



Building, Teaching & Learning in a Classroom of the Future:

How Oregon Tech's
Entrepreneurial Center
Drives Innovation

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Building, Teaching & Learning in a Classroom of the Future: How Oregon Tech's Entrepreneurial Center Drives Innovation

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How do educators prepare students to work in the innovative, dynamic, and evolving 21st century work environments when most of our classes are held in traditional front-facing classrooms designed for 20th century learning?

Session Objectives

1. **Explain** the design process and features that were used in creating the entrepreneurial center.
2. **Understand** how this center supports an innovative mindset and learning for students.
3. **Apply** active learning and design thinking practices when teaching in modern classroom.
4. **Design** an entrepreneurial learning space that supports innovation and prepares students for a modern workplace.

Background | Pedagogy & Learning Spaces

Pedagogy & Learning Spaces

Active Learning Pedagogy

- Constructionist Theory – Build & Engage to Learn
- Student-to-Student, Instructor as the Guide
- Increased Student Learning Outcomes

Active Learning Spaces

- Mobile Furniture to Support Active Learning
- Increase Student Learning Outcomes & Experiences

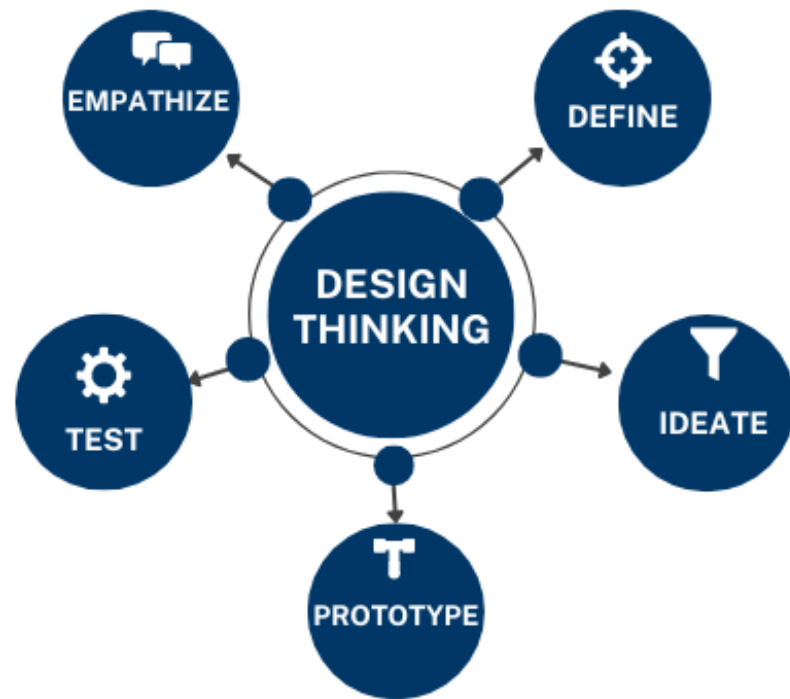


Background

Pedagogy & Learning Spaces

Innovation Pedagogy

- Idea Generation, Prototyping, Feedback Loops
- i.e. Stanford's Design Thinking
- Increased Collaboration
- Employers are seeking these skills

