic State University.



The TV viewing room was equipped with satellite; foreign programming, news, business news are available and the room can be reserved in advance.

Project: Michael D. Miller, Helen Chu, Greg Wilson, Tommy Demoville.

Photography: Marya Figueroa.

California Polytechnic State University.

Originally conceived as a “faculty one stop shop,” the Cal Poly Learning Commons evolved into a multi-phase project that took a more holistic approach - addressing the needs of all users. In its first year, the Internet2 Faculty R&D lab hosted the Lumière Ghosting Project. In particular, we were interested in supporting the project which included very affordable 3D systems for its potential to impact teaching and learning in a number of disciplines, especially engineering, bio-engineering, architecture, as well as the sciences.

Reference:

Gillette, David and Thomas Fowler and John Elsdon. Lumière Ghosting & the New Media Classroom. 30 July 2008.

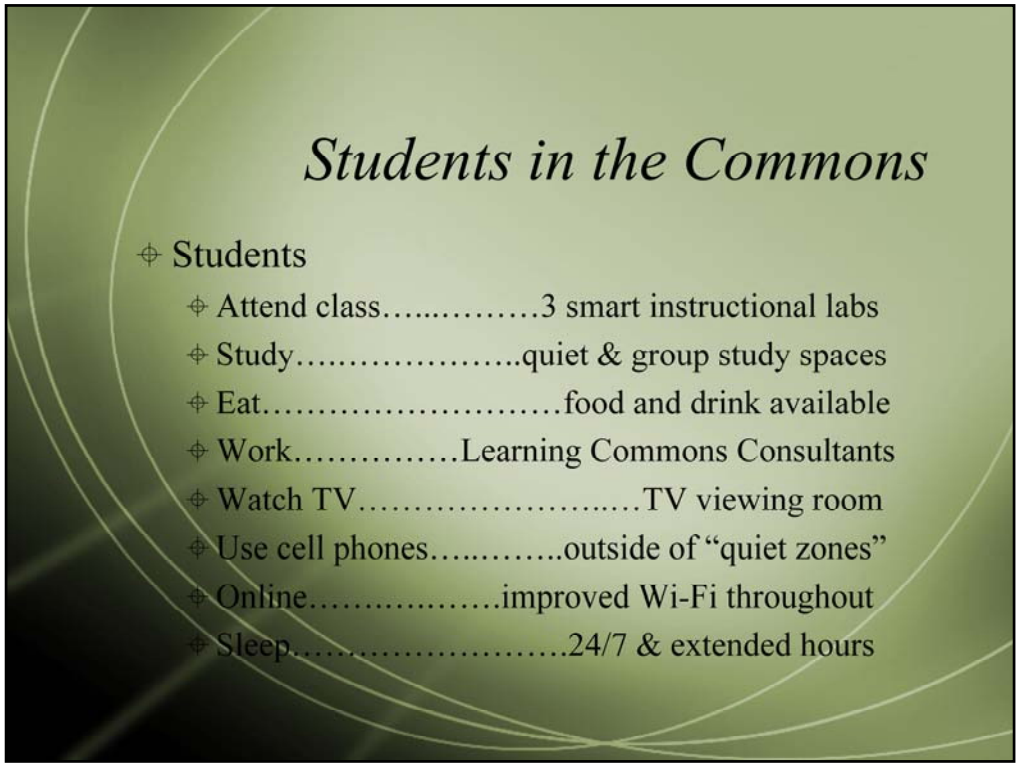
http://www.technorhetoric.net/9.2/features/gillette/.

Adjacent to the Knowledge Station, the Gallery @ the Commons allows students and faculty to take advantage of the specialty printing service, exhibit their work, find inspiration and engage with each other. This particular exhibit focused on affordable sustainable design by architects on on faculty. We've hosted other exhibits, including student furniture design and construction, learning commons design, and designs for a new library.

Photography: Marya Figueroa.

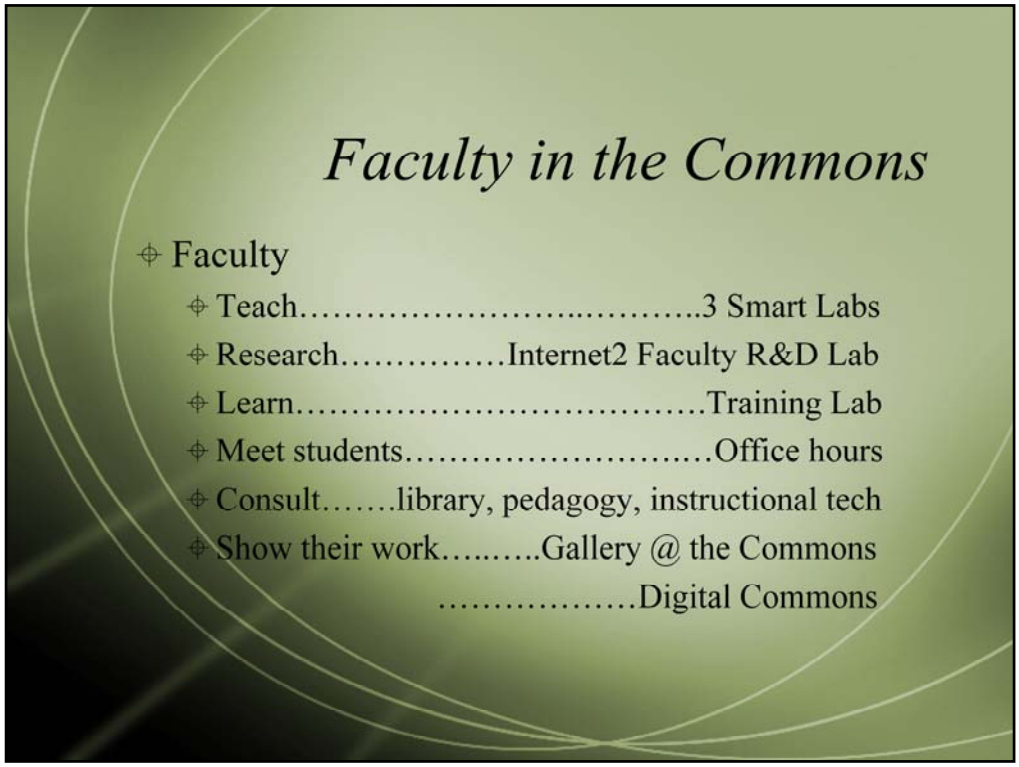
Exhibit curation: Catherine Trujillo.

