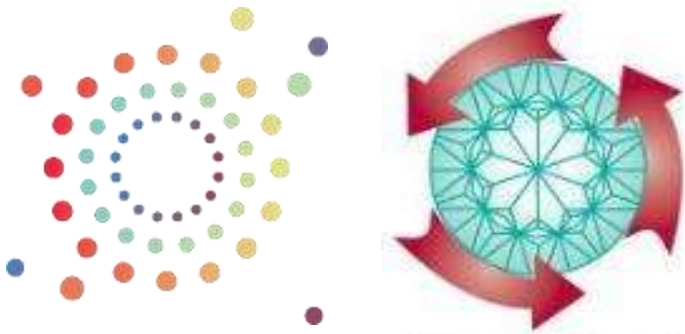


USER—21st Century Learners

Learning Spaces Collaboratory Webinar



DECEMBER 4, 2017



Moderator

Jeanne L. Narum – LSC

Facilitators

James Goblirsch
Principal – HGA Architects and Engineers

Felix Kronenberg
Associate Professor, Modern Languages and Literatures and
Director, Language Learning Center – Rhodes College

David Reid
Principal – Gould Evans

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

Facilitators



James Goblirsch
Principal – HGA
Architects and
Engineers



Felix Kronenberg
Associate Professor,
Modern Languages and
Literatures and Director,
Language Learning
Center – Rhodes College

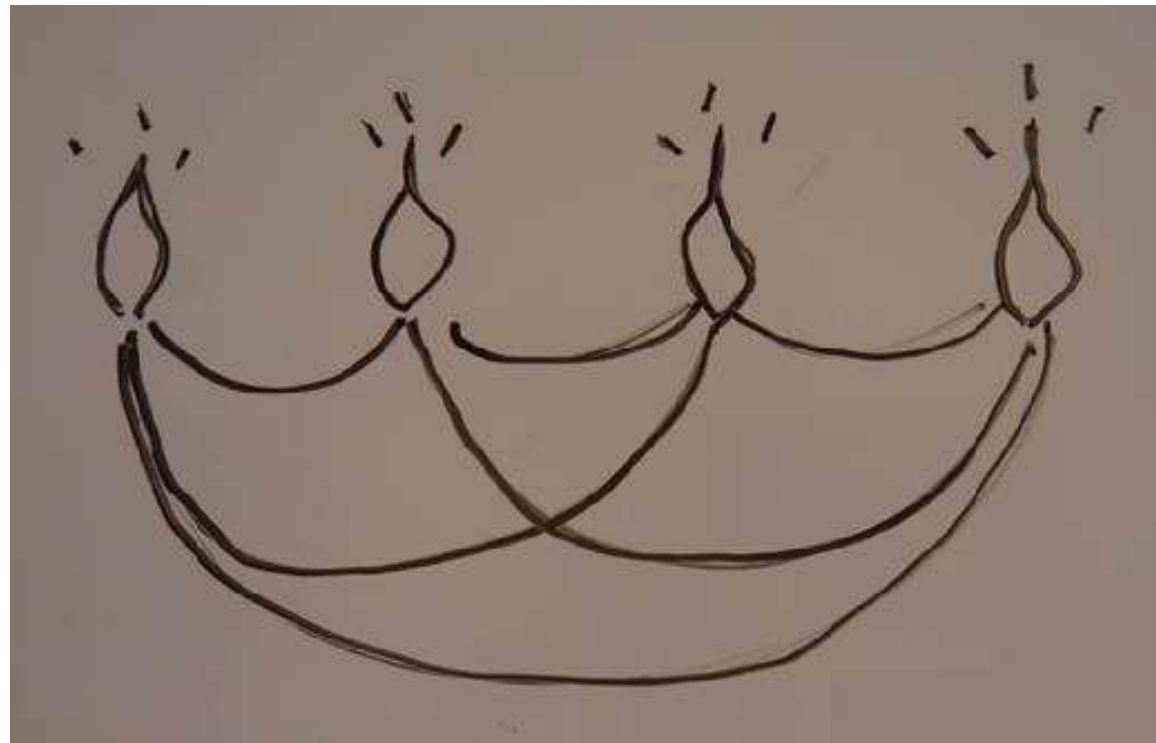


David Reid
Principal—Gould
Evans



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

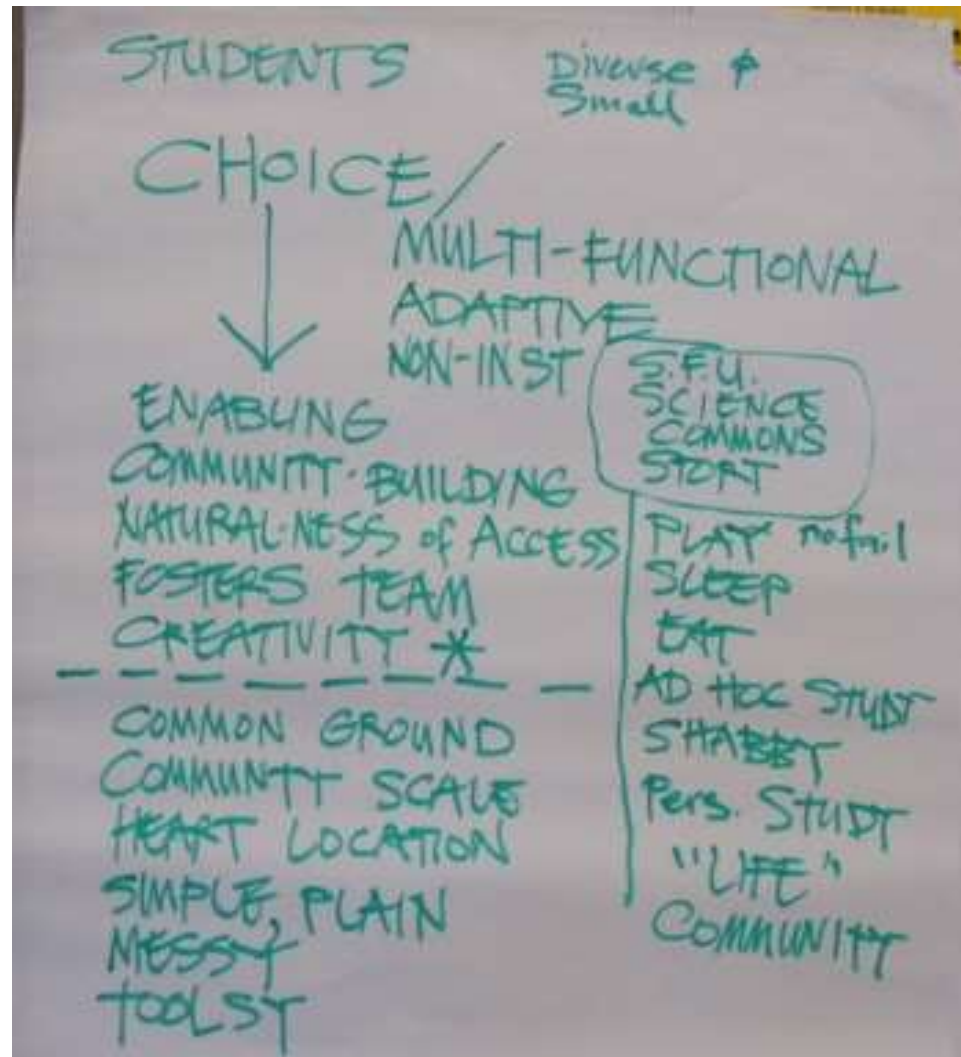
What do we want our users to become?

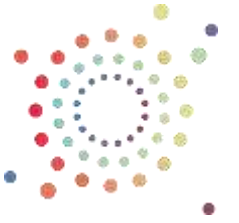


The LSC Guide: Planning for Assessing 21st Century Spaces for 21st Century Learners

<http://www.pkallsc.org/basic-page/lsc-guide-planning-assessing-21st-century-spaces-21st-century-learners>

What might choice architecture be?



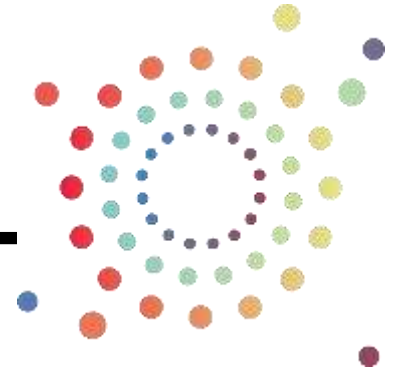


Learning Goals

- 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?

