chemistry education as the ‘binding energy’ for active learning

real learning not just the myth

Lennie Scott-Webber, PhD
Director Education Environments Globally

Steelcase
EDUCATION

”Empowering chemical educators to generate deep learning reactions "

”Empowering chemical educators to generate deep learning reactions "

”Empowering chemical educators to generate deep learning reactions "

”Empowering chemical educators to generate deep learning reactions "

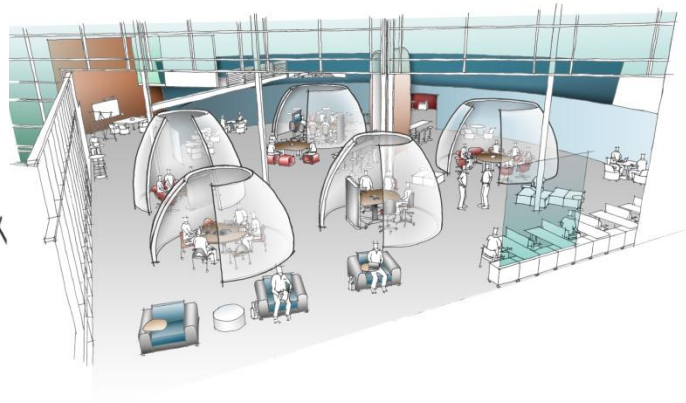
”Empowering chemical educators to generate deep learning reactions "

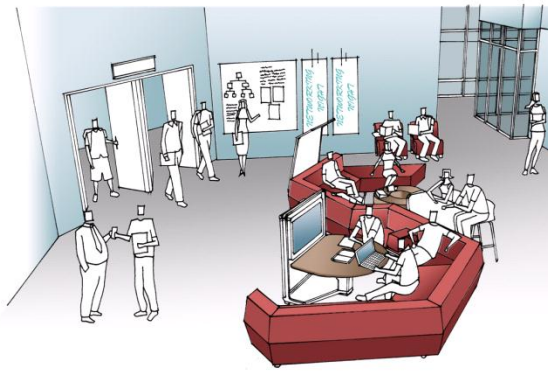
PARADIGM
NETWORKING
MOBILE
SHIFT
APP
WEB

STEELCASE EDUCATION

- SE is a dedicated group within Steelcase focused on developing evidence-based researched solutions for education environments
- focus on understanding behaviors in physical spaces
- Innovation in design, furniture, tools, and technologies for learning environments

OUR MISSION





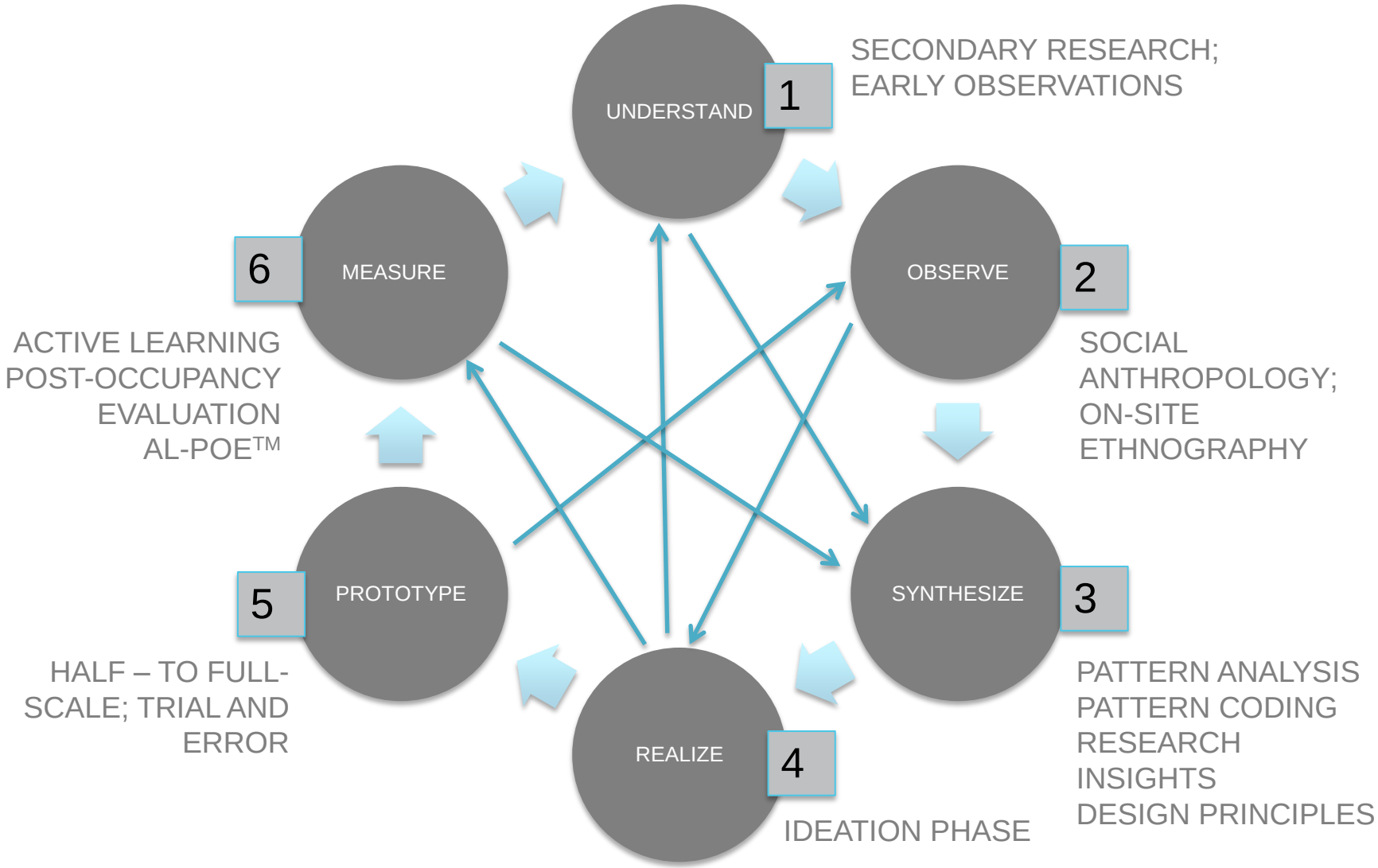
…help colleges and schools create the most effective, rewarding, and inspiring learning environments…

research

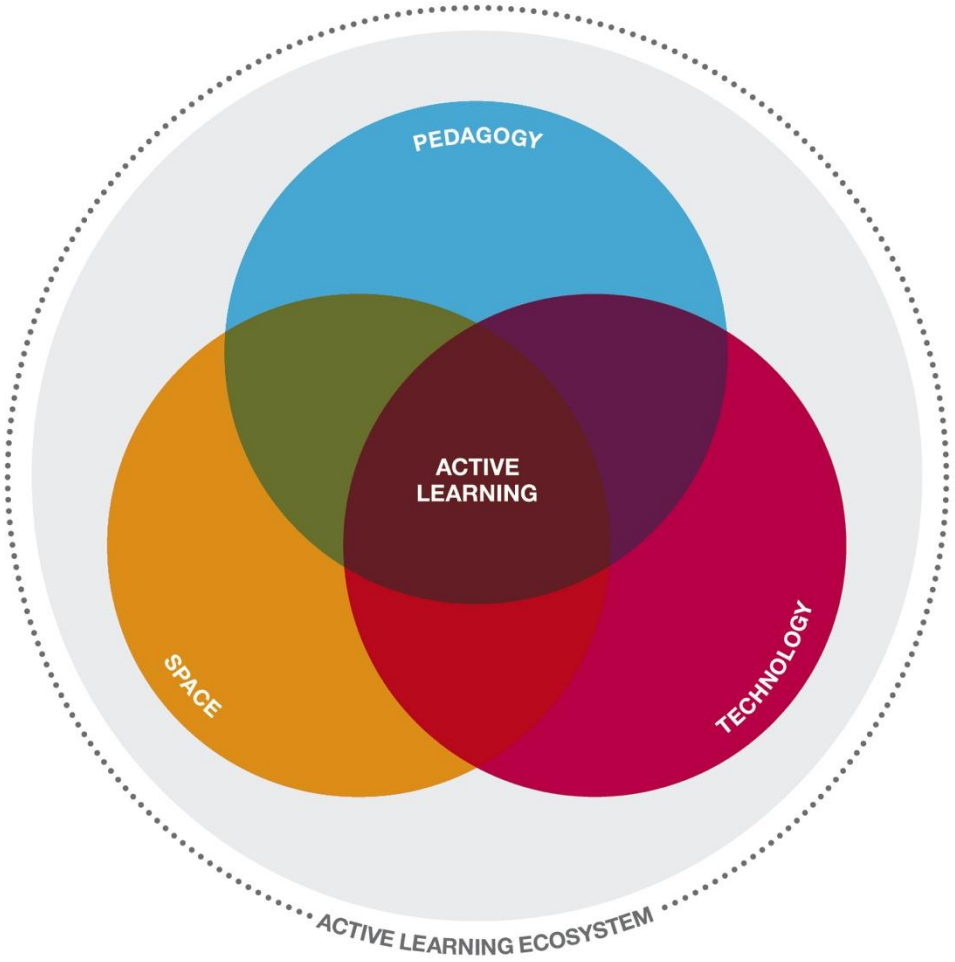
“When I pronounce the word ***future***, the first syllable already belongs to the past.”

-- Wislawa Szymborska

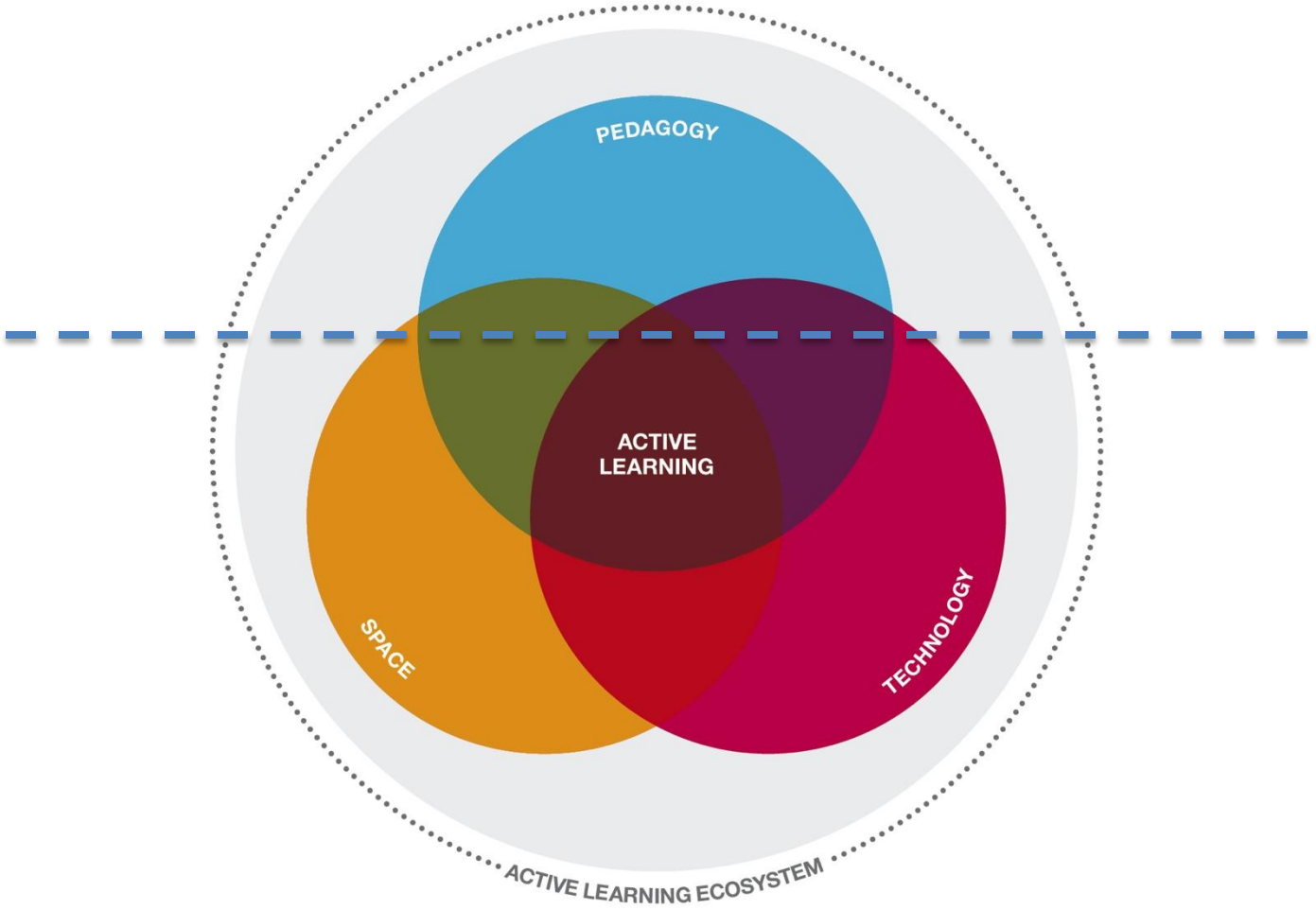
HUMAN-CENTERED / DESIGN THINKING RESEARCH PROCESS



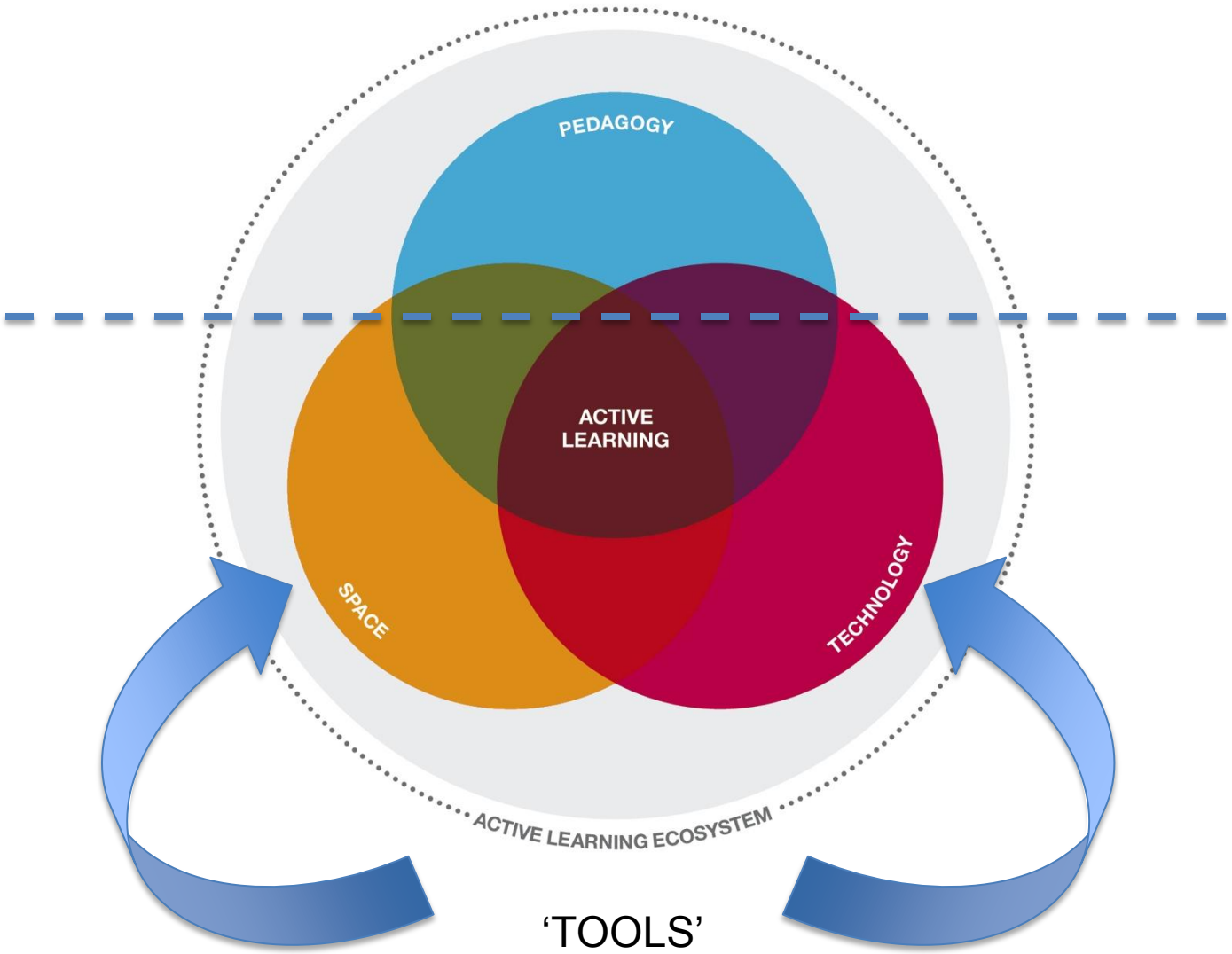
ACTIVE LEARNING ECOSYSTEM



ACTIVE LEARNING ECOSYSTEM



ACTIVE LEARNING ECOSYSTEM



'TOOLS'

