Using Alumni Surveys to Assess the Impact of Innovative Learning Spaces on Development of Career-Ready Soft Skills

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Professor of Chemistry, College of Life Sciences

1. Understand the varied assessment techniques used to measure outcomes in active learning spaces.

2. Appreciate the value, and limitations, of incorporating alumni reflections in assessment strategies (based on research supported by a 2018-19 SCUP fellowship award).

3. Instill reflection upon your institutional assessment needs to create an assessment plan tailored to your institution's learning spaces to quantify outcomes.

Learning Outcomes

Educator
Chemistry, Oceanography, Study Abroad

Coordinator
Active Learning Space Initiative

Director
Center for Teaching Innovation
& Nexus Learning

Center for Teaching Innovation and Nexus Learning

The Center for Teaching Innovation and Nexus Learning is the core faculty and staff development vehicle for fostering:

- Active and engaged learning
- Collaborative inquiry
- The use of real world problems and experiences
- The strong integration of the liberal arts and sciences with professional disciplines

UPCOMING EVENTS

Weekly Spring Semester Reading and Implementation Group: Diversity, Inclusivity and Social Justice in the Classroom and on Campus

Apr 9 11am

Nexus Learning at Jefferson University East Falls Campus encompasses the above four tenets of teaching and learning. These are the key elements of engagement with course content and skills that catalyze intellectual growth and personal development for our students, as well as our faculty.

The mission of Jefferson University East Falls Campus' Center for Teaching Innovation and Nexus Learning is to support faculty members' experimentation and innovation in teaching to

LINKS

- » About the Center
- » Camp EdVenture 2018
- » Programs
- » Services
- » Active Learning Space Initiative
- » Nexus Learning Grants
- » Nexus Teaching Resources
- » Staff List

WHAT IS NEXUS LEARNING? →

Kanbar College of Design, Engineering, and Commerce — ~27 Programs
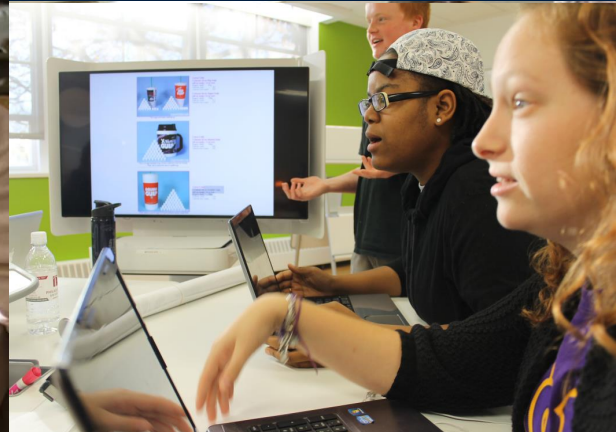
College of Architecture and the Built Environment — ~18 Programs

Colleges of Life Sciences; Health Sciences; Humanities and Science; and Rehabilitation Sciences — ~25 Programs

Thomas Jefferson University - East Falls Campus

At Jefferson East Falls Campus, we have always believed in creating professionals of the future. We've been doing it since 1884.

Our method? We call it NEXUS LEARNING

Nexus Learning:
ACTIVE, COLLABORATIVE, CONNECTED TO THE REAL WORLD

…and Infused with the Liberal Arts and Sciences!

1. Set the vision and goal
2. Inventory our teaching and learning strategies
3. Define it
4. Communicate the need
5. Create an infrastructure to support it
6. Assess it

Nexus Learning: The 6 Steps to Success

Seven University Strategic Plan Initiatives (2008):

#1 Formalize our *Signature Learning* Approach

#6 Develop Innovative Facilities

STEP 1: Set the Vision and Goal

- **Formed the Signature Learning Action Team**

- **Faculty submitted detailed narratives of their "Best Practices"**

- **Team categorized responses into broad signature learning approaches**

STEP 2: Inventory our Teaching and Learning Strategies

Active **Project-Based**

Infused

with the Collaborative **Team-focused**

Liberal Arts Real World **Industry-sponsored**

Step 3: Define It

BOUNDARY CROSSING COMPETENCIES
Teamwork, communication, perspective, networks, critical thinking, global understanding, project management, etc.

MANY DISCIPLINES
Understanding & communications

MANY SYSTEMS
Understanding & communications

DEEP IN AT LEAST ONE DISCIPLINE
Analytic thinking & problem solving

DEEP IN AT LEAST ONE SYSTEM
Analytic thinking & problem solving

**DEEP IN AT LEAST ONE DISCIPLINE**
Analytic thinking & problem solving

DEEP IN AT LEAST ONE SYSTEM
Analytic thinking & problem solving

STEP 4: Communicate the Need

POPULAR SKILLS ACROSS INDUSTRIES

The top few skills that employers rank as most important are common across all industries. Communication, writing, and organizational skills are listed as requirements for almost every job posting.

