

# Expanding Structured Simulated Learning Space for Occupational Therapy Doctorate Students

Caroline Le Jones, OT/s | Doctoral Experiential Capstone (DEC) project

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# Background

# Site Description



- **Tufts University Department of Occupational Therapy**
  - ACOTE accredited graduate program in Medford, Massachusetts
  - Offers a variety of degrees and certificates
    - EL-OTD
    - PP-OTD
    - Etc.

# What is ACOTE?



- **Accreditation Council for Occupational Therapy Education**
  - Accrediting agency for occupational therapy education
  - Establishes educational standards, policies, and procedures for which programs must abide by
  - Delineated by level of education

# ACOTE standards (2018)

- **A standards: General requirements**
  - Standard A.2.12 – programs must have “adequate classroom and laboratory space, including storing and securing of equipment and supplies”
  - Standard A.2.13 – programs must have “appropriate and sufficient equipment and supplies”
  - Standard A.5.2 – “curriculum design must include...learning activities demonstrating preparation and application of in-depth knowledge in practice skills”
- **B standards: Content requirements**
- **C standards: Fieldwork education**
- **D standards: Doctoral capstone**

# Background Literature

## What is experiential learning?

“**Learning by doing**” – gaining knowledge through **practical, hands-on experiences**.

- **High-Fidelity Simulation (HFS)**
  - Realistic environment, high-tech mannequins or standardized patients
- **Low-Fidelity Simulation (LFS)**
  - Case studies
  - Role-play

## And what are its benefits?

- Students who participated in HFS showed **improved mean rank scores of AOTA's Fieldwork Performance Evaluation for the Occupational Therapy Student** (Ozelie et al., 2016)



# Background Literature

Substantial evidence that experiential learning supports students in multiple ways *(Knecht-Sabres, 2010)*

- Refines **problem-solving skills**
- Enhances **clinical reasoning**
- Improves **self-efficacy**



Advancing students' professional development and readiness for level II fieldwork *(Goldbach & Stella, 2017)*

- Experiential learning labs embedded into didactic courses facilitated **increased understanding of course concepts** *(Benson et al., 2013)*
- Increased levels of **comfort and preparation for fieldwork** *(Benson et al., 2013)*

# The Gap

- Tufts OT department currently occupies one floor of their building, including:
  - Small kitchenette
  - Mini bathroom
  - Limited durable medical equipment (DME)
- Main classroom (rm 201) must be flipped to have adequate space for students to use on lab days