James Goblirsch



Principal – HGA
Architects and Engineers

Collab rooms →
neighborhood
hubs –
community

disciplinary

commons.
open or closed
door?
department home.

IDENTITY

Faculty
Students

OFFICE

Not
an
OFFICE
Building

Convergence

Cross
Fertilization

Blurred
Boundaries

PRACTICAL
ADVANCE

Semantics
of
Boundaries

Can
Platforms
be
Engineered?

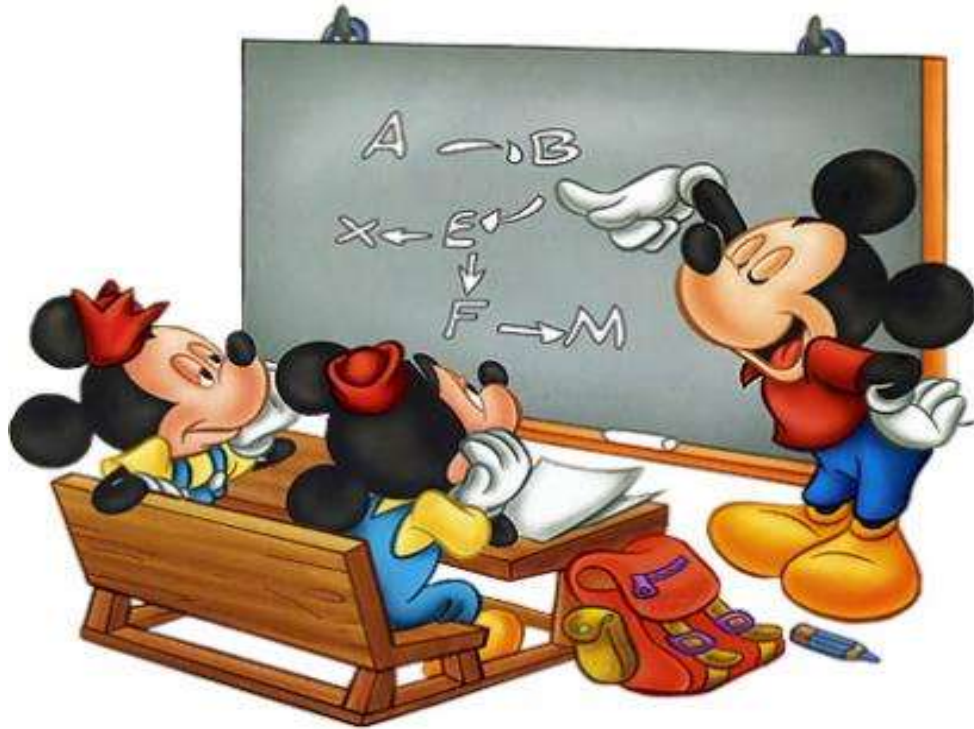
South
commons as
interaction
zone

Open door
culture-
faculty

Movement of
goods/material
efficient.

What keeps me up at night?

Felix Kronenberg



Associate Professor, Modern
Languages and Literatures and
Director, Language Learning
Center – Rhodes College

Eliza Reilly



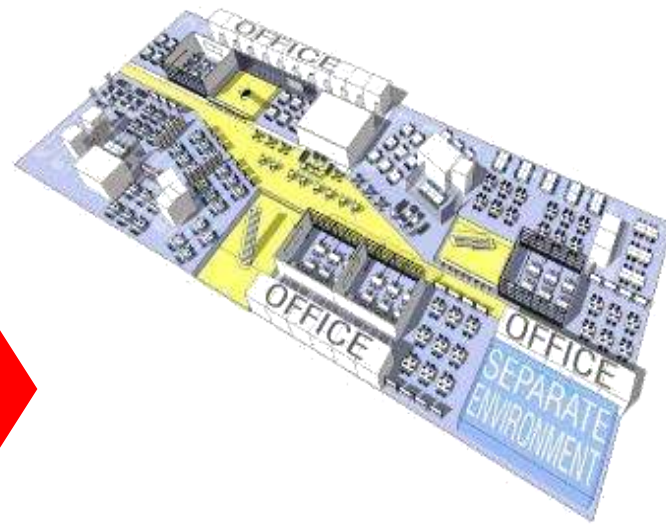
Executive Director – National Center for
Science and Civic Engagement and
Research Professor, Department of
Technology and Society – Stony Brook
University

David Reid

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.

— Christopher Alexander. *The Timeless Way of Building*. Oxford University Press, 1979.