#1 Communication skills
2 Organizational skills
3 Writing
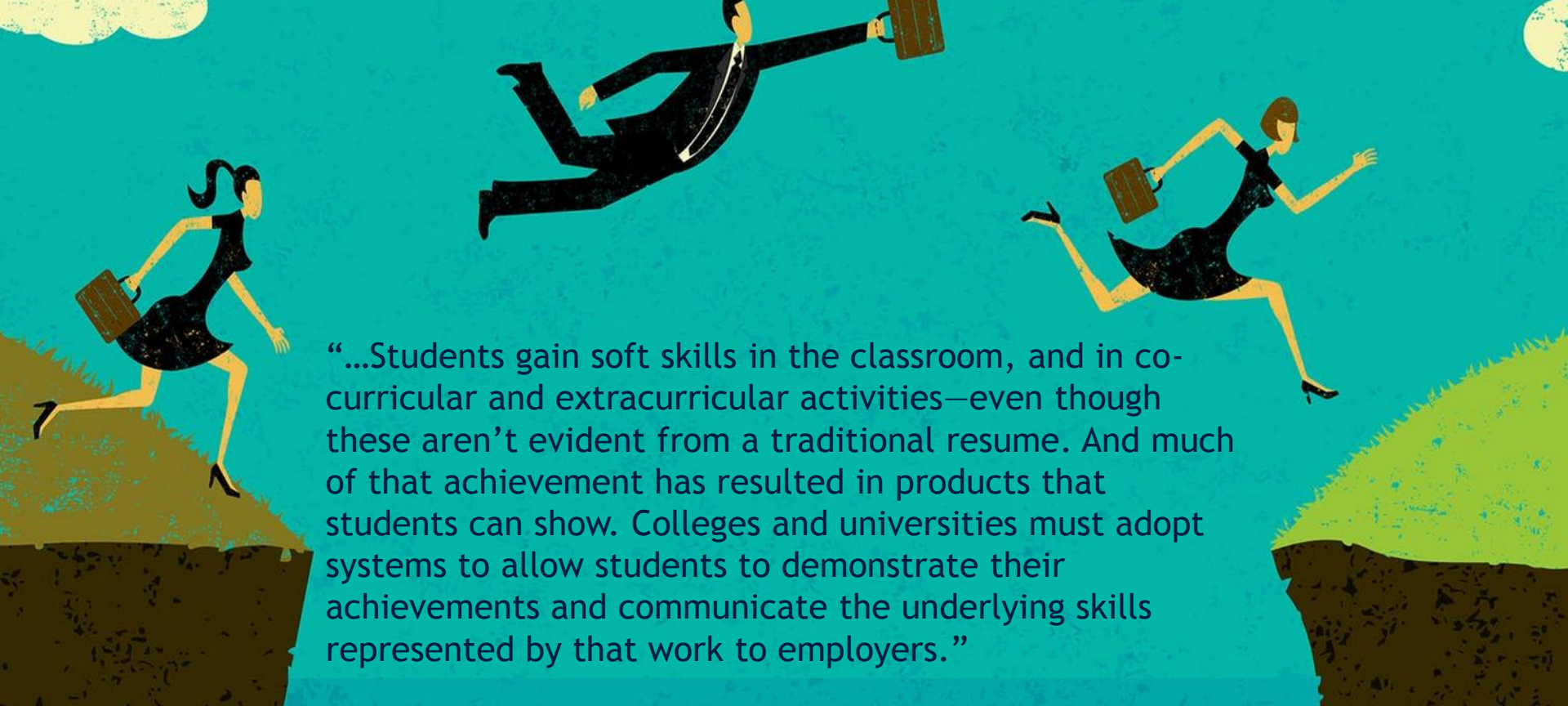4 Customer service
5 Microsoft Excel
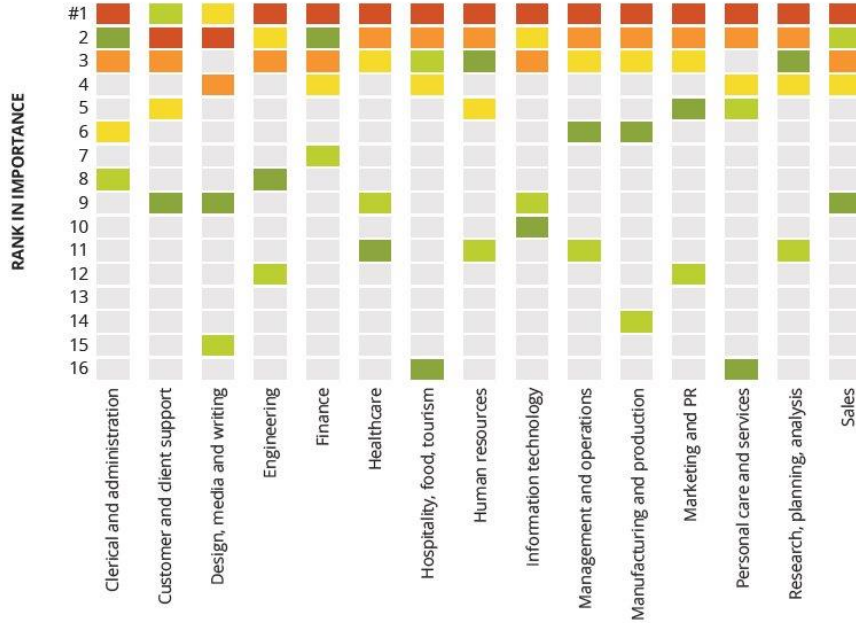
Source: Burning Glass

What Do Employers Want?

Knowledge and Skills within that discipline

+

Soft skills

STEP 4: Communicate the Need

"…Students gain soft skills in the classroom, and in co-curricular and extracurricular activities—even though these aren't evident from a traditional resume. And much of that achievement has resulted in products that students can show. Colleges and universities must adopt systems to allow students to demonstrate their achievements and communicate the underlying skills represented by that work to employers."

STEP 4: Communicate the Need

2 Exemplars
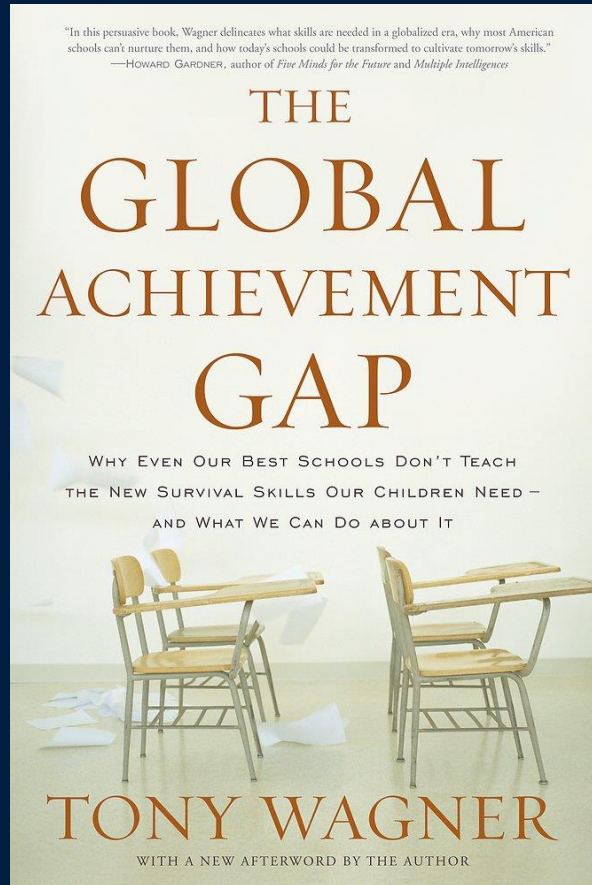
Tony Wagner's 7 core competencies
(Source: "The Global Achievement Gap")