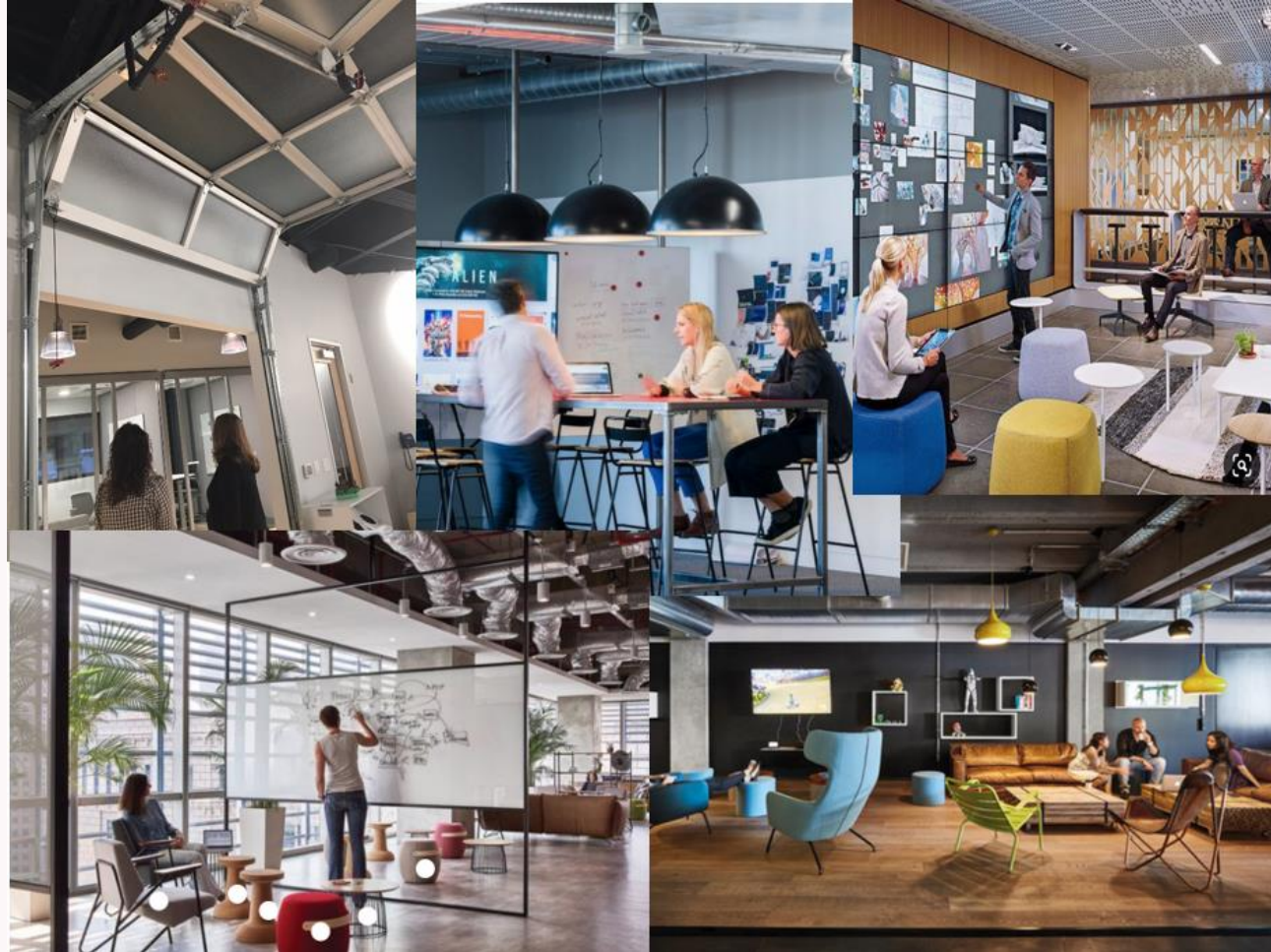


Design | Designing & Building an Entrepreneurial Center

Design

Inspiration

- Modern Offices Spaces
- Collaboration Spaces
- Stanford's D School



Design

Inspiration

- Modern Offices Spaces
- Collaboration Spaces
- Stanford's D School



Design

Funding

- Developed a Proposal
- Shared with Development & Leadership
- New Building = Top Priority



Design

Design Principles



Me + We

Equally support individual
and team work



Fixed to Fluid

Design for greater
flexibility and mobility



Open + Enclosed

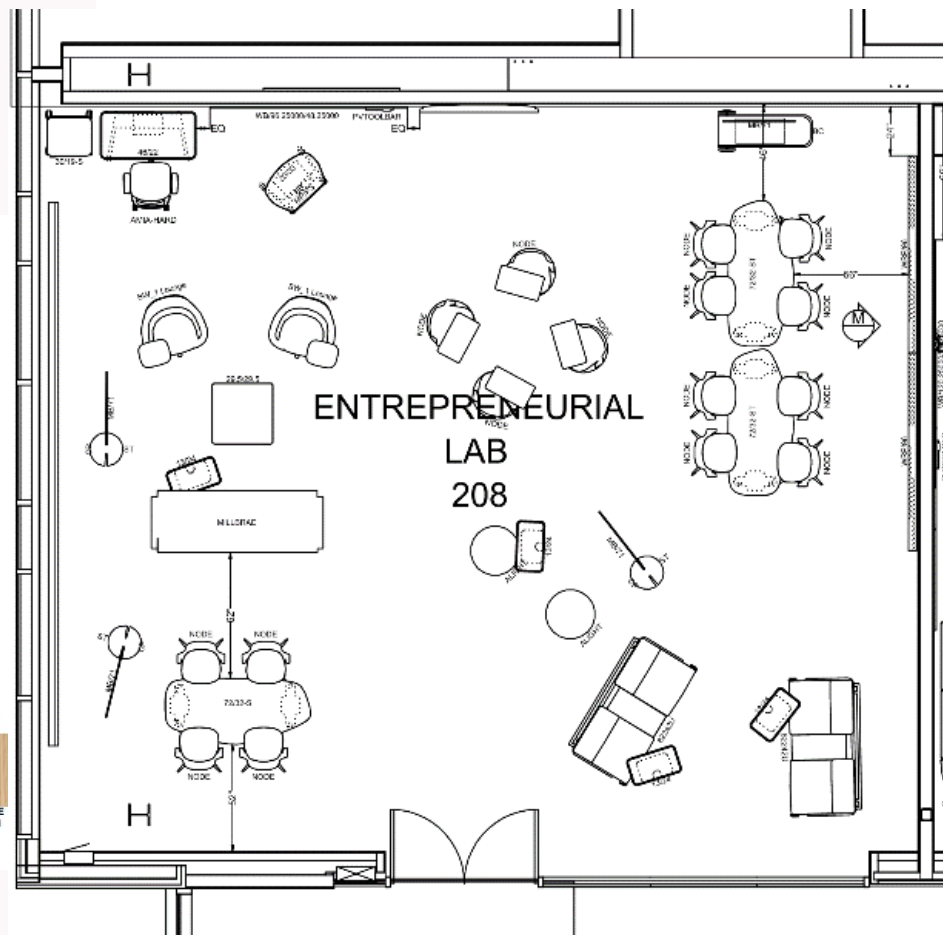
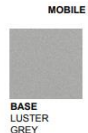
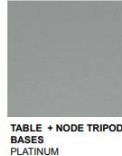
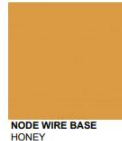
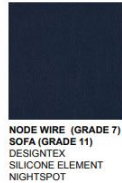
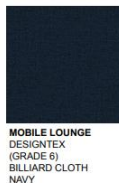
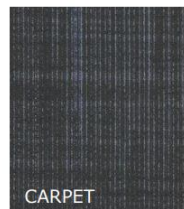
More enclosed "me" and
more open "we" spaces