content

=

just data

engagement

=

high student success predictor

engagement in context

=

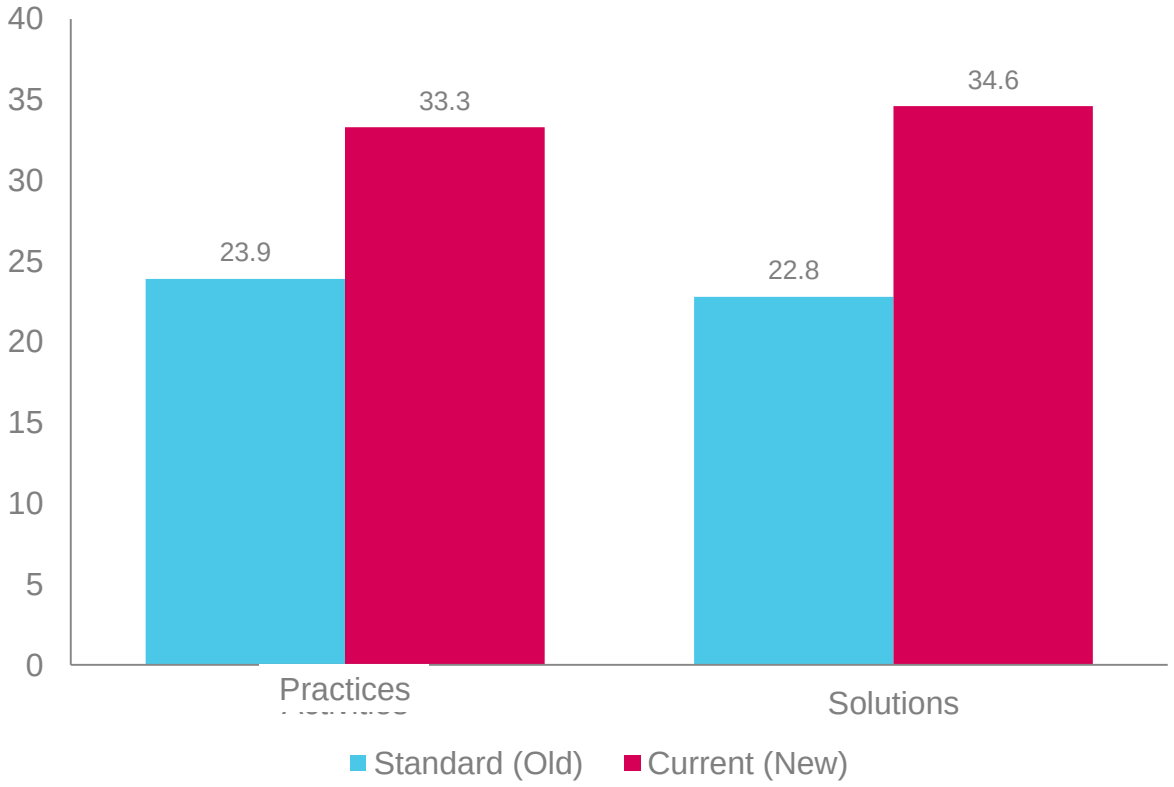
deep learning

Is space relevant?

YES! When Evidence-based design practices are employed.

AND when face-to-face experiences embrace engagement

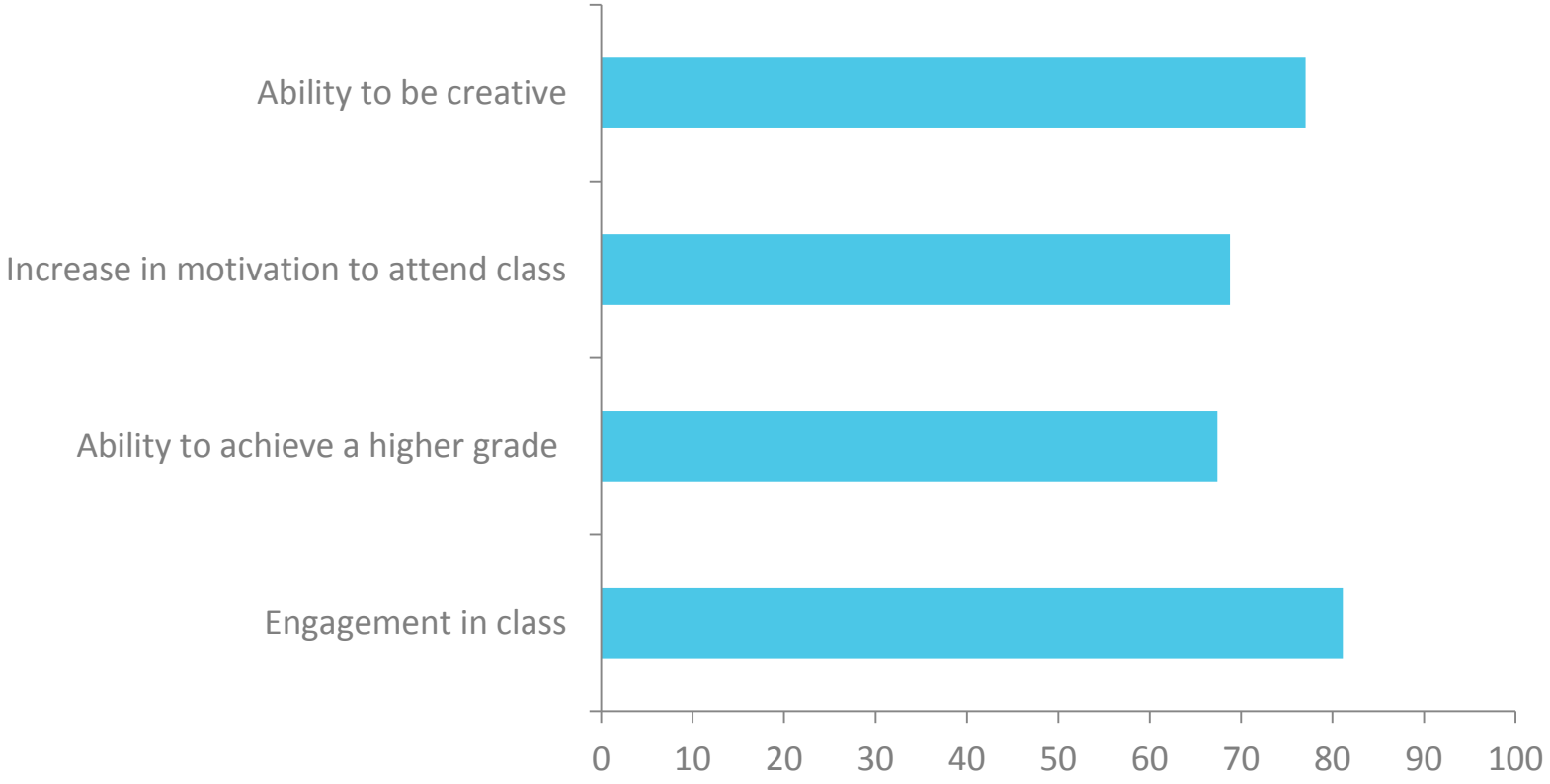
Student Survey Results



The difference between the mean composite standard and the mean composite current scores is *highly statistically significant for both sections using a paired t-test, p<0.001.*

PARTICIPANTS
n=278*

Student Survey Results



Percentage of students who attributed moderate to exceptional increase in factors in new classroom (rating of 3,4 or 5 on Likert scale)

SPACES AND PLACES - INSTITUTE-WIDE TASK FORCE ON THE FUTURE OF MIT EDUCATION — PRELIMINARY REPORT
Working Group 1. MIT Education and Facilities for the Future

ACTIVE LEARNING INCREASES STUDENT PERFORMANCE IN SCIENCE, ENGINEERING, AND MATHEMATICS
Scott Freemana,1, Sarah L. Eddya, Miles McDonougha, Michelle K. Smithb, Nnadozie Okoroafora, Hannah Jordta, and Mary Pat Wenderotha

BUILT ENVIRONMENTS IMPACT BEHAVIORS
RESULTS OF AN ACTIVE LEARNING POST-OCCUPANCY EVALUATION
by Lennie Scott-Webber, Aileen Strickland, and Laura Ring Kapitula

T.H.E. Journal
META-ANALYSIS: IS BLENDED LEARNING MOST EFFECTIVE?
By David Nagel 07/01/09

blended learning

- students learn in a supervised brick-and-mortar location away from home at least some of the time

- students experience online delivery with some control over the time, place, path, and/or pace

physical

virtual

a variety of blended learning models are emerging…

- face-to-face driver
- rotation
- flex
- online lab
- self-blend
- online driver

Source: Adapted from Classifying K-12 Blended Learning, Innosight Institute, 2011

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blended learning

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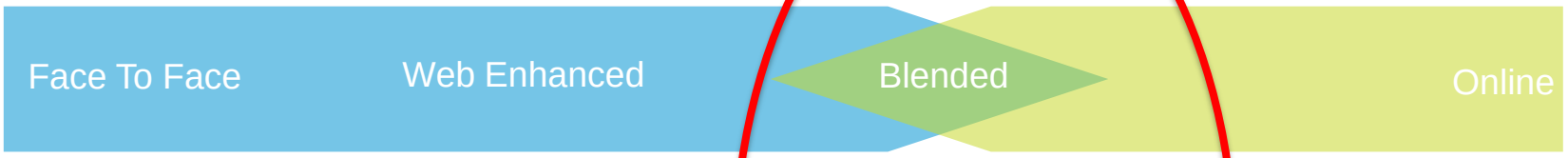
- students experience online delivery with some control over the time, place, path, and/or pace



physical virtual

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FLIP

Source: Adapted from Classifying K-12 Blended Learning, Innosight Institute, 2011

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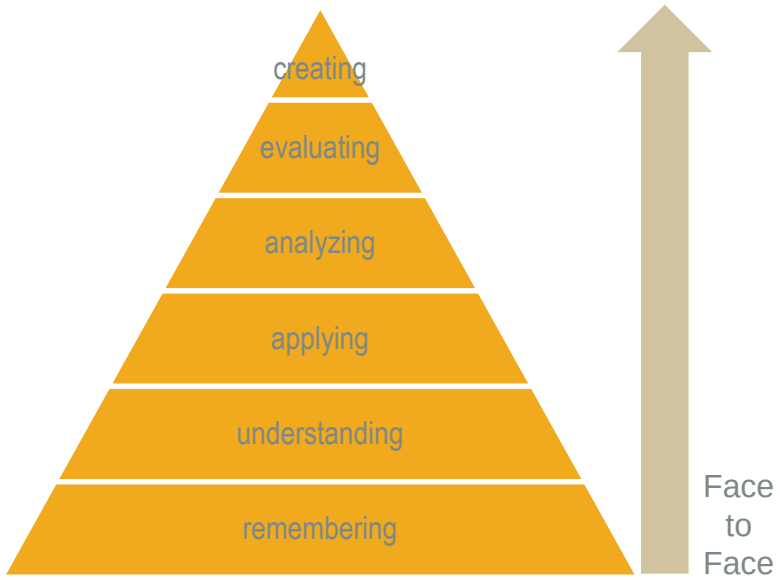
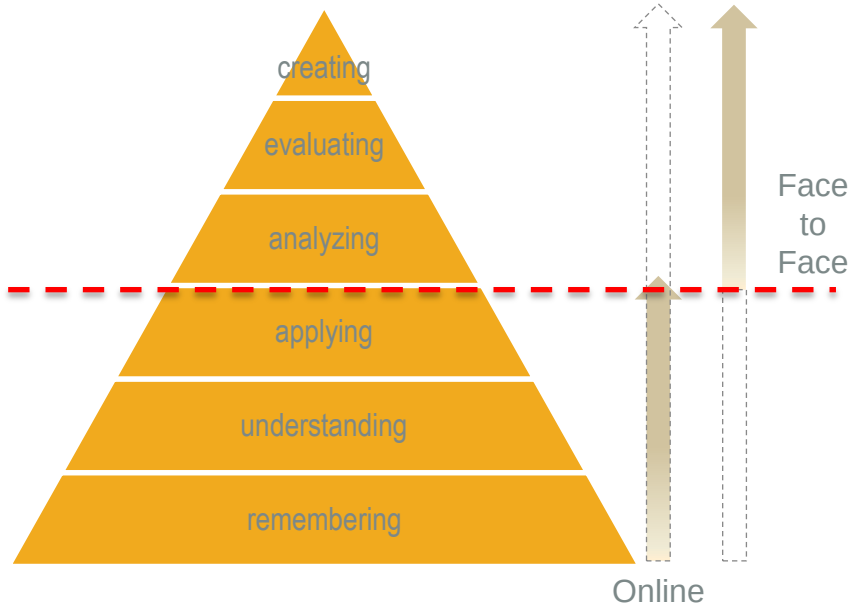
blended learning



traditional model



blended model

adaption of revised New Bloom's Taxonomy[8]

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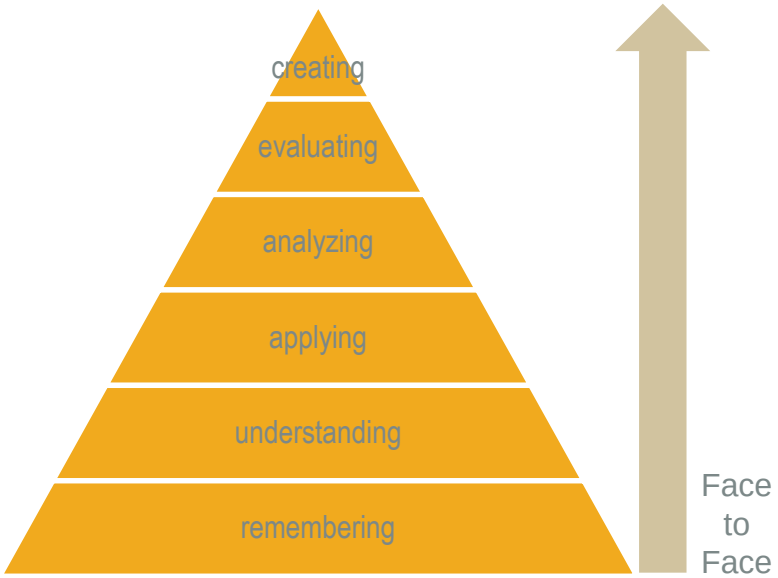
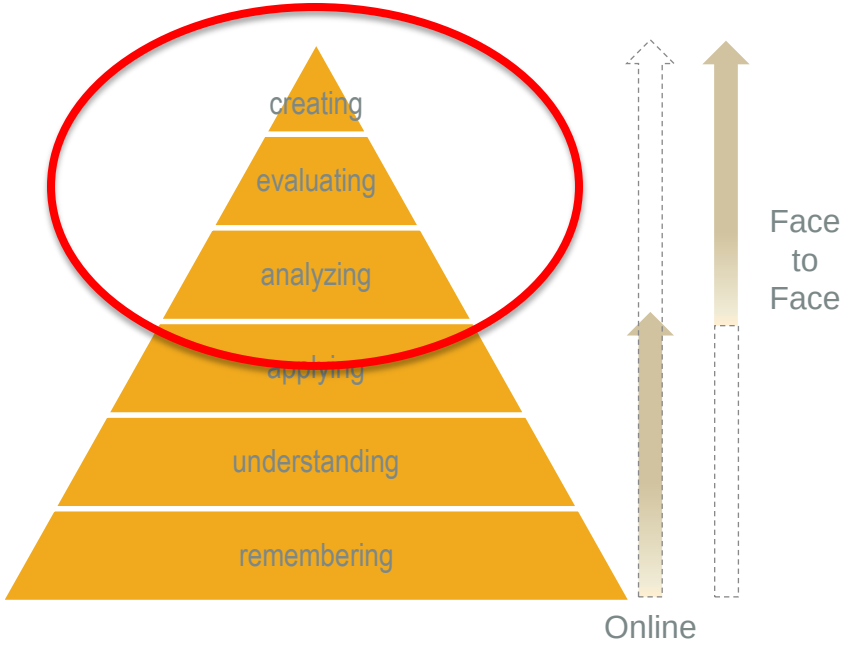
blended learning



traditional model



blended model

adaption of revised New Bloom's Taxonomy[8]