California Polytechnic State University.

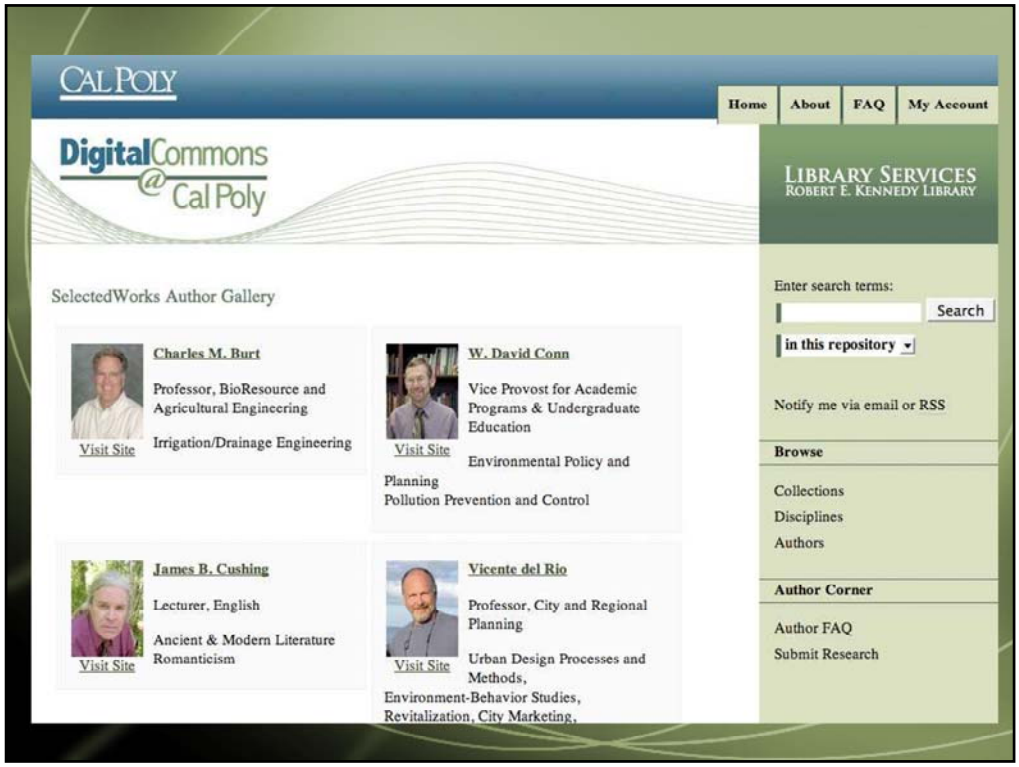


Returning to the mulit-tasker list of daily activities, students are able to accomplish all of them within the Learning Commons and the library.

But students are not the only users of the Learning Commons.



In the 2006, California Polytechnic State University integrated Center for Teaching and Learning into the Commons. Originally housed in the back of the 5th floor, we relocated and expanded the Center to better integrate faculty services. We also moved ITS and library staff into this "*faculty commons" so that technologists, instructional technologists, and pedagogy experts could work together as a team* supporting faculty development.



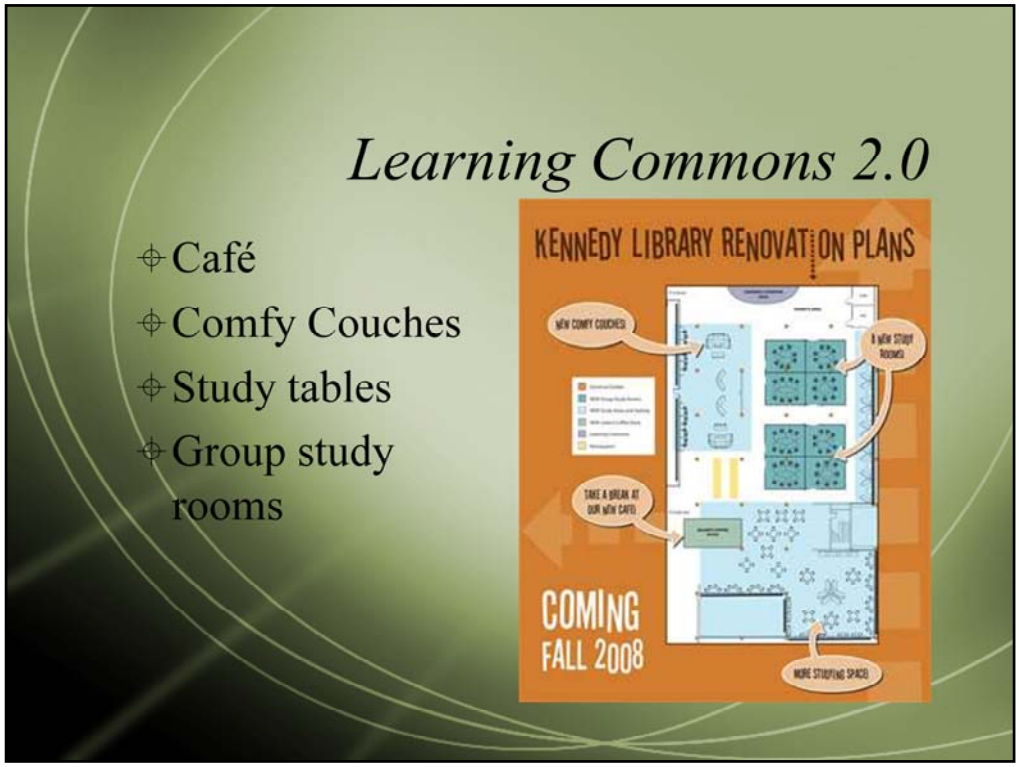
In 2007, we added an institutional repository called the Digital Commons. As an integral part of the repository, faculty profiles with photos and links to their research and publications help students find experts in fields of interest. This is particularly useful not just for students seeking advisors for senior projects, but also for other faculty seeking collaborators on research projects or the local news media looking for experts to interview on the evening news.