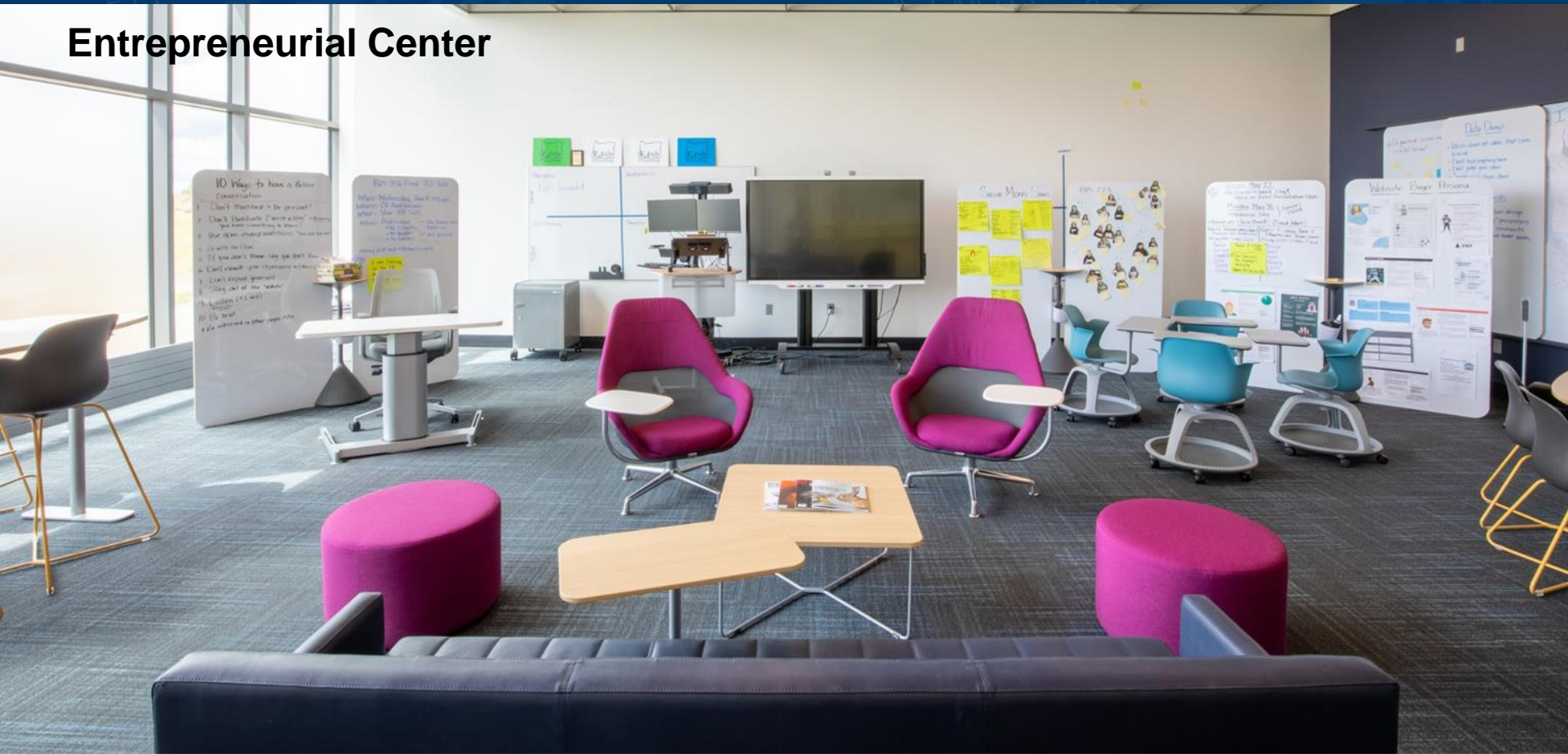
Braiding Digital + Physical

Enhance the human
experience through technology

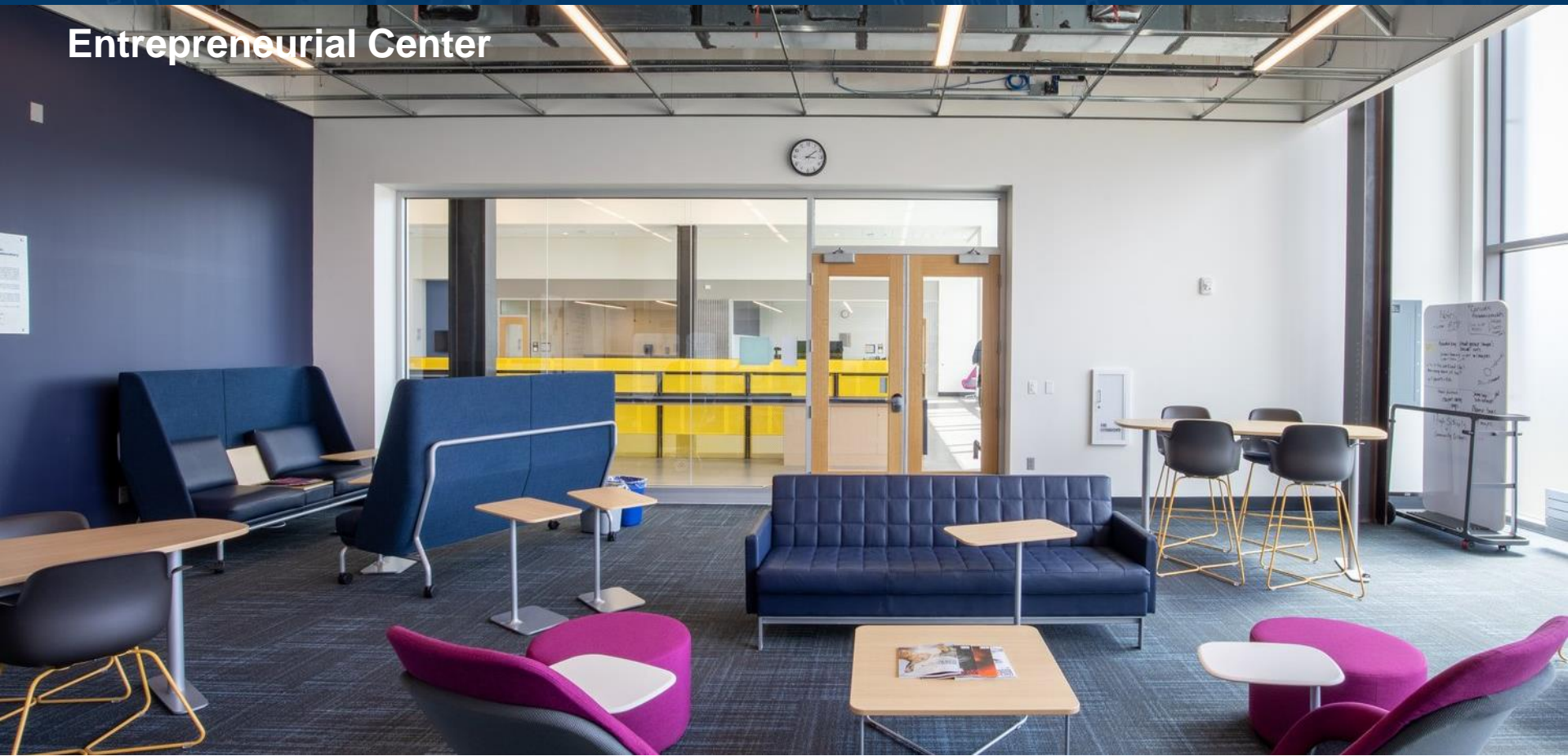
Design



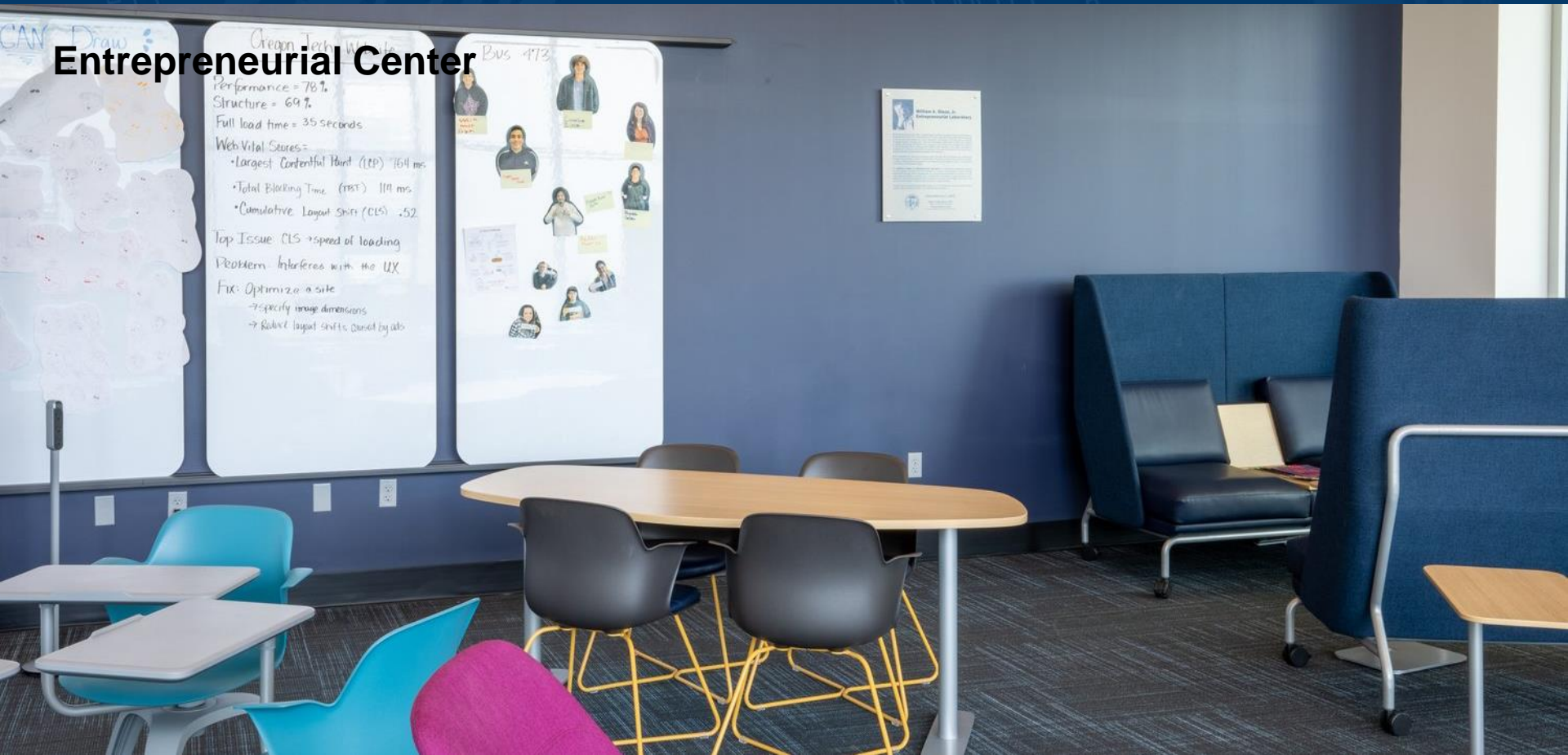
Entrepreneurial Center



Entrepreneurial Center



Entrepreneurial Center



Entrepreneurial Center

Sam

BUS 223

Friday, May 27

No Class → Work Day!

Work on Final Presentation Steps

Monday, May 30

Memorial Day

Rehearsals + Tech Checks (Dead Week)