- **Critical thinking and problem solving**

- **Collaboration across networks and leading by influence**

- **Agility and adaptability**

- **Initiative and entrepreneurialism**

- **Effective oral and written communication**

- **Accessing and evaluating information**

- **Curiosity and imagination**

Exemplar 1: The Hallmarks Program

QUESTION: Curiosity and Confidence

for general education

Curriculum

CONTRIBUTE: Empathy and Collaboration

ASK: Initiative and Ethical Reflection

the major

ADAPT: Contextual Understanding and Global Perspectives

Year 1   Year 2   Year 3   Year 4

Exemplar 1: The Hallmarks Program

	HALLMARKS LEARNING GOALS	HALLMARKS FOLIO ITEMS		
		From the Hallmarks Core	*From Your Major*	*From Your Co-Curricular Activities**
QUESTION	Curiosity	☑	☑	☑
	Confidence	☑	☑	
ADAPT	Contextual Understanding	☑	☑	☑
	Global Perspectives	☑	☑	
CONTRIBUTE	Empathy	☑	☑	☑
	Collaboration	☑	☑	
ACT	Initiative	☑	☑	☑
	Ethical Reflection	☑	☑	

(Left vertical label: ABILITIES TO BE DEVELOPED)

*This can be satisfied by additional work in the Hallmarks Core or in your major.

Exemplar 1: The Hallmarks Program

Exemplar 2: Innovative Learning Spaces

Nexus Learning Hubs

STEP 6: Assess It

The Assessment Process

What Are The Outcomes?

Students

Outcome:

Enhanced acquisition of collaboration skills

Faculty Members

Outcome:

Enhanced ability to employ collaborative pedagogies

Students

Alumni

President's Office

Board of Trustees

Faculty Members

Registrar

Furniture & Technology Venders

Provost / Faculty Affairs Office

School/College Dean

Physical Plant & Operations

Office of Information Technology

Center for Teaching & Learning

Stakeholder	Example of Outcome
Center for Teaching & Learning	• support for faculty members to optimize teaching
Physical Plant & Operations	• Refinement of guidelines for ideal active learning spaces on campus
Board of Trustees	• Evidence to continue financial support of these spaces

Stakeholder	Example of Outcome	Assessment Tools
Center for Teaching & Learning	• support for faculty members to optimize teaching	No One Tool Fits All!
Physical Plant & Operations	• Refinement of guidelines for ideal active learning spaces on campus	
Board of Trustees	• Evidence to continue financial support of these spaces	

Stakeholder	Example of Outcome	Assessment Tools
Center for Teaching & Learning	• support for faculty members to optimize teaching	• Ethnographic observations of classes • Faculty reflective journals • Faculty surveys
Physical Plant & Operations	• Refinement of guidelines for ideal active learning spaces on campus	• Student and faculty reflections • Pre and post surveys
Board of Trustees	• Evidence to continue financial support of these spaces	• Post-Occupancy survey • Collating faculty success narratives

My SCUP Fellowship Research Project!

Why Alumni?

Top 10 Soft Skills Managers Want to See in Candidates
Source: CareerBuilder
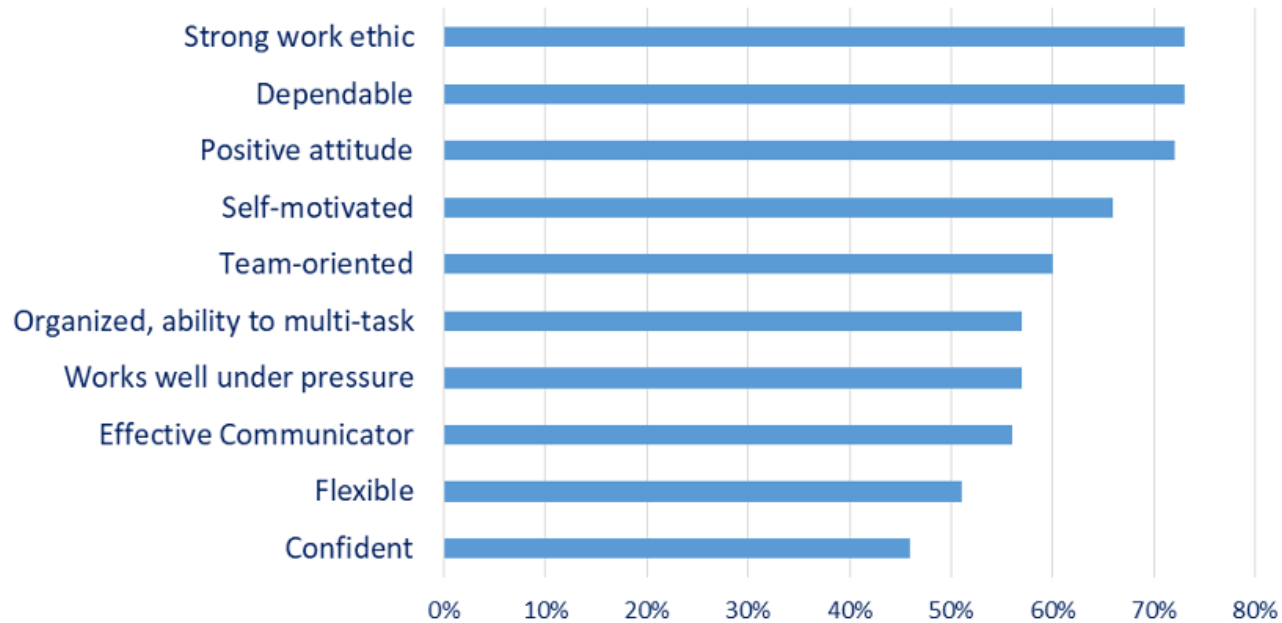
Why Soft Skills?

