Planning Facilities for Interprofessional Education

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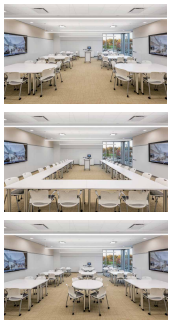
Hypothesis: Health Education Specific Learning Space Typologies

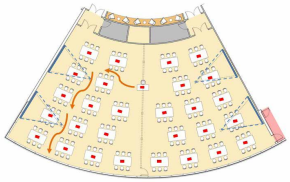
Student competencies and interprofessional education can be enhanced by planning spaces for three types of learning activities. The following are key characteristics of these typologies that will support "team-based everything," and can ease students' transition from IPE to clinical practice.

FORMAL LEARNING – CLASSROOMS



Classrooms are provided with resources to learn in multiple modalities in a single course session including lecture, video demonstration, distance collaboration and small group discussions.

Flexible furniture and infrastructure can allow "workhorse" rooms to quickly change format. They can be utilized as formal teaching, informal and skills training.

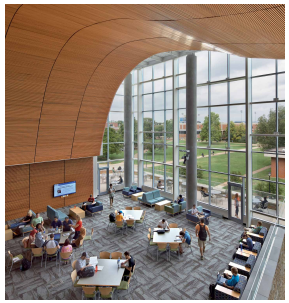


Large team-based learning Classrooms can be designed to support a single professional school class at one time, or bring interprofessional groups from medicine and health professions together for their coursework. Key considerations are the size of the table's learning groups, the distance between the tables for acoustical separation and to facilitate instructor movement, and the ability to use the room for multiple study groups at one time. These spaces can be accessible after hours to support collaborative study.

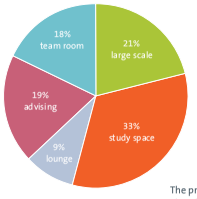
Health Education Learning Studios = **40 SF/seat**

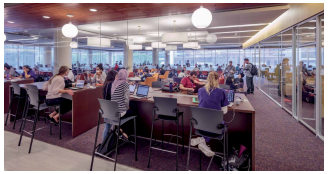
Typical Active Learning Classroom = 30 SF/seat

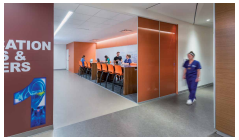
INFORMAL LEARNING – STUDY SPACE



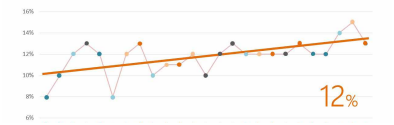
Scales of Informal Learning Space:
Many programs benchmark the overall amount of area dedicated for informal collaboration. For an effective continuum of learning, varying scales are provided. A study of eleven recent projects reflects the following allocation.







The proportion of informal learning space has been increasing in higher education projects. This chart indicates the percentage of dedicated program area in 25 EYP projects since 2009.



EXPERIENTIAL LEARNING – SIMULATION

Larger teams affect the size of the learning lab. Traditional teams of 3-4 per bed increase for IPE, impacting Skills Labs sizes. These larger labs need to address acoustical separation and can provide supplementary demonstration and teaching space.

Skills Lab = 140-200 SF/bed

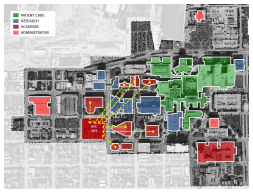
The institutional approach to debrief and observation impacts sizes and arrangement of space, depending on whether the approach favors direct or remote adjacency.

The degree of realism and mirroring real-world environments can enhance learning, but studies show this is directly tied to the skill level of the learning. Novice students do not need high fidelity simulations as much as advanced learners. These program requirements will impact the design of the spaces.

.3 factor of storage space for each SF of Simulation

Method: Design Strategies at University of Texas Medical Branch Health Education Center

Buildings that bring multiple departments together can implement planning approaches to facilitate interaction and improve student engagement.



Part of the Galveston campus master plan to expand clinical training capacity and consolidate simulation, the building brings multiple groups together, increasing interprofessional learning opportunities. All spaces in the 160,000 SF Center are shared; there are not departmental assignments. The building will be used by the Schools of Medicine, Nursing, Health Professions and Graduate Biomedical Sciences and provide professional education for residents, nurses, physicians and staff. It features a centralized Simulation Center including a standardized patient suite and flexible simulation labs. It also includes large, flat floor classrooms that enable "flipped classroom" and team-based instruction and study.