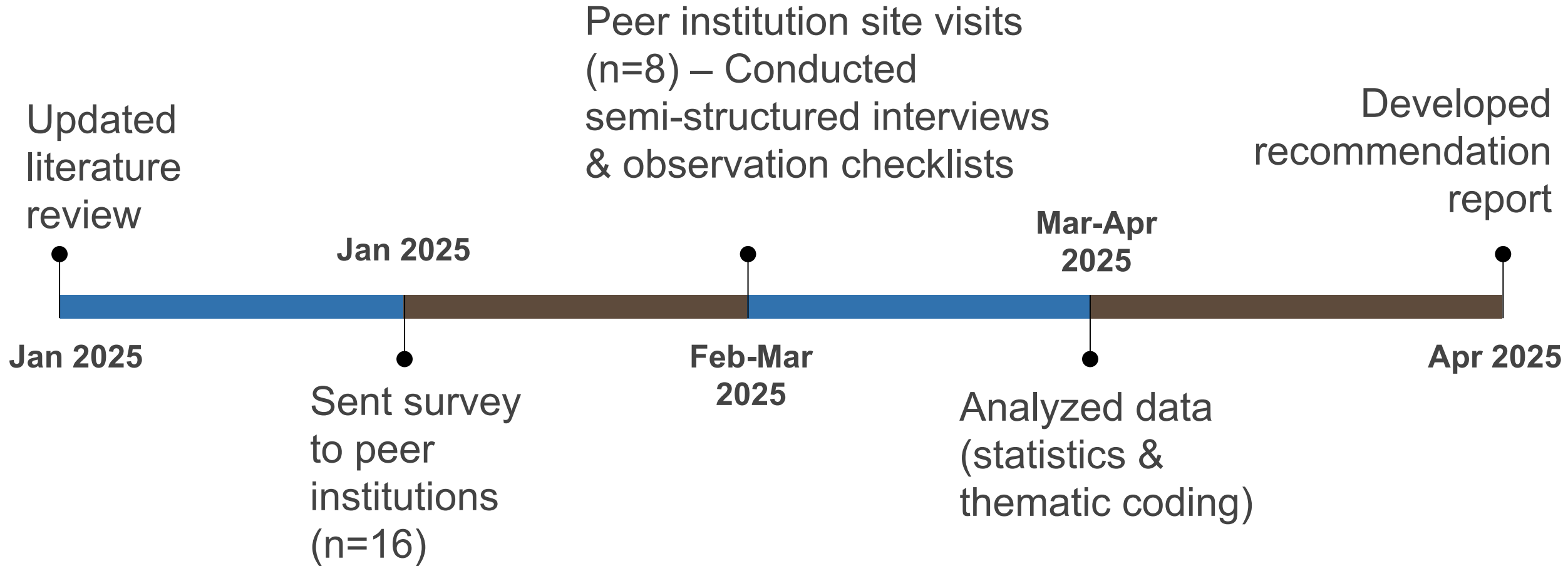
# Purpose

*To understand the benefits of experiential learning space and materials for the Tufts Occupational Therapy Doctorate (OTD) program and make recommendations to improve perceived self-efficacy among students.*

Aims	Objectives
To investigate the benefits of experiential learning for occupational therapy doctorate (OTD) students	<ol style="list-style-type: none"> <li>1. Conduct a literature review on experiential learning for occupational therapy students</li> <li>2. Conduct semi-structured interviews evaluating perceived student benefits from experiential learning</li> </ol>
To determine what resources are most beneficial for experiential learning	<ol style="list-style-type: none"> <li>1. Collect data from peer institutions that have functional living spaces/gyms via Qualtrics survey and observation checklist</li> </ol>
To make recommendations for developing more experiential learning opportunities for Tufts OTD students	<ol style="list-style-type: none"> <li>1. Complete a recommendation report for the department based on the needs assessment</li> </ol>

# Methods

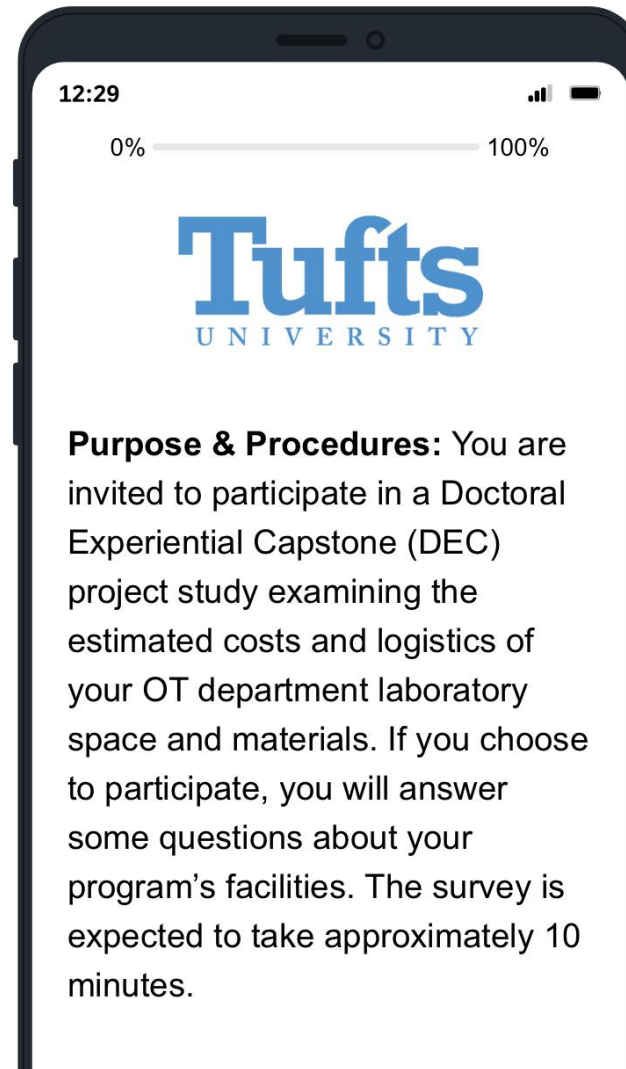
# Mixed Methods Procedure





# Measures

- **Peer institution survey** (n=16)
  - Distributed nationally
- **Site visits** (n=8) – in-person and virtual
  - **Semi-structured interview**
  - **Observation checklist**



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**Tufts**  
UNIVERSITY

**Purpose & Procedures:** You are invited to participate in a Doctoral Experiential Capstone (DEC) project study examining the estimated costs and logistics of your OT department laboratory space and materials. If you choose to participate, you will answer some questions about your program's facilities. The survey is expected to take approximately 10 minutes.