www.ionos.com

Outcome: Nexus Learning Hubs Develop Soft Skill Acquisition

Hard skills	**Soft skills**
Learnable and presentable skills, knowledge, and qualifications	Character traits; personal, interpersonal skills
• Language knowledge	• Communication skills
• Degrees, apprenticeships, certificates	• Flexibility
• Accounting	• Self-discipline, self-reflection
• Typing techniques	• Teamwork
• Machine operation	• Time management
• Programming languages	• Empathy
• Software knowledge	• Ability to take criticism
• ...	• ...

www.ionos.com

Outcome: Nexus Learning Hubs Develop Collaboration Skills

IRB APPROVAL

PRE-SURVEY

SURVEY

DATA ANALYSIS

CONCLUSIONS

STEP **1**
Identify Outcomes

STEP **2**
Select & Design Measure(s)

STEP **3**
Plan for Data Collection & Implement Measure

STEP **4**
Analyze Data

STEP **5**
Use Results to Improve

My Assessment Process

For this survey, collaboration skills are defined as the ability to:

- communicate effectively, respectfully and productively with peers and instructor

- manage conflict and build consensus as a team

- listen with empathy to understand and value the views of all

- recognize that collaboration leads to better outcomes

- think differently through sharing of knowledge and approaches

Defining "Collaboration" for Survey Takers

PRE-SURVEY Responses:

67% Agree
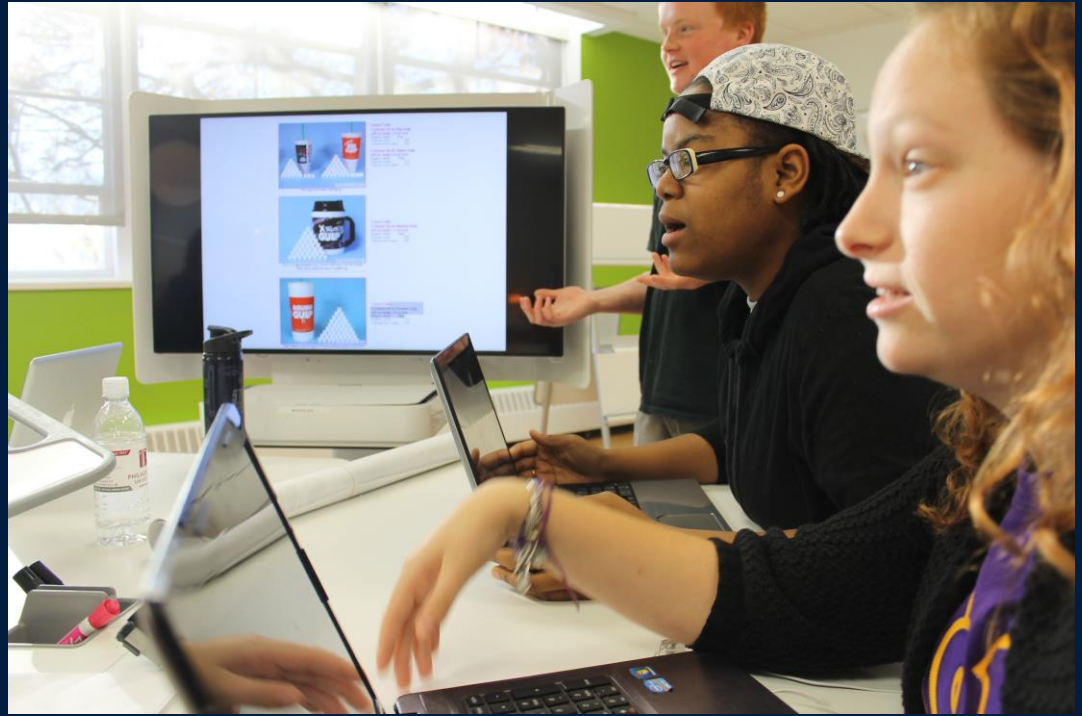
Do you agree or disagree with the statement "Nexus Learning Hubs developed my collaboration skills"? (n=108; 20% response rate)

PRE-SURVEY Responses:

Space/Attributes: Configuration, furniture, tables, aesthetics

Technology: Digital and analog

Instructor/Pedagogies: Teaching and learning methods/activities

What in particular (provide examples) allowed collaboration skills to be developed in Nexus Learning Hubs as opposed to traditional 'row and column' classrooms? (n=108)

PRE-SURVEY
Open Responses

↓

SURVEY
Multiple-Choice
Responses

In your opinion, which was the most important attribute of Nexus Learning Hubs in developing your collaboration skills (pick only one)?

☐ Orientation of furniture (being able to face other people and engage in discussion)

☐ Instructor's teaching and facilitating style

☐ The assignments/group projects

☐ Digital technology (computers, wall-mounted monitors, projectors)

☐ Whiteboards and whiteboarded surfaces

☐ The spaces between furniture allowed for easy movement throughout the room

☐ Room aesthetics and comfort level (color/type of furniture, accent walls, flooring choices, etc.)

☐ Other...