Reference: Digital Commons @ Cal Poly. 30 July 2008. http://digitalcommons.calpoly.edu/sw_gallery.html.

Project Team:

Michael D. Miller, Dean of Library Services; Nancy Loe, Marisa Ramirez, Helen Chu, Craig Schultz. California Polytechnic State University.

Project Sponsor: William Durgin, Provost. California Polytechnic State University.

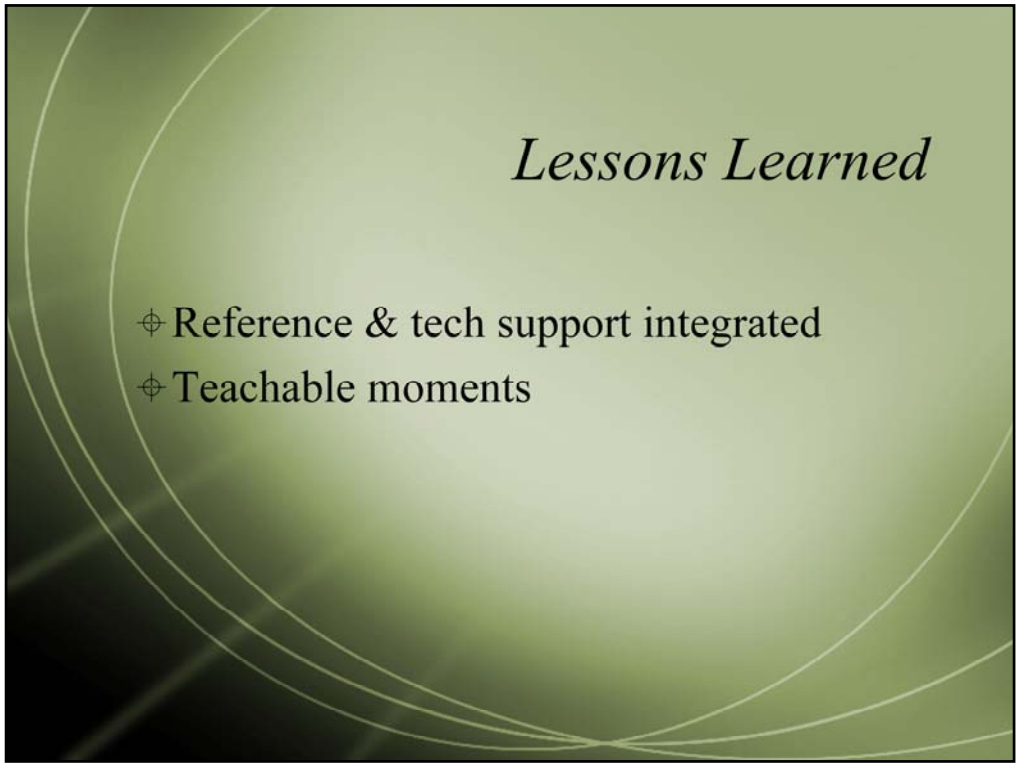


Was the Learning Commons successful? Yes. Of course, there were lessons learned, but students and faculty make great use of the new technology, facilities and services. All the different partners involved have a truly collaborative working relationship - not just friendly co-located facilities and staff.

Another indicator of success may be the increased demand for more user-centered learning space and the availability of funds and institutional support to do so. Under the leadership of a new dean, the rest of the floor is being renovated for an expansion which will include more seating, group study rooms, more open study space and a café. A new building expansion is also underway and expected to be complete by 2013.

Project Sponsor: Michael D. Miller, Dean of Library Services, California Polytechnic State University.

Artwork: Laura Crowhurst, California Polytechnic State University.



So what did we learn from the Learning Commons?

1. We anticipated greater integration between reference services and tech support. Unlike other learning commons, we were not able to co-locate the two at the same desk. A natural usage emerged where students who required application level support came first to the Commons and those who required reference assistance worked in the reference area. We did upgrade the furniture and workstations in the Reference area to support this usage, taking care to provide modular furniture that would easily accommodate 2-3 people per workstation.

2. We were trying to create a space where “teachable moments” would happen throughout the Commons, but especially at the “Knowledge Station.” We anticipated more “Apple Genius Bar” type activity, but for the most part, student questions at the desk revolved more around laptop checkout, way finding, and printing.

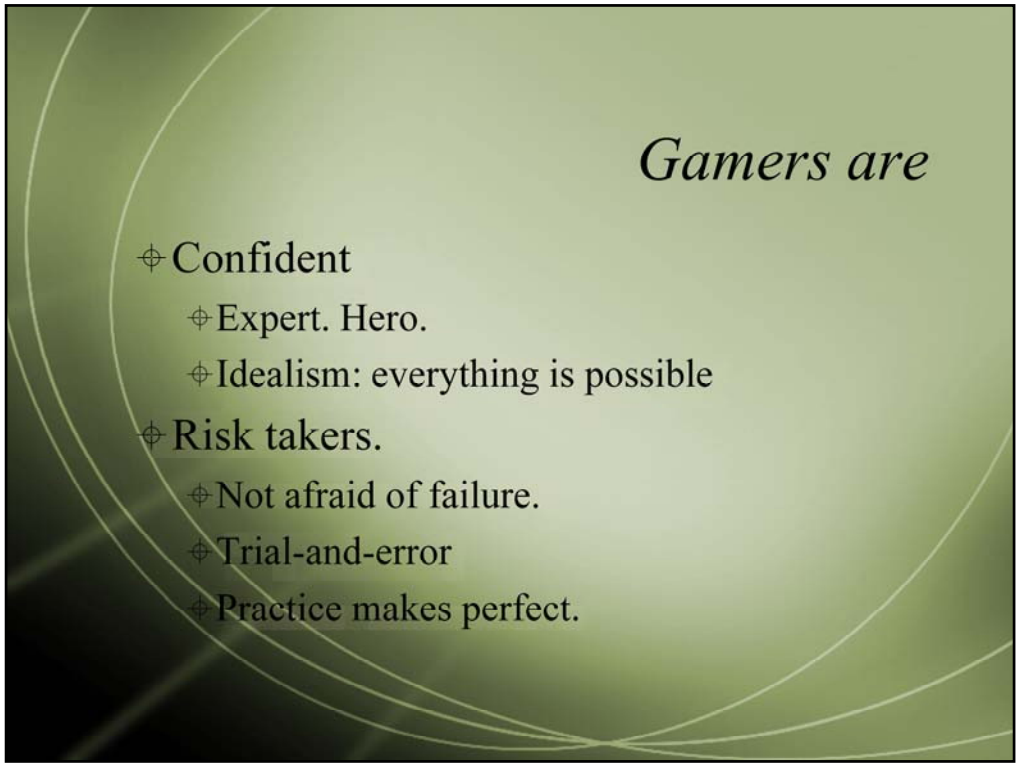
The rare teachable moments only came at the point of requiring technical support. Why is that? John C. Beck and Mitchell Wade, in their research may have an answer.