James Goblirsch



Designing for 21st Century
Communities of Learners

Principal – HGA Architects and Engineers

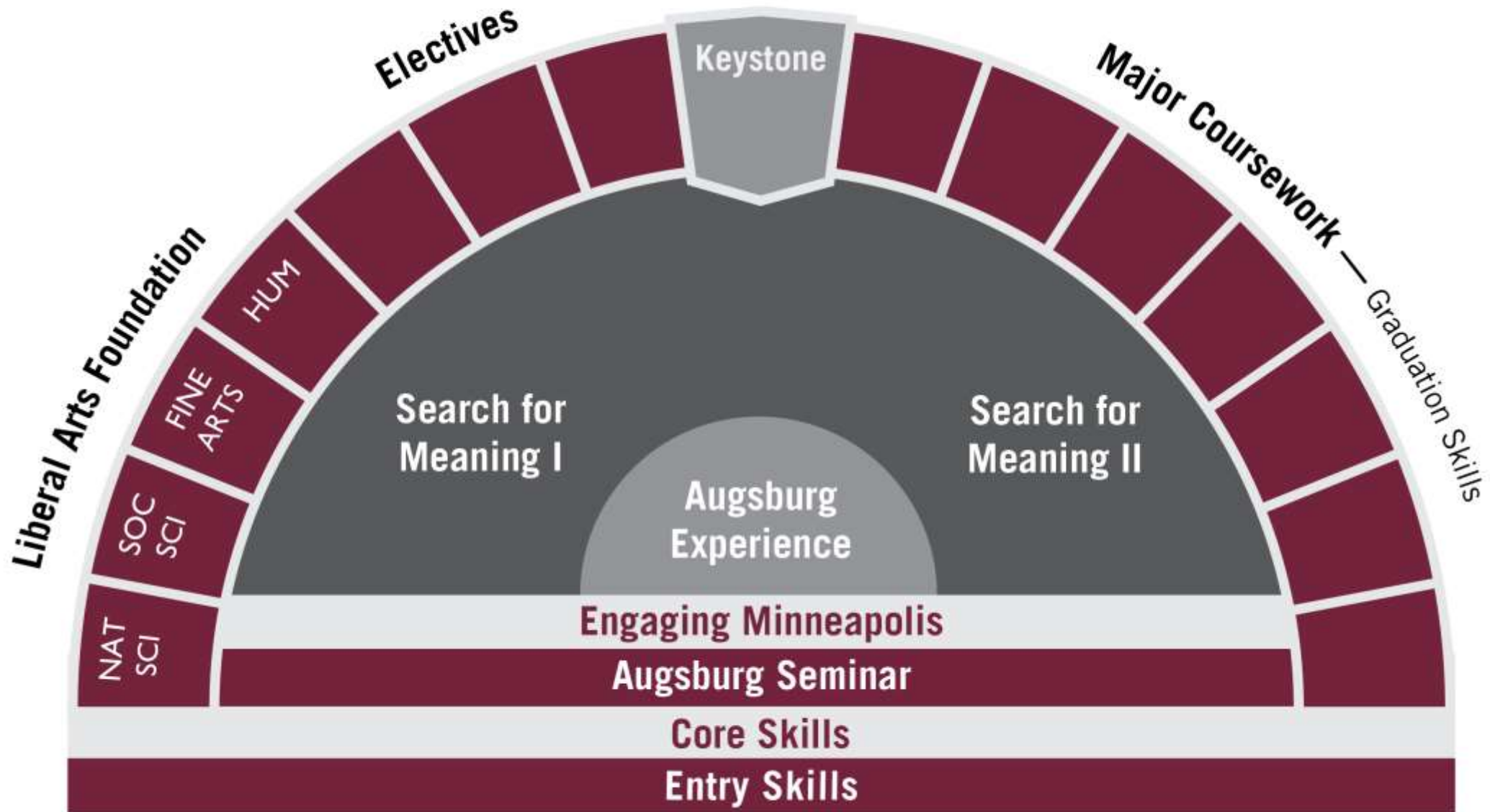
Designing for the 21st Century Learner



Hagfors Center for Science, Business and Religion

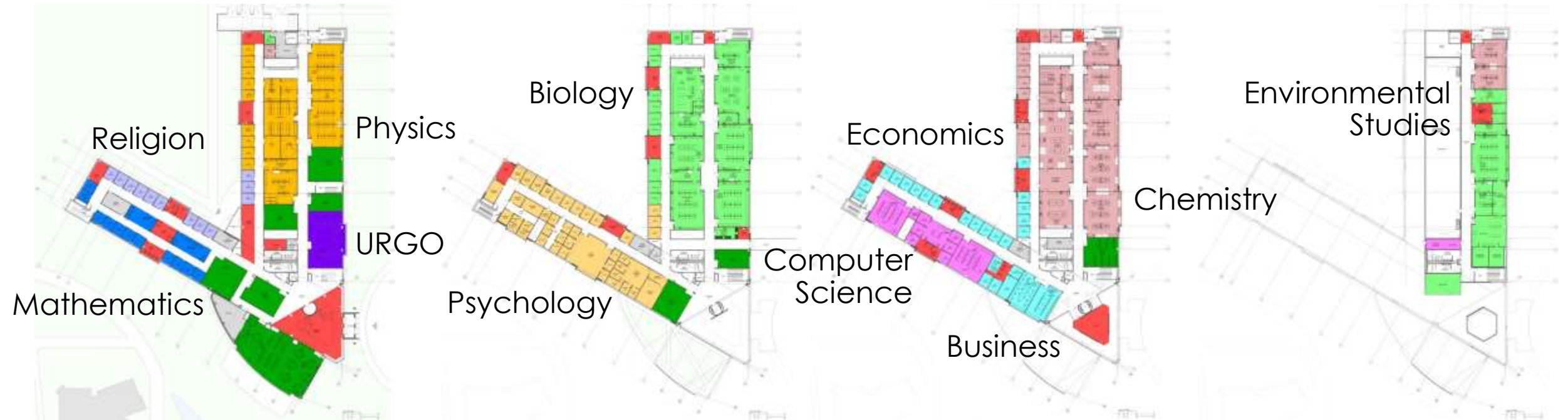
AUGSBURG
UNIVERSITY

AUGSBURG CORE CURRICULUM



If we are to solve the big problems facing our world, we need to engage in a scientific, economic and ethical dialogue.

multi-disciplinary



“engage in a scientific, economic and ethical dialogue”

measure liturgy
verify chemistry
ut liturgica
join shapes
separate systems
diagnose theory
consider data
interview dogma
negotiate biology
know commerce
borrow divinity
force thought
sense growth
gather weight
loan individuality
validate circulation
know commerce
store habitat
permit heredity
utilize surface
confiscate tension
probe force
assess suspension
hear volumes
deliberate fact
promote psychology
consider statistics
test values
ce
er
cc
cc
ti
le
de
C
promote function

multi-disciplinary

distill bias

blend missions

build heredity

consider vectors

gather kinesics

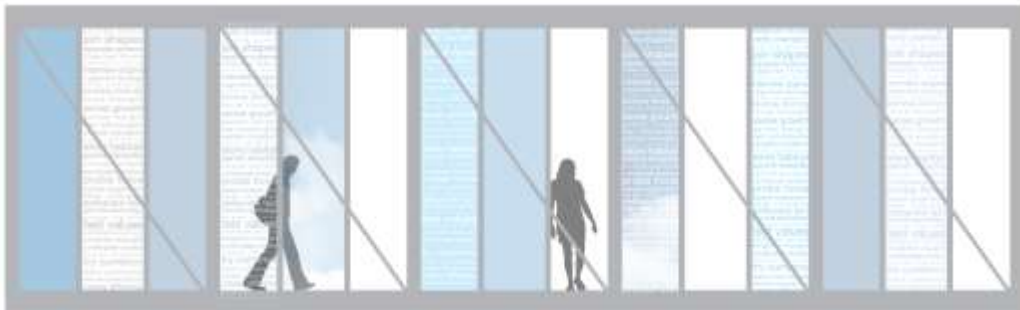
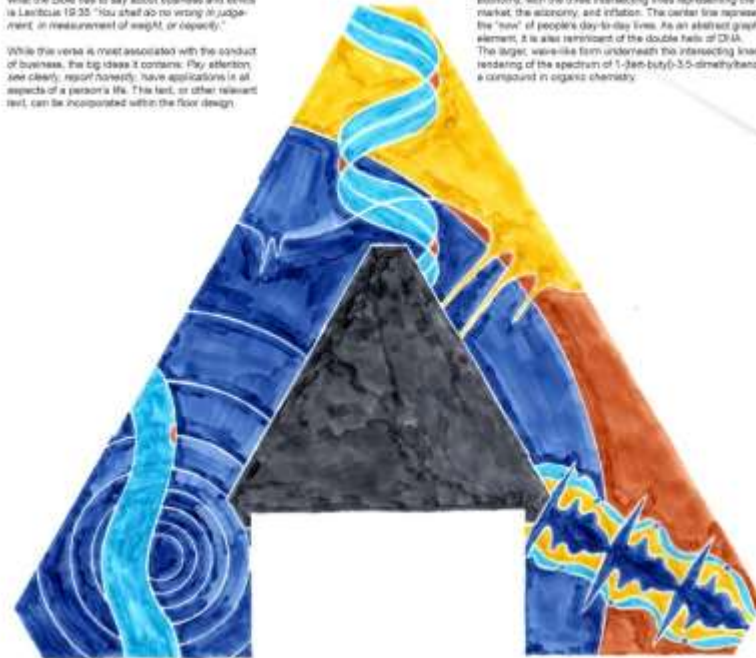
blend hypotheses



A verse which caught our attention when looking at what the Bible has to say about business and ethics is Leviticus 19:35 "You shall do no wrong in judgment, in measurement of weight, or quantity."

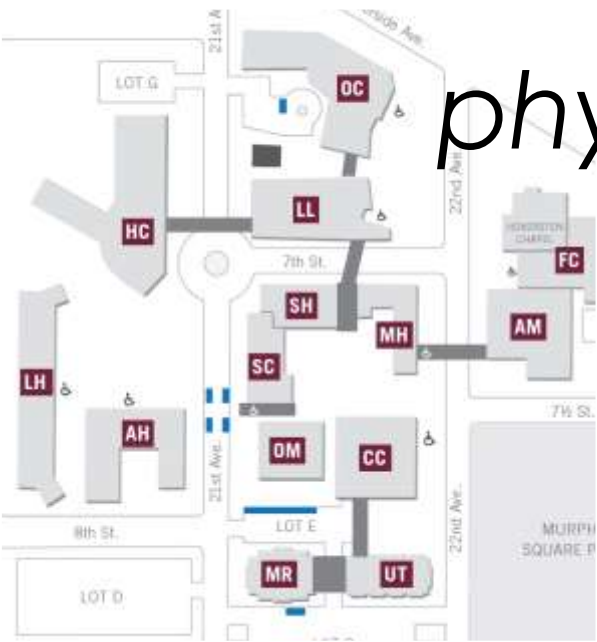
While this verse is most associated with the conduct of business, the big ideas it contains: Play attention, see clearly, report honestly, have aspirations in all aspects of a person's life. This text, or other relevant text, can be incorporated within the floor design.

This imagery is drawn from a chart representing cycles of the economy, with the three intersecting lines representing the market, the economy, and inflation. The center line represents the "pulse" of people's day-to-day lives. As an abstract graphic element, it is also reminiscent of the double helix of DNA. The zigzag, wave-like form underneath the intersecting lines is a rendering of the spectrum of 1,2-an-buty-3,5-dimethylbenzene, a compound in organic chemistry.