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From Passive to Active Learning - analogue & digital

learning preferences | learning research

V	A	K
visual	auditory	kinesthetic

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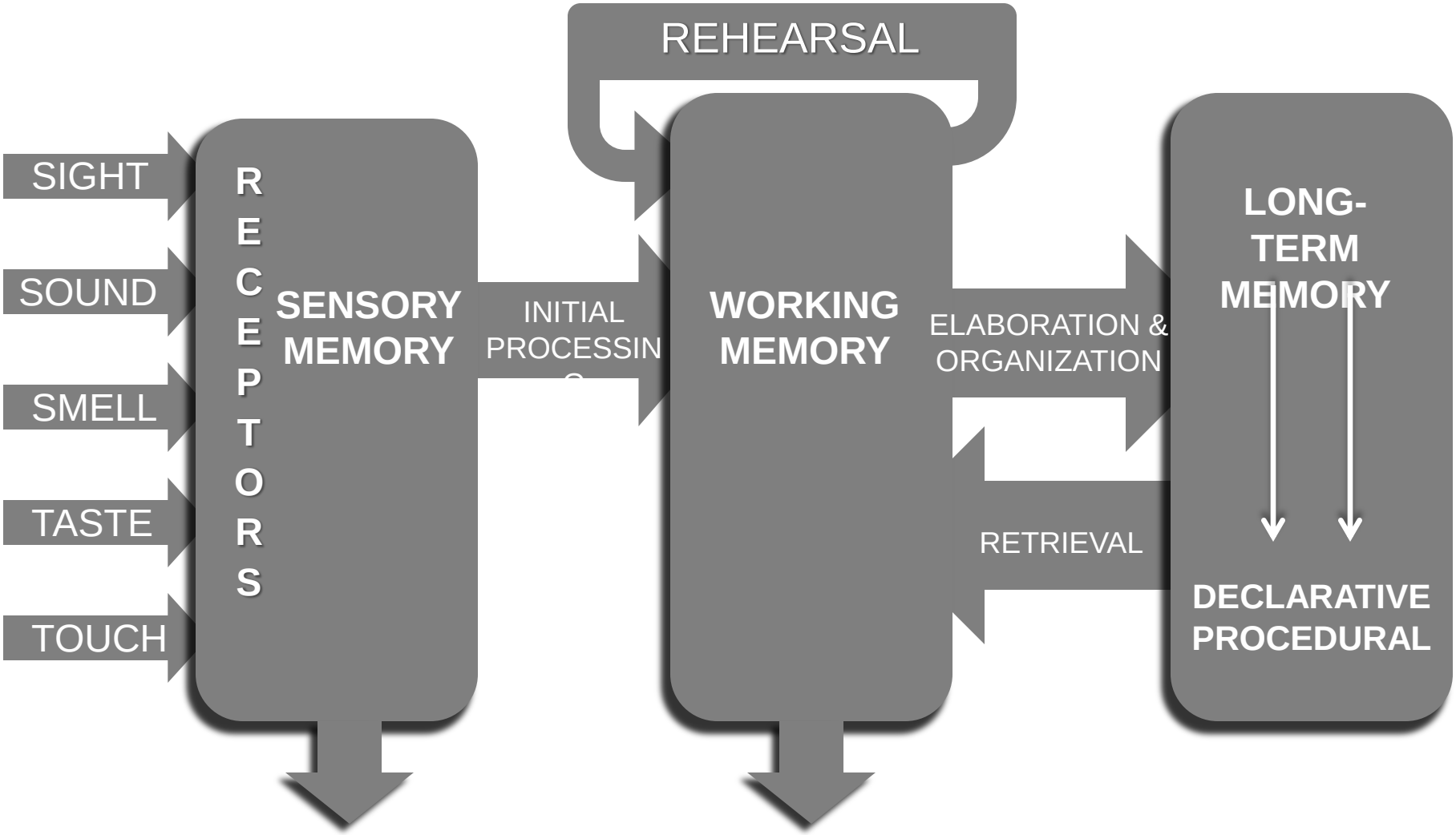
information processing model | brain science



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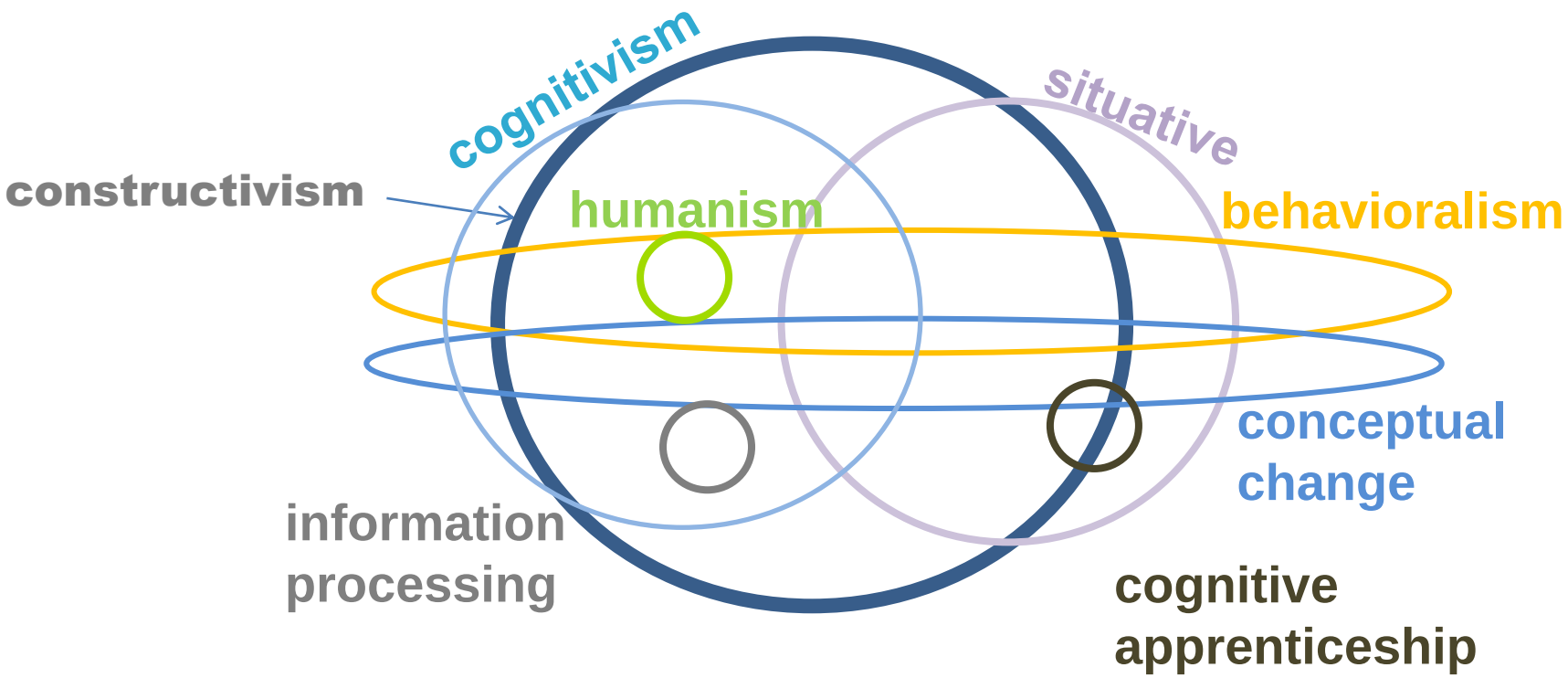
learning theories | learning research



By ZOE TIMOTHY DOWNING on October 20, 2008
http://www.personal.psu.edu/ztd102/blogs/science_teaching_and_learning/2008/10/blog-8-learning-theories-venn-diagram.html; retrieved june 10, 2011;science teaching and learninga discussion of readings for SCIED 552

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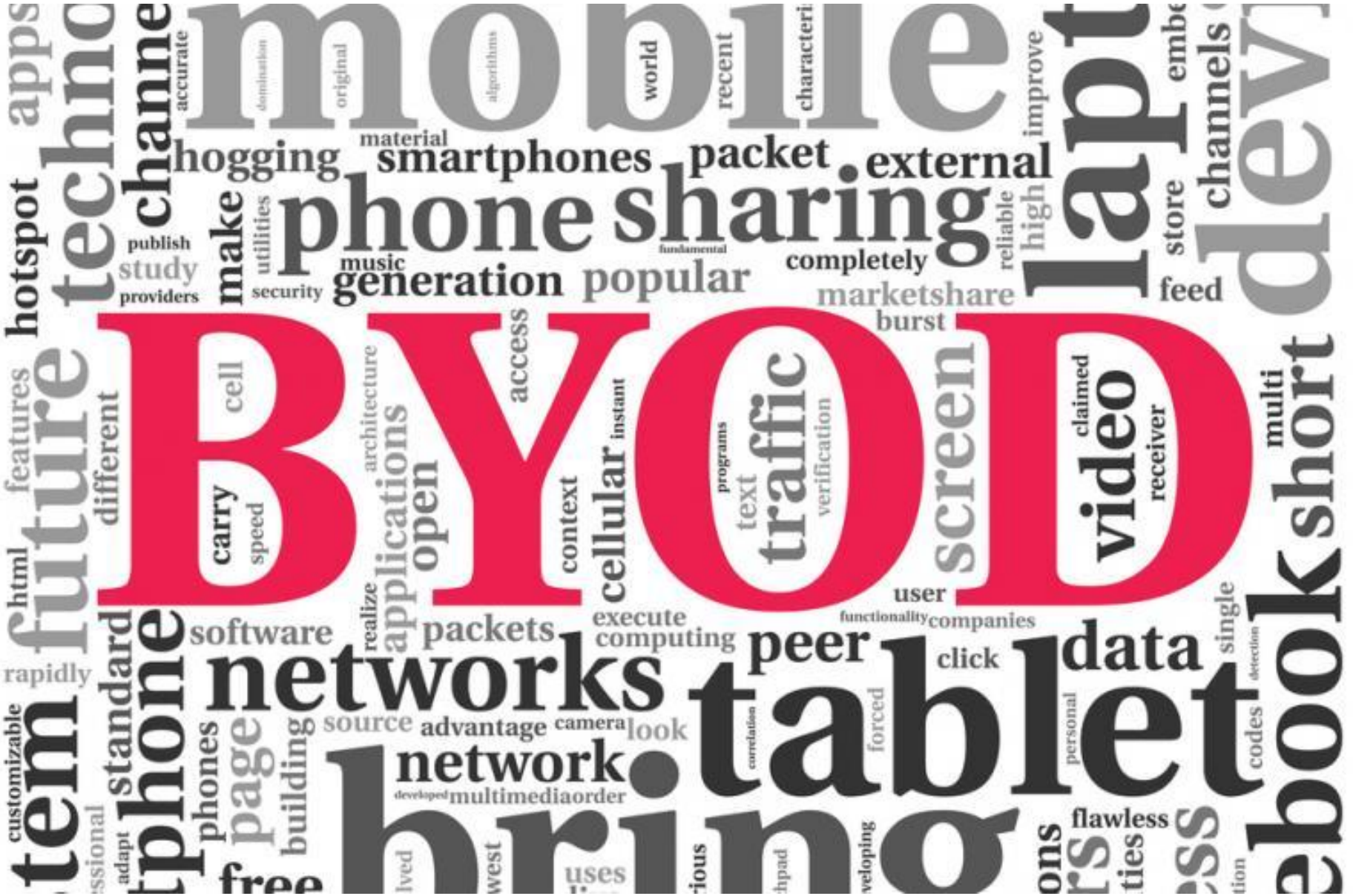
chemistry education
w/lab-base
=
active learning

major factors

Digital Revolution

App “quilt”


BYOD
mobile
phone
sharing
tablet
bring
networks
network
smartphones
hogging
packet
external
generation
popular
marketshare
traffic
screen
video
short
data
peer
software
packets
execute
computing
cellular
open
applications
architecture
access
cell
carry
speed
different
features
future
hotspot
technology
channel
apps
hogging
material
make
utilities
publish
study
providers
security
music
fundamental
completely
reliable
high
improve
store
channels
feed
burst
claimed
receiver
multi
programs
text
verification
instant
context
user
functionality
companies
single
detection
click
forced
personal
codes
flawless
uses
free
phones
page
building
standard
phone
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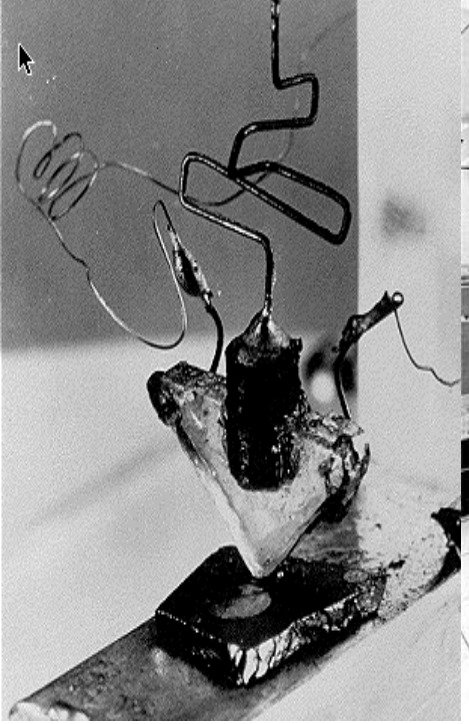


transitions (1950-today)

- transistors
- mainframe computers
- personal computers
- smart phones
- iPad

2,3, retina, mini, lite—thanks Steve

Social Revolution

Who is teaching who?

sharing is the cornerstone

communicate

continually

not worried about security

blur public + private

changing needs

- spaces to work as teams
- technology to support
- co-authoring of presentations
- classrooms that support teams
  - fluid lecture
  - quick breakout
  - multiple screens

Environmental Revolution

Environmental Shift

Student Demand

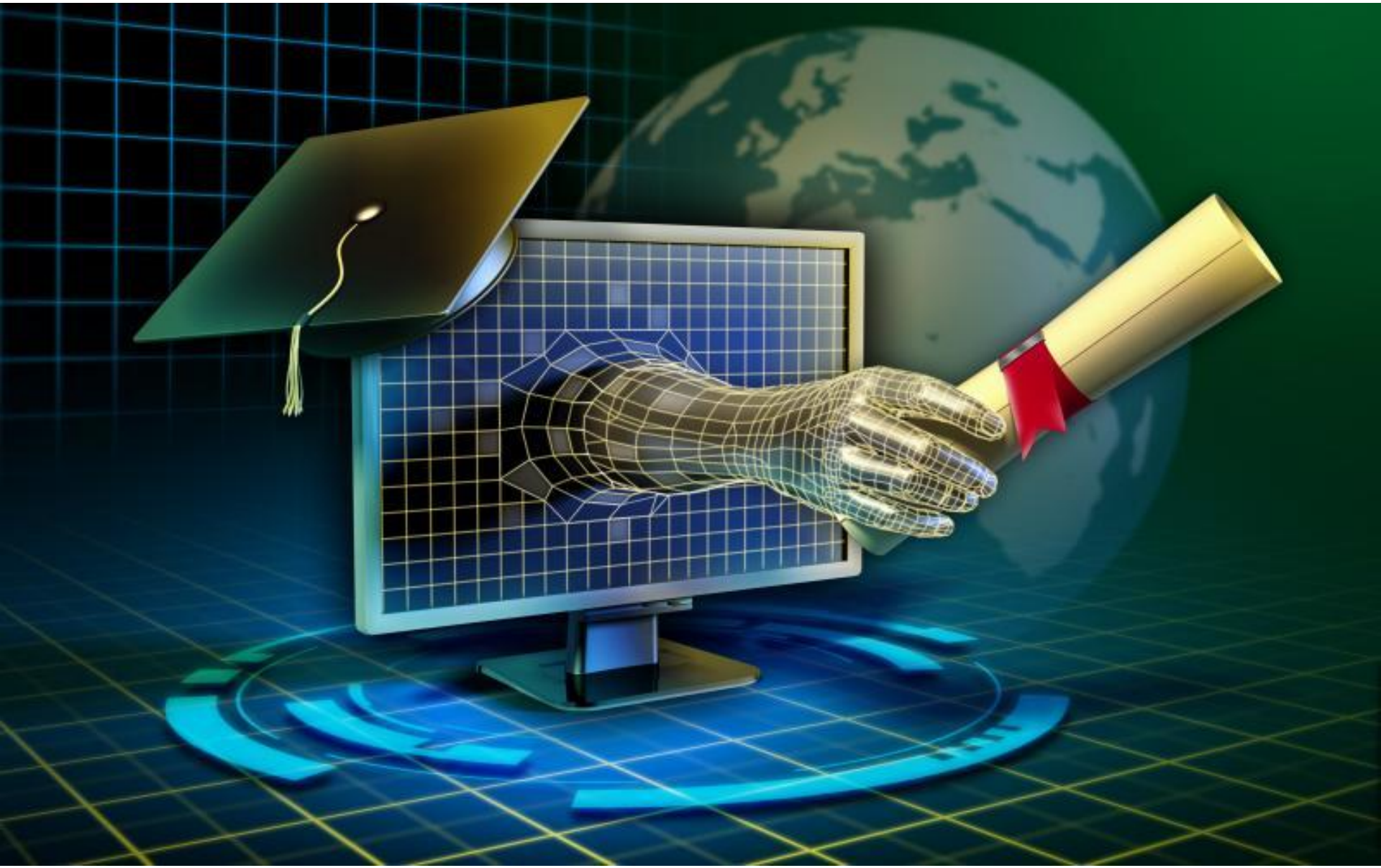
- **Part of Decision Making**

Staff Recruitment + Retention

Visible and Real

Better Learning Environments

- **Air**
- **Quality of Light**
- **Acoustics**



Deep learning???