John C. Beck and Mitchell Wade are probably best known for these two books published by Harvard Business School Press. They're calling this generation the "gamer generation."

References:

Beck, John C. and Mitchell Wade. _The Kids Are Alright_. *Boston: Harvard Business School Press. 2006.*

Beck, John C. and Mitchell Wade. _Got Game: How the Gamer Generation is Reshaping Business Forever._ *Boston: Harvard Business School Press. 2004.*



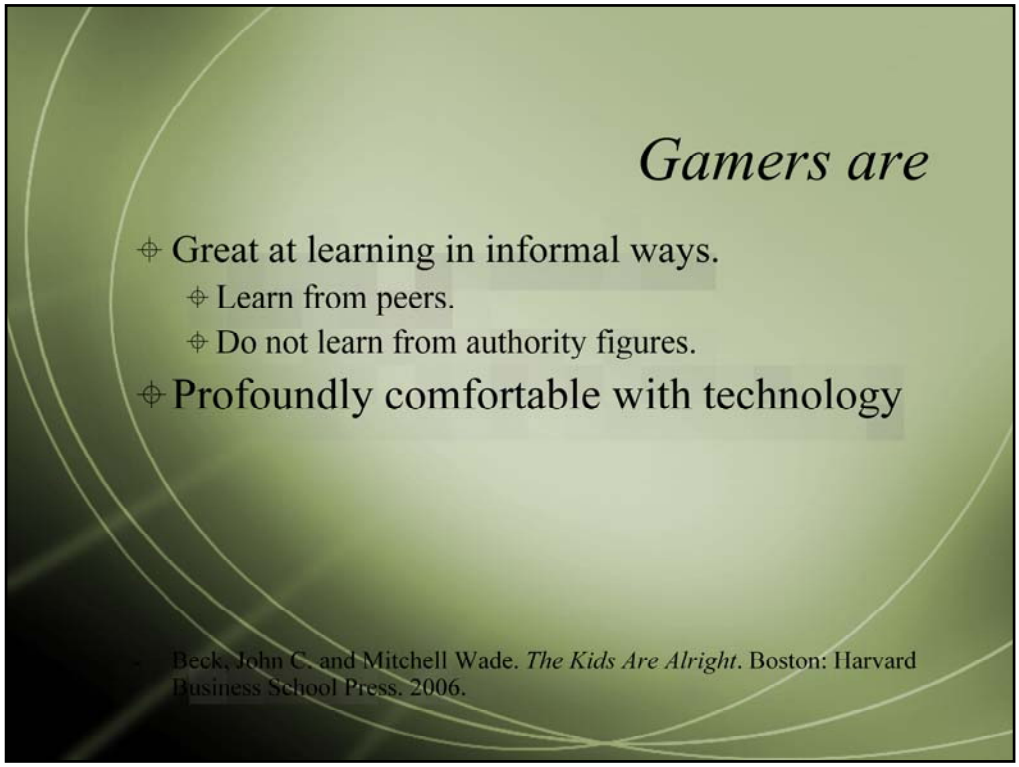
Beck and Wade posit that this generation, who have grown up with technology during their psychologically and neurologically formative years, is confident.

Accustomed to playing the “hero” in the game, they are experts. The way they learn new technologies is the way they play video games: trial-and-error. They don’t read the manual. They’re not asking for assistance until they’re stuck, really stuck.

This could, in small part, explain why students never did get out of their chair, approach the knowledge station and ask for help or expect to “learn” something from the authority figure behind the desk.

But Beck and Wade also posit that this generation is more sociable, that they understand the need for teamwork but also exhibit leadership skills. In other words, while they're the "hero" of the game, they also embrace the user social network around the game, sharing tips and tricks to "get to the next level."

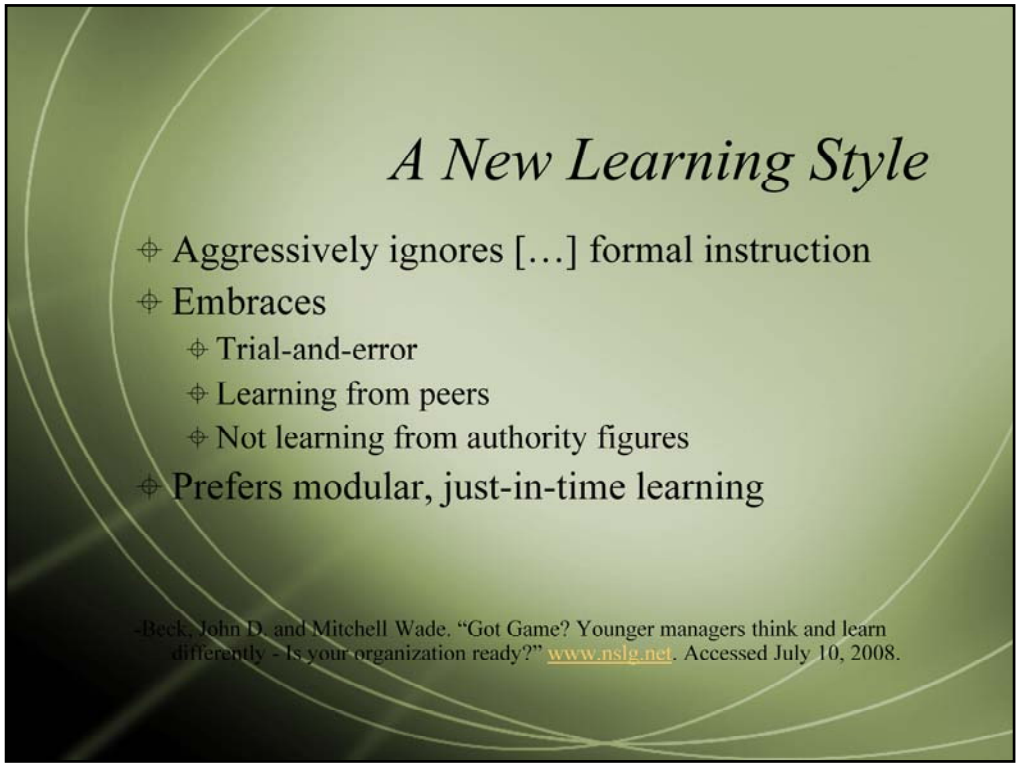
They're problem solvers - constantly trying new ways to advance in the game. So, they are more flexible and creative.