## Semi-Structured Interview Questions

1. Who oversees maintenance of the space?
2. In what ways do students report benefiting from this space?
3. In what ways do faculty report students benefiting from this space?
4. Can you describe a learning activity you've done in the space that you feel is the most impactful?
  - a. Tell me about a lab module that you think worked well that would have been a challenge outside of the space.
5. Who else uses the space (just OTs, etc.)?
6. What are the top 5 most commonly used items in the space?
7. Why did you want the space / what made you decide to build the space?
8. Now that you have the space, would you have done anything differently?
  - a. Was the space worth it/do you feel that the benefits outweigh the costs?
9. How has the space changed your teaching style/curriculum?
10. Do you feel like anything is missing from your space?
11. Any future plans for the space?

## Observation Checklist

Name of program: \_\_\_\_\_ # students per cohort: \_\_\_\_\_

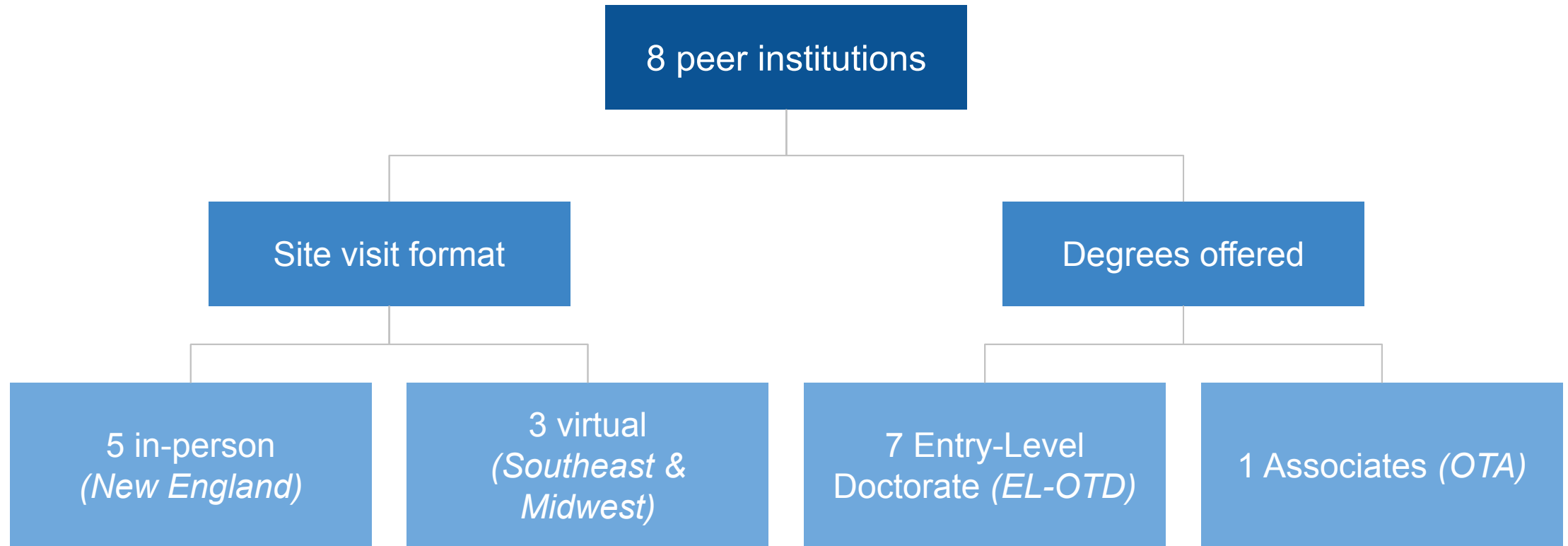
- ☐ Plinths (#: \_\_\_\_\_)
  - ☐ Automatic (#: \_\_\_\_\_)
  - ☐ Mechanical (#: \_\_\_\_\_)
- ☐ Floor mats (#: \_\_\_\_\_)
- ☐ Kitchen
  - ☐ Stove (#: \_\_\_\_\_)
  - ☐ Fridge (#: \_\_\_\_\_)
  - ☐ Dishwasher (#: \_\_\_\_\_)
  - ☐ Food (#: \_\_\_\_\_)
  - ☐ Cups (#: \_\_\_\_\_)
  - ☐ Plates (#: \_\_\_\_\_)
  - ☐ Pots and pans (#: \_\_\_\_\_)
  - ☐ Utensils (#: \_\_\_\_\_)
    - ☐ Universal cuff (#: \_\_\_\_\_)
    - ☐ Rocker knives (#: \_\_\_\_\_)
    - ☐ Hemi cutting board (#: \_\_\_\_\_)
    - ☐ \_\_\_\_\_
- ☐ Adaptive equipment
  - ☐ \_\_\_\_\_ (#: \_\_\_\_\_)
  - ☐ \_\_\_\_\_ (#: \_\_\_\_\_)

