

Implementing the Design Studio Model in conventional US High School Classrooms - Manny Juarez

In a world where individuals have multiple skills and who can create and function within “team” environments are highly valued, we can no longer teach students by simply feeding them information and requiring them to regurgitate it via quizzes and tests. It is an antiquated concept that we arrange students in “egg crate” patterns, teach in strictly lecture forums, and expect them to succeed, yet it is the model in the majority of conventional classrooms in the US. High school students who are not accustomed to working with interaction between themselves, mentors, and colleagues in a learning environment are now at a disadvantage before entering the workplace or university studies. The question is then raised: How do we transform the “egg crate” into a interactive studio environment?

As a volunteer instructor at Rio Rancho High School (RRHS) in Rio Rancho, NM, (USA) I observed the need for a different learning environment to better accommodate courses based around design principles and exercises. Meanwhile, as a Teaching Assistant for an Introduction to Drawing course at the University of New Mexico School of Architecture and Planning I also realized there is a deficiency in design education, or a complete lack of exposure to design and aesthetics, in high school students entering design programs. I became intrigued as to how new students made the transition from a traditional high school environment into a university or advanced design program. I observed that work habits in the studio are different from a typical, lecture-based program. Studio formats take into consideration how students work and learn, not simply how students are instructed. Because of this, education received in a studio is valuable, both in content and method, and contains lessons for other aspects such as teamwork and multi-faceted problem solving. My personal experiences of working in the studio, especially in the early stages of my training, were highly enjoyable and impacted how I developed as an individual and a professional. The studio environment encourages interaction between peers and instructors, seeking out new types of resources, and, more importantly, it encourages participants to support each other throughout the problem solving process.

The design studio model trains students to analyze and solve multi-faceted problems using various resources and students share the process and solutions with colleagues using both verbal and graphic language. The challenge is changing how high school students learn, and then adapting their environment to this new way of learning. By adopting the design studio model an integrated learning experience, which is used in design schools by students everyday, can be easily implemented and encourage students to think and not just memorize. The design professional already utilizes this successful model of work and collaboration, why not adopt these techniques of analysis and creative problem solving into the school environment? Unfortunately the physical organization of space (desks in rows and columns with limited work areas) do not readily promote experimentation and creativity.

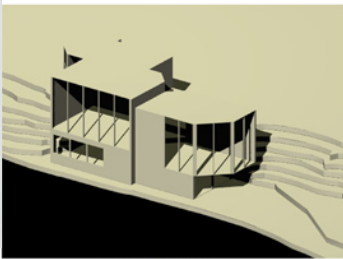
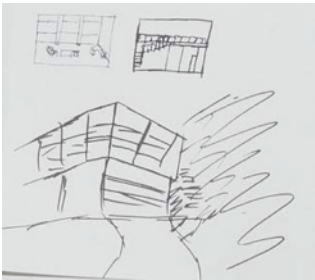
For RRHS I developed both a new design curriculum and conceptual workspace based on the design studio model. I further investigated these concepts as a thesis project for graduation from the Master’s Architecture Program at the University of New Mexico School of Architecture and Planning. My concepts were derived from observations of student working environments, direct interaction with students working on various types of design projects from diagrammatic graphic problems to architecture designs with complex program and site

requirements. Long term relationships with teachers and students have been invaluable and now myself, my partner Rupal Engineer and Dr. Anne Taylor are planning to continue work on this idea of not only encouraging students to study design but how to change the process of education on the levels of curriculum, environment, and process.

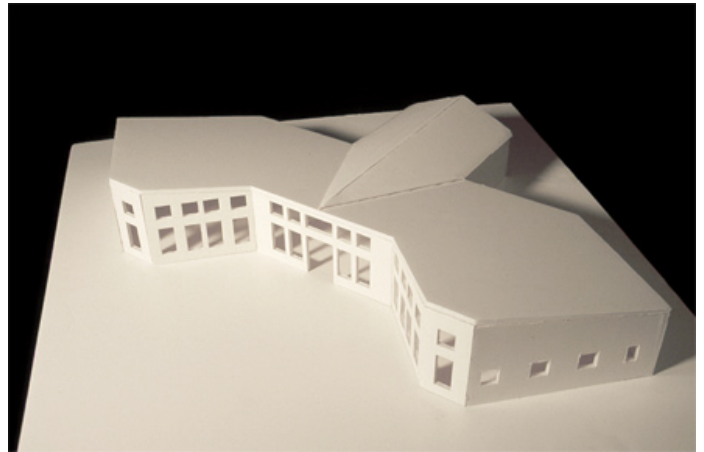
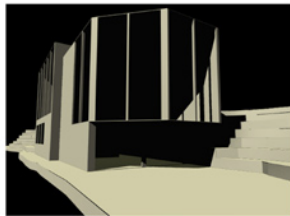
Student Work

This is a house project in which students were given simple spatial program requirements and then had to develop a detailed program based on the profession of the inhabitant. Hand sketches, Line Drafting, Physical Scale Models, and CAD 2D and 3D were used to create final presentations. Students presented to each other and to a panel of design professionals. Students were taught to give constructive criticism as well as receive and apply criticism as well.

Aaron Kolysko (left and middle), Alyce Ramos (right).