The gamer generation is great at learning in informal ways, learn from their peers, and, as we already knew very well, are profoundly comfortable with technology."

Reference:

Beck, John C. and Mitchell Wade. _*The Kids Are Alright*_. Boston: Harvard Business School Press. 2006.



Beck and Wade also believe that gamers have a new learning style. Add to "auditory, visual, kinesthetic" a new learning style that aggressively ignores […] formal instruction and authority figures, and embraces trial-and-error, learning from peers, and modular, just-in-time learning. Recall Keanu Reeves' character in the Matrix where gains black-belt kung-fu master expertise by downloading the new skill into his spinal cord.

The question becomes then, how do we address not only the multi-tasking habits of our students and faculty, but also accommodate this new learning style? We talk a lot about ICT fluency, or information and communications technology. Combined reference and help desk services are supposed to help address that issue. But what about when students - who don't know that they need this education - don't come to you?

Reference:

Beck, John D. and Mitchell Wade. "Got Game? Younger managers think and learn differently - Is your organization ready?" _Northstar Leadership Group. 10 July 2008. http://www.nslg.net.

Well, then, we go to them.

When I started at the University of Oregon a few months ago, we began a program review of several areas, including the Help Desk and Hardware Repair shop. What we found is that students, faculty, staff, departments - everyone across campus - had contact with the help desk at some point. Beyond account management, our staff spent a lot of time with users helping them clean up anti-virus software conflicts, infected machines, or doing hardware repair work.

But we realized that it was largely a reactive service model. People only came in when they needed help - desperately - but they absolutely were in a mindset to receive it. So we pulled together a project team to investigate how we could enhance the user experience and turn our users' desperation and frustration into a valuable learning moment.

Photography: David Ragsdale. University of Oregon. University of Oregon Help Desk as of July 2008. Remodel planned for Fall 2008.

Now I don't know about you, but I do a lot of online banking. Not just direct deposit, but bill paying, new accounts, everything. I'm pretty annoyed if I have to drive by an ATM. But if you make me park my car, turn off the engine, unload my toddler and his snack bag and his fire truck, I am downright ornery. You had better make my visit worthwhile.

So what happens inside the bank? The traditional design of a bank calls for customers to engage in financial transactions by yelling through a 2-inch thick glass to a teller on the inside - as if we were passing a file to an inmate.

Reference:

Ziba Design. "Case Study on Umpqua Bank: A New Banking Experience." _Ziba Design._ 28 July 2008.

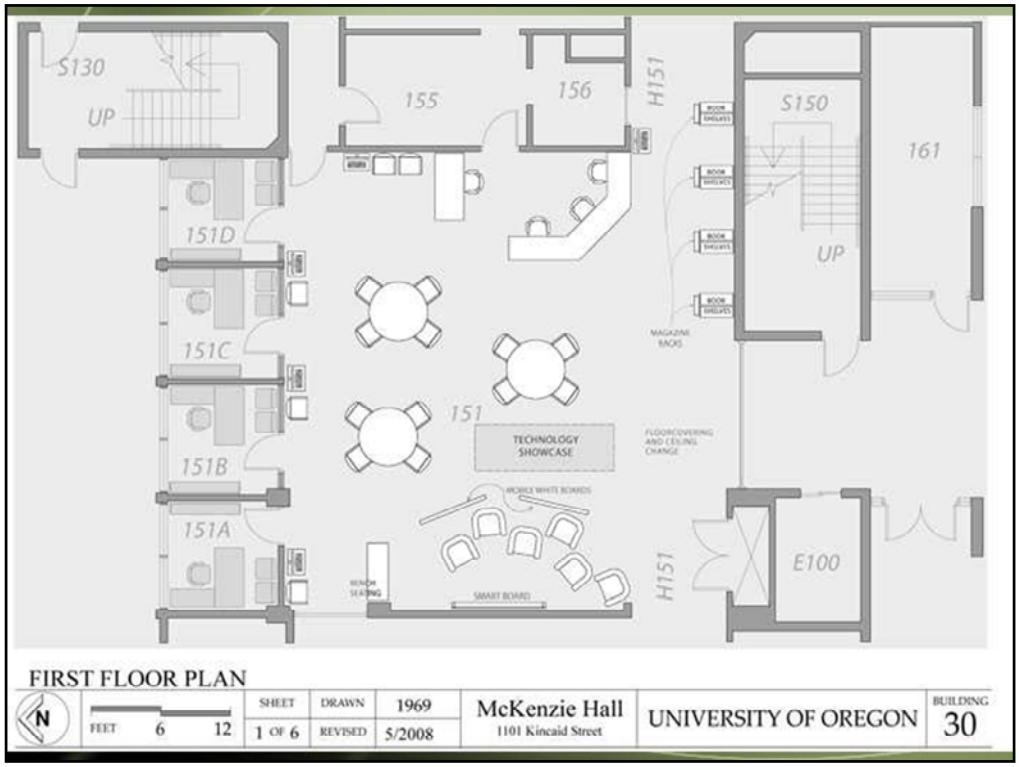
<http://www.ziba.com/pdfs/products/CS_Umpqua.pdf.>

Umpqua Bank in the Pacific Northwest understood this and recently revolutioned bank design with their remodel that look like a cross between retail space and upscale hotel lobby.

