

Art, Architecture, & Community: Create Spaces to Highlight Local Talent

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Abstract

The paper will focus on a two-semester service-learning project in which Architectural Technology Students are partnering with a local entity called Reclaiming Community. Reclaim is a subsidiary of a larger local organization with a mission to bring about sustainable regeneration, improvement, and management of the physical environment through their Art Shed initiative. Each semester will develop a separate set of shed designs, with separate assessment methods and outcomes. The over-arching goal of the project is revitalizing the neighborhoods that will house these sheds, and encourage the love of art and design in area. Sheds are designed with the intent that after a certain amount of time in residence the materials will be recycled for custom designed furniture.

Utilizing the evidence-based design process (EBD) students will collaborate with Reclaiming project organizers to identify goals for the destination points. Sheds are studied and designed utilizing varying roof styles and interactive design ideas. Through this process each student will design a version of the shed, creating detailed instruction manual with materials and construction methods, and do a miniature 3D study model of the shed. Community partners from the reclaim project will play an integral role in reviewing the design process of the sheds, giving critical feedback for revisions and use. This is a very important part to ensure the evidence base design strategies are effectively solving the design problem.

Assessment methods include our institutions Start/Stop/Continue along with customized end of course survey specifically aligned with this project. The community partners will also assist in development of end of course surveys, further integrating them into the culture of the course. The Start/Stop/Continue assessment is a student-centered mid-semester assessment of the project and its process. The completed paper will include the assessment results and course/project modifications carried into the second part of the semester. The customized end of semester course survey will allow the community partner along with the faculty member to specifically target questions at the student's participation in the project and the outcomes. Results will be used for phase two of the project to take place in the spring semester.

Body

The course is kicked off with a site visit to gain perspective on the local neighborhood issue at hand and how the semester-long design study will help in solving the issue with some long-term impact. Prior to the site visit the students are given some limited information about the project, but most of the pre-site visit information focuses on the redesign strategies, and first is the detailed look at the schedule. The 16-week course is broken into four assignments, and each one

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is designed using the University of Nevada Las Vegas TILT Higher Ed Transparency in Learning and Teaching method [3] all course deliverables created using Auto CAD and Revit design software packages. In implementing the TILT Transparency teaching methodology my first step was to review my current assignment as they were written (**ex. 1a**) and identifying the purpose, task, and criteria at the Course and Department level outcomes (**ex.1b**).

Assignment Set #1

Published

This assignment will require you to develop a floor plan and one typical building cross section of a one story residential style structure to be built with lite wood framing.

Assignment format:

- 11x17 drawings template format: viewports/drawing titles/north arrow/section marker
- Floor plan with: exterior & interior partitions/ windows / doors / dimensions / room lables
- Submission style: e-file to Canvas & 11x17 hard copy
- Due date & time: 8/30/17 @1:00pm: Electronic files to Canvas must be submitted by 1:00pm to Canvas and drawing 11x17 prints are due at the beginning of class on 8/30/17
- [McDougal Residence Dwg Set.pdf](#)

[Architectural Symbols.dwg](#)

Ex.1a: Original Assignment Description

Transparency Across Levels

What are the purposes, tasks and criteria at each level?



Ex.1b: TILT Methodology Levels

Each assignment was re-written utilizing the outline listed below, and the result of assignment #1 can be seen in (**ex.1c**).

Purpose

- Written purpose statement that explains
 - What content knowledge will students gain from doing this assignment?
 - A purpose statement that links the assignment to the larger context of the course,

the major, and the discipline.

- Linking the assignment to the institutions main learning outcomes
- Indication of relevance and/or usefulness of this knowledge to the student's career

Task

- Project description that explains
 - What are the very first thing students should do when they begin working on the assignment?
 - Strategies to help students to avoid wasting their time on unnecessary steps or unproductive time expenditure
 - Why we will conduct some practice exercises along the way as new concepts and design thinking processes and software are introduced

Criteria

- Individual assignment rubrics that explain
 - Criteria that students can use while they are working on the assignment to determine whether they are completing deliverables efficiently and effectively
 - A checklist of graded items students can use to evaluate the quality of their efforts while they are working on the assignment
 - Expectations and examples of high-quality work

Below is an example of the one of the assignments written using the TILT strategy in which students were introduced to this philosophy of teaching.

Assignment Purpose:

The purpose of this assignment is to review the concepts gained in the course pre-requisite (floor plan development, dimensioning, simple drawing annotation), and introduce new concepts of building details. Student will be asked to do a self-review of existing documents, and make modifications to prep for new details.