GREAT **JOBS** workplace engagement

GREAT **LIVES** well-being

Source: The 2014 Gallup-Purdue Index Report

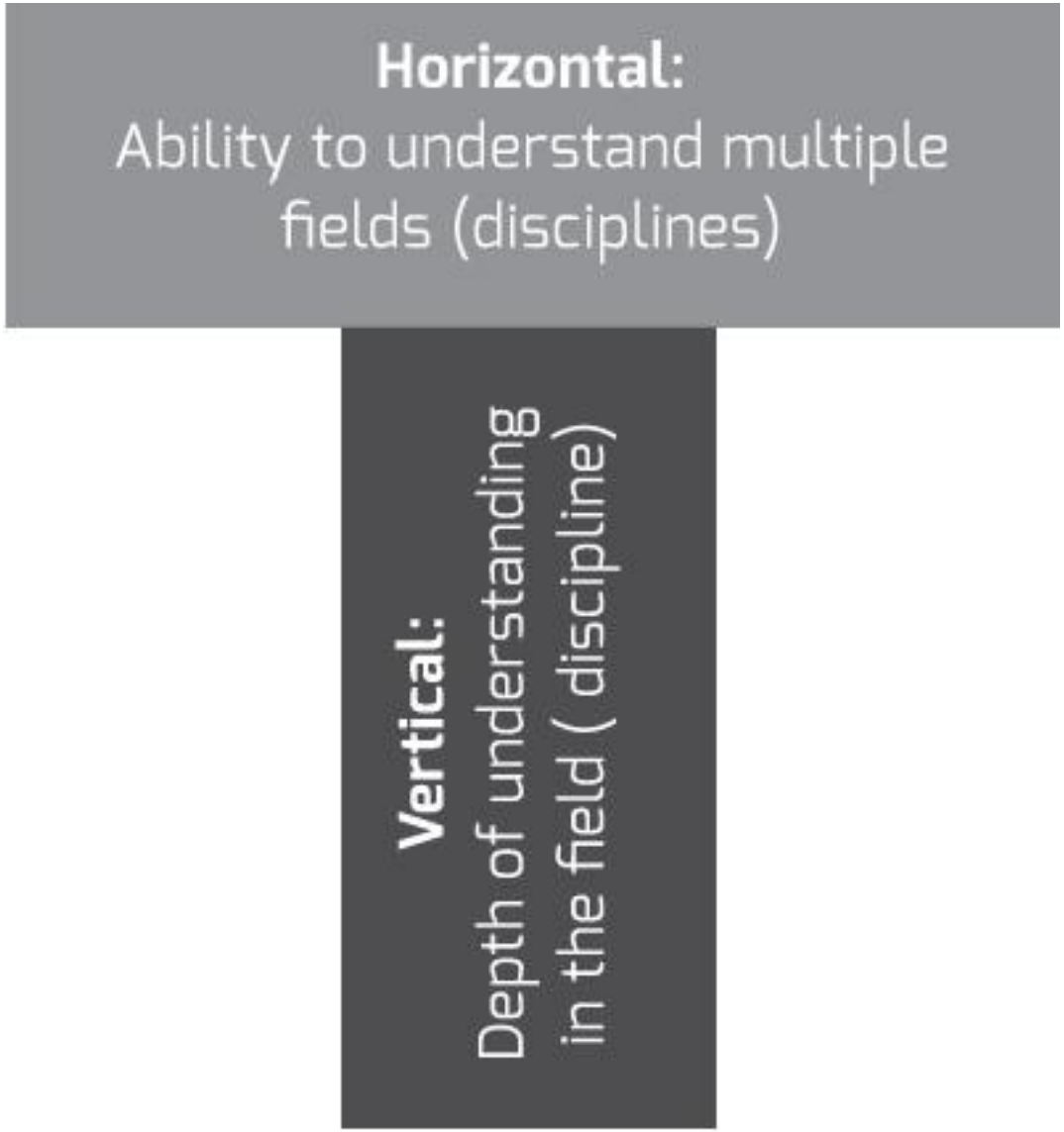
"…answers lie in *what* student are doing in college and *how* they are experiencing it.. have a profound relationship to a person's life and career. Yet they are being achieved by too few."

GREAT **JOBS** workplace engagement

GREAT **LIVES** well-being

Source: The 2014 Gallup-Purdue Index Report

"Slightly more graduates who majored in the arts, humanities and social sciences (41%) are engaged at work than either science (38%) or business (37%)." p. 11



21st Century Skills

WANTED!!

T-shaped students
With 21st century skills

21st Century Skills

Trilling + Fadel
21st Century Skills

Daniel Pink
Whole New Mind

Richard Florida
Rise of Creative Class

From: Information Age

To: Conceptual Age

Conceptual Economy

21st Century Skills Required

- ***Design***
- ***Storytelling***
- ***Symphony***
- ***Empathy***
- ***Play***
- ***Meaning***

Design

Conceptualize

Think Creatively

(Not Only Function)

Storytelling

Coherence

Poise

Skill

(Not Only Argument)

Symphony

Ability to Work Together

Co-Author

Collaboration

(Not Only Focus)

Empathy

Immerse Oneself

In Another Culture

(Not Only Logic)

Play

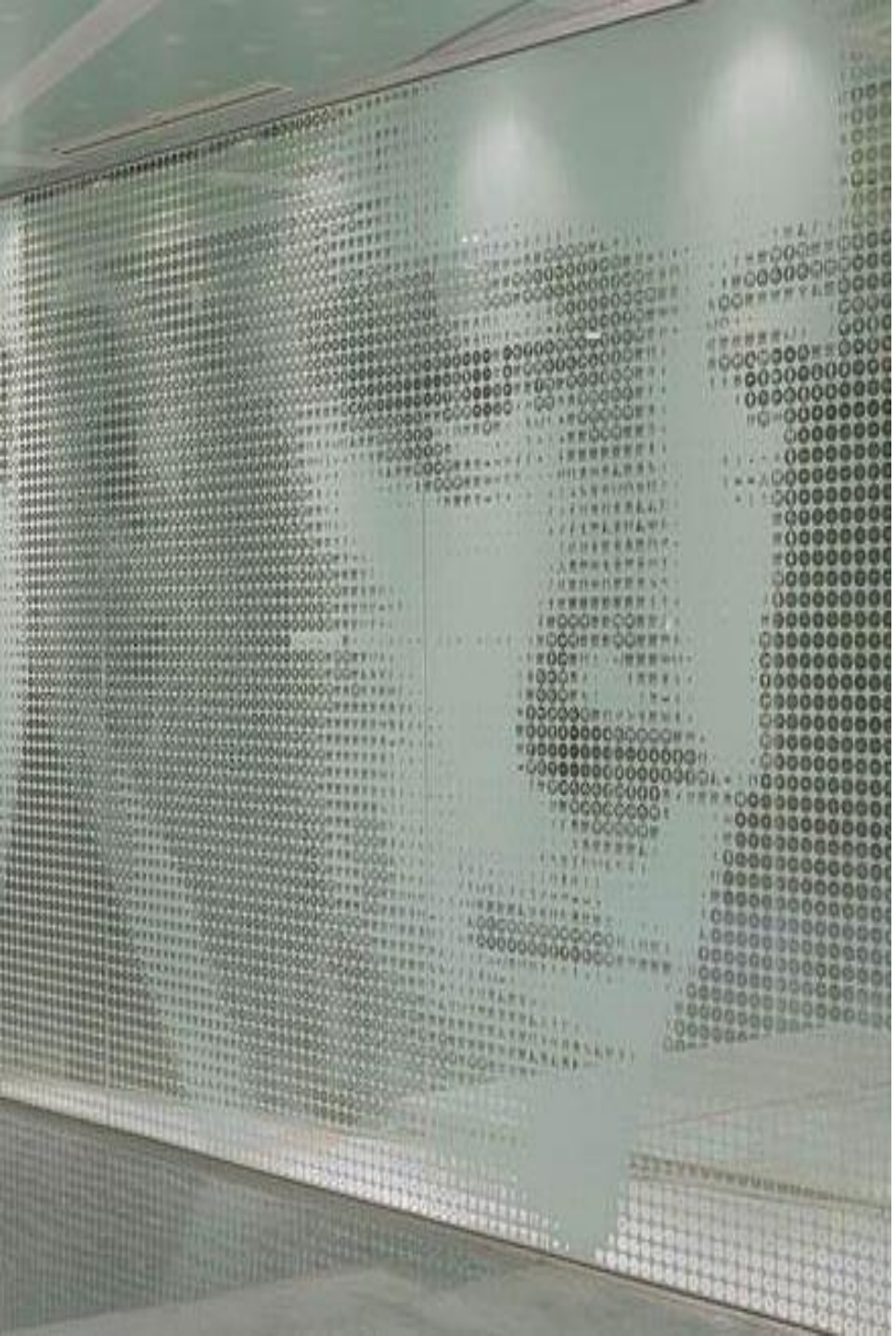
Game Playing

Be Humorous

Think Creatively in

Everyday Problem Solving

(Not Only Seriousness)



Meaning

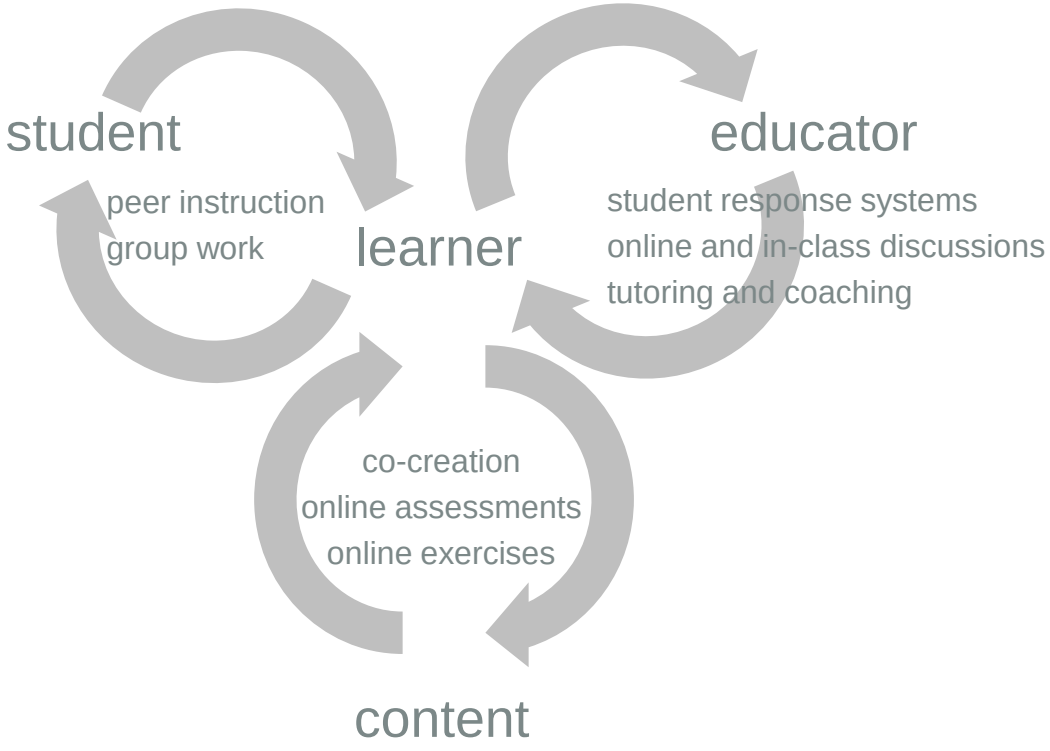
Not 1:1 Literal

Appreciate Symbolic

(Not Only Data)

if

fostering interaction, connection + engagement



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the results

Face to Face

- complex, higher level interactions
- impromptu interactions
- spatial context

Online

- self-reflection and review
- more problem solving and doing
- focus on weak areas
- increase in student data
- more frequent student feedback
- parent involvement

Outcomes

- access to courses and experts
- faster and higher completion rates
- higher engagement
- higher grades
- increased attendance

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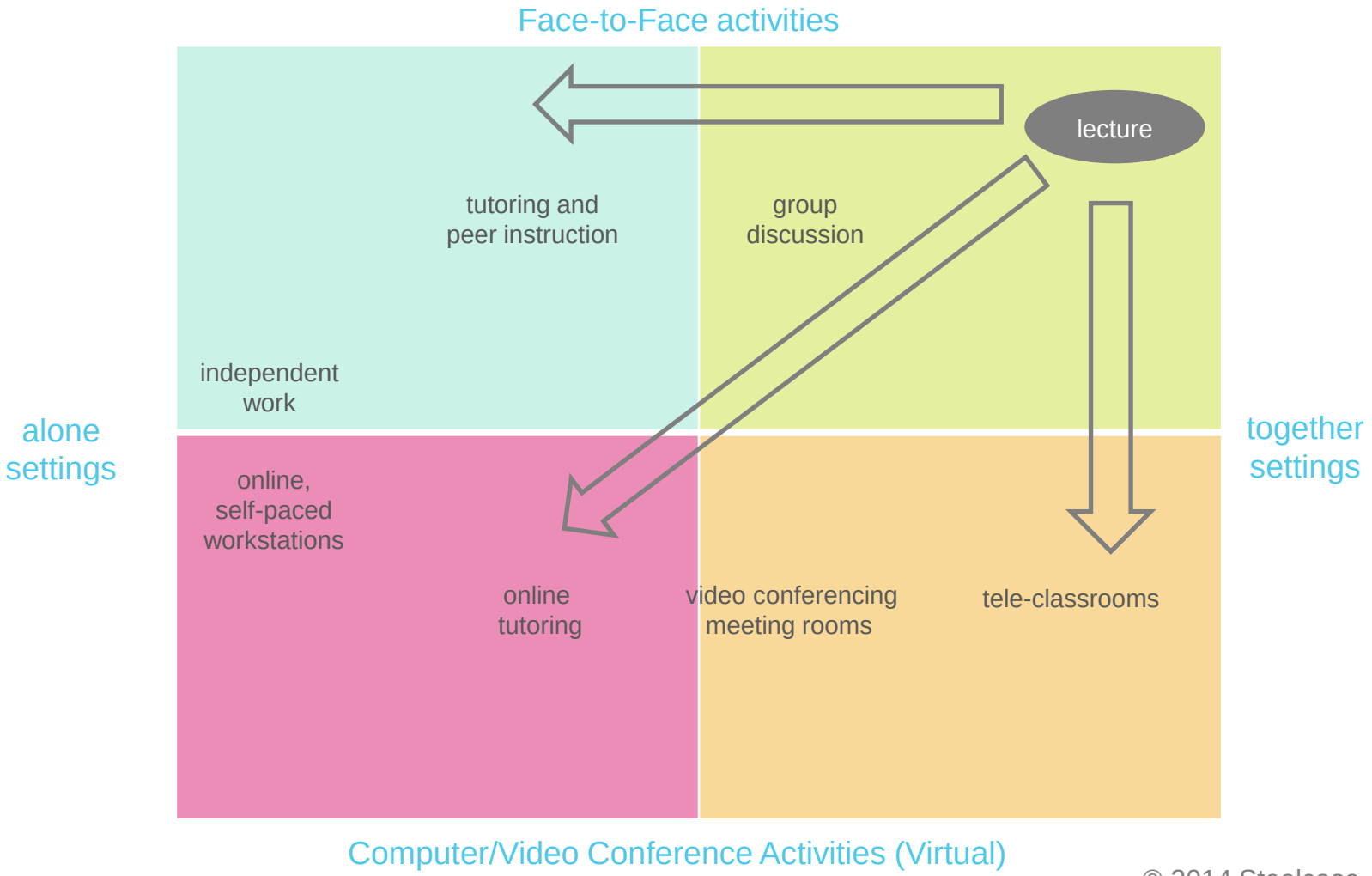
learning spaces

blended learning gives rise to a wider range of classroom activities, both face-to-face and digital



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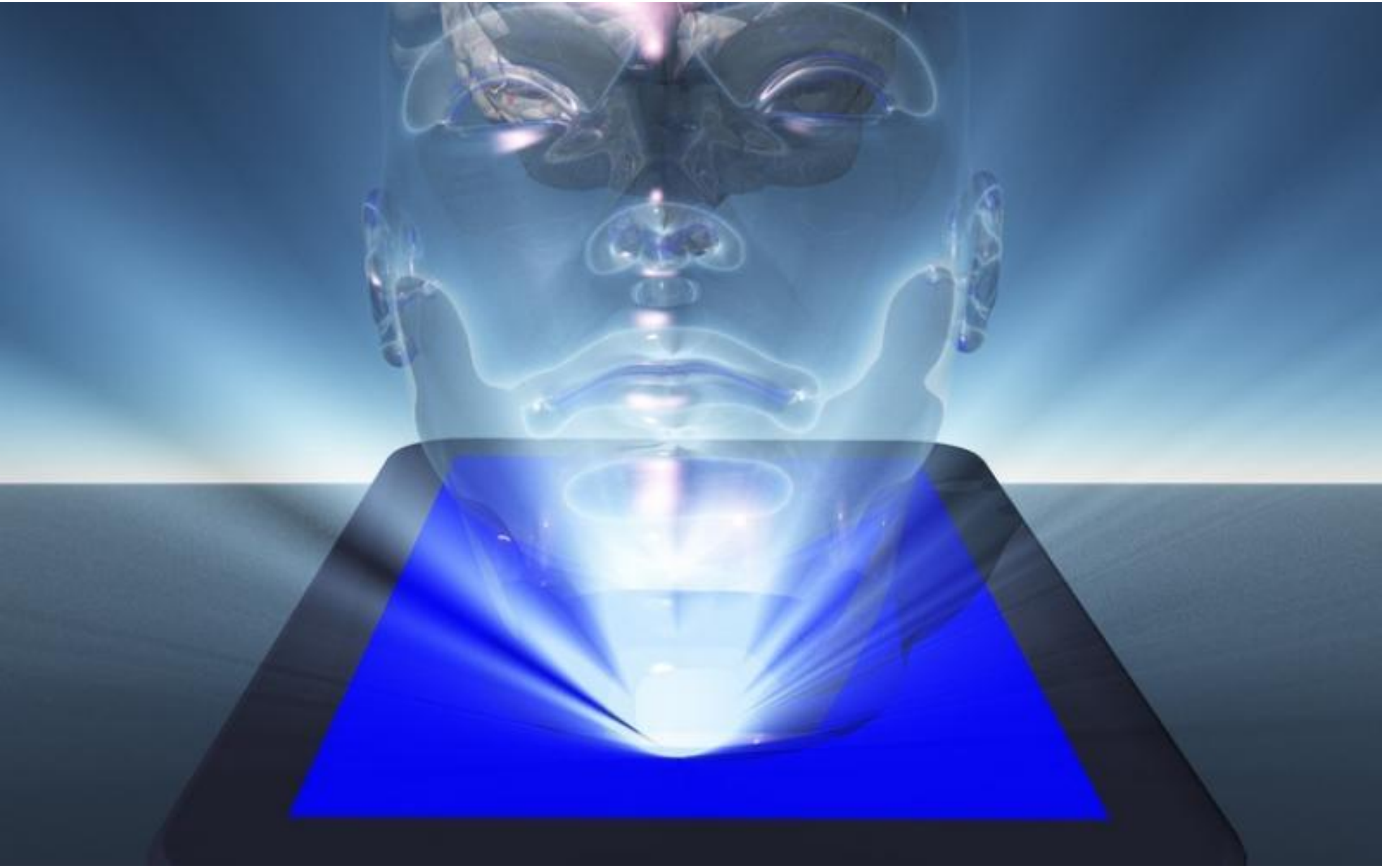
Empower the mind