Reference:

Ziba Design. “Case Study on Umpqua Bank: A New Banking Experience.” _Ziba Design._ 28 July 2008.

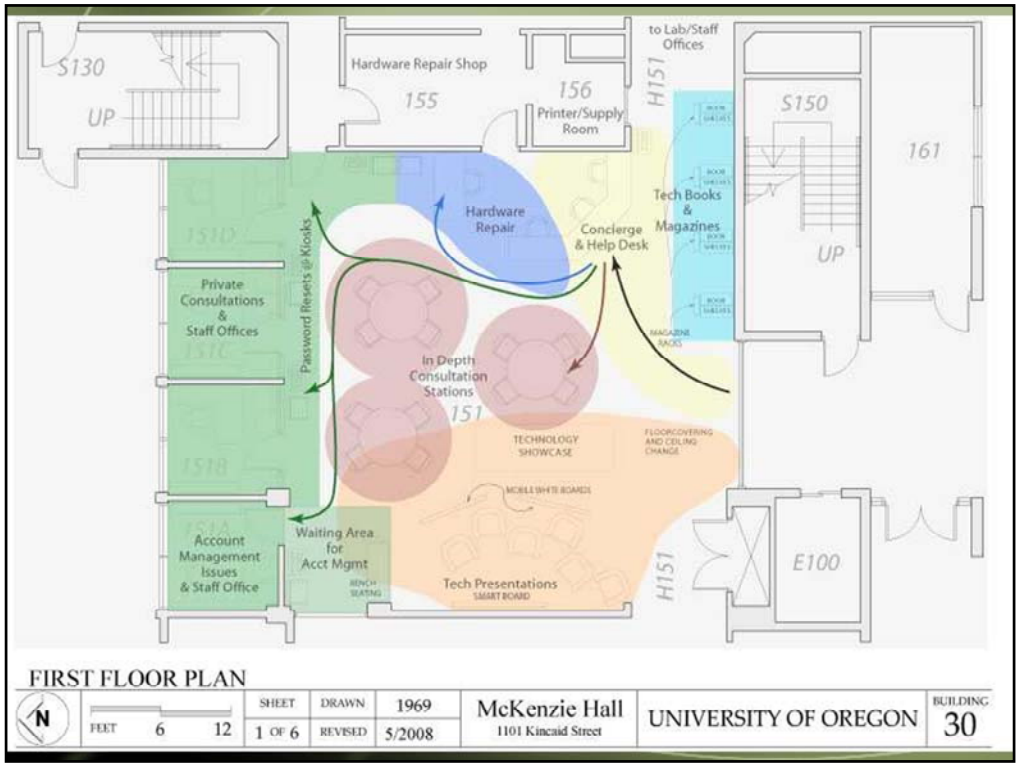
<http://www.ziba.com/pdfs/products/CS_Umpqua.pdf.>



The project team did an extensive program review, including a targeted user survey which yielded current usage patterns, problems with the current space, and suggestions of what they would like to see. Based on that, as well as in-depth analysis of our own workflows, challenges and processes, we defined requirements and then worked with two different professional designers.

This is the plan we chose and that we're hoping to implement by fall 2008.

Design: Pellitier & Pellitier.



Digital signage, lighting and carpeting will guide users entering the double doors towards the concierge and help desk. Quick issues are addressed immediately at the help desk and users can be on their way or stay and browse. Hardware repair intake is also taken care of by the help desk. If consultation with a hardware technician is required, users can step to the hardware repair area of the help desk, making way for the next client. Ample floor space and a clear path is available for large printers and other equipment coming in to the hardware repair shop. Users waiting in line can browse the tech books and trade magazines which face outwards, adding to the representation of “cutting-edge technology” without purchasing every new gadget on the market. Advanced account issues are directed to kiosks or in-depth consultation stations. Account management issues requiring privacy are directed to the accounts manager, whose office benefits from both additional privacy and a waiting area. Users waiting for account management services in the waiting area will be interested in participating in the tech presentations, playing with the smart board, or evaluating the latest technology showcased. These active learning spaces help provide the teachable moments that hopefully users will consider as “value added” services when coming to this space.

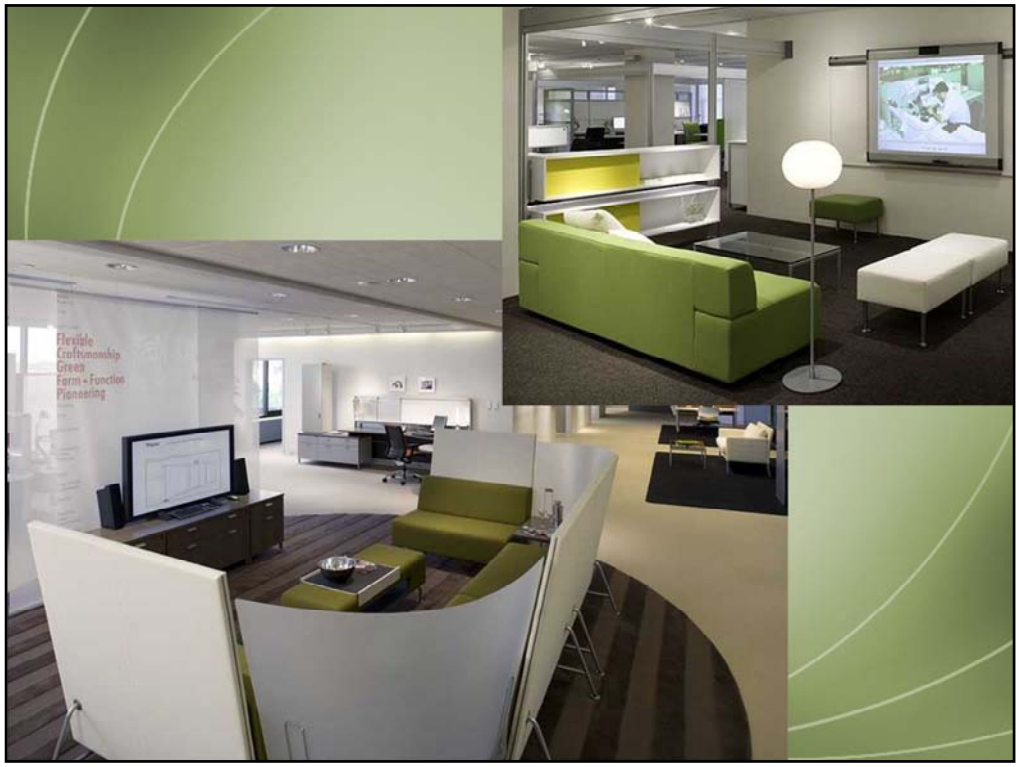
New glass doors for the staff offices upgrade the feel of the space and allow more natural light into what is now a very dark space. A high drop ceiling, with new lighting treatments providing 73% indirect light and 27% direct light will better reflect the natural light and reduce glare on monitors. A lower drop ceiling outside of the account management space and tech presentation area creates a more intimate space for both privacy and discussion, respectively.