76% YES

24% NO

Are you currently employed in a position related to the major you studied? (n=49; 10% response rate)

Approximately how many courses did you have in Nexus Learning Hubs during your undergraduate/graduate experience? (n=49)

~40% Cubicles
Isolated Desks/Offices

Varied spaces – retail, open office, labs, clinics

Describe your current workspace environment with respect to its ability to foster collaboration? (n=43)

7%   Technology (Digital/Analog)

21%   None

72%   Furnishings/Configurations

Beginning of Survey
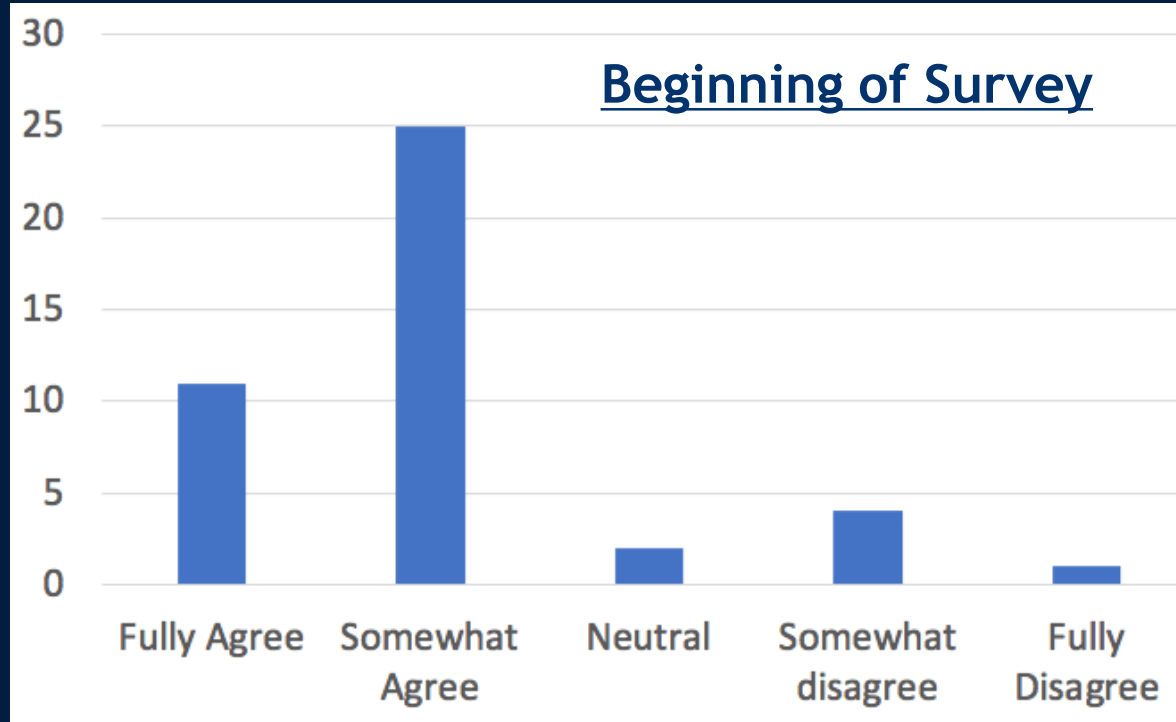
84% YES

To what degree do you agree with the statement "Nexus Learning Hubs developed my collaboration skills in ways not provided in traditional "row and column" classrooms? (n=43)

Towards End of Survey
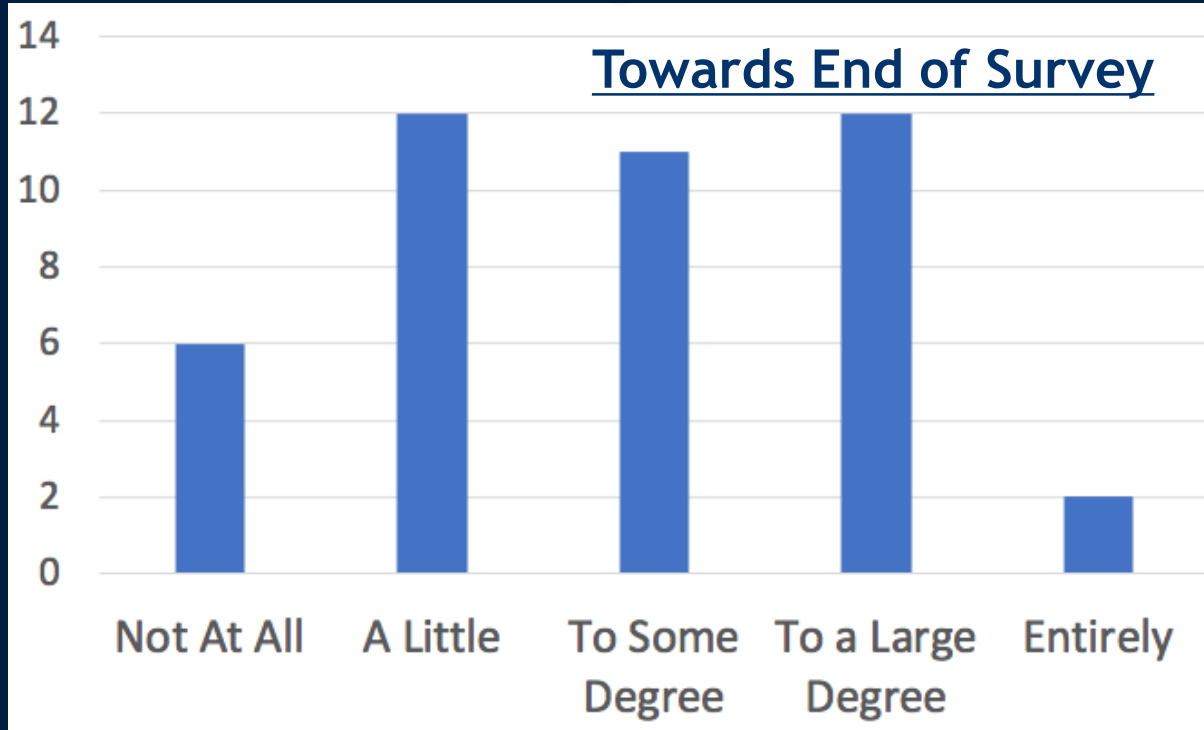
86% YES

Do you think your experiences in Nexus Learning Hubs developed your collaboration skills (n=43)?

