Impact of Space Design on Student Satisfaction and Success

“…adapting and innovating during this time of wide disruption”

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Session Outcomes

Application-Focused Learning Outcomes

• Update integrated approaches to development of campus space.
• Connect spatial experiences of current students to implications for prospective students.
• Gauge researched institutional characteristics and students’ sense of fit.
• Draw design directions from satisfaction data and qualitative feedback.
Overview of the Session Content

- Integrating research and design: snapshots of research-based precedents

- The moving target of student satisfaction and success
  - The role of institutional research in academic planning (less about space)
  - Integrated planning for recruitment and development
  - Student-faculty research
  - Student satisfaction survey and success data (spring 2012)
  - Favorite spaces research question and student input (fall 2013)

- 2013 research questions, student input and observations
  - Patterns of use and how spaces work
  - Spatial expressions of shared values, aspirations, backgrounds and strengths
  - Investment priorities based on sense of belonging and continued success
  - Observations and implications for institutional research and physical planning

- The changing contexts of culture and campus
  - The role of architecture in campus planning (less about academics)
  - Where recruitment and design connect: SUNY Binghamton and SCUP awards
  - Applying design thinking to institutional research for adaptation of campus design

- Participants Q/A and closing remarks
“Students, Instructors, and Perceptions of Learning in Active Learning Classrooms (ALCs)” Brooks, SCUP North Central Conference 2012

- Research – University of Minnesota classrooms
- Approach – quasi-experimental designs, pedagogical approaches, statistics, academic performance expected-actual-perceived, interval frequency of activity & instructor behavior
- “The classroom in which I am taking this course...encourages my active participation.”
Integrating Research and Design (Cont.)

“Research on Learning Space Design: Present State, Future Directions”

• Research – universities, psychology, architecture, planning/design, furniture research, clinical education, projects

• Approach – online survey, 37 questions, 3,250 respondents, focus groups, “design sessions” on individual work, collaborative work, enclosed space, laptop use
“Effective Space Management Decision Making to Inspire Community” Blanchette, U Mass Boston, SCUP Pacific 2011

- Research – space, with changing values and priorities, effectiveness and institutional mission
- Approach – qualitative cases, document review, interviews on critical space concerns

Quality of space, quantity
- Outdated facilities, retrofitted buildings, functional mismatch

Location of space
- On campus, contiguous, accessible, prestigious

“Found In Space: Observational Evidence for Informal Gathering Spots” Clemmenson, Kahn, King, Sherry, Taylor, SCUP North Atlantic Region Conference 2011
“Summary Report of a Survey of Learning Space Design in Higher Education” Vredevoogd, Herman Miller, at SCUP 43 Montréal, 2008, reported by Grummon, SCUP, annual student video contests

- Research - SCUP members and individuals responsible for campus facilities or space planning, respondents mostly from 4-year-and-above campuses
- Approach - importance and performance; qualities of adaptability, social, healthful; sustainability, resourceful, and stimulating
The role of Institutional Research in Academic Planning (less about space)

- Integrated Planning for Recruitment and Development
- Student-Faculty Research
  - Student Satisfaction Survey and Success Data (spring 2012)
  - Favorite Spaces Research Questions and Student Input (fall 2013)
  - Faculty Satisfaction survey
Overview of Binghamton University

Who are we?

- Part of SUNY system
- Student: 16,000+ enrollment
- Faculty/staff: 5000+
- Programs: BA/S/FA/MUS, Masters, PhDs, graduate certificates

brain and spine
Indicate your level of satisfaction with each of the following aspects:

**Academic Facilities**
- Classroom facilities – 78%
- Course-related laboratories (not including studios) – 70%
- Library facilities – 82%
- Study areas (not including studios) – 74%
- Fine and performing arts studios (art, dance, film, music, theater) – 75%

**College Facilities and Grounds**
- Athletic and recreational facilities – 79%
- Campus center/student union – 82%
- General condition of residence halls – 74%
- General condition of buildings and grounds (other than residence halls) – 77%
- Personal safety/security on this campus – 88%
Think of the places and experiences you value around campus, those which contribute most to engaging you in campus life, in academics and moving you toward your goals:

- What is your favorite space on campus? Why is it your favorite?
- Of the campus places, which is your least favorite? Why is it your least favorite?
- Of the campus places, which one would benefit most from added effort and investment by the university? Why does it have the most potential for added investment?