- Recall dimensioning style for wood frame structure
- Review simple construction document annotation
- Introduce Uniform Drawing Standards
- Introduce development of building sections

Assignment Task:

- Review existing plans for errors and omissions.
- Introduce footer and foundations criteria
- Introduce building codes
- Re-created building sections

Assignment Criteria:

- Develop floor plan with notes, dimensions
- Develop elevations with notes and dimensions
- New typical wall sections
- New building cross section.
- Building code analysis

Later on this paper we will see some examples of student reflection as they talk about how the assignments may have helped them be effective in their deliverables, or in some cases where

they would like to see improvements in this course to better assist them in future assignments.

Community partners can play a vital role in high impact practice courses that utilize service learning, and during the pre-course development I conducted several meetings to clarify, wants & needs of the partner. These meetings also help to set the groundwork for expectations of student work and how it can, and in some cases, more importantly cannot be used upon course completion. When teaching a course where the deliverable is a product, and in this case design drawings that are the intellectual property of the students, it is important to make clear to the community partner the appropriate use of the design ideas, the drawings, and how they should be ethically used in any future discussions. I have clients sign a memorandum of understanding (MOU) to clearly outline these things, and to protect the rights of the student and the university. This MOU explains delivery deadlines, delivery list of items, and responsibilities of all parties involved including the faculty member, community partner, and students. Students are made aware of the MOU and a copy is posted on the course management website for them to review and have access too. An example of this MOU will be available for viewing during the presentation.

Midway through the course a reflective assignment utilized in our department called the Start/Stop/Continue Course Assessment (**ex.1d**) was implemented to help students voice thoughts, opinions, and general feedback in an anonymous format. This very simple reflective exercise prompts some very informative critical feedback at a juncture of the semester, and at times can also provide some confusing/amusing commentary on the course. Below are a few examples of the feedback gained:

START

STOP

CONTINUE

The purpose of this exercise is to gather anonymous, mid-semester feedback regarding this course. Your responses will be considered as we strive for holistic improvement throughout the Interior Design Technology curriculum at IUPUI.

Please place your completed exercise in the provided envelope which will be delivered directly to the program director, typed up for complete student anonymity, and returned to your instructor for reflection.

Course Number: _____ Instructor: _____

1. What is something you would like to **start** happening in this course that is not currently happening?

2. What is something you would like to **stop** happening in this course?

3. What is something currently occurring in this course that you would like to **continue** happening?

Do you have additional comments or suggestions about ways that this course might be improved?

Ex.1d: START/STOP/CONTINUE Assessment

Question #1:

What is something you would like to start happening in this course that is not currently happening?

Responses:

“I feel like I need a day to ask questions/check my work with you before turning in an assignment”

“Clear instructions on what is important to know and what is required of us. Direct instruction for assignments. Feedback on previous assignments so we know if we are on

the right track for current or future assignments”

“Currently I enjoy what we are doing, so I do not have any suggestions at this time”

Question #2:

What is something you would like to stop happening in this course?

Responses:

“What is something you would like to stop happening in this course”?

“I want him to stop rushing because nobody knows what is going on”

“The course material is very heavy early on. Maybe do shorter lessons, pause to give lab time to implement, then resume notes”?

Question #3:

What is something currently occurring in this course that you would like to continue happening?