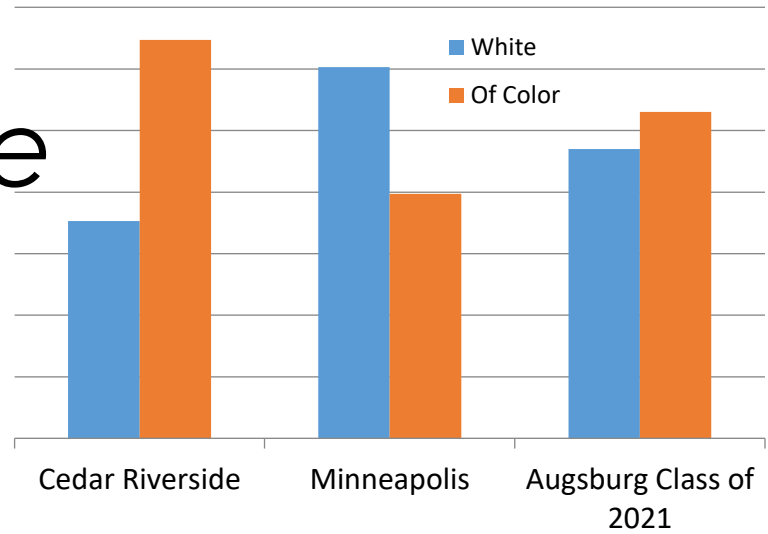


multi-cultural



physical

culture

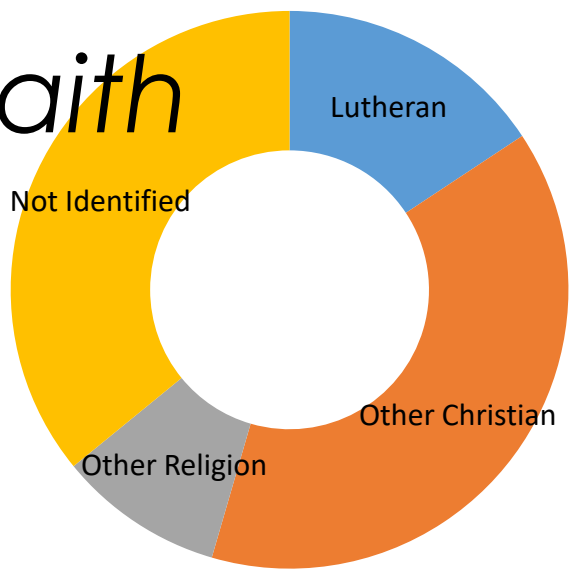


gender

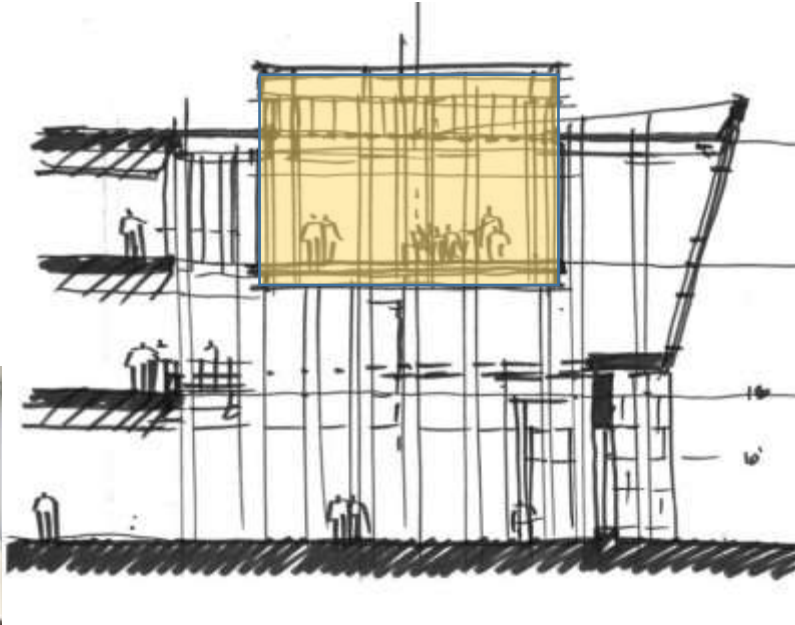


? cognitive

faith



multi-cultural



An aerial photograph of the Cedar-Riverside neighborhood in Minneapolis. A prominent yellow and red diagonal line runs from the top left towards the bottom right, likely representing a city boundary or a specific project area. The neighborhood features a mix of residential buildings, green spaces, and a large industrial-style building in the center. The text 'community-minded' is overlaid in the top left corner.

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

City Park

Community Gardens

20th Avenue S.



community-minded



Conversation with Colleagues



Felix Kronenberg



David Reid



Eliza Reilly

Felix Kronenberg

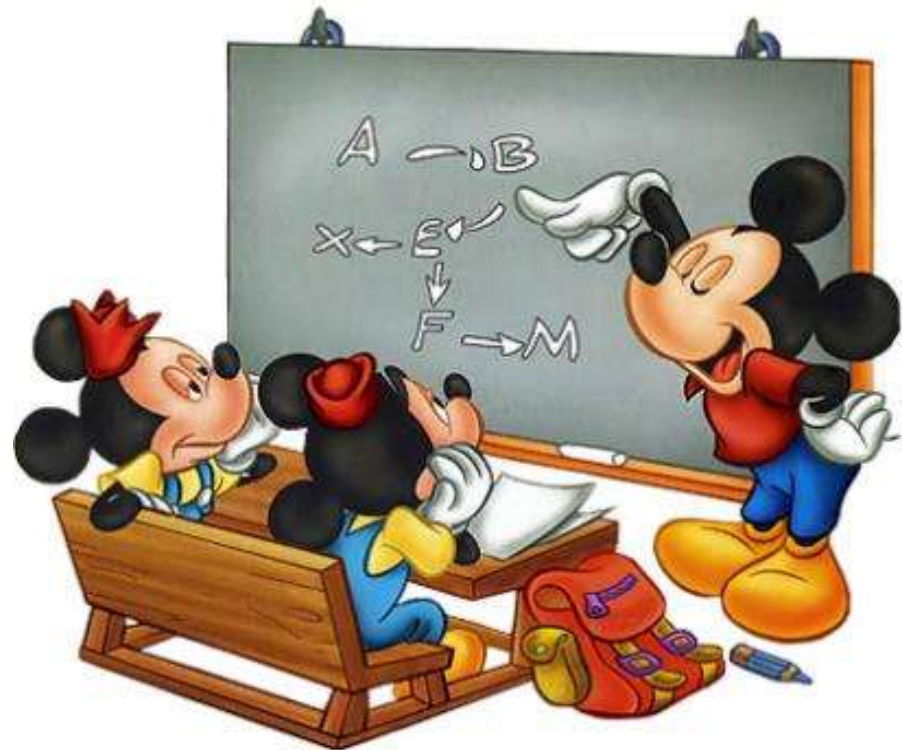


Normalizing Learning
Spaces for 21st
Century Learners

Associate Professor, Modern Languages
and Literatures and Director, Language
Learning Center – Rhodes College.
President-Elect, International Association
for Language Learning Technology









Waldklassenzimmer

Interesse?
Informationen bekommen
Sie bei uns!

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Tel: 03641/202300
www.fuerst-wald.de



Waldlehrpfad
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 Forstamt
Taubensuhl











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

This wireless language lab is portable...reliable...expandable...and affordable!



Only the MORI-COM language laboratory offers all of these advantages:

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- **Portable:** lightweight system takes up less space, can be stored in secure cabinet between classes or moved to other rooms.
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Conversation with Colleagues



