Learning the Fundamentals from Hands-on Learning

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Learning the Fundamentals from Hands-on Learning

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This learning community, Fundamentals in Design Thinking, explores the notion of design as an act of thinking-through-making. It focuses on hands-on learning, which included drawings, model-making, and producing artifacts. As such, the learning community linked Introduction to Architecture, which covers the reading about design principles and craftsmanship, with Architecture Studio, which covers design exercises and projects. The Introduction class demonstrated that craftsmanship is not only about developing technical skills, but also serves as a means to germinate critical thinking. These lessons served as a basis in executing exercises in Architecture Studio. As the name of the course suggests, the primary concern in the hands-on exercise was in the understanding and ability to read and create space. One set of projects focused on learning to see the world through different filters. Different media and genres in drawing served the purpose of understanding various aspects of the environment. For example, charcoal drawings aimed to capture the environment as a series of planes, in which different planes were defined by varieties of phenomena of light and shadows. In another example, line drawings intended to capture the edges of things and objects in the environment around us. These drawings offered a basis for translating two-dimensional artifacts into three-dimensional ones. The models created from drawings allowed the studies on varieties of properties of space, such as scale, proportions, and spatial characteristics.

The project in the wood shop offered further ways to learning through making. The project started from drawings textures in the environment, which captured textures at various scales through zooming-in and zooming-out the drawing objects. The assignment then asked students to analyze the drawings to capture basic elements, such as points, lines, and planes and the relationship between them. These findings served as basis to construct three-dimensional artifacts out of wood tiles and other materials. The constraints for the wood artifacts were the basic module of 4” x 4” tiles and the format of the artifacts that should not exceed 12” x12.” The wood shop sessions started with students learning varieties of tools for carving, including hand-chisels and powered chisels, in order to become familiar with the techniques and procedures for each tool and how the tools interact with the materials. The findings from these engagements with tools, process, and materials would inform the design process. The experiences from making drawings, models, and artifacts were discussed in the Introduction class.
Dahyun Kim, *Charcoal Drawing* and Cooper Sewell, *Parallel Drawings*
T.J Rottenberg and Anirose Burge, *Texture: From Drawings to 3-D*
Mercedes Campilango, *Texture: From Drawings to 3-D Artifacts*
Tonal scales show the variations of lightness or darkness through bright white and black shades. The tonal scale can alter how we perceive objects and is generally used to denote major planes of an object.

Fernando Asamoah, *Drawings and Analysis*
Fernando Asamoah, *Transformation from Drawings to Three-Dimensional Artifacts*

The tonal arch combines aspects from each three past studies to create a 3-dimensional space that is occupied by tones values discovered from the charcoal and vine sketches and picture studies. As one moves through the space they will in turn with a series of tonal values which will introduce the perception of compositional depth and form at tones and planes.