Rd #1: Wednesday June 1

Rd #2: Friday, June 3

June 1 + 1955

June 3 + 1955

Website Buyer Persona

Performance = 78%

Structure = 69%

Full load time = 35 seconds

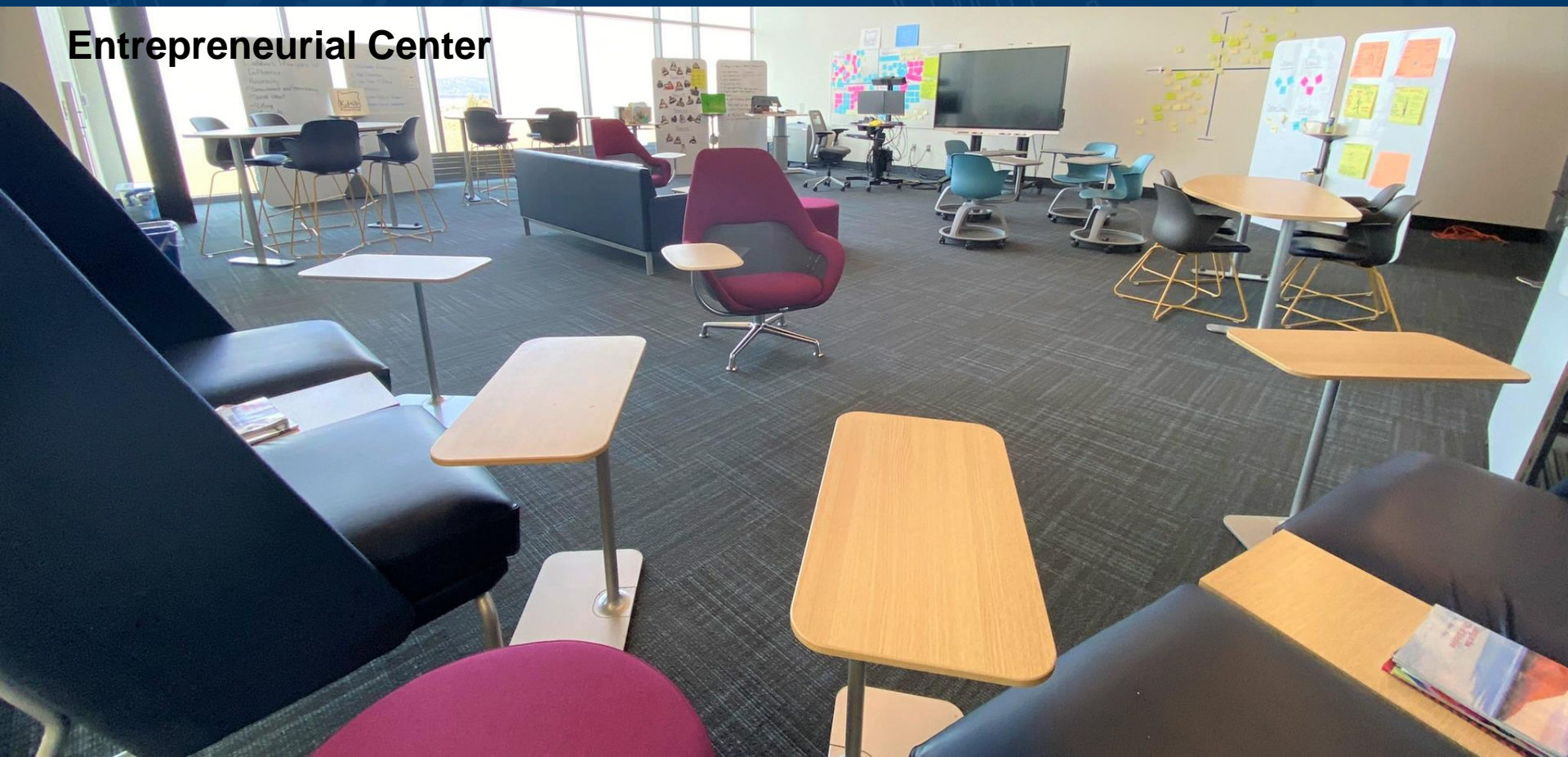
Web Vital Scores =

Top Issue: CLS → speed of loading

Problem: Interferes with the UX

Fix: Optimize a site

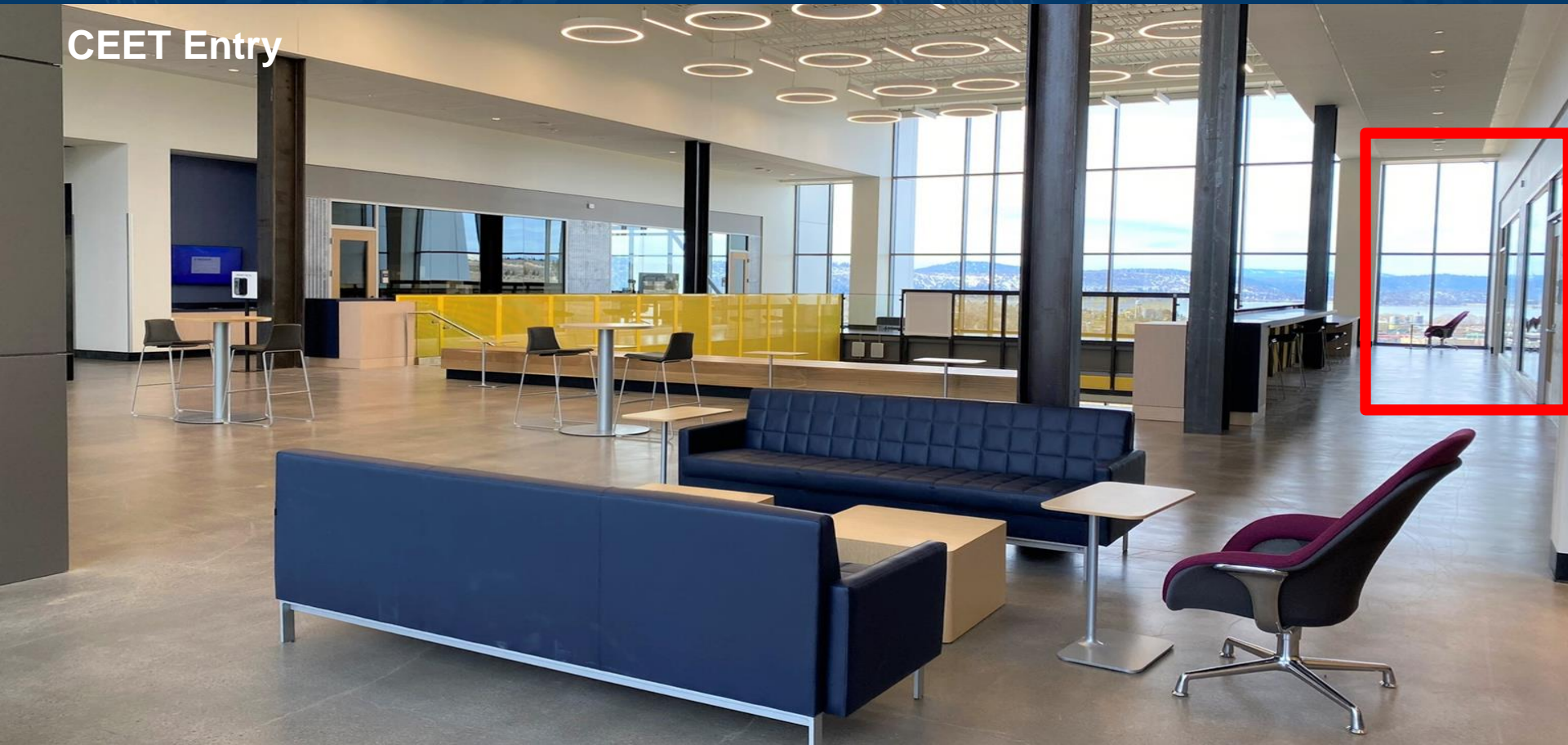
Entrepreneurial Center



Entrepreneurial Center



CEET Entry



Research | Understanding How the Space Supports Innovation & Student Success

Research Questions

- How do the classroom tools and features aid students in their learning?
- How does the classroom help to develop innovation skills?
- How does the classroom support student success (i.e. motivation and retention)?

