Engineering Transformation and Innovation in Libraries

Bonnie Postlethwaite
UMKC Dean of Libraries
Engineering Transformation and Innovation in Libraries

Then

...  

Now

1969

Individual Study

Book Repository

2018

Collaborative Learning

Focus on Student Learning

9/18/18

2018 ASEE Midwest Conference
Engineering Transformation and Innovation in Libraries
Collections:

Scholarly Resources

- Students access digital resources more than they check out printed books
- A *Student Monitor* survey of 1,200 students also reported a preference for print for every type of study except research.

From: Gensler, *Dialog 27, Student View of Academic Libraries*
Engineering Transformation and Innovation in Libraries

Collections: UMKC Usage Trends

UMKC Book check-outs in
FY2008 = 167,000
FY2017 = 61,612

95% of 2018 budget > digital materials
What College Students Want

• Prefer studying in the library:
  • A place where they can focus
  • Focus makes their study time more effective.
  • 3:1 Quiet study to collaborative study spaces
  • Technology rich
  • Scholarly resources.
  • See and be seen—even if they need to study alone

Gensler, Dialog 27, A Student View of Academic Libraries
“The competition for great study spaces on campus is fierce, the vibe, the slight din, the social component, being near others yet able to focus.” says Gensler’s Melissa Mizell.

Gensler, *Dialog 27, A Student View of Academic Library*
# Engineering Transformation and Innovation in Libraries

## Learning Paradigm Shifts

<table>
<thead>
<tr>
<th>Previous Learning Styles</th>
<th>New Learning Styles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning is an individual activity</td>
<td>Learning is a group and an individual activity</td>
</tr>
<tr>
<td>Only happens in classrooms at fixed times</td>
<td>Learning takes place everywhere</td>
</tr>
</tbody>
</table>
| Classrooms always have a front  
  • Chalkboards or white boards  
  • Tablet chairs—one-size fits all  
  • No sound system except in largest of rooms | Learning spaces are open and flexible  
  • Moveable furniture  
  • Shared screens  
  • No front to the room  
  • Lots of screen projection and white boards  
  • Technology rich |
| Rote Learning | Learning that fosters critical thinking, creativity and development of communication skills  
  • Team projects  
  • Open discussions  
  • Active learning / High-impact learning |
| Sage on the stage—Teaching with lectures | Flipped classroom—teacher as facilitator |
| Print based classroom materials | Multi-media, online resources |

*Image © Gensler*
Making Room for Library Users

- Current collection acquisition is now mostly electronic
- Physical collections growing at a much slower pace
- Physical collections are less current
- Moving collections to higher density storage
  - Automated Storage Retrieval Systems (ASRS)
  - Off site depositories with ‘cherry-picker’ installations
  - Compact shelving
Engineering Transformation and Innovation in Libraries

Making Room for Library Users @ UMKC

• Collections were squeezing out the readers
• Limited real estate
• Robotic storage = 1/7 space of traditional stacks
• Keeps collection on site; 80% in RooBot
• Under 10 minutes retrieval time
Engineering Transformation and Innovation in Libraries

Revovation Impact at UMKC

Number of People in Miller Nichols Library
2006-2017

- Construction of new addition closes south door at Miller Nichols Library
- Miller Nichols Learning Center and new entrance open
- Newly renovated first floor open at Miller Nichols Library

Shows the total number of people entering each library building between 2006 and 2017. Lines show the overall trend for each building, while the highlighted areas show the number of people in each building.
Engineering Transformation and Innovation in Libraries

Comfortable Spaces

Image © Gensler
Engineering Transformation and Innovation in Libraries

Comfortable Spaces

Grand Valley State Univ

Hunt Library--NCSU
Engineering Transformation and Innovation in Libraries

Libraries as Space for Teaching and Learning:

• Flexible spaces that can be re-arranged for multiple classroom and study needs

iX Theater @ UMKC Miller Nichols Library

1. Book discussion  
2. Program  
3. General study

Research Consultations
Engineering Transformation and Innovation in Libraries

Collaborative Learning Spaces
UMKC
Engineering Transformation and Innovation in Libraries

Collaborative Learning Spaces
NCSU—Hunt Library
Engineering Transformation and Innovation in Libraries

Collaborative Learning Spaces
NCSU—Hunt Library

Terrace

Idea Alcove
Engineering Transformation and Innovation in Libraries

Collaborative Learning Spaces
NCSU—D.H. Hill Library
Presentation Practice Room
Engineering Transformation and Innovation in Libraries

Individual Study
UMKC
Engineering Transformation and Innovation in Libraries

Individual Study
NCSU Libraries
Engineering Transformation and Innovation in Libraries

High Impact / Active Learning

Makerspace

Technology Showcase and Lending

NCSU Libraries
Engineering Transformation and Innovation in Libraries

High Impact / Active Learning

Music Booths

Virtual Reality Lab

Digital Media Lab

NCSU Libraries
Engineering Transformation and Innovation in Libraries

High Impact / Active Learning

Visualization Lab

Game Lab

Data Space

NCSU Libraries
Engineering Transformation and Innovation in Libraries

High Impact / Active Learning

Immersive Technologies

Simulation Lab

NCSU Hunt Library
Engineering Transformation and Innovation in Libraries

NCSU Hunt Library

Web site and video
http://www.ncsu.edu/huntlibrary
Bonnie Postlethwaite
University of Missouri-Kansas City
Dean of Libraries
postlethwaiteb@umkc.edu