USER—21st Century Learners
Learning Spaces Collaboratory Webinar

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Facilitators

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David Reid
Principal – Gould Evans

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What do we want our users to become?

What might choice architecture be?

- **STUDENTS**
- **Diverse & Small**

**Choice:**
- **Multi-functional**
- **Adaptive**
- **Non-institutional**

**Enabling:**
- Community building
- Naturalness of access
- Fosters team
- Creativity
- **Common ground**
- Community scale
- Heart location
- Simple, plain
- Messy
- Toolset

- **E.U. Science Commons Start**
  - Playroom
  - Sleep
  - Eat
  - Ad hoc study
  - Shabbat
  - Rest study
  - "Life" community
What do we want our communities to become?
Learning Goals

• How to be clear about 21st century users – what you want them to become & what they want to become
• How to be clear about the changing context, about how challenges and opportunities into the future demand new ways of thinking about learning spaces
• How to plan spaces that dissolve boundaries, nurture new kinds of communities
• How to become comfortable as a disrupter.
Prompting Question

... from the Roundtables

What keeps you up at night when thinking about learning spaces?
What keeps me up at night?
Felix Kronenberg

Associate Professor, Modern Languages and Literatures and Director, Language Learning Center – Rhodes College
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Executive Director – National Center for Science and Civic Engagement and Research Professor, Department of Technology and Society – Stony Brook University
Bridging Education and the Workplace

Modern Workplace

Hypothetical Work/Ed Learning Environment

Principal – Gould Evans
There is a definable sequence of activities which are at the heart of all acts of building, and it is possible to specify, precisely, under what conditions these activities will generate a building which is alive. All this can be made so explicit that anyone can do it.

James Goblirsch

Designing for 21st Century Communities of Learners

Principal – HGA Architects and Engineers
If we are to solve the big problems facing our world, we need to engage in a scientific, economic and ethical dialogue.
“engage in a scientific, economic and ethical dialogue”
shift rules

dissolve intimacy

allow gender

hear intention


inspire prayer

delve scale

vary photons

summarize chemistry
multi-cultural

physical

culture

gender

faith

? cognitive

- Lutheran
- Not Identified
- Other Christian
- Other Religion

- Cedar Riverside
- Minneapolis
- Augsburg Class of 2021
multi-cultural
community-minded

Cedar-Riverside neighborhood
- 65% identify as nonwhite
- 40% are foreign born
- 31% struggle with English
- 73% household income <$35k

source: MINNESOTA COMPASS
community-minded

Community Gardens

City Park
Conversation with Colleagues

Felix Kronenberg

David Reid

Eliza Reilly
Felix Kronenberg

Normalizing Learning Spaces for 21st Century Learners

Associate Professor, Modern Languages and Literatures and Director, Language Learning Center – Rhodes College. President-Elect, International Association for Language Learning Technology
Peppa Pig
La Classe - Tâk
La Salle de Classe
Attn: Instructors

If you re-arrange the furniture in this room for your class, please return it to "CLASSROOM STYLE" before you leave.

Thank you.

Facility Coordinator
Conversation with Colleagues

James Goblirsch  
David Reid  
Eliza Reilly
How do we bring workplace mindsets into the educational setting?
Missouri Innovation Campus: The Convergence of Education and Work
“Do you believe colleges are effectively preparing students for the workplace?”

Source: Inside Higher Ed survey, 2014
CORE COMPETENCIES
What Employers and the Gig Economy Will Demand of 21st Century Workers
In the Gig Economy, workers need to self-direct their own learning – decide what knowledge they’re missing, where to acquire it, and how to fit learning into daily routines.

- Jeff Selingo, Author, Futurist
  The Future of Work and What it Means for Higher Education
1. **Speed**: work is high speed, education is not

2. **Collaboration**: it’s just missing

3. **Leadership of teams**

4. **Multidisciplinary mindsets** – It’s important to understand how all processes and roles are critical to one another

5. **How to work / where to work** – Students need to learn how to partner activity with appropriate space

6. **Communications proficiency** – how to convey information differently based on the forum and participants
HOW DO WE BRING WORKPLACE MINDSETS INTO THE EDUCATION SETTING?

MODERN WORKPLACE: YAHOO! OFFICES

HYPOTHETICAL LEARNING SPACE DIAGRAM

APPLIED LEARNING ENVIRONMENT
HOW DO WE PROMOTE WORKPLACE MINDSETS IN THE EDUCATION SETTING?

LEARNING STUDIOS (SHARED)

IDEATION COMMONS

LABS (DEDICATED)
• CIM
• DIGITAL ELECTRONICS
• ENGINEERING

Images: courtesy of D-School, Stanford
The building is organized in “Academic Quads” that are centered on departments. UCM and LSR7 each utilize the building during the day, and UCM takes over more shared space in the evening.

Legend:
1. Info, Reception
2. Central Commons and “Stage”
3. Shared Administration
4. Student Center and Bookstore
5. Digital Media Lab
6. Video, Lighting Studio
7. Studio Live Room
8. Biomedical Innov. Lab
9. Learning Studio
10. Ideation Commons
11. Allied Health Lab
12. Building Support
13. Engineering Lab
14. C.I.M. Lab
15. Digital Electronics Lab
16. Shared Workshop
17. Flex Digital Lab
18. Faculty Offices
19. Flex Open Learning Studio
20. Break-Out and Touch-Down
21. Conference Center
"This building is much more like the open labs of professional engineering environments. And the openness of the space allows us to be inspired by what's going on around us."

- Corbin, Student
HOW DO WE REINFORCE WORKPLACE MINDSETS INTO THE EDUCATION SETTING?