Research Methods

- Pre vs Post Survey
- Traditional vs Entrep Space Experience
- 22 Likert Questions & 2 text questions
- Fall 2022

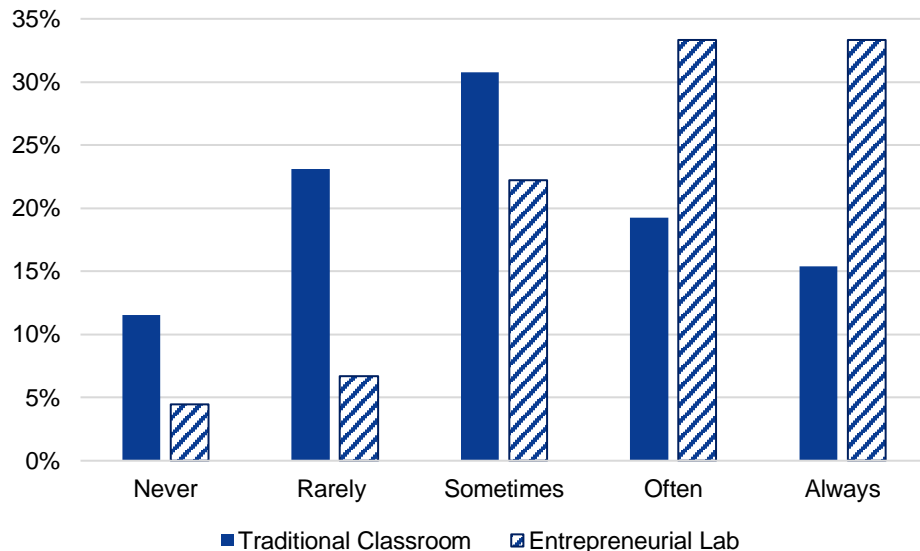
Demographics

- | | |
|---|-----|
| • First-Year | 26% |
| • Sophomore | 7% |
| • Junior | 46% |
| • Senior | 14% |
| • Mix of Business, Technology, Communication & Engineering Majors | |

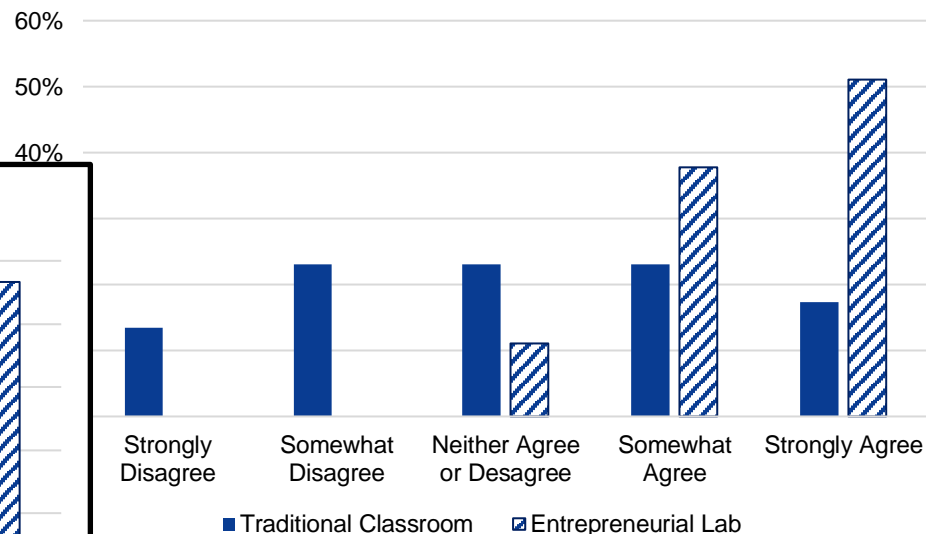
Research

How do the classroom tools and features aid students in their learning?