Beginning of Survey

To what degree do you agree with the statement "Nexus Learning Hubs developed my collaboration skills in ways not provided in traditional "row and column" classrooms?

84% YES

Towards End of Survey

Do you think your experiences in Nexus Learning Hubs developed your collaboration skills?

86% YES
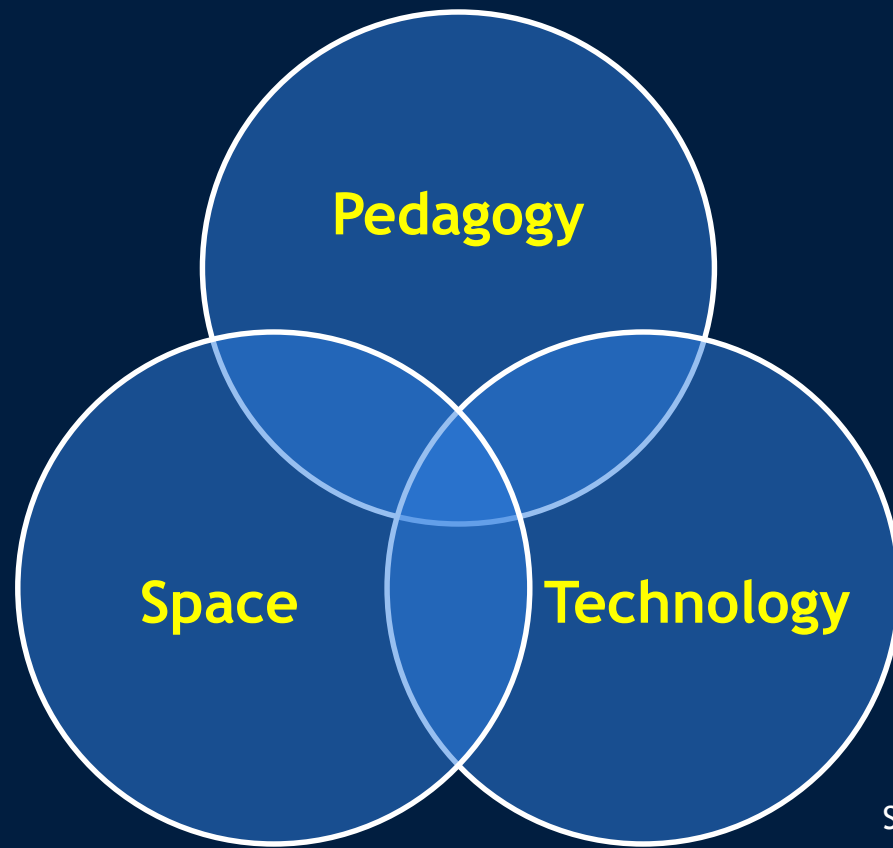
Source: Steelcase Research

What approaches did your instructor(s) use to develop collaboration skills?

82%
Benefits of Furniture Configuration

- We were <u>able to spread out</u> our notes and see everything in a more visual manner

- <u>It's easier to get to know and work with colleagues</u> when you're facing them and have the ability to communicate/ work with them face-to-face

- <u>Feeling of connection</u> with the other students in your group of tables and in turn, <u>feeling more comfortable</u> to talk and be more open to discuss and learn

- It <u>was easier to speak at a moderate voice level</u> without everyone else around you being able to hear your group discussion

Apart from your instructor, what in particular (provide examples) allowed collaboration skills to be developed in Nexus Learning Hubs differently from how they were developed in traditional 'row and column' classrooms?

21% No hindrances

Apart from your instructor, what in particular (provide examples) hindered development of collaboration skills in Nexus Learning Hubs as opposed to traditional 'row and column' classrooms? (n=43)