James Goblirsch



David Reid



Eliza Reilly

David Reid



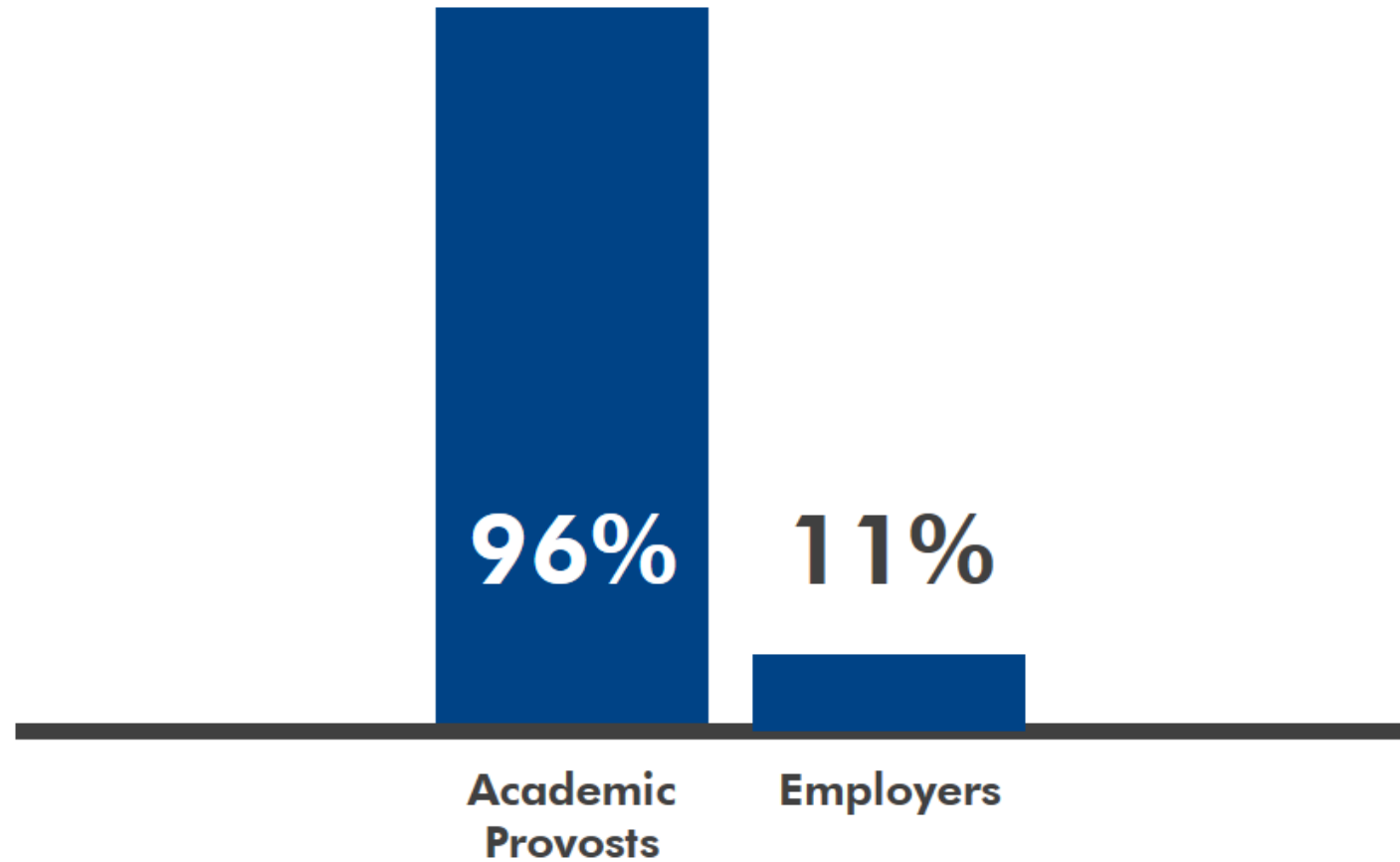
How do we bring
workplace mindsets into
the educational setting?

Principal – Gould Evans



**Missouri Innovation Campus:
The Convergence of Education and Work**

THE BIG DISCONNECT



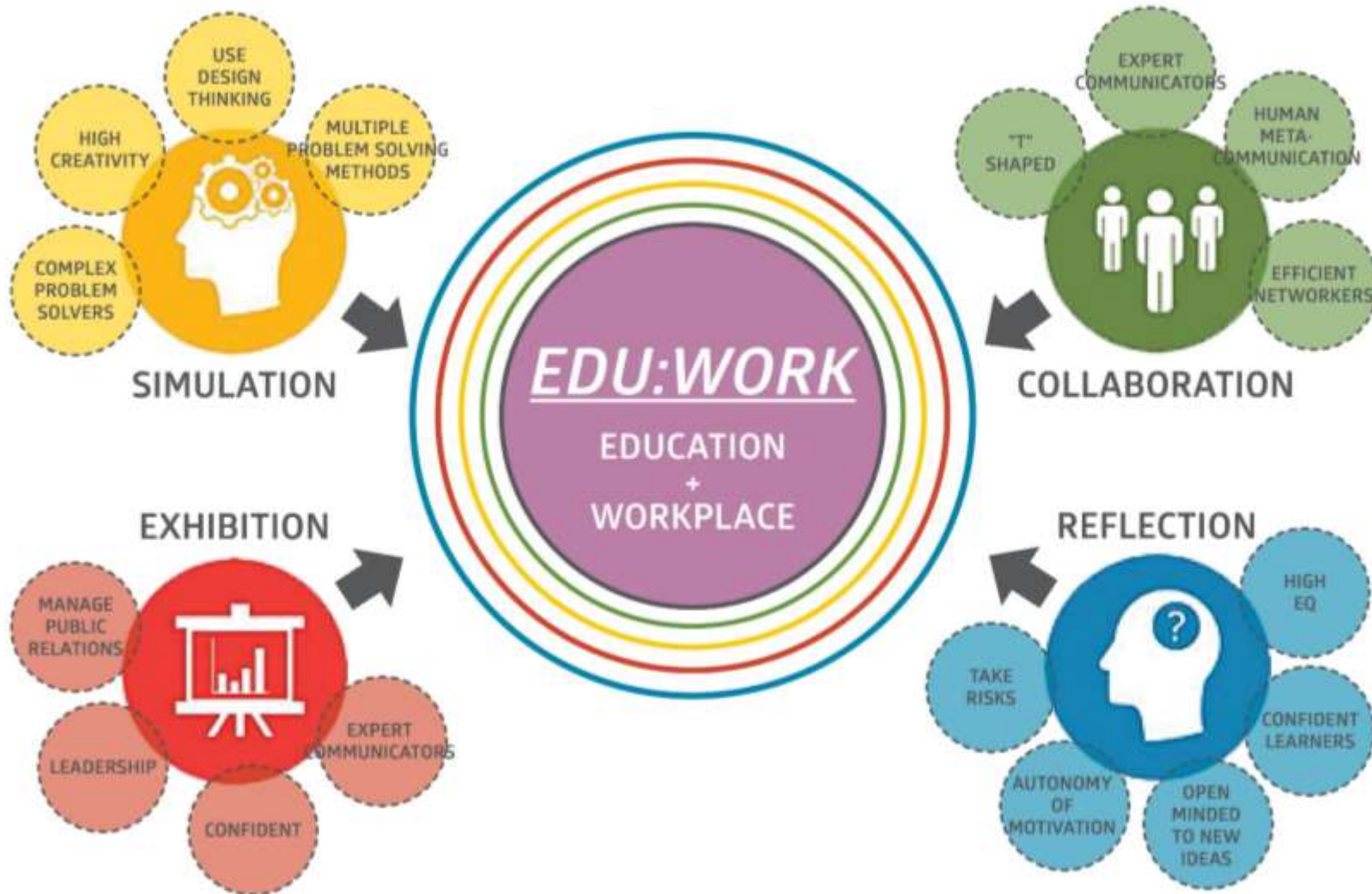
“Do you believe colleges are effectively preparing students for the workplace?”

Source: Inside Higher Ed survey, 2014

gouldevans

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*

CONVERSATIONS WITH BUSINESS PARTNERS

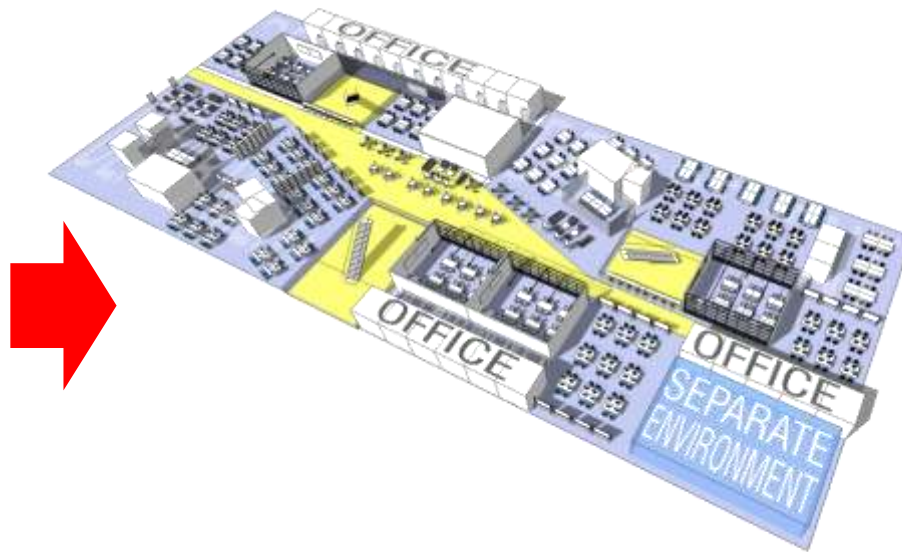
1. **Speed: work is high speed, education is not**
2. **Collaboration: it's just missing**
3. **Leadership of teams**
4. **Multidisciplinary mindsets** – It's important to understand how all processes and roles are critical to one another
5. **How to work / where to work** – Students need to learn how 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