# Site Visits

- MGH Institute of Health Professions\*
- University of New England
- Western New England University
- Springfield College
- University of Florida\*
- Huntington University
- Wingate University
- North Shore Community College

*\*Ranked in the Top 25 Best Occupational Therapy Programs by US News & World Report*

# Site Visits





University of New England



Wingate University



Springfield College



MGH Institute of Health Professions





# Key Findings

# In what ways do students and faculty report benefitting from the lab space?



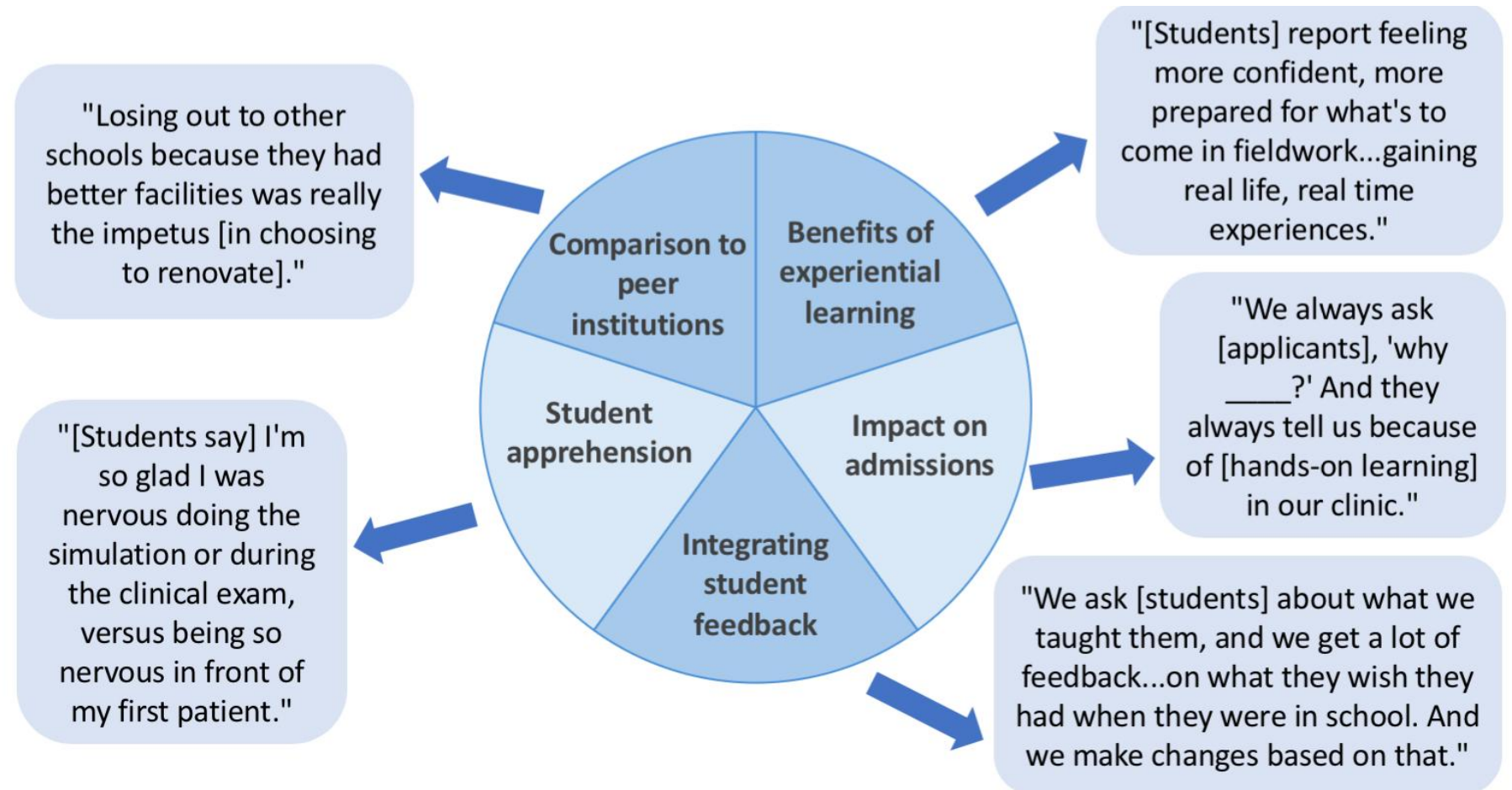
A word cloud of student and faculty feedback. The words are arranged in a roughly circular shape, with 'Confidence' and 'Skills' being the largest and most prominent. Other words include 'Professionalism', 'Community', 'Knowledge', 'Learning', 'Application', 'Prepared', 'Soft Skills', 'Free Your Brain', 'Ease', 'Rapport', 'Opportunity', 'Innovation', 'Muscle Memory', 'Clinical Reasoning', 'Glad Control', 'Game Changer', and 'Comfortable'.