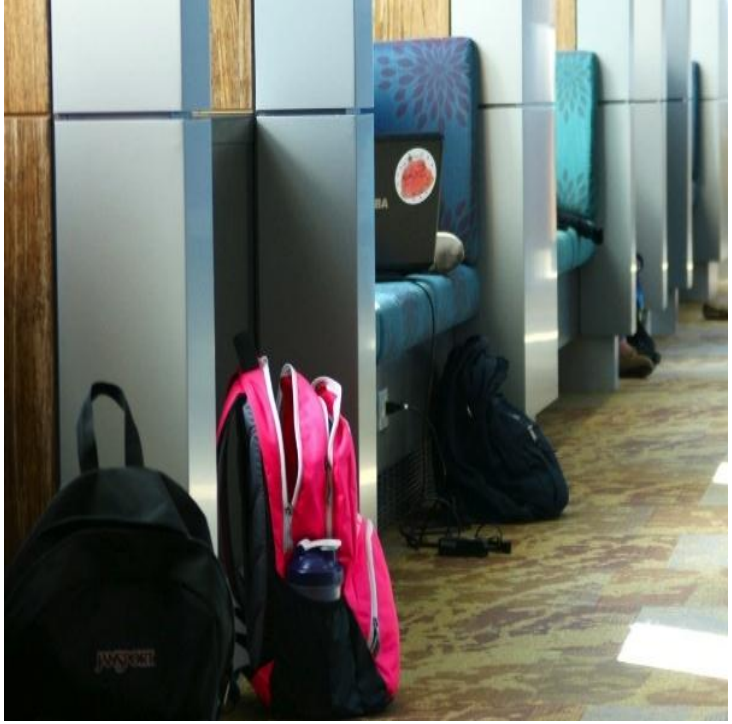
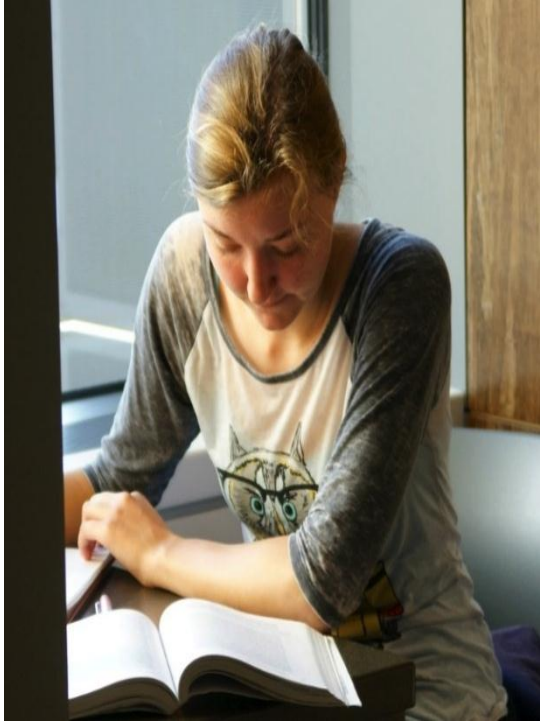
testing is for computers

creating is for humans



Empower the mind

opportunities

Give Them 'Tools' to Manage Their Own Learning

- Contemplative Spaces
- Comfortable Seating - Long Sessions
- Noise system to Reduce Sound

Give Them 'Tools' to Manage Their Own Learning

Noisy | Collaborative spaces

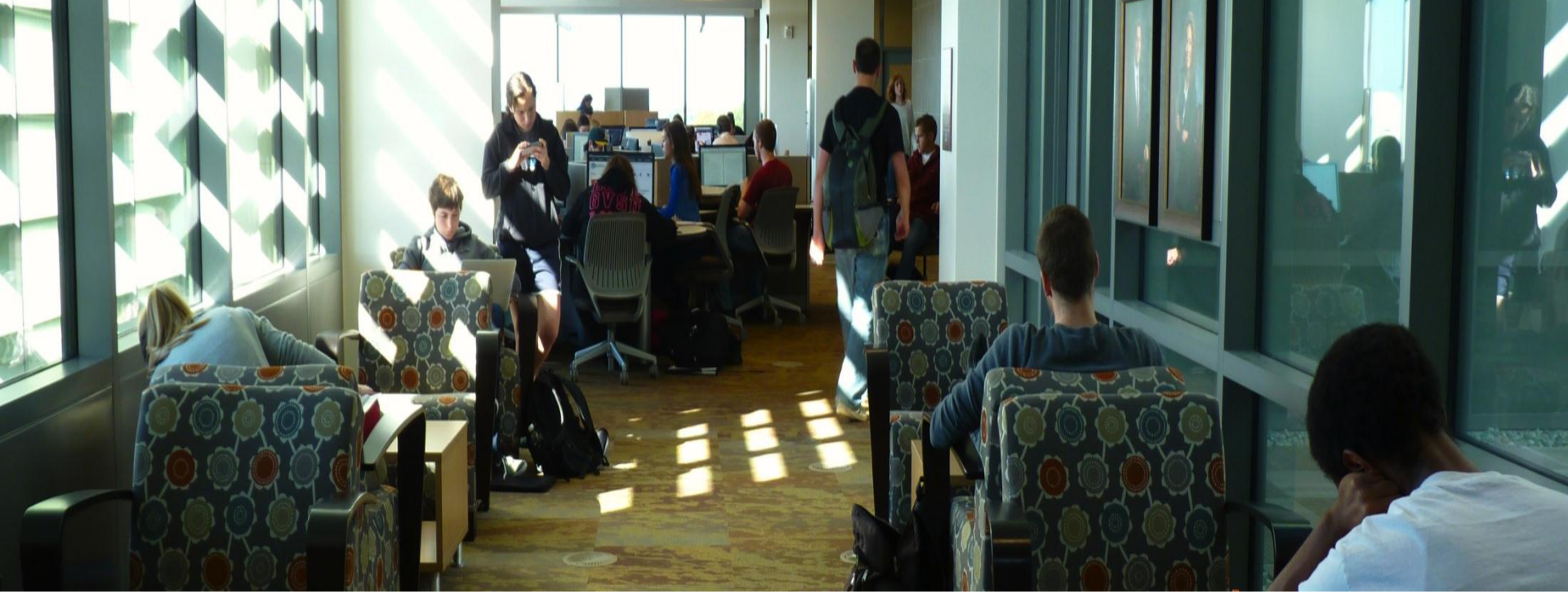
Portable tables, technology, whiteboards

Noise system to encourage conversation

Give Them 'Tools' to Manage Their Own Learning

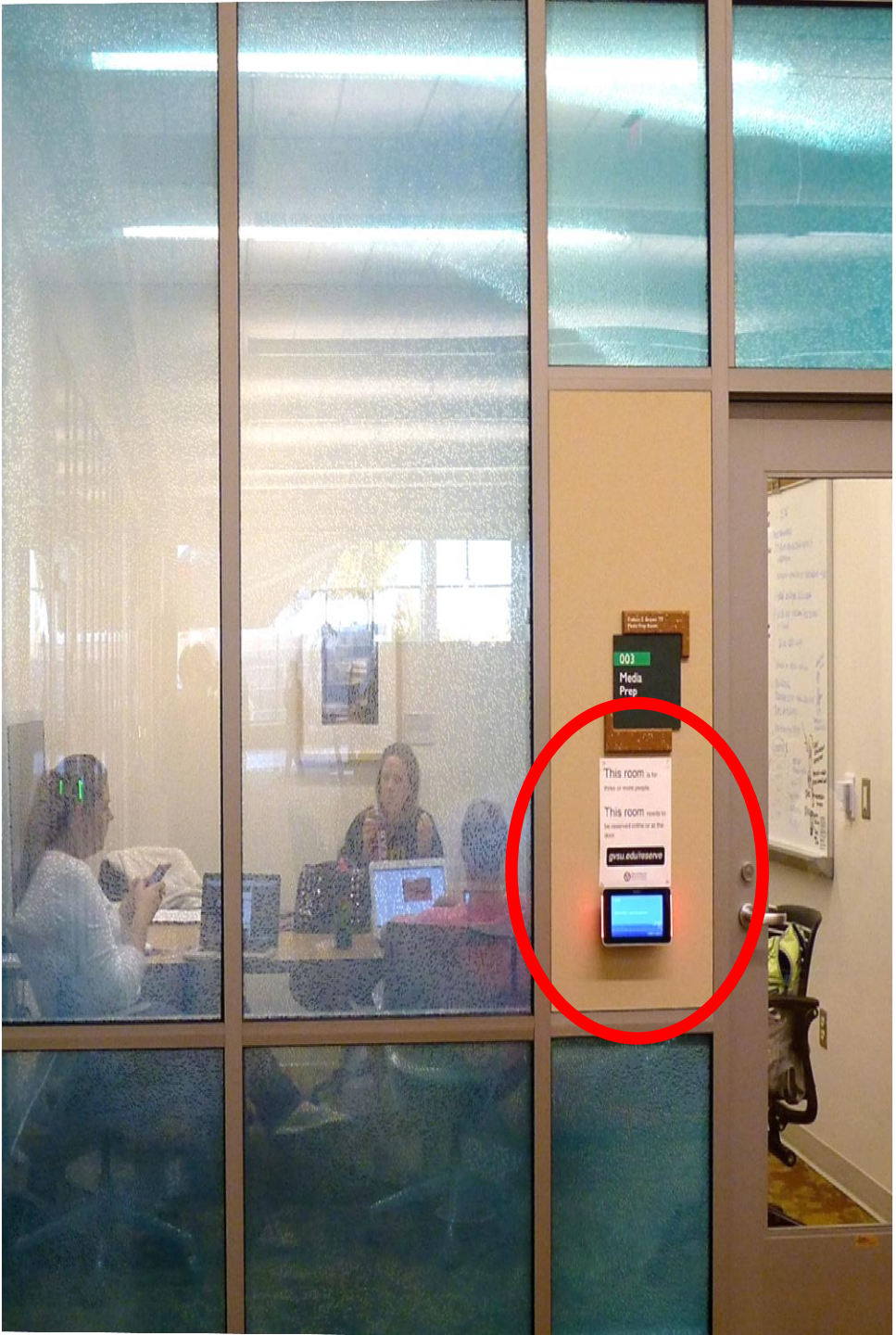
Whiteboard 'Rooms'

'Maker spaces'



Give Them 'Tools' to Manage Their Own Learning

Transition Zones Between
Quiet + Noisy Spaces



Give Them 'Tools' to Manage Their Own Learning

- Fully equipped group study rooms
- Efficiencies—room scheduling from any
  - portable device or at the door
- Print Management system

Engage

Learning Alcove

- On the fly learning
- Curated content
  - short, artful, educational
- Created content
  - student produced

Engage

Technology Showcase

Maker Space

Google Glass

Emerging Technologies

Engage

Multipurpose Room

- Lectures
- Event Space
- Banquet Facilities

Engage

Exhibition Room

- Art Exhibition
- Small Lectures
- Movie Events
- Study Area

challenges

what challenges have we discovered?

- ALIGNMENT
  - Design SPACE
  - Professional Development/Management BEHAVIOR
  - Technology TOOLS

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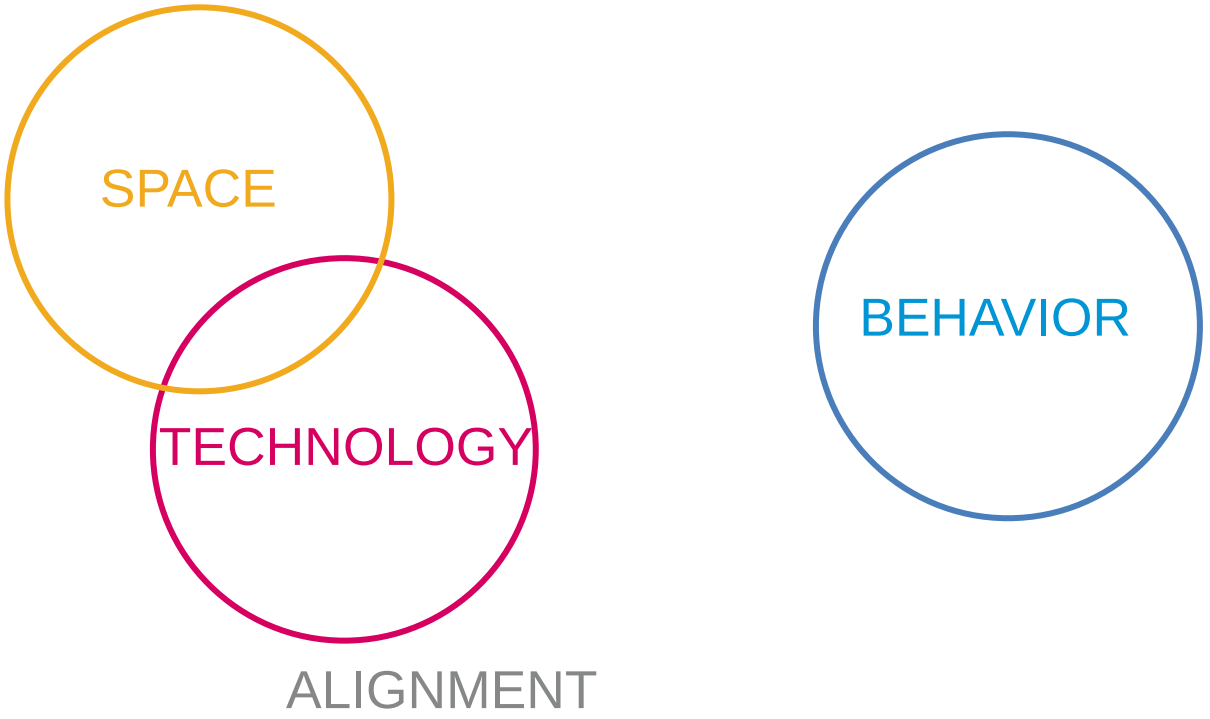
what challenges have we discovered?



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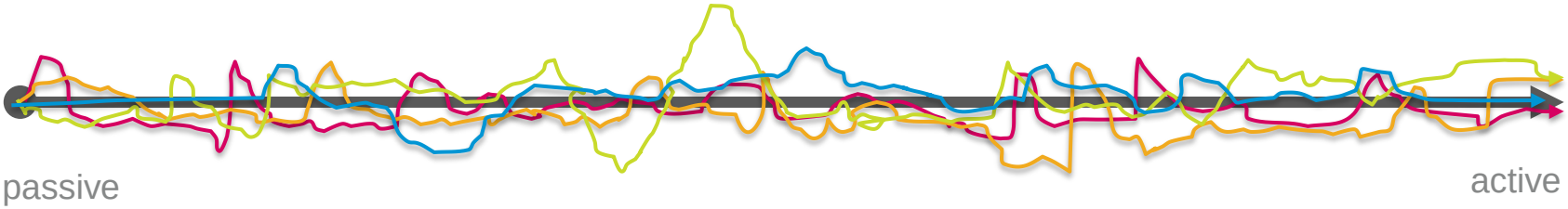
active learning journey



- **ideal**
- an easy, straight shift

- **reality**
- a complex shift involving many variables

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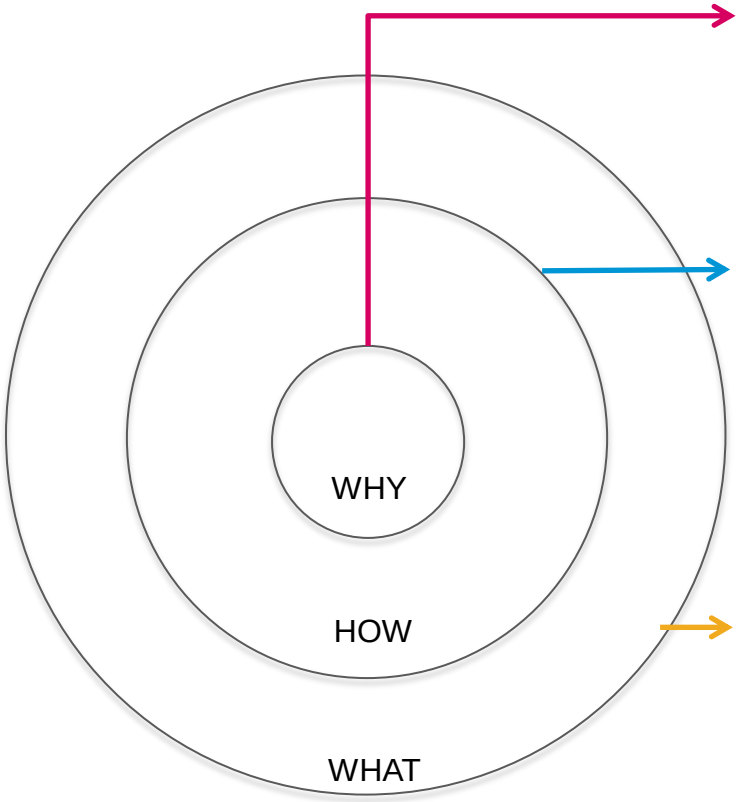
institutional alignment



ALIGNMENT of WHY

What is the institution's 'why' around active learning? How is the institution internally aligned around this 'why'?