Use Posted Material in Classroom



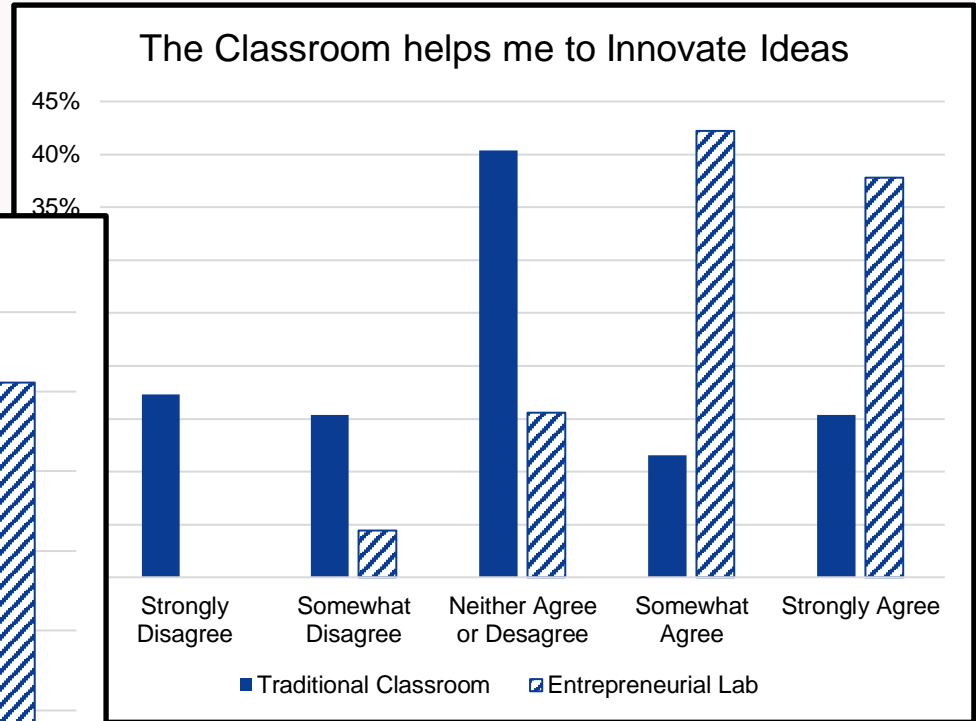
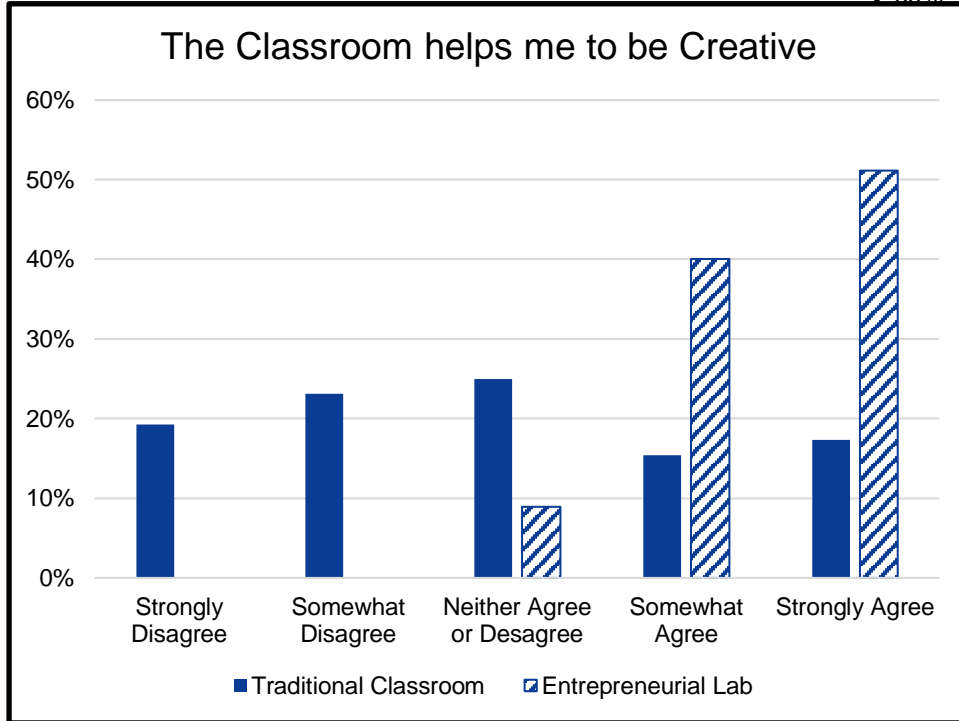
The Classroom Helps me Communicate my Ideas with Others



Increased use of writing surfaces to think through ideas.

Research

How does the classroom help to develop innovation skills?

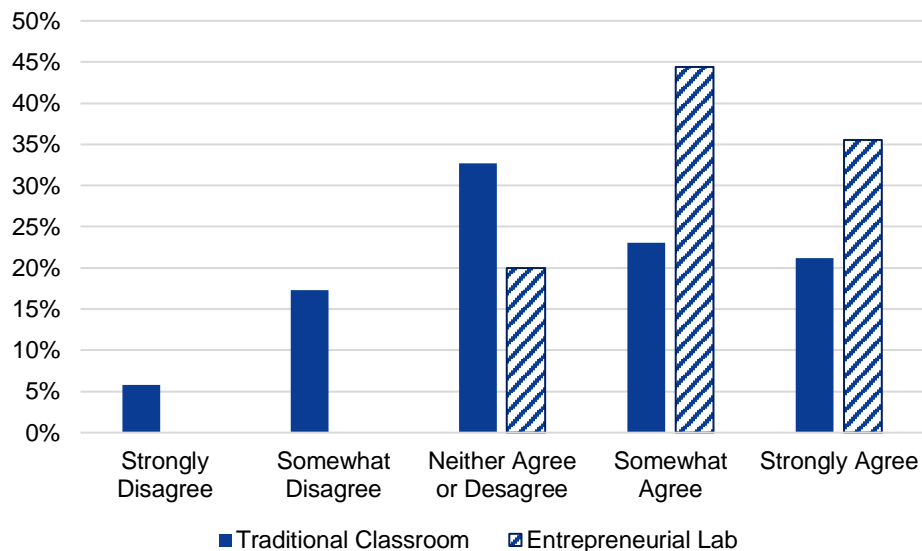


Increased risk-taking, collaboration,
critical thinking

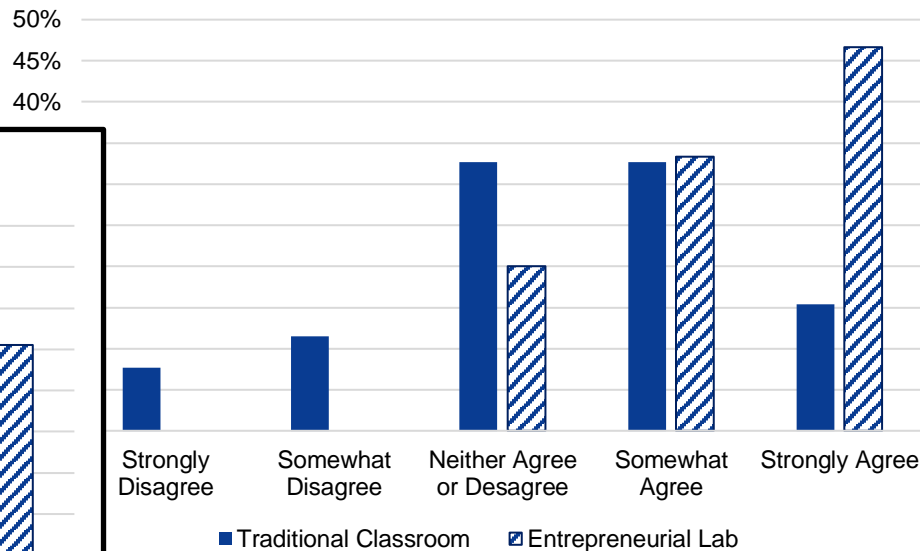
Research

How does the classroom support student success?