Comfortable  
Game Changer Community Knowledge  
Professionalism Glad Clinical Reasoning Control  
**Confidence**  
Prepared Skills Innovation Learning  
Soft Skills Opportunity Muscle Memory  
Free Your Brain Ease Application Rapport

# 100% of programs surveyed listed that their laboratory space is used to fulfill the following (2018) ACOTE standards:

- Safety of Self and Others (B.3.7.)
- Therapeutic Use of Self (B.4.1.)
- Clinical Reasoning (B.4.2.)
- Occupation-Based Interventions (B.4.3.)
- Provide Interventions and Procedures (B.4.10.)
- Mobility (Functional & Community) (B.4.13., B.4.14.)

# Qualitative thematic analysis of semi-structured interviews found themes such as

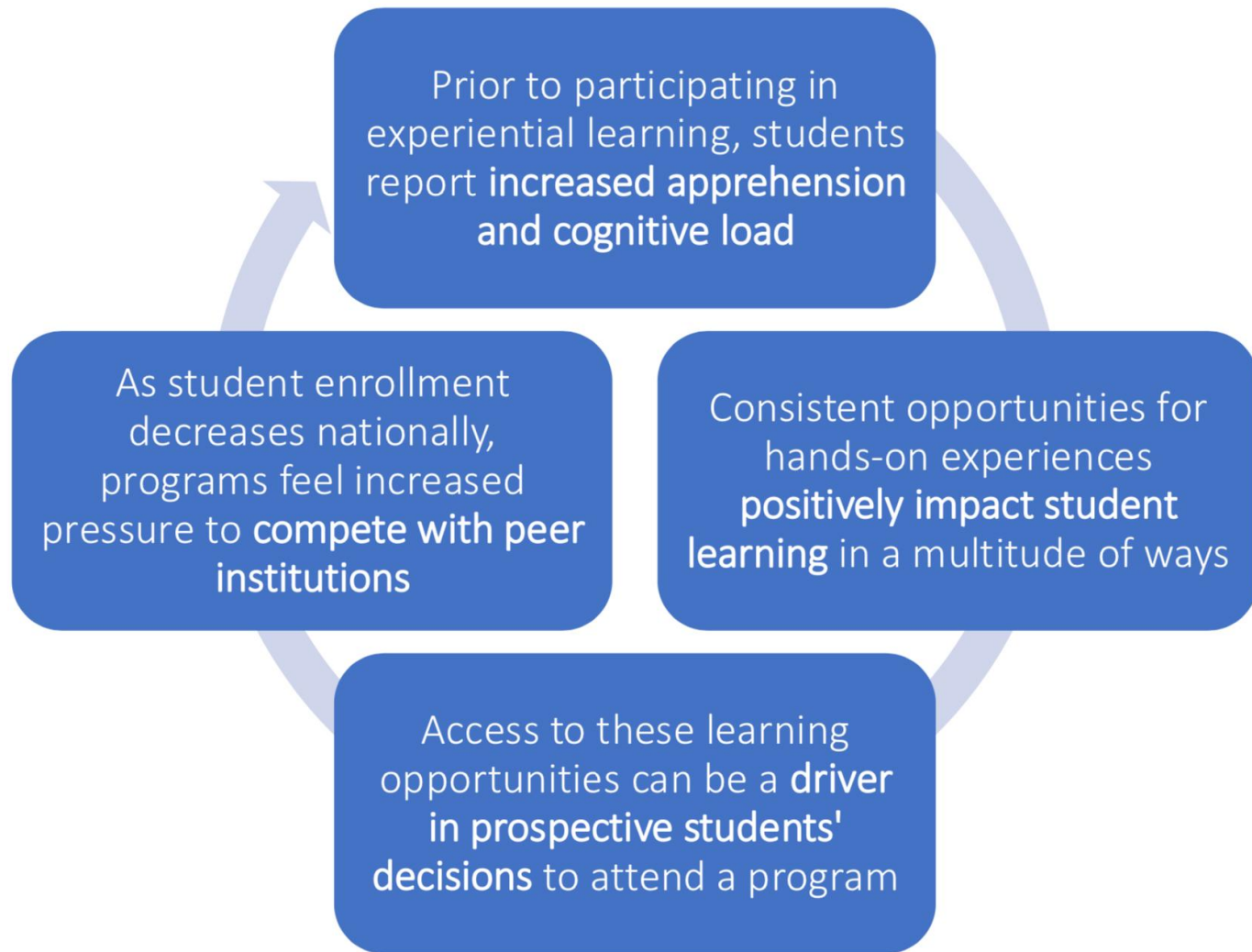




# Semi-structured interviews found that the top most commonly used spaces and items were:

01	<b>Ambulatory Equipment</b>	<ul style="list-style-type: none"><li>• Wheelchairs</li><li>• Walkers</li><li>• Gait belts</li><li>• Transfer boards</li></ul>
02	<b>Naturalistic Environments</b> for simulation, functional mobility, and transfers	<ul style="list-style-type: none"><li>• Home<ul style="list-style-type: none"><li>◦ Kitchen, bedroom, bathroom, laundry</li></ul></li><li>• Hospital<ul style="list-style-type: none"><li>◦ Hospital bed, lines &amp; tubes (i.e., IV, oxygen tank, catheters), vitals sign equipment</li></ul></li></ul>
03	<b>Adaptive Equipment &amp; Durable Medical Equipment (DME)</b>	<ul style="list-style-type: none"><li>• Adaptive equipment<ul style="list-style-type: none"><li>◦ Reacher, sock aide, etc.</li></ul></li><li>• Durable medical equipment<ul style="list-style-type: none"><li>◦ 3-in-1 commode, tub bench, etc.</li></ul></li></ul>

# Discussion & Recommendations



“This is the **safest place** you can make mistakes.”