DIMENSIONS of HOW

How is institution working towards their *why*?

- *professional development & curriculum?*
- *technology?*
- *space?*

DIMENSIONS of WHAT

What plans or programs does the institution have in place, or is looking to develop, as they relate to *how* they are working towards their *why*?

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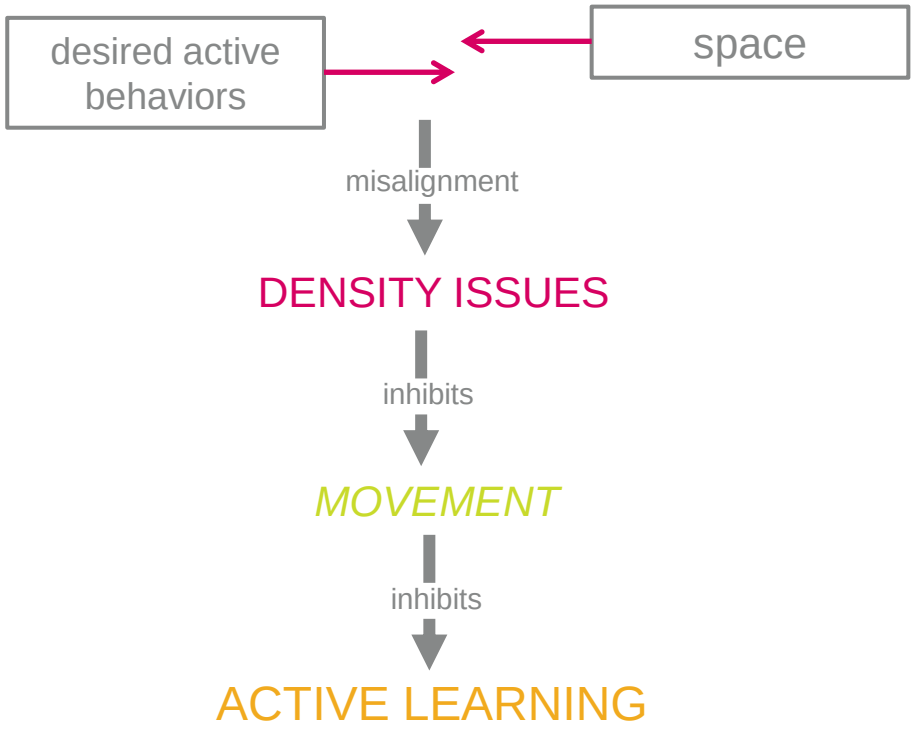
design – business paradigm shift



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RESEARCH

Large Classroom Taxonomy

	PEDAGOGY	TECHNOLOGY	SPACE
700+	individual engagement diadic engagement	individual student tools shared tools classroom	auditorium **10-15 s.f./student**
500+	individual engagement diadic engagement	individual student tools shared tools classroom	auditorium **10-15 s.f./student**
250+	individual engagement diadic engagement group engagement	individual student tools instructor tools shared tools classroom student-student student - instructor	auditorium lecture hall tiered classroom **15-20 s.f./student**
120+	individual engagement diadic engagement group engagement	individual student tools instructor tools shared tools classroom student-student student - instructor	lecture hall tiered classroom flat floor classroom **20-25 s.f./student**
60+	individual engagement diadic engagement group engagement	individual student tools instructor tools shared tools classroom student-student student - instructor	lecture hall tiered classroom flat floor classroom **25-30 s.f./student**

Research:

- The higher the number the less opportunity for engagement [use of clickers, or diadic connections limit deep learning]
- The lower the number the higher the opportunity for engagement [a range of techniques can be employed addressing deep learning]

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a tsunami
is building…

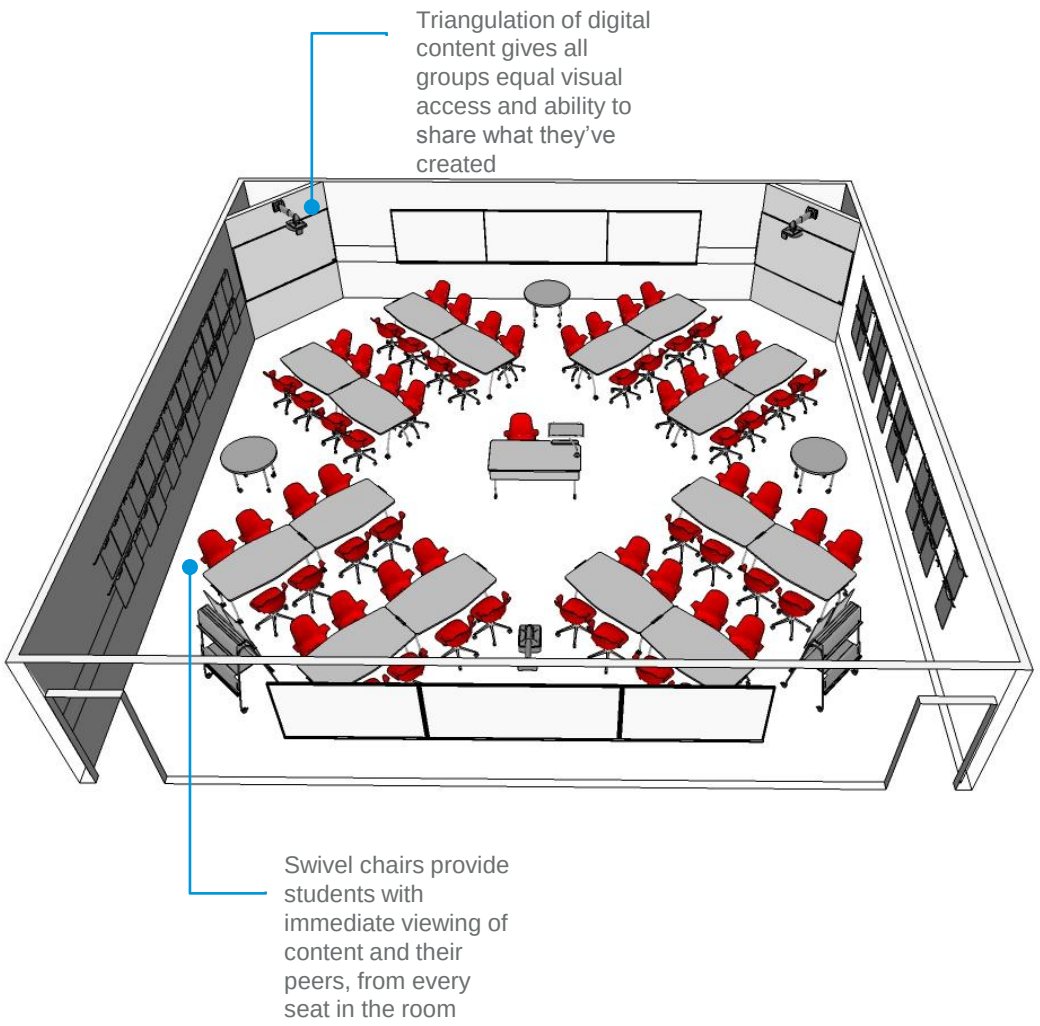
Education leaders are struggling with how to…

- attract and retain top faculty
- attract and retain top students
- improve student success
- incorporate new, more effective pedagogies
- help students develop 21st century skills and meet their expectations
- integrate technology and future-proof their investments
- improve space utilization and keep up with demand
- fund needed change
- make face-to-face relevant in the climate of disruptive online delivery models

solutions in application

3D RENDERING

Double LearnLab™ | Whole/Multi-Group 3-a



technology intent

- Analogue
  - Incorporate vertical writing surfaces for group work
  - Provide individual, moveable writing surface
  - Add easels/carts for transporting and having information persistence of student work
- Digital
  - Triangulate 3 interactive white boards for educator and student use
  - Use ultra short throw projection to reduce glare
  - Support student co-creation using interactive technologies

products

- Node 5-star base
- Verb team tables
- Verb instructor station
- Verb personal whiteboard with easel and rail
- ēno flex interactive whiteboard with ultra short throw projector
- groupwork round table

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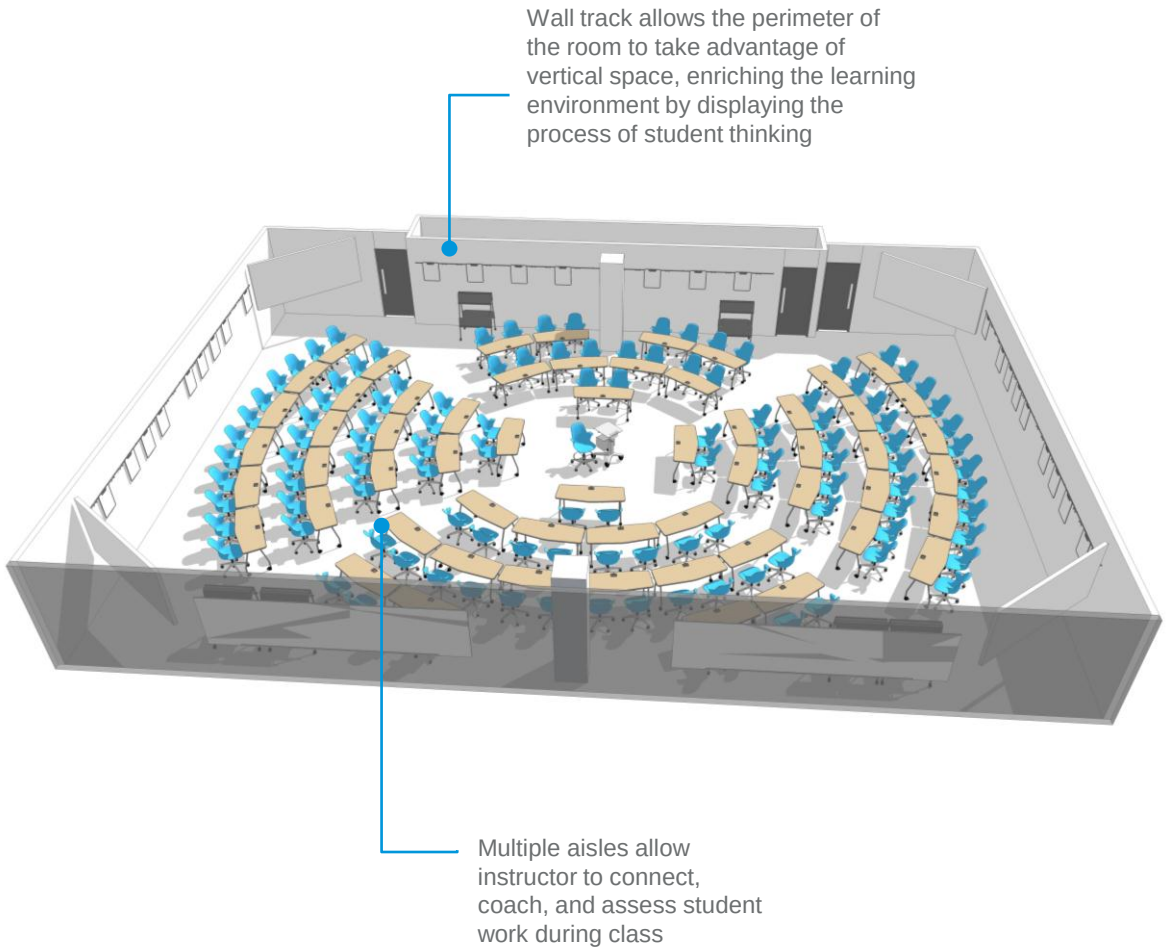
3D RENDERING

Classroom-In-The-Round | Whole Group 5-a



technology intent

- Analogue
  - Incorporate vertical writing surfaces for group work
  - Provide individual, moveable writing surfaces
  - Add easels/carts for transporting and having information persistence of student work
- Digital
  - Provide multiple large screens and projectors

products

- Node 5-star base
- Verb chevron tables
- Verb personal whiteboard
- Verb easel
- Verb wall track
- Pocket adjustable height stand

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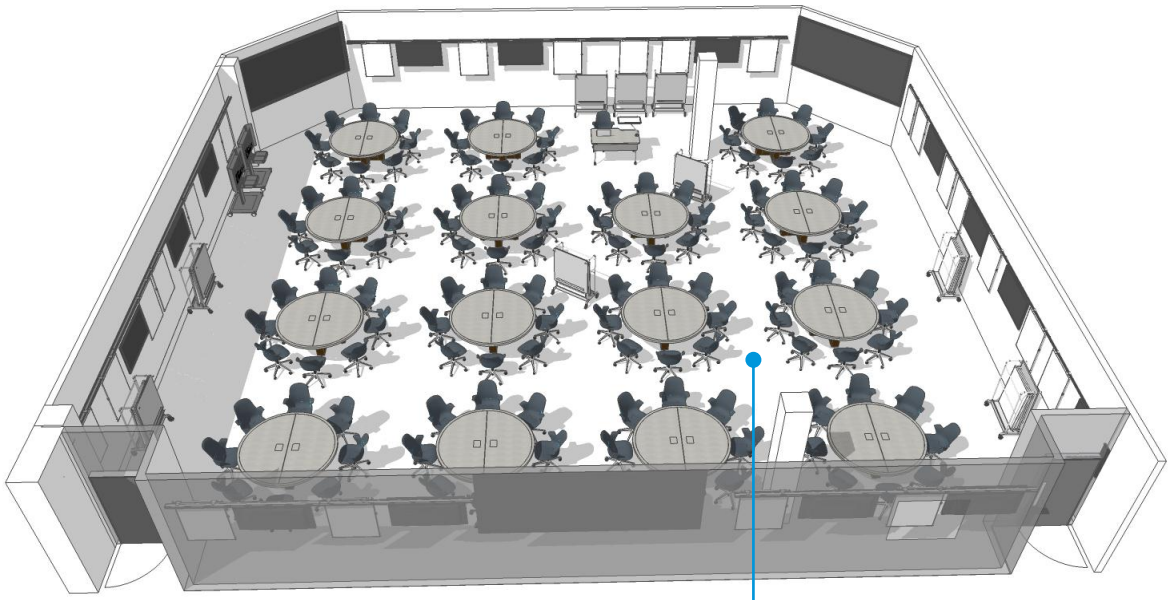
3D RENDERING

stem Classroom | Whole/Multi-Group

10-a



Open aisles allows instructor to seamlessly move through space to connect with every team

technology intent

- Analogue
  - Provide moveable writing surfaces for individual/team work and sharing
  - Add easels/carts for transporting and having information persistence of student work
  - Add wall track for mounting whiteboards supporting information persistence
- Digital
  - Provide multiple large screens and projectors
  - Include perimeter access for digital media work with wall mounted LCD screens
  - Include mobile media:scapes

products

- Convene
- Node
- Verb instructor station
- Huddleboard whiteboard with easel and rail
- media:scape mobile

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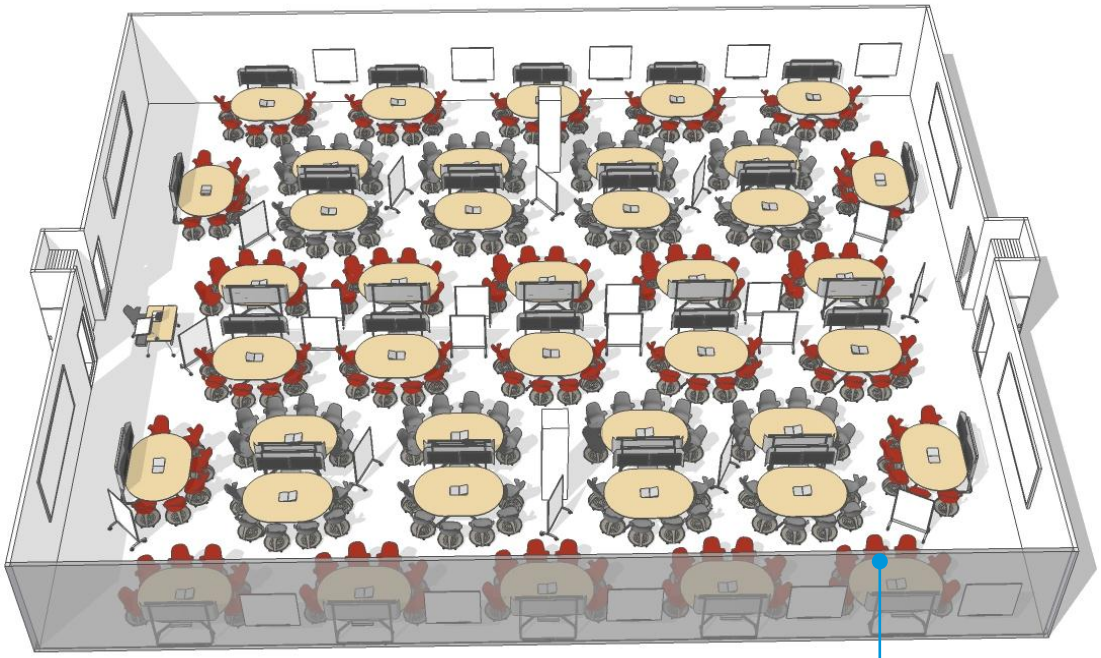
3D RENDERING