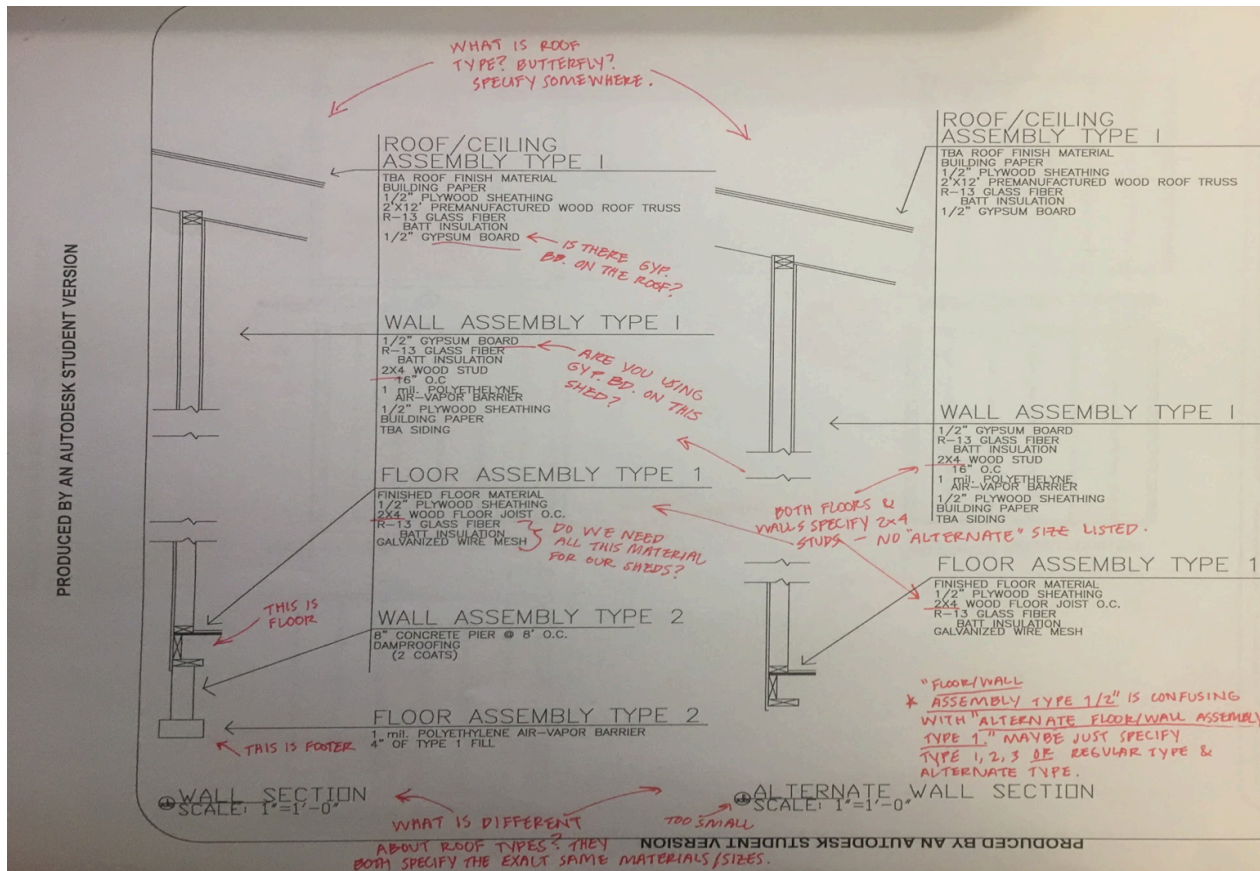
Responses:

“Site visits. I enjoyed going out to the near west side and actually putting faces with the project and seeing what we would be working on”

“Discussions/lectures on wood frame construction. Being taught "why" and not just "what". Site visits, 3D model projects, seeing past student's projects for reference. Project feedback”

“Using the design process and not just jumping into the software”

The critical part of this Start/Stop/Continue Course Assessment process is to provide time for me the faculty member to also reflect and make tangible changes to the course while there is still time to create the most positive course outcome for students. After review of the comments I took some time to share with students some subtle changes that would happen in the class moving forward to address this reflective exercise. I reviewed all the content on the course management system and reorganized it with new folders and eliminated some things that didn't directly relate to this project. I then made some changes to the two remaining assignments as we were preparing for a transition from Auto CAD to Revit to extend out study into the building information modeling (BIM) environment. I added two peer review exercises that gave students the opportunity to see each other's work in a more expanded exercise where they were given some targeted prompts before doing a Quality Control (QC) check on a peer's drawings set for the specific subject we were studying (**ex. 1e**)



Ex.1e: Quality Control Peer Review Sample

The last major change I made was providing a more lock-step approach to using the Revit software to set up our drawings for this assignment. About 70% of the students are concurrently taking an introductory Revit course, and have very good working knowledge of the software and what it can do, but applying it to this particular project type will be new for them, and then there is the 30% that aren't taking the intro course. While some have had Revit in high school, and some are just very adaptive to software in general, there are some that are terrified of the concept of something other than Auto CAD, and this particular group very likely appreciated the way I had been teaching the software component of the class leading up to this point.

We spent several class periods setting up our Revit project browser, identifying family member components for this wood framed structure, and going over the pros & cons of the BIM process. Students were required to submit a mid-point assignment three Revit file where I could review; they're progress and pinpoint areas to review again, and there were some mini exercises given to help re-emphasize certain Revit skills. The mini exercises had some very small point values but did act as low-hanging fruit for those that may have needed some extra points leading into the final exam and final drawing set submittal. Some decided not to complete the mini exercises, stating the work wasn't worth the small point values. This is in-fact something I need to reconsider going into semester two of the course this coming spring 2020 semester.