For your campus, how would students answer?
2013 Student Open-Ended Feedback

Likes

- Nature Preserve, DeFleur Walkway and spine
- gym, Event Center, athletic fields
- Downtown Center – convenience
- Einstein Bagel, John Arthur Café
- Delaware Residence Hall
- Engineering and Science Building and labs
Dislikes

- Library especially study areas (4/10)
- Older residence halls, especially dining, e.g. Hinman and CIW (3/10)
- Science Lecture Hall 1
- Engineering Building Hall 110
- Construction
Investment priorities based on sense of belonging and continued success

- Library
- Bleachers/ seating at older athletic fields
- Weekend operation of Downtown Center
- Older dining halls and residences (CIW and Hinman)
Patterns of use and how spaces work:
- like food, to socialize, and to see people; like places to reflect; landscaping as important as the facilities, like updated facilities but not during construction
- don’t-like terms: dingy, confusing, poorly, awkwardly shaped, poor lighting, inefficient
- could use some renovation, sprucing up

Implications for institutional research and physical planning
COACHE Faculty Satisfaction Survey

Please rate your level of satisfaction or dissatisfaction with the following aspects of your employment:

- Office
- Laboratory, research, or studio space
- Equipment
- Classrooms
- Library Resources

Trend Data

Least Satisfied

Impact

Resources
Mountainview
Newing
Lecture Hall Renovations
Engineering and Science
Bearcat Stadium
Tennis Courts
Student enrollment grew from 13,384 to 15,308 (16,023 in 2013). Construction expenditure grew from $48.7 million to $138.1 million. Satisfaction grew—overall 25%, in the condition of residence halls 23% and buildings and grounds 17%, and in athletic and recreational facilities 18%, for the campus center/student union 14%, arts studios 10%, and study areas 6%.
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Poster: Timeline of research and capital investment
Working logic and comparison to themes in SCUP awards program
Imagining student satisfaction and success
We don’t have money. What do we do?
Thoughtful investing in student feedback...

The Changing Contexts of Culture and Campus

- The role of architecture in campus planning (less about academics)
- Where recruitment and design connect: SUNY Binghamton and SCUP awards
- Applying design thinking, “the capacity for integrative thinking”, to institutional research for adaptation of campus design

...diverse organizations and unique contexts...

SUNY Binghamton connects recruitment and design.

Design thinking integrates research and campus adaptation.
Compare Space Design Qualities in SCUP Awards 2012 ...and 2013
- Interactive learning
- Flexible classrooms
- Convenient bumps
- Adaptive renovation
- Community space
- Outdoor learning
- Ubiquitous technology
- Variety and transparency

...can yield creative patterns...

University of Calgary learning space
Tom Arban Photography
Compare Space Design Qualities in SCUP Awards 2012 ..and 2013

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...for space design and execution.

University of Rhode Island learning labs with Payette and Carol R Johnson
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Northern Kentucky University learning space with Goody Clancy
Compare Space Design Qualities in SCUP Awards 2012 and 2013

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Cleveland State University Julka Hall
community space
Compare Space Design Qualities in SCUP Awards 2012 ...and 2013

- Pedestrian pathways
- Vertical campuses
- Multi-organization collaborations-anchor institutions
- Reuse or preservation of 20th century buildings
- Design excellence at smaller schools
- Sustainability woven through
- Image
- Harnessing institutional anchors to foster innovation

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Note: 2012 images from SCUP 47 proceedings: SCUP 2012 Excellence Awards Program. 2013 images from websites of named recipients.
Design thinking is the form of thought that enables movement along the knowledge funnel. ...mystery, heuristic, algorithm.

Roger Martin. The Design of Business: Why Design Thinking is the Next Competitive Advantage. (2009)

The intrinsically human-centered nature of design thinking points to the next step: we can use our empathy and understanding of people to design experiences that create opportunities for active engagement and participation.

…it is our ability to construct complex concepts that are both functionally relevant and emotionally resonant that sets humans apart from the ever more sophisticated machines we use to assist us.


...for space design and execution.
Selected References

- Brooks, SCUP North Central 2012: http://z.umn.edu/lsr

Credits
- Karen Fennie, Physical Facilities, Binghamton University
- Jonathan Cohen, University Photographer, Binghamton University
- Dorothy Manevich, Student Worker, Binghamton University

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Participants Q/A

Closing Remarks