Digital Lab | Large Group

12-a



Tools located conveniently adjacent to workspaces enable students to fluidly create and share within and across teams

technology intent

- Analogue
  - Provide moveable writing surfaces for individual/team work and sharing
  - Add easels/carts for transporting and having information persistence of student work
  - Add wall track for mounting whiteboards supporting information persistence
- Digital
  - Provide multiple large screens and projectors
  - Include perimeter and interior power access for digital media work

products

- media:scape
- Node
- Verb instructor station
- groupwork mobile whiteboard
- edge series whiteboards

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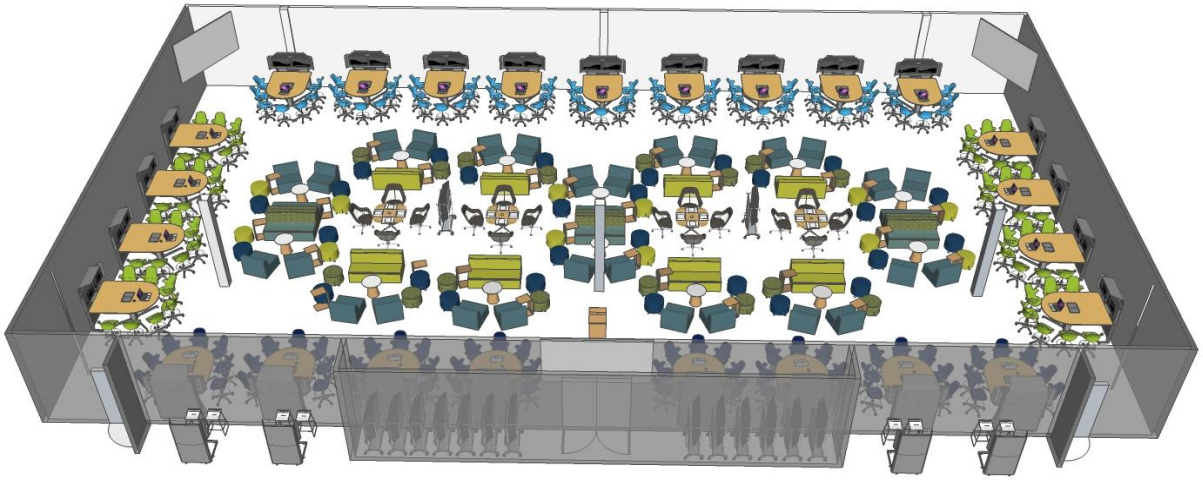
3D RENDERING

Project Studio | Large Group

14-a



media:scape kiosk with HDVC cameras are located in hall alcoves for student teams to connect remotely with experts at various phases of an assignment

technology intent

- Analogue
  - Provide moveable writing surfaces for individual/team work and sharing
  - Add easels/carts for transporting and having information persistence of student work
  - Add wall track for mounting whiteboards supporting information persistence
- Digital
  - Provide multiple large screens and projectors
  - Include perimeter and interior power access for digital media work

products

- Node
- campfire big and half lounge
- alight
- sw1
- Huddleboard whiteboard and easel
- paper table
- personal table
- exponents podium
- media:scape and media:scape kiosk
- last minute stool

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HIGHER-EDUCATION

SOLUTIONS IN APPLICATION

Stanford dSchool

SOLUTIONS IN APPLICATION

Stanford dSchool

SOLUTIONS IN APPLICATION

University of Missouri Kansas City, Bloch School of Business

SOLUTIONS IN APPLICATION

University of Missouri Kansas City, Bloch School of Business

SOLUTIONS IN APPLICATION

University of Windsor, Ontario Canada

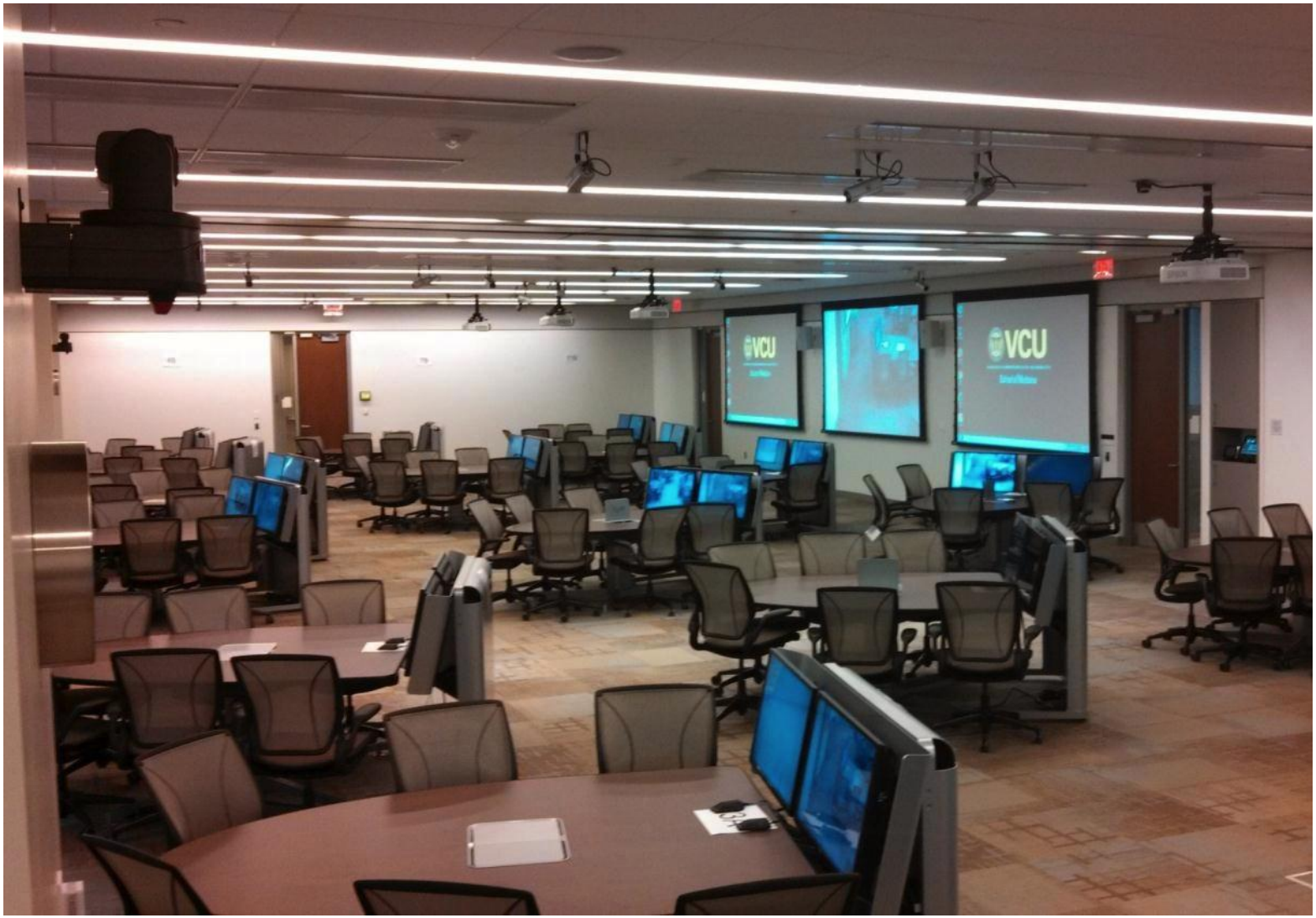
SOLUTIONS IN APPLICATION

University of Florida

SOLUTIONS IN APPLICATION

Virginia Commonwealth University

SOLUTIONS IN APPLICATION



Virginia Commonwealth University

questions
DATA

Biology
Chemistry
Physics
Food and Drinks
(except for bottled water)
are not permitted.
Students:
Please SIGN-IN
each time you visit
the Science Corner
Thank you,
The Learning Center at Richland College