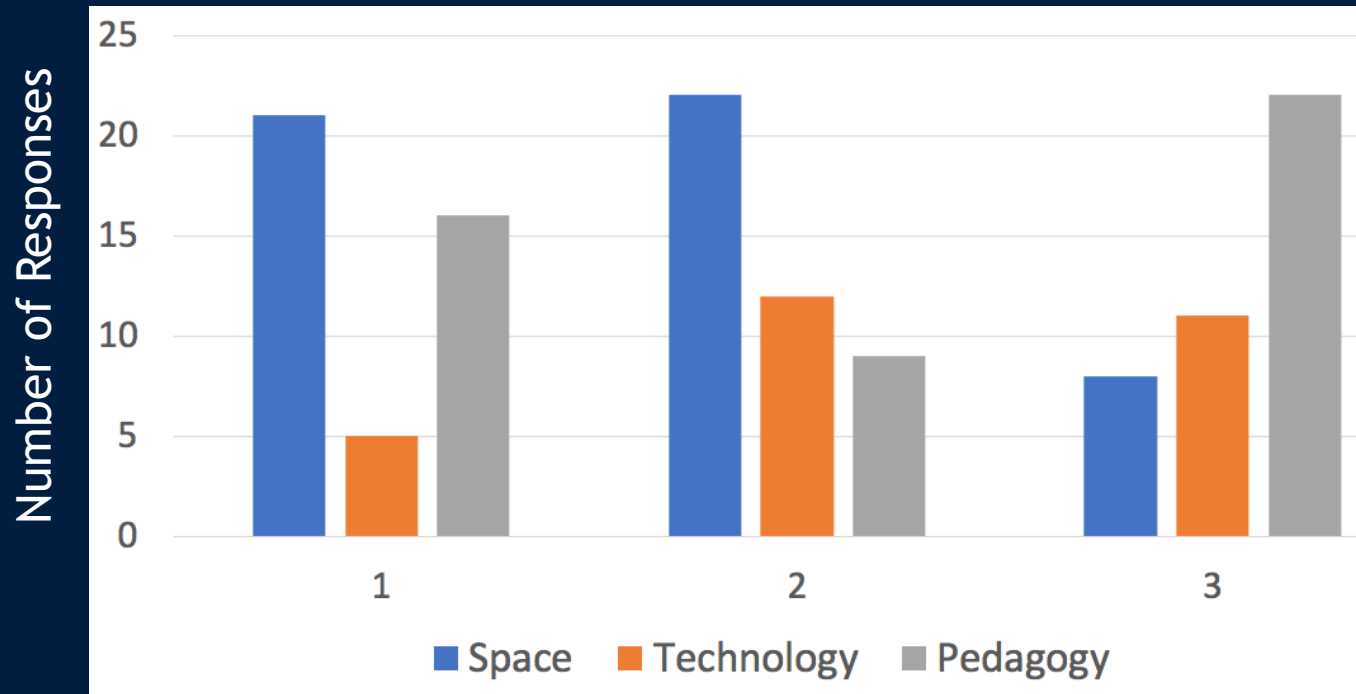21%   No hindrances

15%   Technology Problems

Apart from your instructor, what in particular (provide examples) hindered development of collaboration skills in Nexus Learning Hubs as opposed to traditional 'row and column' classrooms? (n=43)
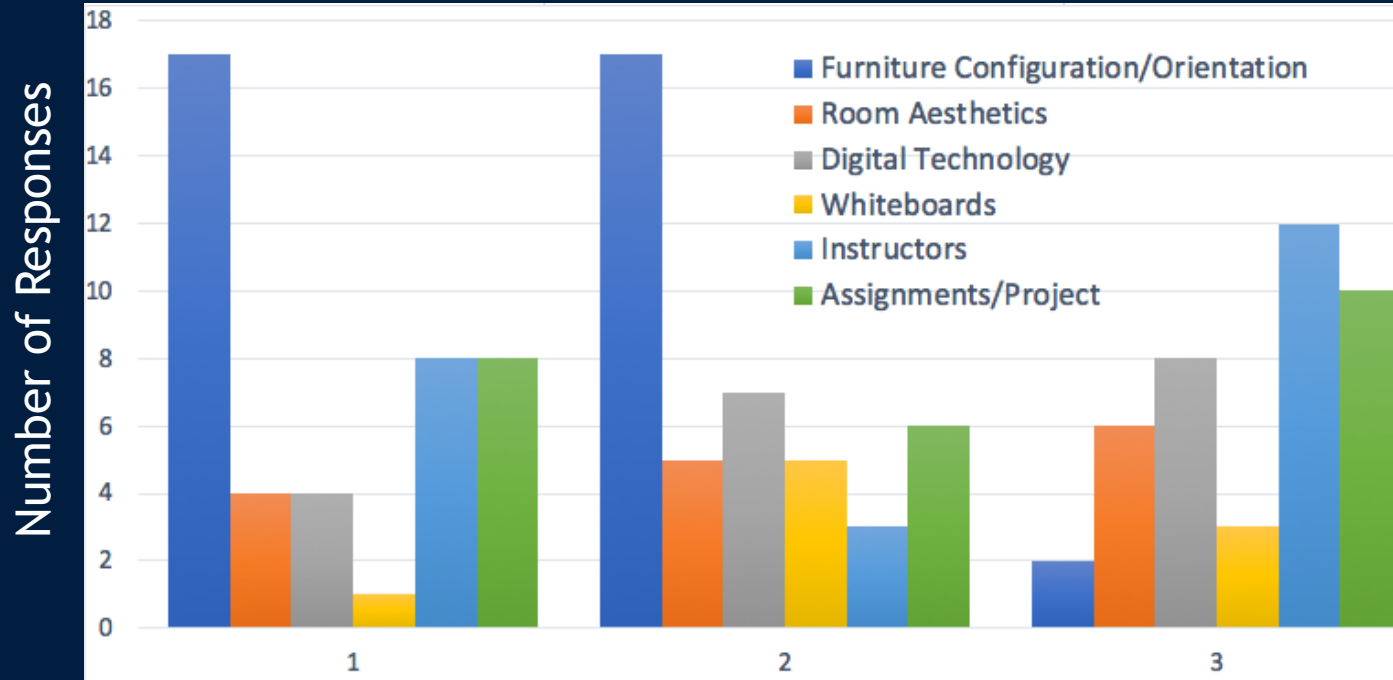
Which were the 1st, 2nd and 3rd most important attributes of Nexus Learning Hubs in developing your collaboration skills? (n=43)

Which were the 1st, 2nd and 3rd most important attributes of Nexus Learning Hubs in developing your collaboration skills (binned responses; n=43)
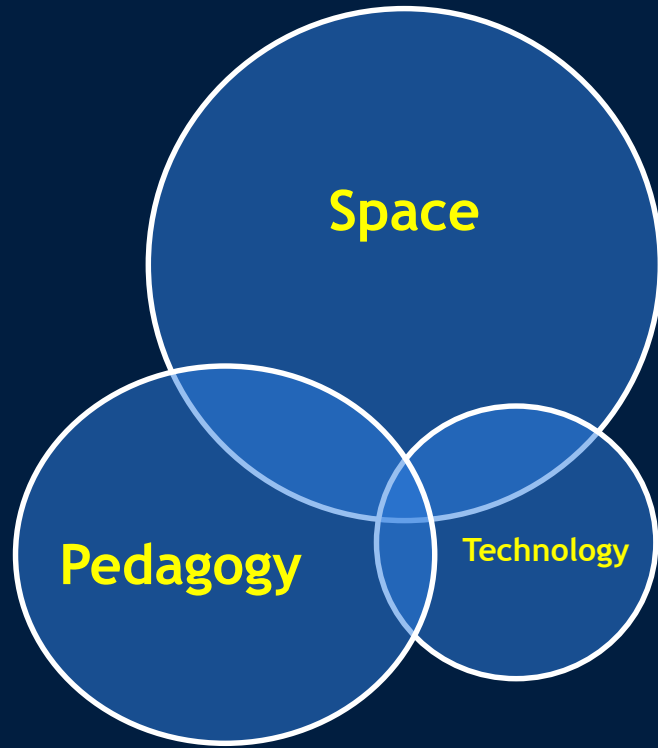
Relative importance of attributes of Nexus Learning Hubs in developing your collaboration skills

44%   Pedagogy

- Collaborative furniture and lessons are of no use if the faculty are not conducive of the collaboration that nexus inspires.

