

Methodology and Approach

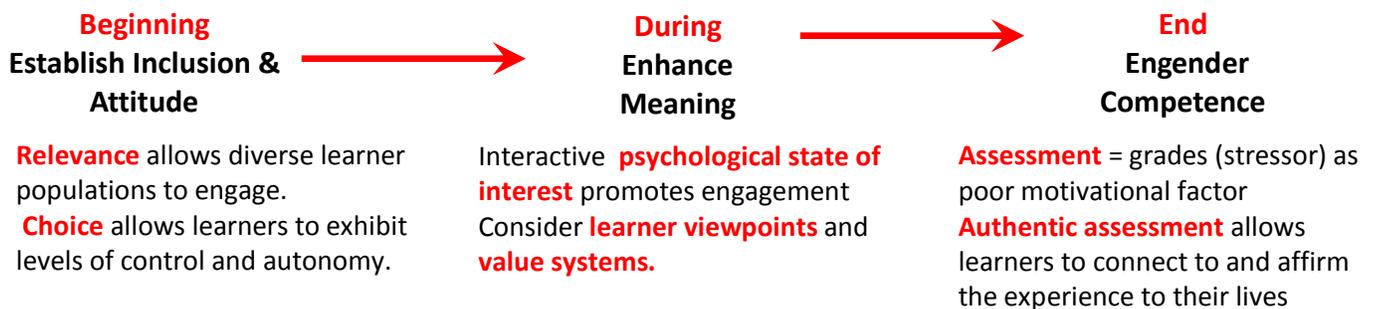
This study analyzes the effectiveness of the redevelopment of a bachelor’s level online course in design and architectural theory using a motivational framework for learner engagement, and culturally responsible teaching (Wlodkowski, 2008). Based on a review of literature on adult cognition and motivation, it looks beyond the institution’s adopted learning model, to provide the depth of knowledge educators need to intentionally create engaging learning activities. It also illustrates how the motivational framework instrument was applied within select course activities (i.e., units) and the course design as a whole.

The course selected for analysis is an upper division (4000 level) humanities course, Philosophy of Design that is representative of curriculum that is required for undergraduate design and architecture degrees. The course not only provides an understanding of design theory and relevant philosophy, but also the correlations with cultural, political, socioeconomic, and historic contexts. Hence, the goal is to help students move from different levels of reflective thought as identified in Fischer’s skill theory (1980).

Applied Instructional Framework

Motivational Framework for Culturally Responsive Teaching (Wlodkowski, 2008)

Motivational conditions are set at specific times of learning activities.



Readings challenge existing ideas and constructs; provide alternative ideas and opportunities for deeper abstract thought. (Fischer, 1980)

Audio enhanced lectures provide opportunities for deeper abstract thought (Fischer, 1980) through alternative examples, open ended questions, different modes of connection.

Asynchronous discussions provide opportunities to look at ideas using individual experiences to see connections between value systems and social constructs.

Synchronous discussion allows for safe, respectful forum to ask questions and receive different opportunities to connect to learning styles.

5 assignments

- **Assignment 1 – Establishes Inclusion:** introduces familiar concepts but encourages new ways to consider them (critical versus creative thought)
- **A2 – Reinforces Inclusion and Attitude:** familiar skills are applied to new theoretical contexts allowing for scaffolding opportunities and deeper engagement, and personal meaning.
- **A3 – Enhances Meaning:** provides response opportunities (active participation) involving learner viewpoints and value systems.
- **A4 – Enhances Meaning and Engenders Competence:** challenging activity (research paper) allows learners to focus on subject that is personally meaningful while using authentic assessment of results related to learner intent.
- **A5 – Engenders Competence:** reiterates the relevance of the overall learning experience by allowing the analysis of multiple theories using creative approaches.

Results

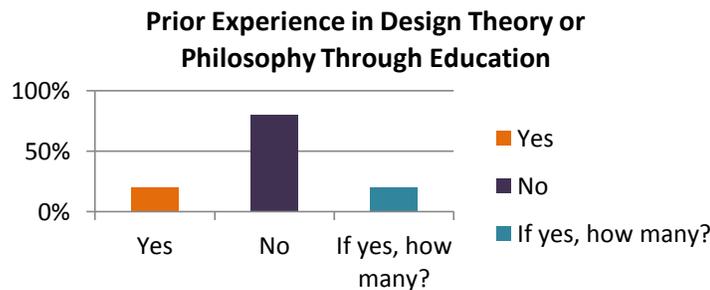
Student Survey

- 10 of 18 respondents = (56% response rate)
- All respondents have completed their program of study

Conclusions: While there are some anomalies, survey data indicate that learners responded positively to their experiences in the course. Further, the learning intent to build awareness, and demonstrate knowledge and insight into the theoretical aspects of design and its impact on individuals, groups, and society appears to be supported by learner feedback and student work. Although this is a pilot study, we believe the motivational framework implemented has strong potential to build learner motivation in online learning environments.