“The whole structure of this building is set up to support doing our work the way professionals do their work. This place really supports our ability to break off with whatever group size we need and go find the right kind of space for the work we have to do.”

- Alex, student
“Compared to the old building, it's just insane how much more collaborative and innovative this new building is!”

- Logan, Student
HOW DO WE HELP FACULTY TRANSITION TO NEW TEACHING ENVIRONMENTS?
“Most of us are used to teaching in buildings that are like Chevy Impalas. This building is more like a fighter jet! It’s designed to be used differently ... as we move toward a future of competencies-based learning.”
Evolving the Faculty Workplace
Meeting faculty needs with a smarter approach to space

Key Insights
• Contingent faculty have become nomadic, disconnecting them from opportunities for interaction that create a sense of community with colleagues and students.
• The private office isn’t the status symbol it once was; today’s faculty have a new definition of status that hinges on positive reinforcement and recognition.
• Faculty transition in and out of multiple work activities, which require more responsive spaces.
• The planning and funding of today’s faculty workplace must align with the profiles and work activities of faculty.

Faculty members, contingent and tenured, are the public face of the institutions for which they work. They are responsible for shaping the educational experience of students and engaging in multiple activities during a given day. While much in the education landscape has evolved, the faculty workplace is largely stuck in the past. As many institutions, offices look a lot like they did in the 1980s, with a traditional desk and black-and-white walls.

Herman Miller partnered with Kansas City-based Gould Evans Architects to look deeply at higher education institutions, specifically the current state of faculty activities, where they take place, and new ways to support them. As a result, we saw a need to rethink traditional approaches and introduce new ideas for faculty workplace design.

http://pkallsc.org/assets/files/ckfinder/evolving_the_faculty_workplace_solution_essay_FINAL.pdf
They Value New Status Symbols
Work/life balance is important as are flexibility and recognition – more so than a private office.

They’re Nomadic (Autonomous & Mobile)
They benefit from a range of settings that fluidly support a variety of activities, both on & off campus.

They Desire Community & Collegiality
As “nomads”, it’s all the more important that the campus provide places for connecting with colleagues.
Conversations with Colleagues

James Goblirsch
Felix Kronenberg
Eliza Reilly
Eliza Reilly

Executive Director – National Center for Science and Civic Engagement and Research Professor, Department of Technology and Society – Stony Brook University
Big Questions

- How can learning spaces facilitate connections between academic and civic life?

- How can the built environment empower, rather than inhibit, all USERS (students, faculty, community members) as they learn and co-create new knowledge and solutions for our complex civic challenges?
• How does SENCER disrupt or transform the “normalized” approach to STEM teaching?
SENCER is an evidence-based approach to learning.

How People Learn (HPL)

HPL Framework

- Expertise Implies (Ch. 2)
  - a set of cognitive and metacognitive skills
  - an organized body of knowledge that is deep contextualized
  - an ability to notice patterns in information in a new situation
  - flexibility in retrieving and applying that knowledge to new problems

*How People Learn*, 1999, National Academy Press
SENCER assumes that STEM Learning Takes place Everywhere, not just in a classroom.
SENCER starts with learning goals that go beyond disciplinary content.

- ethical reasoning
- critical-thinking
- evidence-based, unscripted, problem-solving
- technological and quantitative literacy
- team-work and effective communication

SENCER Courses foster both STEM learning AND 21st Century Civic Skills.
Selected Courses Transformed by SENCER Faculty

• Intro Biology = Biomedical Issues of HIV-AIDS - Rutgers University
• Advanced Biology = STEM Cells and Social Justice - The New School
• General Chemistry = Toxic Chemicals and Human Health - Hamilton College
• Environmental Science = Brownfield Action (a team-based toxic site clean-up simulation - Barnard College (now taught at Lafayette College, Connecticut College, George State College, and many more institutions).
SENCER IS A “COMMUNITY OF TRANSFORMATION” IN THE REFORM OF STEM EDUCATION

SENCER Transforms Faculty

Through professional development programs and support for curriculum re-design

Through national networks of practitioners (meeting of regional SENCER directors)
SENCER transforms Students

Through team-based projects

Through technology and simulations

This screencast demo highlights the key features of the Brownfield Action simulation and also serves as an introduction to navigating its interface.

View the Introduction Video for information on its use in Dr. Peter Bower’s Introduction to Environmental Studies course at Barnard College.

View the Teaching and Learning section of the website for information on how to incorporate the Brc simulation into other courses.
SENCER transforms Students

Through field work

Through presentations of their research to the public
SENCER Transforms Communities

Through community-based research

Through collaborations with local governmental and non-governmental organizations
SENCER Transforms Institutions

A SENCER-based Great Lakes stewardship strategy:

GLISTEN

(Great Lakes Innovative Stewardship Through Education Network)
SENCER Transforms Systems of Higher Education

SENCER Hawaii team receiving recognition from Congressman on Capitol Hill
SENCER Fosters Embodied Learning for All.

SENCER approaches regard the learning environment as both conceptual and physical “civic space” that conveys and establishes the “pathways” for learning and knowledge production.

SENCER approaches reflect an understanding of how the physical environment shapes the relationships, hierarchies, roles, and responsibilities of the learner.
Conversation with Colleagues

James Goblirsch
Felix Kronenberg
David Reid
PROCESS Logo
FUTURE Logo
Change agents have a talent for speaking differently rather than for arguing well. …to produce second-order change… requires a strong alternative schema, presented clearly and persistently.

Karl E. Weick and Robert E. Quinn, Organizational Change and Development. Annu. Rev. Psychol. 1999.
peace
PARTICIPANTS

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