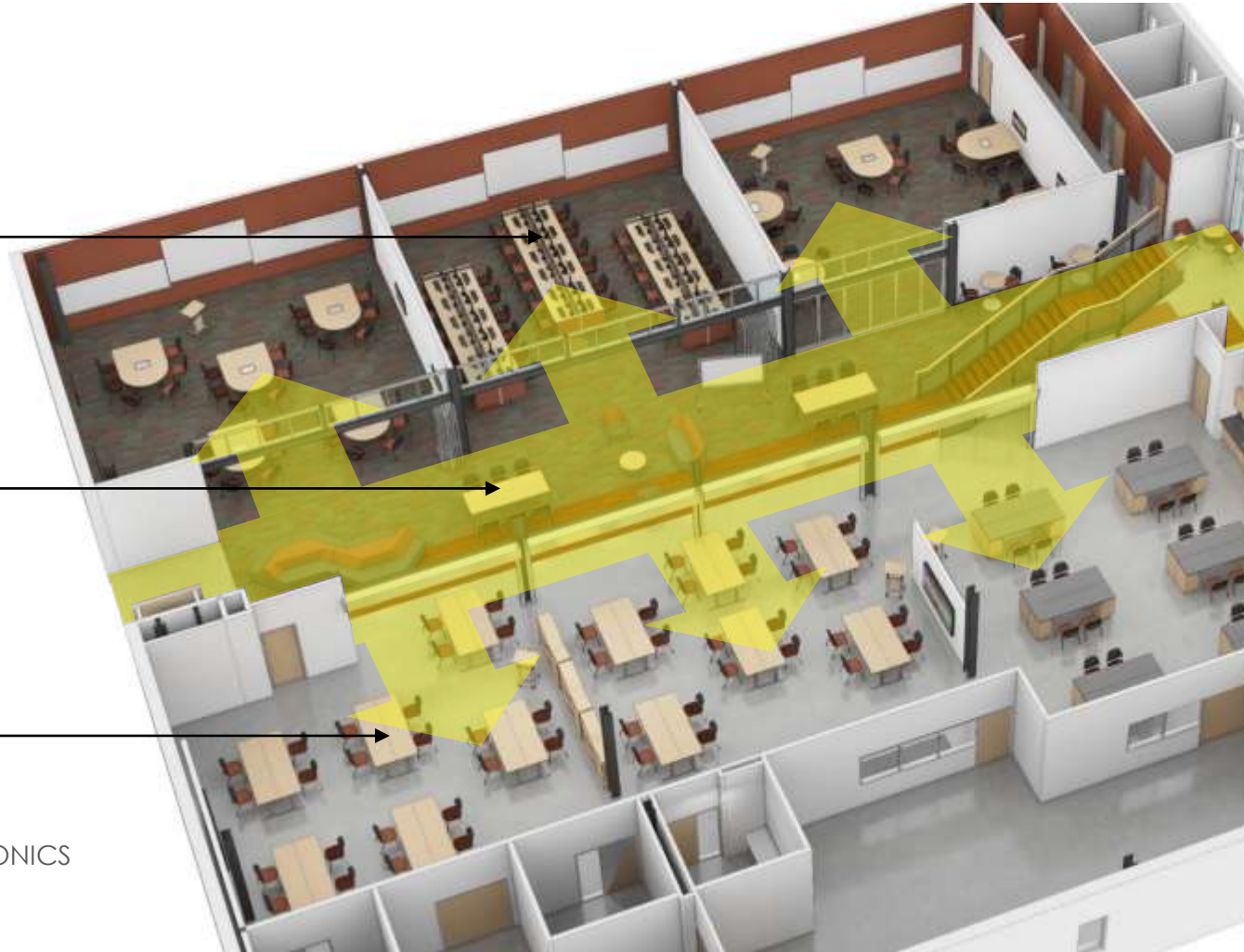
HOW DO WE PROMOTE WORKPLACE MINDSETS IN THE EDUCATION SETTING?

LEARNING
STUDIOS
(SHARED)

IDEATION
COMMONS

LABS
(DEDICATED)

- CIM
- DIGITAL ELECTRONICS
- ENGINEERING



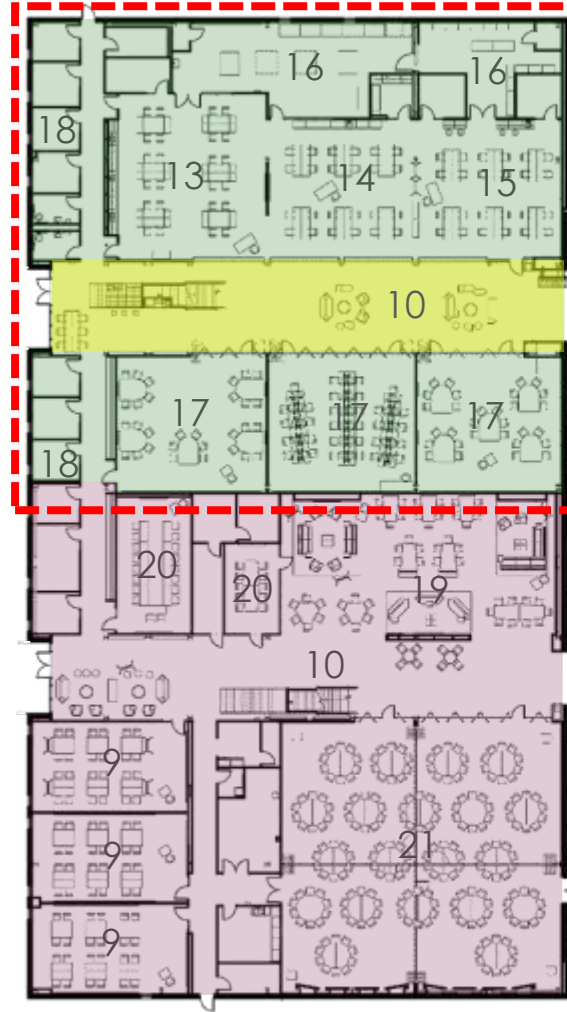
Images: courtesy of D-School, Stanford

MISSOURI INNOVATION CAMPUS: GROUND FLOOR

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

ENGINEERING DESIGN & DRAFTING



GENERAL-USE/CONF. CENTER

HEALTH SCIENCE



ADMINISTRATIVE

HOW DO WE PROMOTE CROSS-POLLINATION ACROSS DEPARTMENTS?



"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

gouldevans

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

gouldevans

HOW DO WE TEACH ENTREPRENEURIALISM?