I am an Important Member of the Class



My Classmates Support my Learning



Increased level of motivation, making a friend, feeling confident to participate

Impact of Space on Learning

Traditional Classroom Experience



Entrepreneurial Lab Experience



Impact of Space on Creativity and Innovation

Traditional Classroom Experience



Entrepreneurial Lab Experience



Instructors' Insights

Embracing the Space

- No Time Needed to get used to Space
- Encouraged to try New Teaching Techniques

Connections

- Natural Movement
- Immediate Student-to-Student Connections
- Easier Student-to-Faculty Connections

Activities Observed

- Creativity & Iteration of Ideas
- Risk-Taking
- Managing Projects

“The space is conducive for those who appreciate and celebrate the student-centric active learning environment.”

Key Discoveries | Research Outcomes

Discoveries

Key-Discoveries

Re-Envisioning the Classroom

- Even active learning classrooms look like classrooms
- Learning can be enhanced in a non-traditional space

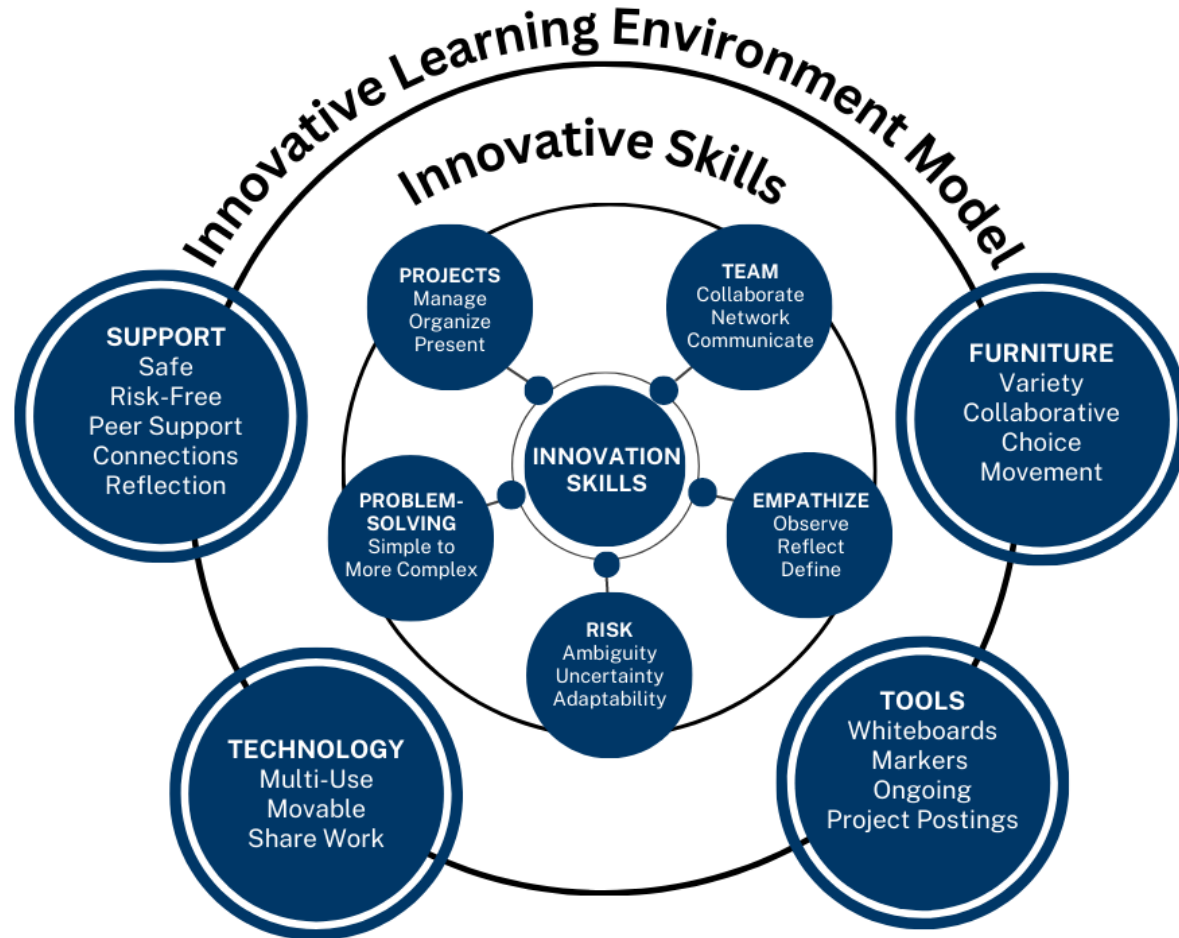
Sense of Awe & Pro-Social Space

- Sense of being part of something greater than self

Development of Innovation Skills

- Development of a framework to create a space to support innovation skill development







William A Olson, Jr. Entrepreneurial Lab, Oregon Tech

Vancouver Innovation, Technology & Arts School

Strascheg Center of Entrepreneurship, Germany

Key Conclusions

Space Matters!!

Re-Thinking the Classroom?

Space Design to Support Connection
& Innovation Skill Development
to Prepare Students

Next Steps

Deep Dive
Innovation Learning Environment Model

Multiple Space Research:
K-12, Higher Ed (US & Europe)
Workspace

Grant Support

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**Want More Info About
The Research Study & CEET Project?**



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