“Your ability to meet the patient’s needs is **only as good as** the equipment and resources you have around you to problem solve.”

Item	Peer Institutions	Tufts
<b>Acute care</b>		
Hospital bed	4	0
Mechanical lift	4	0
Transfer belts	25	4
IV pole	4	1
BP cuff	13	9
Catheter/foley bags	4	1
O2 tank carriers	2	0
<b>Kitchen</b>		
Stove	1	1
Fridge	1	1
Dishwasher	1	1
Cups	11	2
Plates	16	2
Pots & pans	7	2
Utensils	12	5
Universal cuff	6	1
Rocker knives	4	0
Hemi cutting board	2	0
<b>Adaptive equipment</b>		
Reacher	7	7
Sock aide	7	10
Shoe horn	7	9

Long-handled bath sponge	6	10
Dressing stick	7	8
Leg lifter	6	0
<b>Bathroom</b>		
Toilet	1	1
Walk-in shower	1	0
Tub	1	1
Grab bars	3	0
<b>DME</b>		
Tub bench	2	1
Shower chair	2	1
3-in-1 commode	3	1
Rolling walker	7	3
Wheelchair	9	1
Axillary crutches	6	6
Lofstran crutches	2	0
Hemi walker	2	1
<b>Miscellaneous</b>		
Plinths	11	5
Floor mats	7	7
Physioballs	6	3
Therapy swings	3	0

- Average cohort size of peer institutions: 29
- Average cohort size at Tufts: 35

Tufts' inventory falls behind peer institutions in **69%** of key materials for simulated learning *despite having larger cohorts*



# Recommendations

There is a **clear demonstrated need** for structured simulated learning space and materials for Tufts OTD students to **support their competence in practical skills** and **enhance perceived self-efficacy**.

Recommendations include

- **Investigating a collaborative return on investment** in expanding resources necessary for experiential learning
  - Collaboration with other rehab departments that already have space
- **Further investigate potential for downstream revenue** resulting from lab space
  - Such as a faculty-led clinic

# Thank you!

# References

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