Survey Analysis

1. 80% of respondents had no prior experience in course content. Of the 20% with previous education in design theory or philosophy, it was introductory level composition theory, etc.



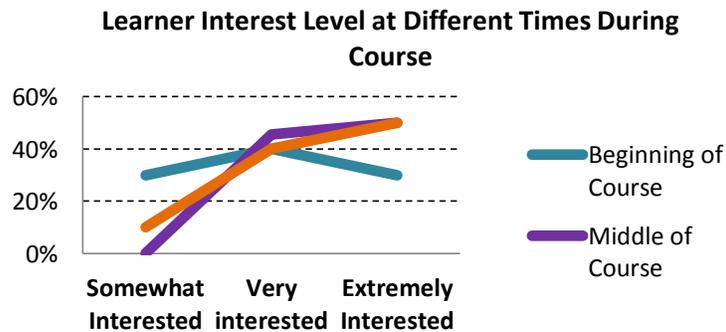
2. Interest Level in Course Content

Interest Level in course material peaked at middle and end of course, which is in line with the intent of the motivational framework.

Influencing factors

The course is required for the major, which may imply inherent interest. At the beginning of the course, respondents may have been influenced by perceptions of students who previously to the course.

Trend: Student interest increased to *very interested* or *extremely interested* from middle to end of course.

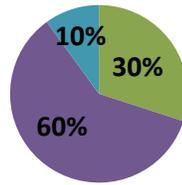
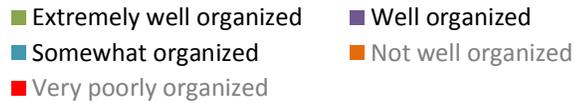


3. Course Organization:

90% of respondents felt course was *well organized* (60%) or *extremely well organized* (30%). 0% of respondents reported finding the course *not well organized* or *poorly organized*

Relevance: Student perceptions on organization support the organization approach as effective.

Did you find the course organized in a way that helped you relate to content?



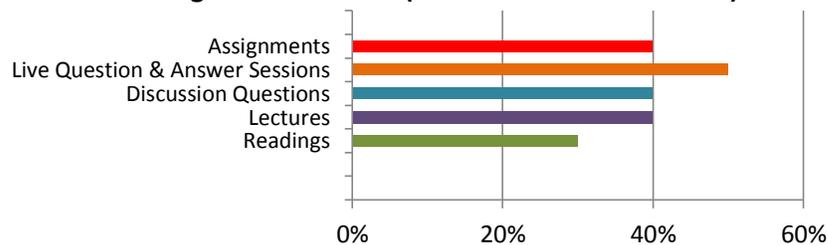
4. Course Activity & Content Relevance:

- Live Q&A sessions identified as **most** relevant (55%), with lectures, discussions and assignments identified as equally relevant in connecting with course content (36% each).
- Discussion questions identified as **least** helpful (40%) followed by readings (30%) and assignments (20%).

Relevance: Clearly live (synchronous) sessions are viewed as meaningful for students to engage with content.

Question: Readings are identified as least helpful, yet the ideas are of interest. Does this indicate difficulty with the required reading/textbooks or an issue with reading overall?

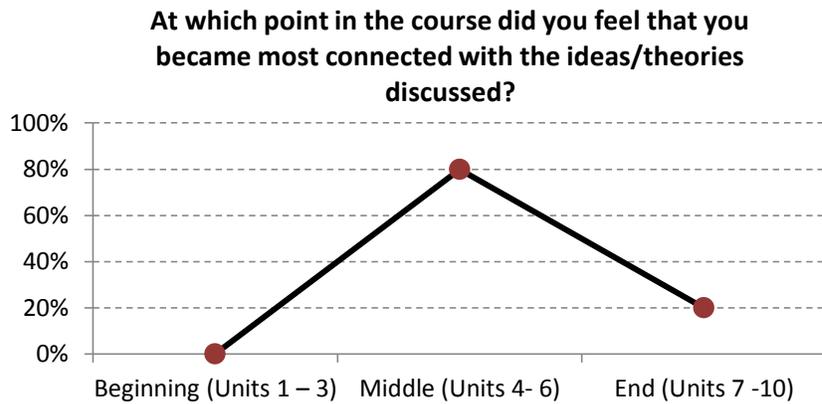
Which activity of the course did you find most helpful in relating to the content? (select all that are relevant)