Artwork: David Ragsdale, University of Oregon.


Concierge Services
Help Desk
Anti-virus software, anti-spyware, anti-malware…
Etc.
Hardware Repair Shop
Dell warranty repairs
Apple warranty repairs
Account management
Password Resets
Account issues

Photography: Steelcase.

Photography: Helen Y. Chu.



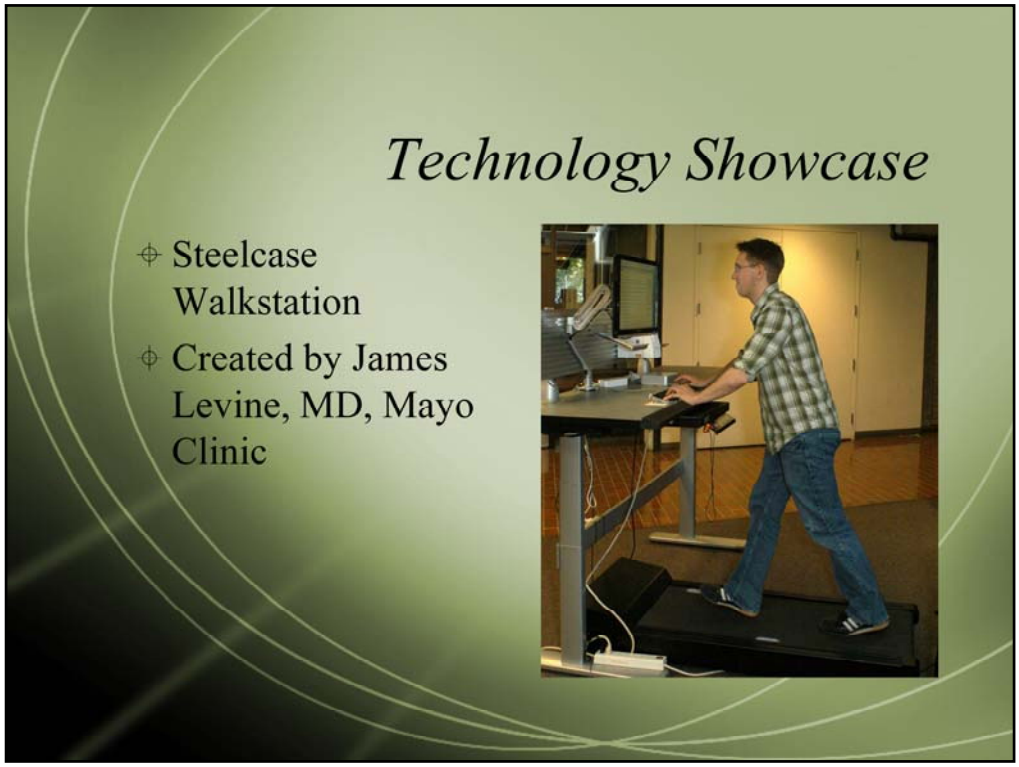
Presentation area.

Photography: Steelcase.

Presentation Area.

Photography: David Ragsdale, University of Oregon.

No matter what your learning style, there are multiple ways to learn about new technologies in this space, including from peers, from experts, from print materials, product demonstrations…



Our kinesthetic, experiential learners can even hop on a treadmill and surf the Web while they walk.

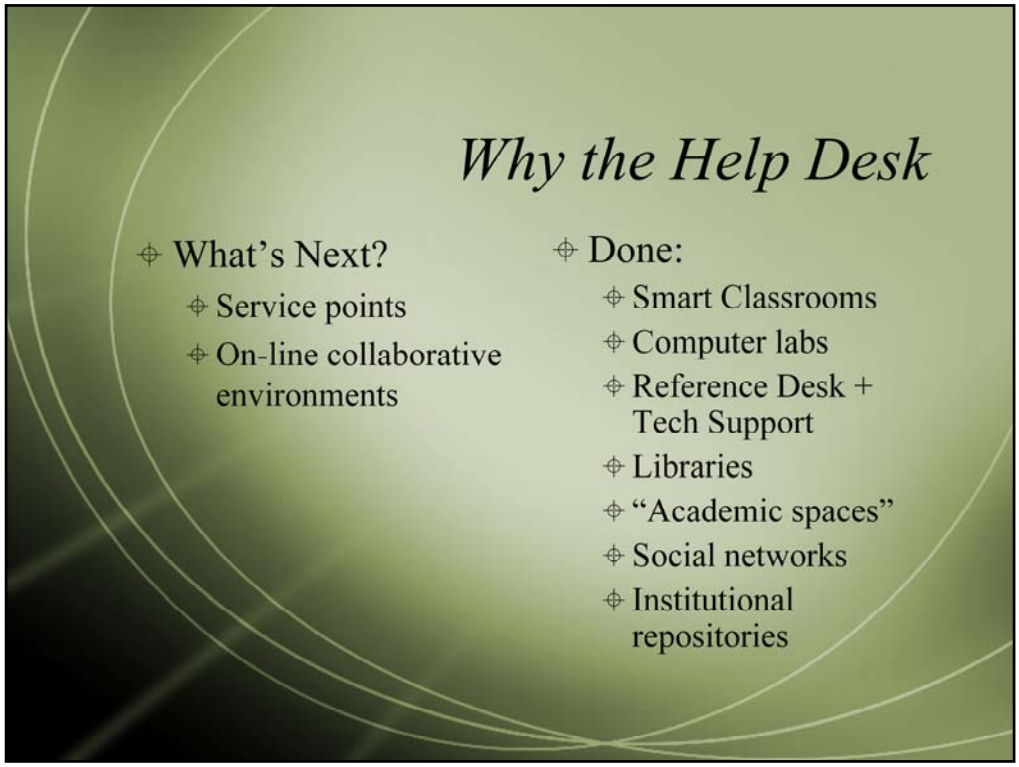
The current “exhibit” so to speak is the Steelcase Walkstation which was invented by Dr. James Levine of the Mayo Clinic and manufactured by Steelcase. This treadmill desk maxes out at a speed of 2 mph - it is NOT meant for you to break a sweat. But according to the inventor, studies have shown that not only does this help improve your overall physical health, it makes you more alert and energized while working. And yes, I have tried it, and yes, I can and do regularly wear my heels on the treadmill.