- Making each time the students come to class have a different way they interact within the room will make them more excited and engaged in the class overall.

- More cohesiveness.

If you could improve on the development of collaboration skills within Nexus Learning Hubs, what would you suggest doing? Please explain.

44% **Pedagogy**
18% **Technology**

- Offering screen mirroring so that projector screen can pop up on student's laptops.

- I would suggest having more ease of use for the technological aspects.

- Adding individual iPads or laptops for a more advanced experience

If you could improve on the development of collaboration skills within Nexus Learning Hubs, what would you suggest doing? Please explain.

44% Pedagogy
18% Technology
14% Physical Attributes

- Better aesthetics, art, ergonomic chairs, etc.

- Change the style of rolling seating and provide just a little more room between seats so people don't impede on others' space

- Have optimal natural lighting

If you could improve on the development of collaboration skills within Nexus Learning Hubs, what would you suggest doing? Please explain.

Responses represent self-reported perceptions of their development of collaboration skills in Nexus Learning Hubs.
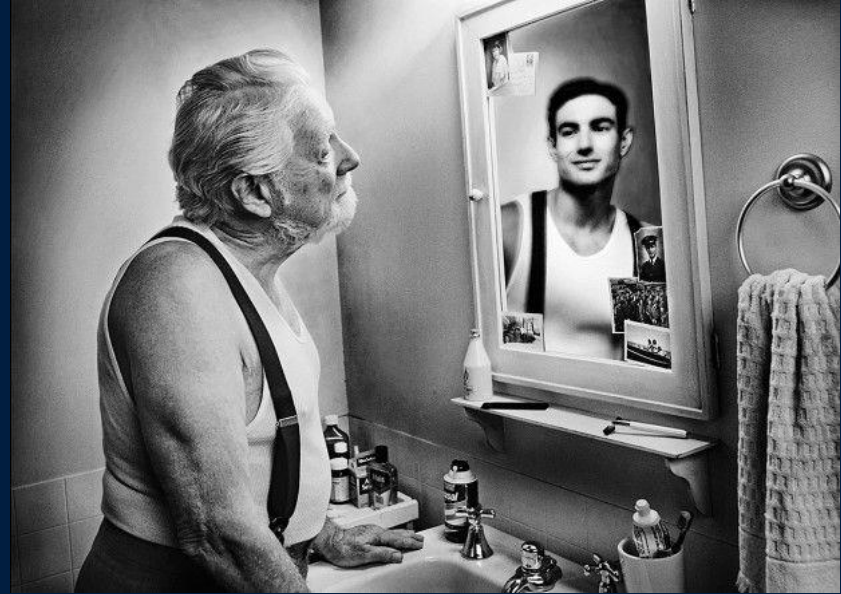
www.tomhussey.com/

Reflections of my Survey Approach

The relationship between satisfaction with college and learning gains could the product of a halo effect – an artifact in which an alum's assessment of a few items colors or 'halos' the entire evaluation.
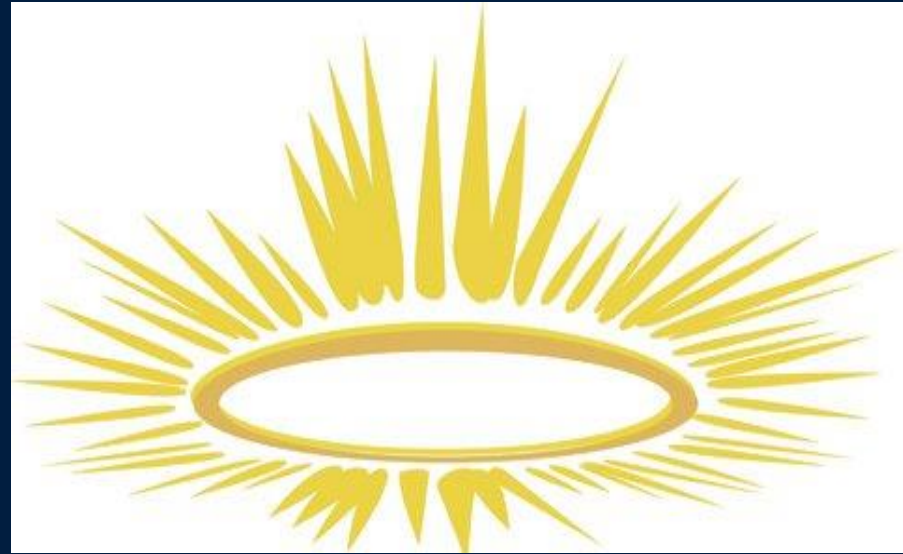
Pike (1993) The relationship between perceived learning and satisfaction with college. *Research in Higher Ed*

Reflections of my Survey Approach

Difficulty in identifying those sets of competencies that are actually developed in innovative learning spaces rather than those that can be acquired elsewhere.

Pascarella (2001) Identifying excellence in undergraduate education: Are we even close? *Change 2001*

Reflections of my Survey Approach

- According to polled alumni, Nexus Learning Hubs developed collaboration skills (85%; n=43)

Conclusions

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- Alumni felt that space attributes ranked highest for allowing collaboration skills developed (over pedagogy, technology)

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Conclusions

- According to polled alumni, Nexus Learning Hubs developed collaboration skills (85%; n=43)

- Alumni felt that space attributes ranked highest for allowing collaboration skills developed (over pedagogy, technology)

- Further faculty pedagogical support and/or gate-keeping should be considered to further develop mindful and effective Nexus Learning pedagogies (such as collaborative learning).

- Analog technology continues to be highly valued while digital technology sometimes results in frustration.

Conclusions

SCUP Fellowship Mentors

Nancy Strum
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Dean of Libraries, and
Professor, College of Computing & Informatics
Drexel University

THANK YOU!

Jefferson

Philadelphia University +
Thomas Jefferson University