5. Engagement with Course Content

80% of respondents felt most engaged with content during middle units

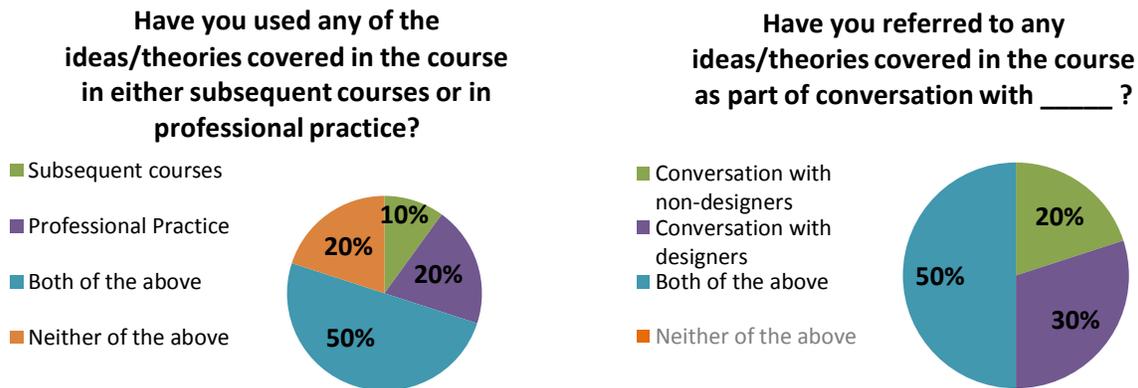
Relevance: Motivational framework emphasizes *Meaning* during learning activities. Earlier activities set up the opportunities to enhance meaning and later activities allow for reflection and engendering competence.



6. Use of Course Ideas in Conversation or Subsequent Use

50% of respondents indicate they have discussed the course ideas with others (designers and non-designers alike) and 50% have used some of the ideas in subsequent work (student and/or professional). See Appendix for examples.

Relevance: There is a strong indication of content discussion, but learning transfer to other courses or professional work is low. Could this be explained by students not having opportunities to apply the concepts? Or is it a larger indication of learning silos?



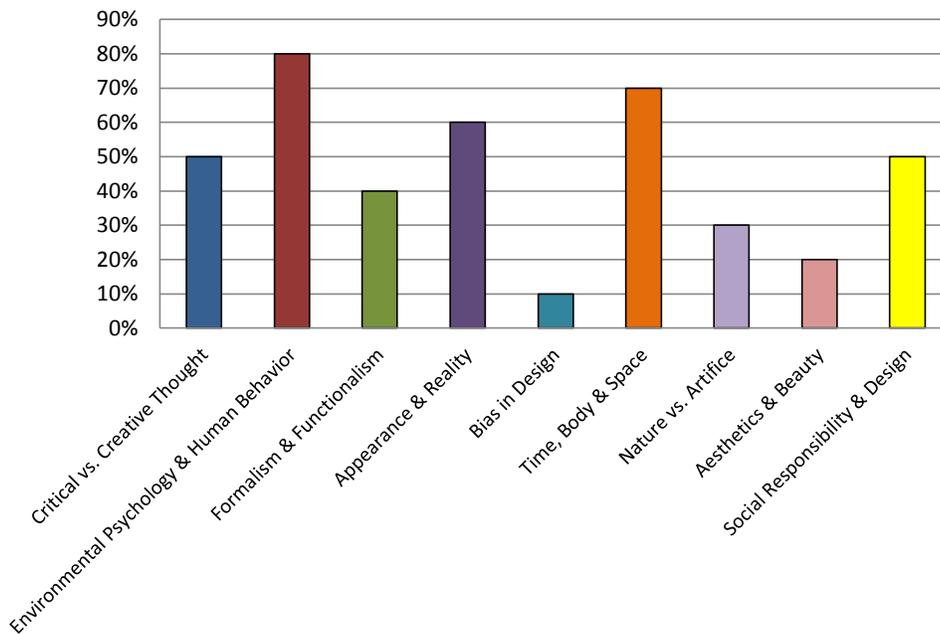
7. Topic Interest and Personal Engagement

80% of respondents found *Environmental Psychology and Human Behavior* to be most interesting, followed by *Time, Body and Space* (70%), *Appearance and Reality* (60%), and *Social Responsibility and Design* and *Critical and Creative Thought* (55% each). *Bias in Design* was of least interest (10%)

Relevance: *Environmental Psychology* is a topic that students are introduced to in previous courses at an elementary level; hence they have more inherent comfort with advanced ideas (scaffolding opportunities). Similarly *Time and Space* are concepts that have been introduced previously as part of basic design theory (Elements of Principles), and *Social Responsibility and Design* is touched on as part of their study in sustainability.

Question: Bias in design (gender, class, cultural bias) such as accessibility, anthropomorphizing, etc. was least interesting, yet student demographics indicate a high degree of cultural variation in student backgrounds and roughly 88% of students are female. Why?