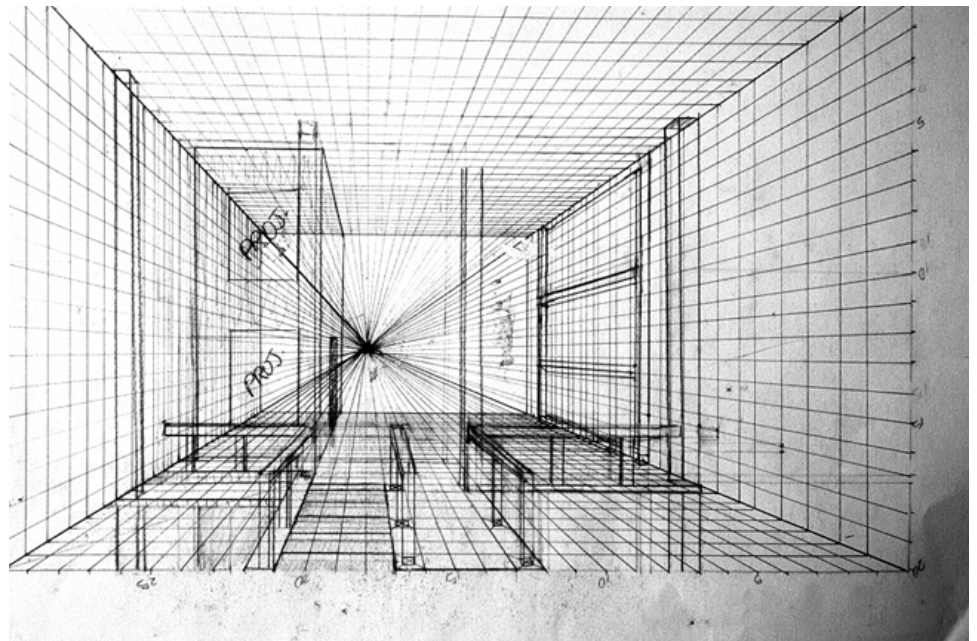


architect's house
aaron kolysko

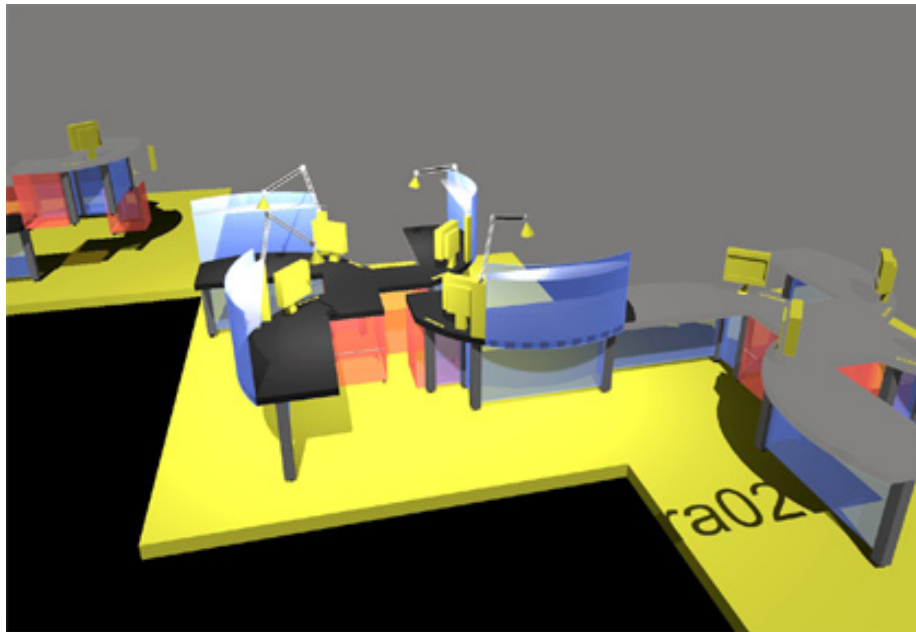


This is a study of perspective and its value in the design of spaces. The critical and beautiful part of the exercise is the overlay of ideas and process, smudges, lines, and notes, that encourage problem solving and analysis. Students participated in group presentations as well as collaborations with fellow students to review their designs and assist in technical issues.

B. Deatherage



“Each student is assigned an individual workstation and studio space. The workstation provides each student with space to store personal items such as food, medicine, supplies, clothing, books and drawings, etc. To address security needs the attached storage bin is made from semi-translucent plexiglass panels. Students are equipped with laptops and are connected to a central server via a wireless data transfer system. This allows students to use their laptops outside studio in seminar sessions or in other buildings on campus. Students can plug into their workstations and use a larger LCD screen, full-size keyboard, and a faster data line. Assignments and readings can be downloaded and taken home. Intranet announcements are downloaded each morning. Studio facilitators have office space directly off the studio and coordinate student projects. They provide guidance and administrative support for their students. Studio facilitators and students arrange workstations according to the day’s activities. Using pins and locking casters students can work within multiple configurations and easily add group members or separate into individual stations. Multiple workstations can also be arranged into temporary exhibit units in both the studio and commons space outside the studio.” **(Presented as part of my Master’s Thesis Project, 2001. In order to accommodate the curriculum I developed part of the process involved the study of the personal space of the student and its relationship to the studio as a whole)**



Mr. Edgar Short and his students



Rio Rancho High School,
Rio Rancho, NM USA