HIGHER-ED LIBRARIES & IN-BETWEEN SPACES

SOLUTIONS IN APPLICATION

Grand Valley State University, Michigan

SOLUTIONS IN APPLICATION

Grand Valley State University, Michigan

SOLUTIONS IN APPLICATION

Grand Valley State University, Michigan

SOLUTIONS IN APPLICATION

Grand Valley State University, Michigan

SOLUTIONS IN APPLICATION

Grand Valley State University, Michigan

SOLUTIONS IN APPLICATION

University of California, Los Angeles

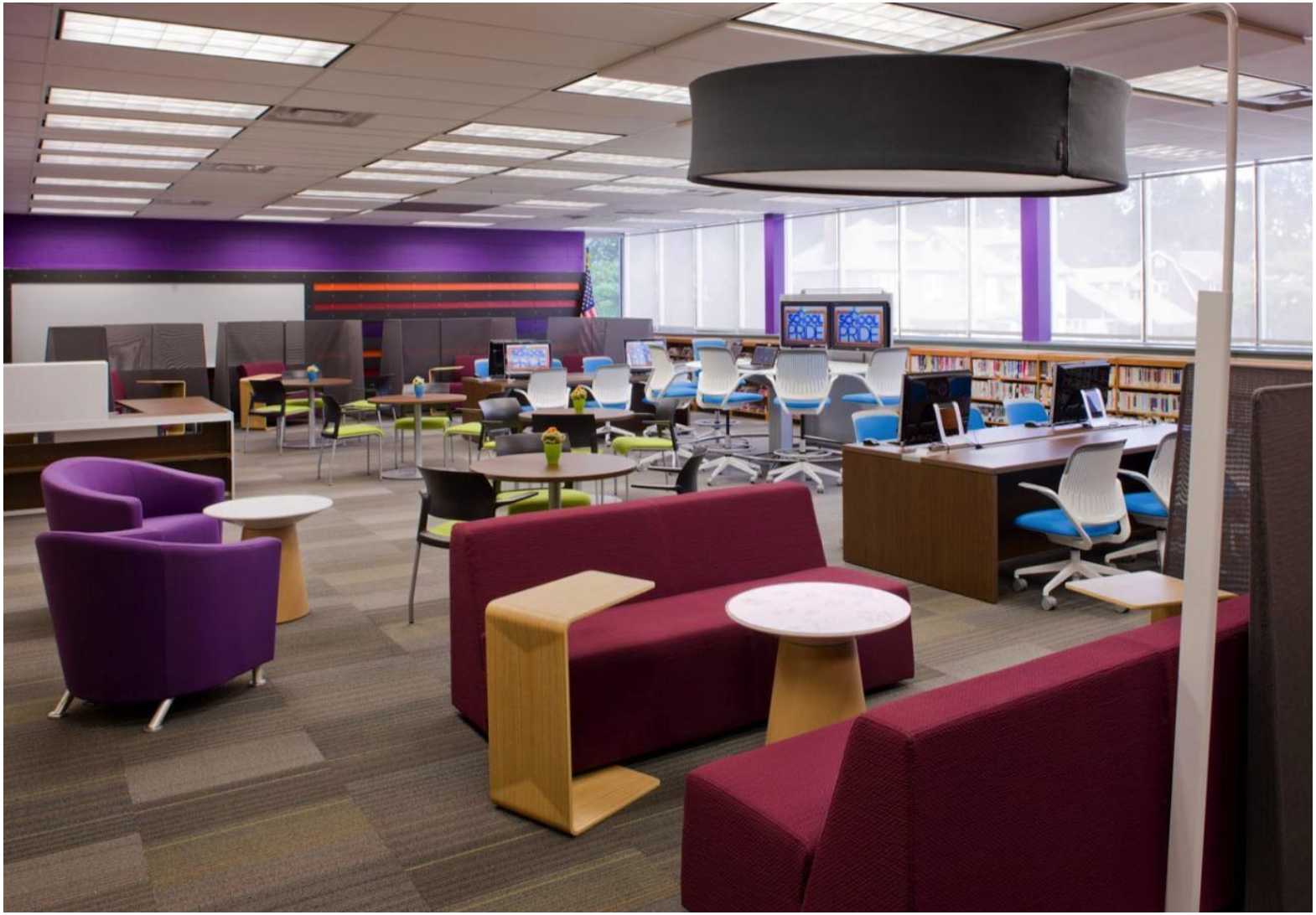
SOLUTIONS IN APPLICATION

Phoenix College, Arizona

SOLUTIONS IN APPLICATION

Kent Innovation High School, Michigan

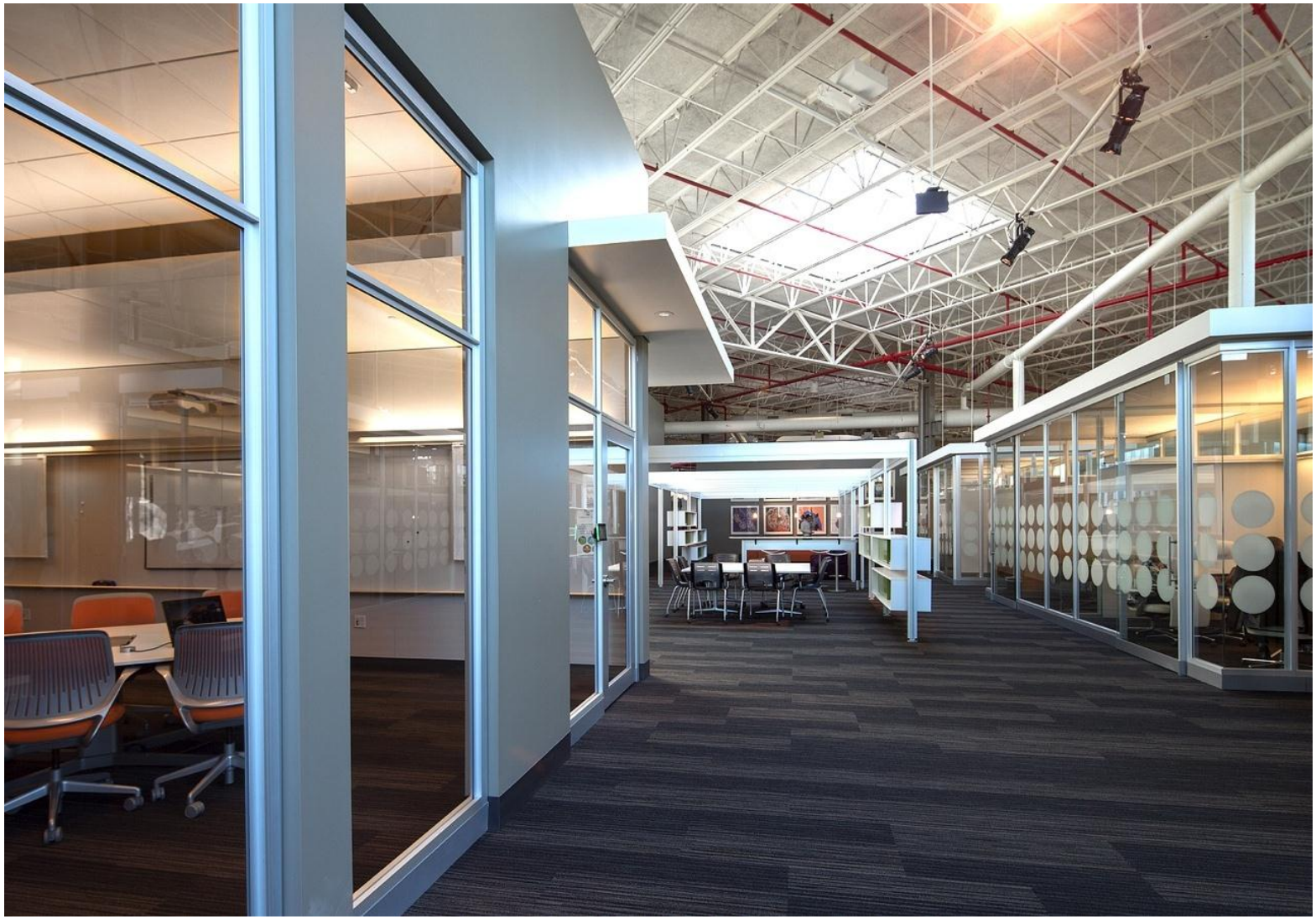
SOLUTIONS IN APPLICATION



Detroit Communication & Media Arts High School, Michigan

WORK & BUSINESS

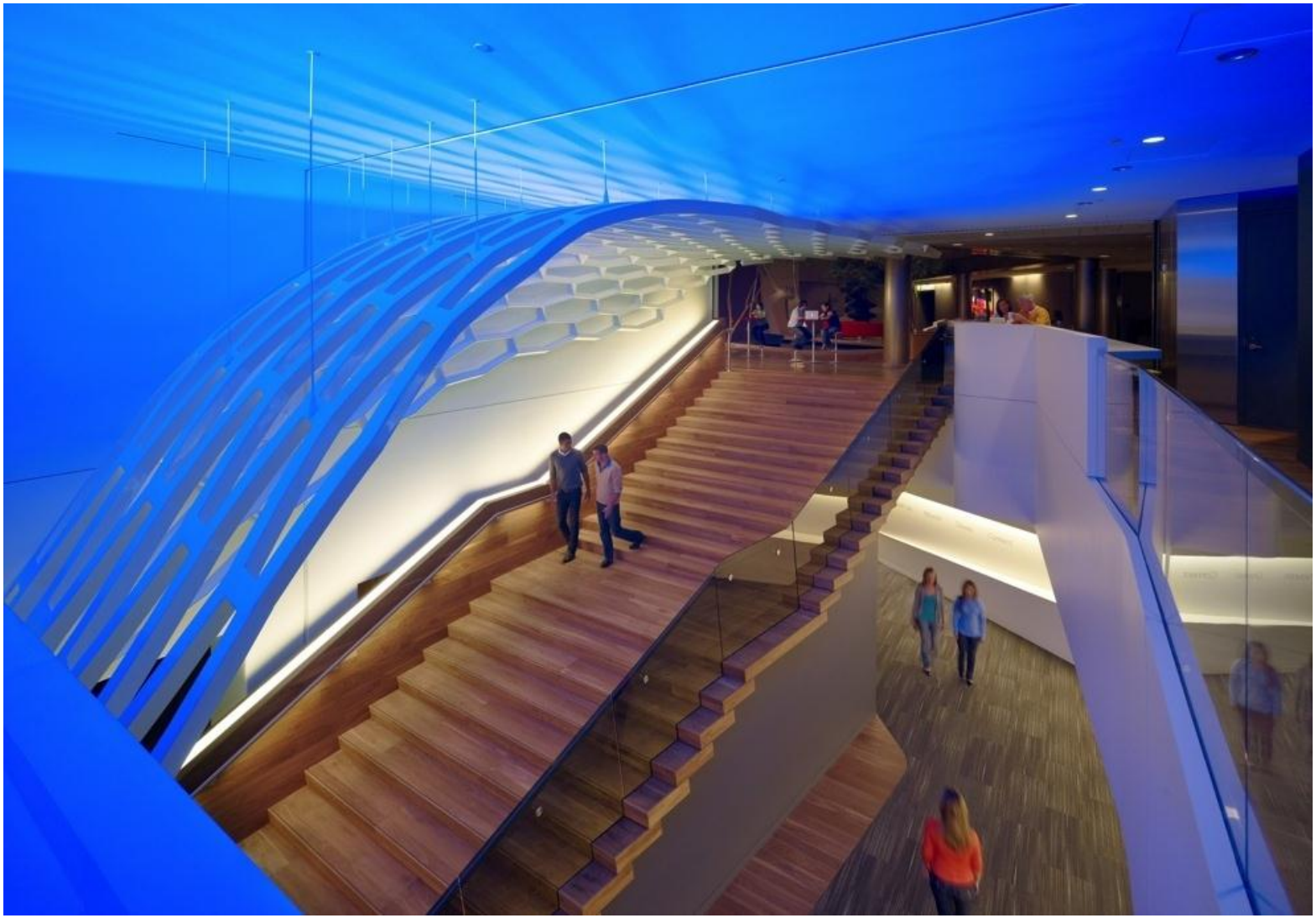
SOLUTIONS IN APPLICATION



Steelcase University Learning Center, Michigan

SOLUTIONS IN APPLICATION

LearnLab, Steelcase University Learning Center, Michigan



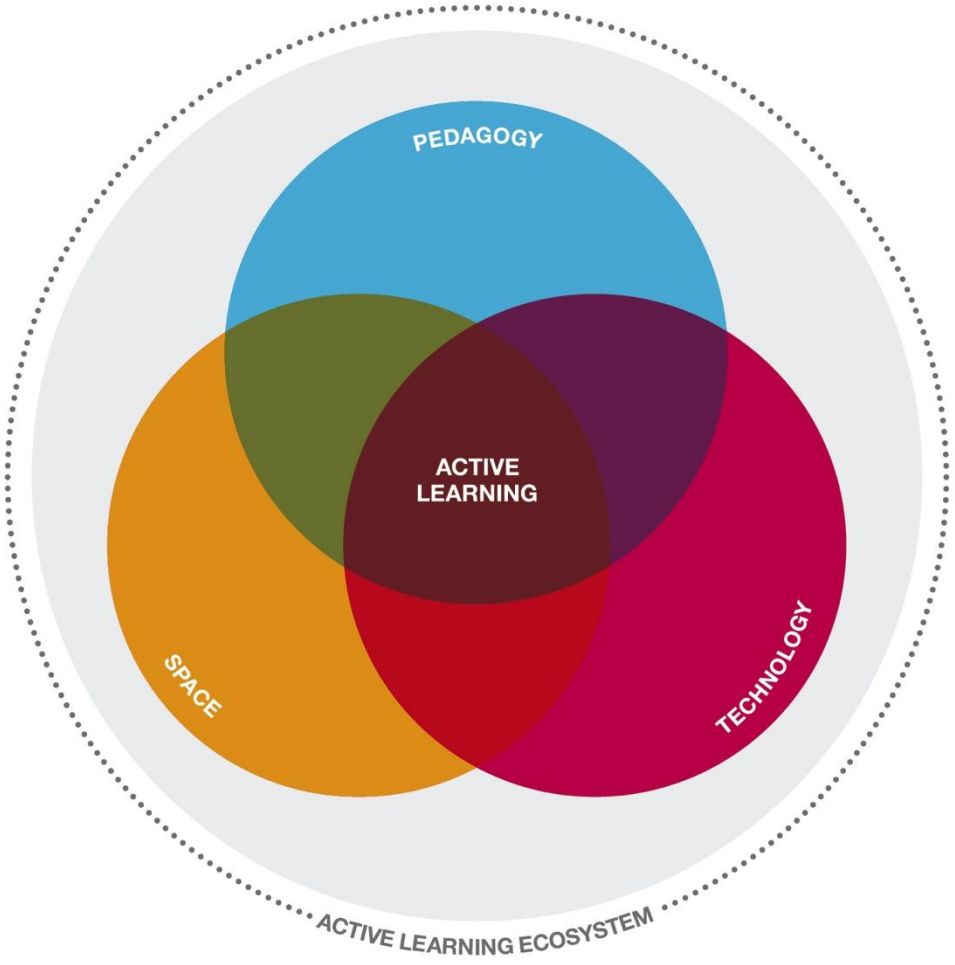
Steelcase Global Headquarters WorkCafe, Michigan

SOLUTIONS IN APPLICATION

Steelcase University Learning Center, Michigan

summary

Active Learning Ecosystem



teaching and learning are changing

passive learners

directed learning

knowledge revealed

alone

knowledge is discrete

content focused

active learners

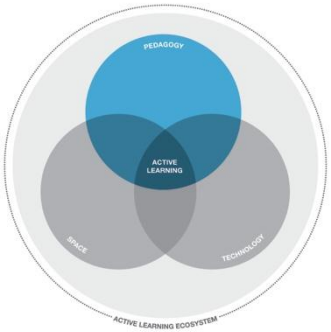
facilitated learning

knowledge discovered

alone and together

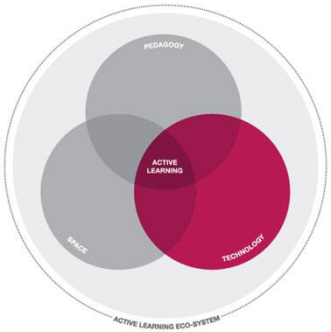
knowledge is embedded

content and process focused



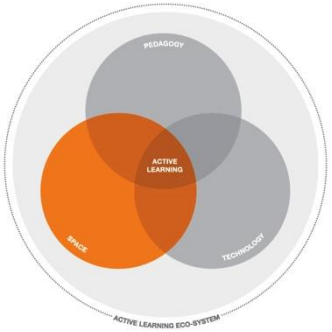
technology is changing

- MOOCs
- 1:1and BYOD
- Blended learning
- Distance learning
- Flipped classrooms
- Collaboration
  - student groups
  - peer-to-peer
  - faculty/student interaction
  - virtual



space remains the same

history repeating itself



independent solutions
=
inconsistent fit

21st CENTURY LEARNERS

20th century teaching practices

19th century learning places

chemistry education should lead the way to deep learning

EVIDENCE-BASED INTENTIONALLY DESIGNED SPACES

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”Empowering chemical educators to generate deep learning reactions "

Q & A

thank you

lscottwe@steelcase.com

Steelcase
EDUCATION

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APPENDIX

BIBLIOGRAPHY

- Taylor, A. & Enggass, K. (2009). *Linking architecture and education. Sustainable design for learning environments.* NM: University of New Mexico Press.
- (Staff, 2000a). Learning environments for the Information Age: New environments for learning. MI: Steelcase Inc. http://www.steelcase.com/knowledgebase/learnb7.htm)
- Johnson, J. (2001, September). Designing for the future. *Interiors & Sources.* FL: L. C. Clark Publishing Co., pp. 80-84.
- Cornell, P. (1998). Learning environments for the information age*. Workplace issues: one in a series*. MI: Steelcase, Inc.
- Scott-Webber, L., Marini, M., & Abraham, J. (2000, Spring). Higher education classrooms fail to meet needs of faculty and students. *Journal of Interior Design, 26,* (1), 16-34.
- Teknion, Inc., Gensler, and The LaJolla Institute. (2001). "Pioneers 21C—First findings summary." As reported in J. Johnson's (2001, September). Designing for the future. *Interiors & Sources*. FL: L. C. Clark Publishing Co., pp. 80-84.
- Goleman, D. (2000, March-April). Leadership that gets results. *Harvard Business Review.* MA: Harvard College.
- Teknion, Inc., The Gartner Group, and MIT. (2001, August). "New approaches to real estate portfolio design. A Workplace Forum," MA: Cambridge as noted in J. Johnson's (2001, September). Designing for the future. *Interiors & Sources*. FL: L. C. Clark Publishing Co., pp. 80-84.
- Aring, M. & Brand, B. (1998, January). *The teaching firm: Where productive work and learning converge. Research summary and implications of findings.* MA: Center for Workforce Development Education Development Center, Inc.
- Senge, P., Kleiner, A., Roberts, C., Ross, R., Roth, G., & Smith, B. (1999). *The dance of change. The challenges to sustaining momentum in learning organizations.* NY: Doubleday.
- Wenger, E. (1998). *Communities of practice: Learning, meaning, and identity.* NY: Cambridge University Press.
- Norris, D. (1997). *Revolutionary strategy for the Knowledge Age.* MI: The Society for Colleges and University Planning.
- Davis, S. & Meyer, C. (1998) *Blurr…The speed of change in the connected economy.* NY: Warner Books.
- Bromberg, J. (2000). (Unpublished). *Space as a product.* Community Based Planning Project. MI: Steelcase, Inc.
- Cornell, P. & Scott-Webber, L. (2001). Environments for sharing knowledge. A sheet for grist, fodder, starters, solutions, stories, insights, and beginnings. *Application series 1 to 9.* TX: Vecta.
- Scott-Webber, L. (2001, July). "Environments for learning – Issues and implications. Pre-conference workshop," Society for Colleges and University Planners, MA: Boston.
- Staff. (1993). *Webster's new encyclopedic dictionary.* NY: Black Dog & Leventhal Publishers, Inc.
- Darrouzet, C., Dirckinck-Holmfeld, L., Kahn, T., Stucky, S., & Wild, H. (1994, August 23). *Rethinking "distance" in distance learning.* CA: Institute for Research on Learning.
- Barr, R. & Tagg, J. (1996, November/December). A new paradigm for undergraduate education. *Change Magazine, 27,* 13-25.
- Clark & Nexcen Architects, Hanna, D., Scott-Webber, L, & Hurst, S. (2000). *Performance/design standards for Virginia Polytechnic Institute and State University.* VA: Virginia Tech.
- McVey, G. F. (1996). Ergonomics and the learning environment. In D. Jonassen (Ed.) *Handbook of research for educational communications and technology. A project of the association for educational communications and technology.* NY: Prentice Hall International, pp. 1045-1104.
- Hauf, H., Koppes, W., Green, A., Gassman, M. & Haviland, D. (1971). *New spaces for learning: The design of college facilities to utilize instructional aids and media--2nd printing.* NY: The American Institute of Architects.
- Blackett, A. & Stanfield, B. (1994, Spring). A planner's guide to tomorrow's classrooms. *Planning for Higher Education, Vol. 22*, pp. 25-31. MI: Society for College and University Planners.
- Graves, B. E. (1993). *School ways: The planning and design of America's schools.* NY: McGraw-Hill Incorporated.
- Staff. (2002, Jan/Feb). Design key to more productive workplaces. *Interiors & Sources.* FL: L. C. Clark Publishing Co.
- Leonard, D. & Swap, W. (1999). *When sparks fly. Igniting creativity in groups.* MA: Harvard Business School Press.
- Peters, T. (2001, June). Design as a way to stand out. *Design does matter.* NJ: Teknion.
- Allen, T. J. (1977). *Managing the flow of technology.* MA: MIT Press.
- Zelinsky, M. (1997). *New workplaces for new workstyles.* NY: McGraw-Hill.
- Cornell, P. (1999, March). The growth of informal learning environments. *The E&I Report*. NY: Educational & Institutional Cooperative service, Inc.
- Staff. (2000b). Learning environments for the Information Age: The importance of knowledge and learning. MI: Steelcase Inc. http://www.steelcase.com/knowledgebase/lernb1.htm.
- Meister, J. (1998). *Corporate Universities. Lessons in building a world-class work force.* NY: McGraw-Hill, Inc.
- Steelcase Threesixty Magazine, "Rethinking Higher Education Spaces: Issue 60" by Steelcase, Fall 2010
- Steelcase Threesixty Magazine, "Harder Working Spaces: Issue 59" by Steelcase, June 2010
- Steelcase Threesixty White Paper, "How the Workplace Fosters Innovation." by Steelcase Workspace Futures, November 2010
- Steelcase Threesixty White Paper, "Brand, Culture, and the Workplace?" by Steelcase Workspace Futures, June, 2010
- Steelcase CEU, "Classrooms for the 21st Century " by Steelcase Workspace Futures, April 2009
- Steelcase Education Solutions – (in press) White paper on the success of a LearnLab.
- Kelly, F.S., McCain, T. & Jukes, I. (2009). *Teaching the digital generation. No more cookie-cuter high schools.* CA: Corwin Press.
- Wolfe, P. (2010). *Brain matters – 2nd edition. Translating research into classroom practice.* VA: ASCD.

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Faculty Development, Retrieved May 14, 2011, from: http://www.faculty.londondeanery.ac.uk/e-learning/setting-learning-objectives

http://www.google.com/imgres?imgurl=http://today.duke.edu/sites/default/files/news_images/neuroclass009.jpg&imgrefurl=http://today.duke.edu/2008/09/link.html&h=312&w=468&sz=24&tbnid=qh3nZh25B4JWQM:&tbnh=85&tbnw=128&prev=/search%3Fq%3Dimage%2Binteractive%2Blearning%26tbm%3Disch%26tbo%3Du&zoom=1&q=image+interactive+learning&usg=__mRU_GESjhKkIce9JyHQtsmAZJHw=&sa=X&ei=FtDOTffJG4fegQeJlMClDA&ved=0CB4Q9QEwAA

http://www2.ed.gov/pubs/parents/Geography/movement.html

http://www.google.com/imgres?imgurl=http://www.shutterbug.net/images/archivesart/302port.4.jpg&imgrefurl=http://www.shutterbug.net/refreshercourse/portrait_tips/105/&h=135&w=200&sz=16&tbnid=DchiI-MYIl-vrM:&tbnh=70&tbnw=104&prev=/search%3Fq%3Dimage%2Bpeople%2Binteracting%26tbm%3Disch%26tbo%3Du&zoom=1&q=image+people+interacting&usg=__1X1Z-fIjAt6NluoYxtk18JeZ2DM=&sa=X&ei=otDOTZC4NIHEgAfQmOCxDA&ved=0CB0Q9QEwAA

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http://www.google.com/imgres?imgurl=http://images.inmagine.com/img/photoalto/paa125/paa125000044.jpg&imgrefurl=http://www.inmagine.com/paa125/paa125000044-photo&usg=__kJfUGH7BKsOHTyQM51jMAHb-u7I=&h=283&w=400&sz=57&hl=en&start=12&zoom=1&tbnid=YTVdWQaIhzO81M:&tbnh=102&tbnw=142&ei=KtHOTa6iNsbagQfZzJyzDA&prev=/search%3Fq%3Dimage%2Bpeople%2Binteracting%26hl%3Den%26sa%3DX%26rlz%3D1T4SKPT_enUS413US420%26biw%3D765%26bih%3D533%26tbm%3Disch&itbs=1&iact=rc&dur=841&page=2&ndsp=12&ved=1t:429,r:0,s:12&tx=75&ty=76

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