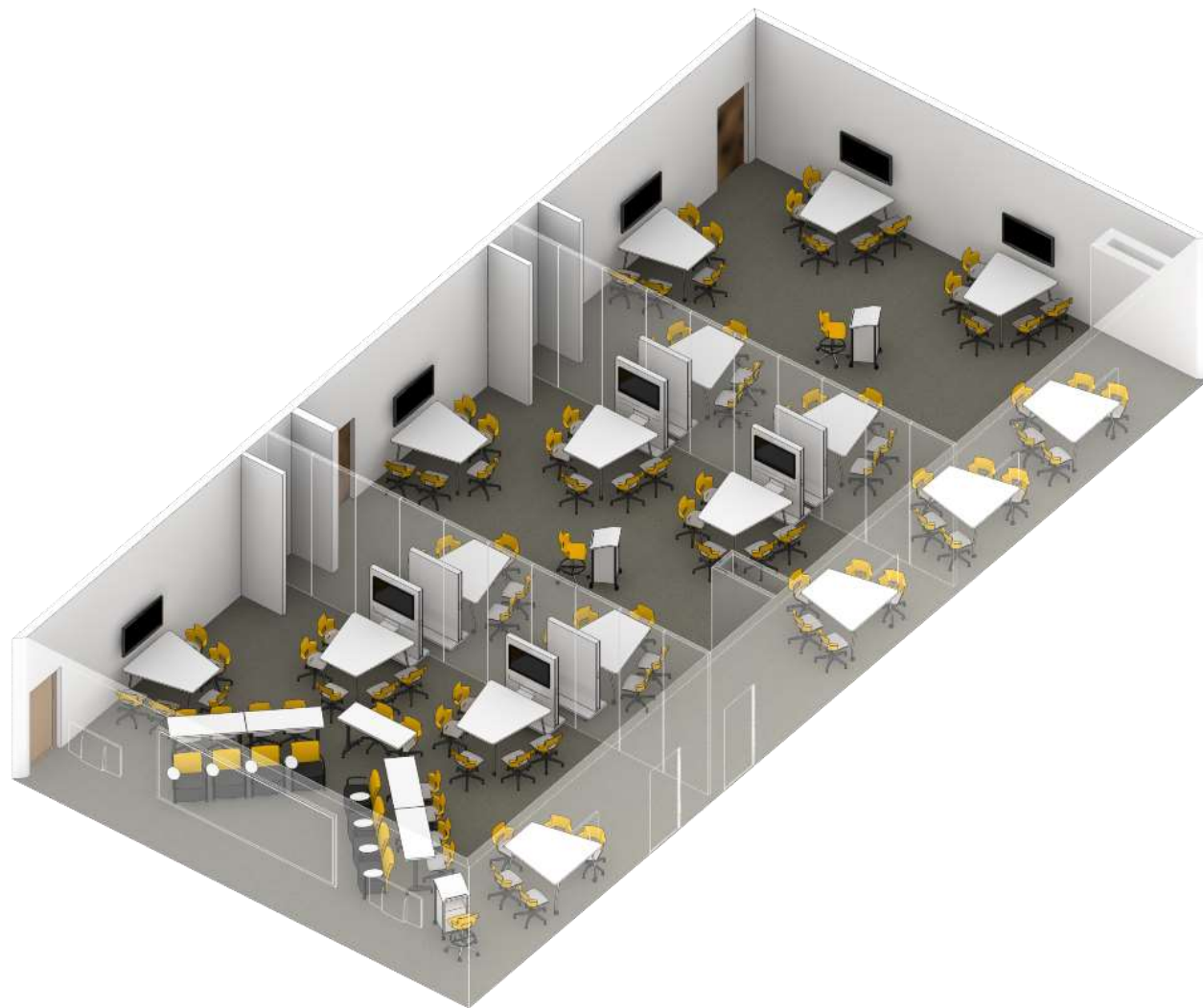
“Compared to the old building, it's just insane how much more collaborative and innovative this new building is!”

- Logan, Student



gouldevans

HOW DO WE HELP FACULTY TRANSITION TO NEW TEACHING ENVIRONMENTS?



HOW DO WE PROMOTE RISK-TAKING AMONG FACULTY?



“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.”

THE FACULTY AS USERS



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 requires more responsive spaces.
- The planning and funding of today's faculty workplaces must align with the profile 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 experiences of students and engage in multiple activities during a given day. While much in the education landscape has evolved, the faculty workplace is largely stuck in the past. At many institutions, offices look a lot like they did in the 1940s, with a traditional desk and bookcase-lined 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

THE FACULTY AS USERS

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?

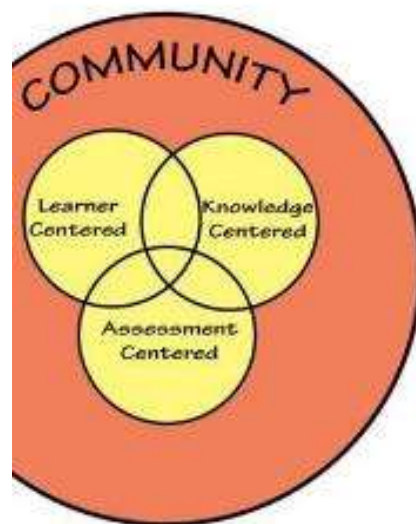
Big Questions

- How does SENCER disrupt or transform the “normalized” approach to STEM teaching?

SENCER is an evidence-based approach to learning.

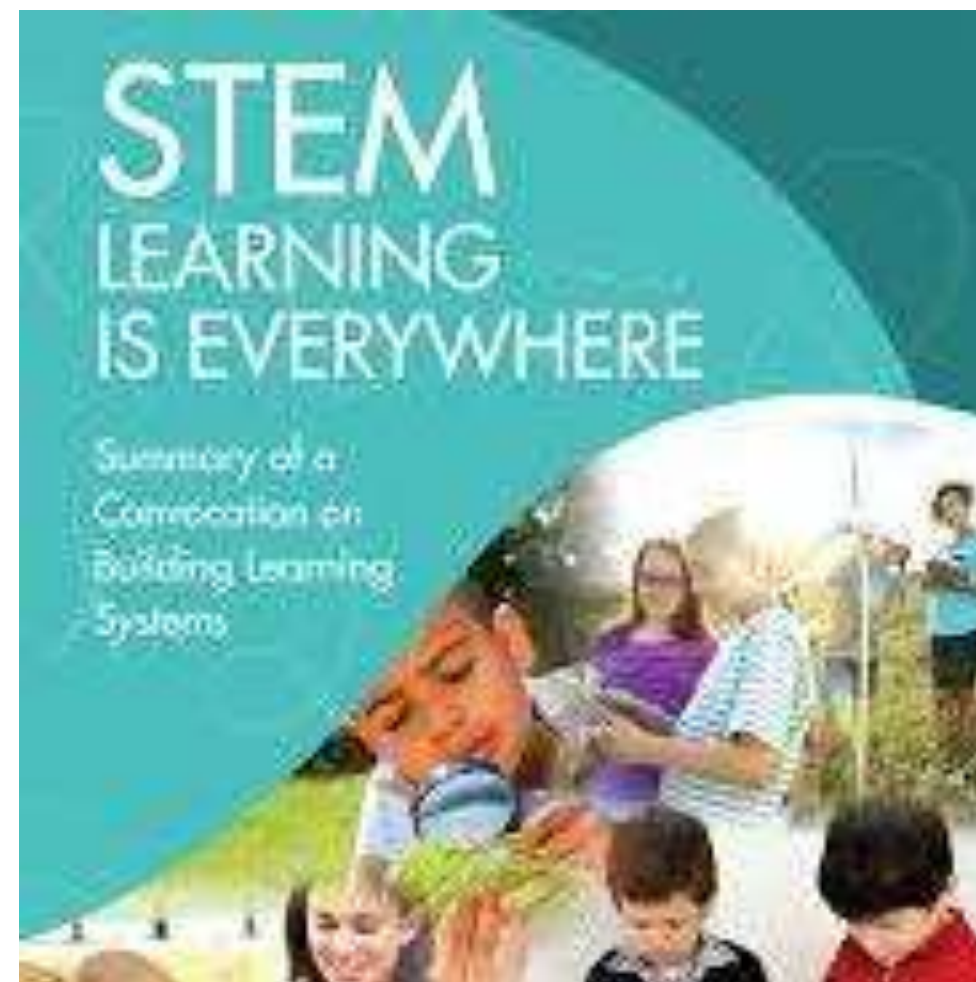
How People Learn (HPL)