There were two opportunities for students to interact with the community partner, sharing they're design ideas, gaining feedback from on if the concept developed thus far had hit the "target" of

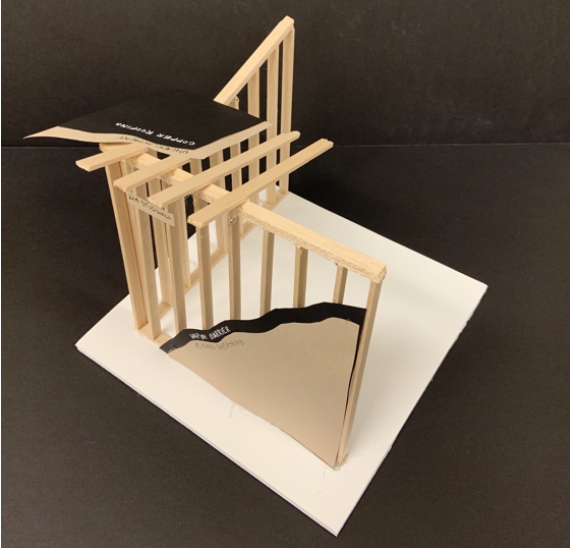
the community issue. Our community partners made two visits to our studio on campus and spent individual time with each student, and then I conducted a group Q&A where we all had discussions about the project in general and long-term impacts we were trying to make. Partners got to see study models (ex.1g, 1h, 1i, 1j, 1k) each student hand built to explain their concepts and ideas, and students got firsthand experience of how important a study model can be on projects where clients are themselves still in the ideation phase of a project. Examples of the study models, and pictures from the two in class sessions will be shared during the presentation.



Ex.1g: Study Model 1

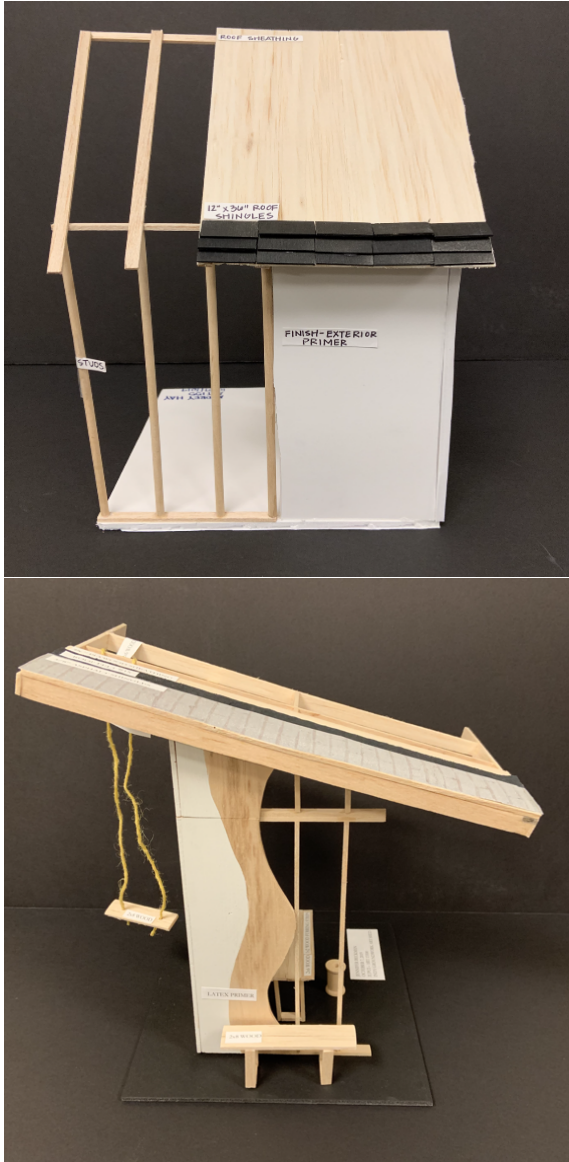


Ex.1h: Study Model 1



Ex.1i: Study Model 1

Ex.1k: Study Model 1



Ex.1j: Study Model 1

Moving into the second part of this project the second group of students are adding a tiny house structure to the Art Sheds. Five Art Sheds from the previous class were selected as study subjects, and students were randomly assigned one of the five to add their tiny house design too. As we kick off this part two we will be simulating the process of client reviews, peer reviews, mid-semester course assessments, and studying the design in both AutoCAD and Revit. At the time of this draft paper we have not yet completed the tiny house designs deliverables, but they will be available for display during the presentation, along with course assessment feedback from students and the community partner.

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