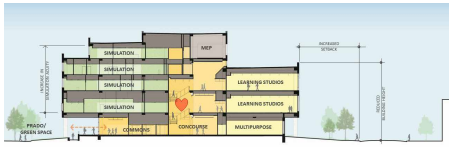
The following specific facility improvement goals were identified:

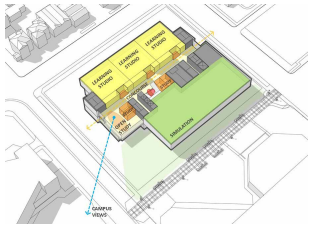
- Facilitate inter- and multidisciplinary team-focused learning and discussion
- Offer flexible spaces for large and small group learning activities
- Provide ample collaborative spaces that facilitate "random collisions" between students, trainees, faculty members and staff
- Incorporate state-of-the-art electronic and integrative technology resources
- Serve as a centralized hub for simulation activities
- Be a destination that anchors and draws people toward educational activities on campus

Three key design strategies were employed. A study is currently in progress to evaluate the effectiveness of the space typologies and the planning approach.

ORGANIZATION & ACCESS

The building is organized to bring students and faculty together at the intersection between the Simulation Center and the Learning Studios. Spaces on the lower levels of the building have greater degrees of access for study and independent skills practice after scheduled instruction of class. The central concourse provides a variety of scales of informal space.





TRANSPARENCY

Planning with views into program spaces can help showcase interprofessional collaboration through transparency and visibility of departmental activities. This promotes identity and increases understanding of varying specialty areas. Feedback from one recent institution indicated that students report being interested in new courses after seeing lecture content and simulation activity from the corridors.

NATURAL LIGHT

A recent study of EYP projects surveyed 2000 students and 400 faculty. The top feature of importance for use of informal learning spaces was natural light.

Importance of Various Features in Making Public Spaces an Attractive Place to Study (%)

	Feature	Not at all Important	Slightly Important	Moderately Important	Very Important	Extremely Important	Mean	S.D.
#1	**Daylight** / good lighting	0.0	2.2	17.9	38.8	41.0	4.19	.804
#2	**Convenient** place to be before and after class	1.9	3.4	15.7	42.7	36.3	4.08	.906
#3	Generally **quiet**	1.1	5.2	21.2	37.2	35.3	4.00	.936

Outcomes: Pre- and Post-Occupancy Study

STUDY PURPOSE: In 2017, EYP commissioned a pre-occupancy pilot study of the newly constructed physical spaces assigned by UTMB-Galveston to support health sciences education with a particular focus on student engagement in simulation, team-based learning and interprofessional education. The intent was to collect baseline information for later comparison with post-occupancy use of the new Health Education Center. The pre-occupancy survey gauges existing student facility-use patterns, engagement in collaborative work and satisfaction with specific aspects of the learning environment in support of IPE.

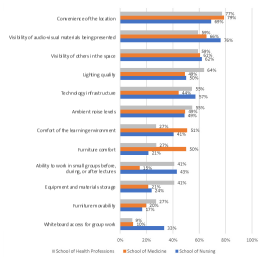
CORE INTERPROFESSIONAL COMPETENCIES

- Role Clarification
- Team Functioning
- Patient-Centered Care
- Conflict Resolution
- Collaborative Leadership
- Interprofessional Communication

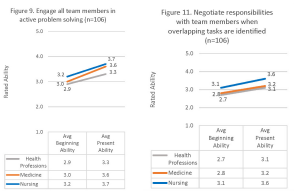
SURVEY GOALS: How the building supports the competencies

- Building and room use patterns
- Participation in team-based education
- IPE readiness and perceived changes in IPE competency
- Self-confidence in demonstrating IPE competency
- Satisfaction with simulation and interprofessional learning experiences
- Collaborative interactions with students, faculty and staff
- Connectedness with the broader campus community

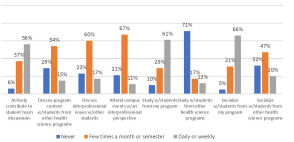
SATISFACTION WITH CURRENT FACILITIES



ACQUISITION OF CORE COMPETENCIES



PARTICIPATION IN TEAM-BASED LEARNING



These charts report key data collected in the pre-occupancy survey that will be compared for improvements with post-occupancy results in 2020.