HPL Framework

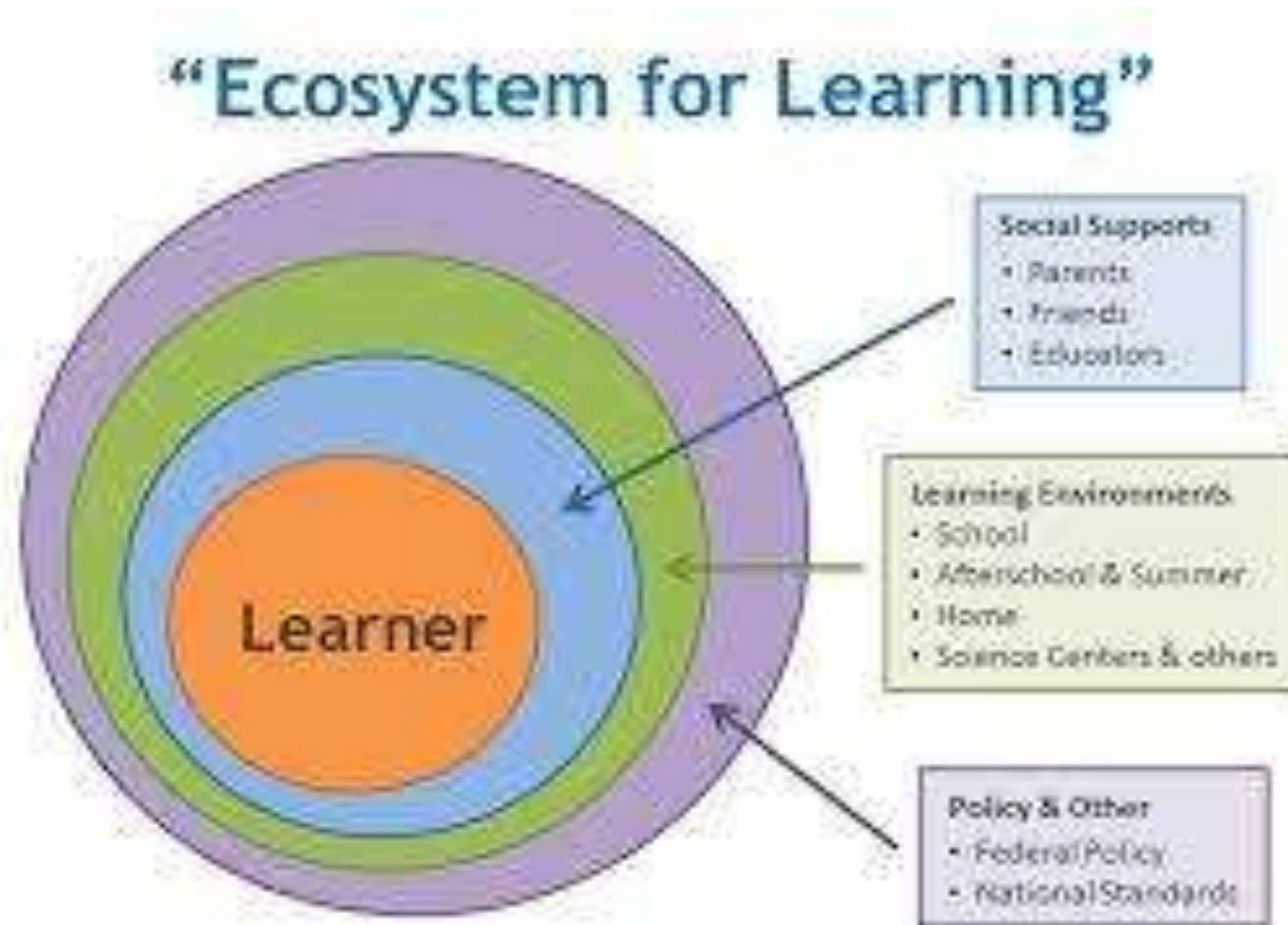


- Expertise Implies (Ch. 2)
 - a set of cognitive and metacognitive skills
 - an organized body of knowledge that is deep and contextualized
 - an ability to notice patterns and information in a new situation
 - flexibility in retrieving and applying that knowledge to a new problem

Lord, Brown & Cocking. 1999. *How¹⁰ people learn*. National Academy F



SENCER assumes that STEM Learning Takes place Everywhere, not just in a classroom.



SENCER starts
with learning
goals that go
beyond
disciplinary
content

SENCER
Courses
foster both
STEM
learning
AND 21st
Century
Civic Skills

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

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

<https://pullias.usc.edu/wp-content/uploads/2016/01/communities-of-trans.pdf>

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 Science curriculum at Barnard College.

View the [Teaching and Learning](#) section of this web site for information on how to incorporate the Brownfield Action 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)



2016 SENCER Summer Institute

Roosevelt University
Chicago, Illinois

July 28 - August 1, 2016



published September 10, 2012

West Point Launches Major Curricular Initiative: Puts SENCER Ideals in Action

- David Burns



I think it is safe to say that the team from the U.S. Military Academy (West Point) captured the attention, admiration, and affection of the SENCER community members who first met them at SSI 2011 at Butler. West Point trains cadets who face the most challenging of "unscripted problems" and, after various self study, had concluded that when considering its general education program, a "tested" approach had to yield in favor of a structure that was far more open-ended and

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

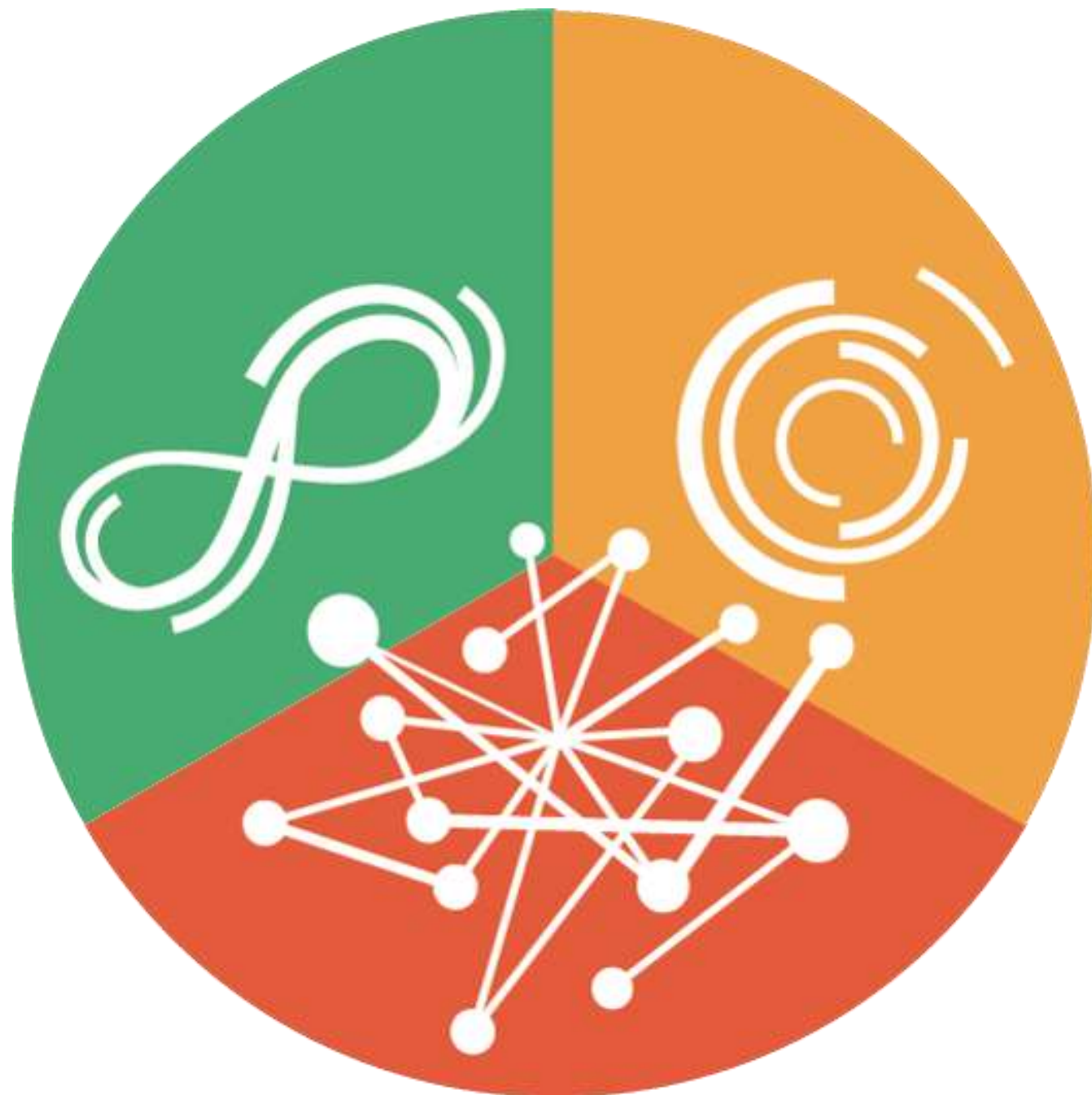


FUTURE Logo



USER Logo





CHANGE AGENT 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

Alexandria University - Egypt ■ Augsburg University ■ BCWH ■
Bentz/Thompson/Rietow, Inc ■ Bethel University ■ Brigham Young
University ■ Cal Poly SLO, Robert E. Kennedy Library ■ California State
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