HOW CAN ARCHITECTURE REDEFINE HIGHER EDUCATION?

An exploration of educational pedagogy and adaptive space. My interpretation of a potential educational shift.
RESEARCH METHODOLOGY

EVALUATIVE RESEARCH METHODOLOGY

Analyzing past educational models and discovering what has made them successful has been the guiding research principle behind this project.

QUALITATIVE RESEARCH METHODOLOGY

Defining pedagogy and developing a deeper understanding of its successful principles became another important aspect of the project. Literature and past research examples illuminated qualities that the architecture can help emphasize.
A BRIEF REVIEW OF THE RESEARCH

What is active learning pedagogy?
ACTIVE LEARNING: Any instructional method that engages students in the learning process. In short, active learning requires students to do meaningful learning activities and think about what they are doing.

Why is active learning pedagogy effective?
CONTEXTUALIZED EDUCATION
NON-DESCRIPT
STUDENT INVOLVEMENT

What other aspects of education play a role in our intellectual advancement?
SOCIAL
SELF PERCEPTION
CONNECTION TO NATURE
Quick Facts Regarding Pedagogy

Student Attention Span during a lecture is roughly 15 minutes.

Lecture Retention: First 10 minutes and last 10 minutes, 70% vs. 20%.

Educational Retention Pyramid:
- 5% Lecture
- 10% Reading
- 20% Audio-Visual
- 30% Demonstration
- 50% Group Discussion
- 75% Practice
- 90% Teaching Others

Average College and University Results:
- Force
- Acceleration
- Velocity

Percentage of students understanding concepts:
- After New Methods
- After Traditional Instruction
- Before Instruction

Active Learning Increases student performance in science, engineering, and mathematics.

- Freeman, S., S. Eddy, and M. McDonough “Active Learning Increases student performance in science, engineering, and mathematics,” October 2013
- Adapted from National Training Laboratories. Bethel, Maine
3 SCHOOLS OF THOUGHT
INSPIRATION THROUGH THEORY

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SOCRATES
CLASSROOM SPATIAL ARRANGEMENT ANALYSIS

- Traditional Grid Arrangement
- Tiered Arrangement
- Herringbone Arrangement
- Clustered Arrangement
- Clustered Radial Arrangement
- Boardroom Arrangement
CLASSROOM SPATIAL ARRANGEMENT ANALYSIS
HBKU CARNEGIE MELLON - LEGORRETA + LEGORRETA
SITE ANALYSIS
WILLISTON IN PHOTOS
A SENSE OF PLACE
POETIC INTERPRETATION
SPATIAL GEOMETRY OF THE SITE
PROGRESSION
CONCEPTUAL DEVELOPMENT
IMPLEMENTING ADAPTIVE SPACES
MOBILE CLASSROOMS
MOBILE CLASSROOMS
CREATING A MODULAR: DESIGNING FOR EFFICIENCY
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ADAPTIVE SPACE DEVELOPMENT

- "Dock" for mobile spaces
- "Play area" allows for multiple arrangements
- "Building blocks" define educational zones in iconic and readable blocks
- Exterior pathways allow for wayfinding and egress
SITE PLAN
EDUCATIONAL PODS