Photography: David Ragsdale, University of Oregon.

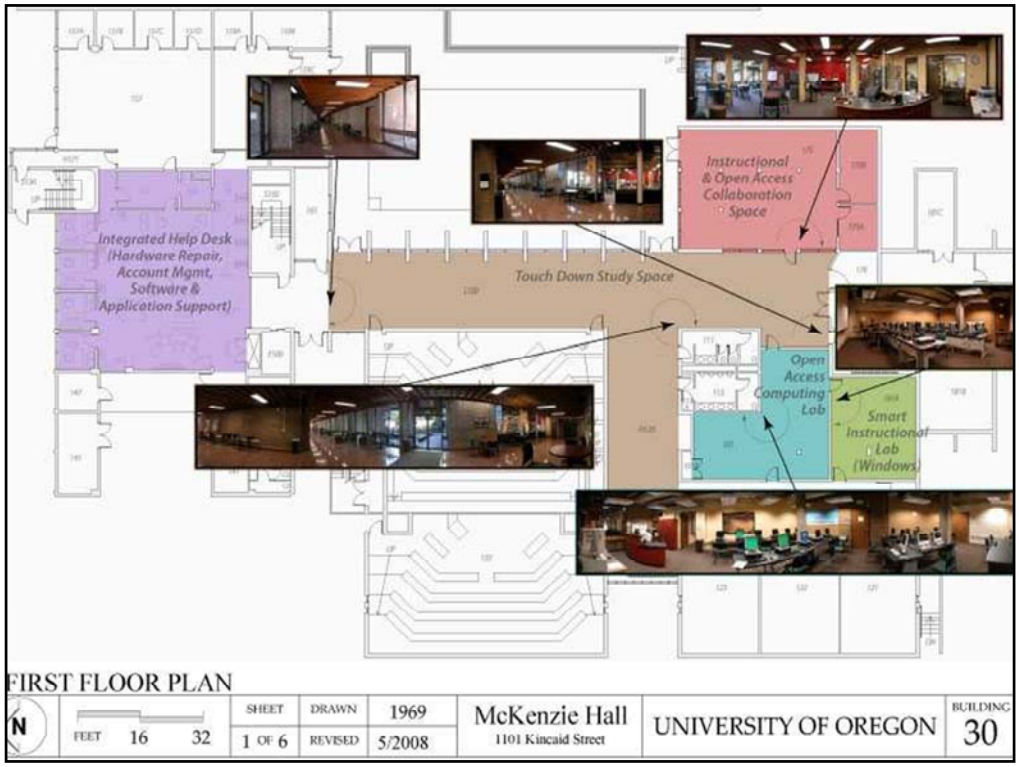
So, in review, what do we have in this remodel and how does it address the new way students work?

This is informal space that provides modular, just-in-time learning, at the learner's pace and will, from student experts as well as experts who are not exactly "authority figures" in their world. We plan on events programs at the smart board that are informal. It just so happens that our hardware technicians are named Rob and Robert. They have, on many occasions saved the bacon of students, staff, faculty and departments. One of the things I love about the University of Oregon is the strong community of technophiles on campus and in town. So an event like "Stump the Rob" should be a great, community-based standing room only event.

We have a variety of learning opportunities - hopefully something that works with individual learning styles. Rich colors, patterns, comfortable furniture, the latest technology, and tech books and trade magazines to browse or check out while we teach you how to reinstall your operating system.



I don't believe that re-engineering the Help Desk will solve all our problems, but if you look at the areas where we have already been successful and where the learning opportunities still exist, it absolutely makes sense to consider service points and any other space where you have direct and extended contact with students and faculty.



No one space or even one kind of space will meet all the needs of our students and faculty.

At the University of Oregon, a number of computing facilities are located on the same floor. We have strategically defined a variety of spaces to meet student and faculty needs in this area. The idea here is to provide a variety of technologically-rich spaces, staffed by student, staff an faculty experts, that are comfortable, exciting, inspiring and respects our diverse users as people.

Users of the open access lab are often students working intensely on class assignments for a prolonged period of time in a quiet environment. The Smart instructional lab is also located within the open access lab, allowing students to work on class assignments immediately preceding or following class. Lab assistants are on-site for both classroom technical support and open-access lab application support.

Imagine, Create, Collaborate

Student project groups, or instructors with their classes can schedule or drop in to the Collaboration Center across the hall to take advantage of one of the three Smart Boards. Ideally suited for brainstorming, group work, or presentation rehearsal, these collaboration areas can also be scheduled for meetings and classes. Student and full-time staff are on hand to provide orientation, training or assistance with applications and Smart technologies.

Expertise, Inspiration, Innovation

When students or faculty need help, the Help Desk provides not only a knowledgeable solution to hardware, software and account issues, it provides easy access to computing expertise – in the form of a real person. A lending library, technology showcase, and demonstrations in the latest technologies make user visits not only informative, but inspiring.

Touch Down Study Space

No one “owns” hallways, so these areas are usually neglected in remodels. However, recognizing the value and potential of this “touch down study space,” the Vice-Provost and CIO not only ensured that wireless access was available in the space adjoining labs, collaboration center, and help desk, but also invested in comfortable study furniture for the hallways. Students attending class in this area make the most of their time between classes thanks to comfortable furniture, wireless access, and proximity to expanded computing resources.

Artwork & Photography: David Ragsdale, University of Oregon.

Please contact me with any questions or comments.

Bibliography available upon request.