Of the various topics studied in the course, which did you find most engaging on a personal level? (select all that are relevant)



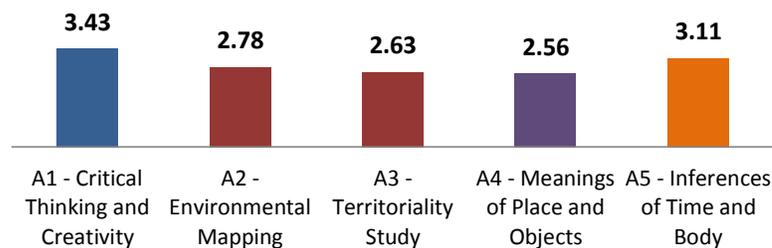
8. Assignment Ranking

All assignments received a 2.5 or higher on a scale of 1 to 5, with the first and last assignments scoring slightly higher than 3 on scale of 1 to 5.

Relevance: Assignment 1 allowed learners to develop an appropriate **attitude** to learning. Assignments 2 – 4 were perceived as relatively stable, with assignment 4 ranking slightly lower. Perceptions of **competence** in final assignment (A5), may be indicated by slight increase in interest.

Question: Is the trend based on content or type of assignment? A1 and A5 are visual studies which may be more comfortable for students (comfort zones). Assignment 4 was a research paper. Is it ranked lowest due to activity type (formal academic writing)?

Please rank the assignments from the course based on highest interest/most inspiring using 5 as highest level of interest and 1 as lowest level of interest.



Interestingly there are anomalies between *personal engagement with topic* and *interest level based on assignment*. For example, 80% of respondents reported *Environmental Psychology and Human Behavior* as the most personally engaging topic, yet the assignments (A2 and A3) associated with that topic ranked at 2.78 and 2.63 out 5 respectively.

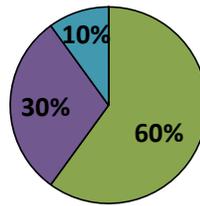
9. Course Impact on How Students Think About Design

90% of respondents indicate that the course motivated them to think differently as designers (Strongly Agree – 60%, Agree – 30%).

Relevance: There is a direct correlation with course intent *Emphasis is on building awareness and understanding of the relevance of design, and social theories within the context of the built environment* (course description), and student perceptions.

Do you feel that the course motivated you to think differently about your role as a designer?

■ Strongly agree ■ Agree ■ Neutral
■ Disagree ■ Strongly Disagree

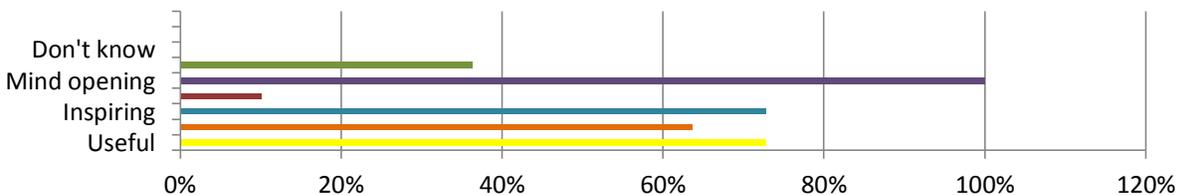


10. Descriptors

100% of respondents selected *Mind Opening* as a descriptor for their learning experience, with *Inspiring* and *Useful* reported by 73%, and *Enjoyable* reported at 63%. Only 10% of respondents selected difficult as a descriptor.

Relevance: The majority of students selected descriptors that were positive. *Mind Opening* implies student engagement was *meaningful* and personally relevant and indicative of higher order thought processes (abstract thought).

**How would you evaluate your learning experience in the course in general?
 (select as many descriptors as necessary)**



11. Responses and Thoughts

While data from the survey provided interesting and relevant feedback on student thoughts and perceptions of the course, the following quotes from respondents provide additional insight.

- *"I thoroughly enjoyed learning the theory behind design which, to me, added value to the program; a program that is typically viewed to be "fluff". Learning the philosophy gave it more depth and more appreciation for how the world can be connected through design."*
- *"Philosophy of Design was one of the most memorable and intriguing courses and it changed my perspective about how I looked at spaces when designing. It was mind opening for me as it gave a better understanding of how people move through space and how they will be using the space. On*

the other hand, I found the reading and the theory very difficult to comprehend until; we had our question and answer session”.

- *“Even though some of the thoughts were difficult to understand on my own once in a discussion with classmates and the instructor things became clearer. I am not normally the type of person to look at the philosophy but I enjoyed seeing how these theories related to real world situations”.*
- *“This course certainly opened my thoughts to the design phases. Assure that you always design with purpose and reasoning”.*
- *“The course was a nice transition into future courses and really helped me think outside the box on a more personal level. I think all designers should consider theories taught in the class and re-purpose them into professional practice”.*

Examples of Student Work

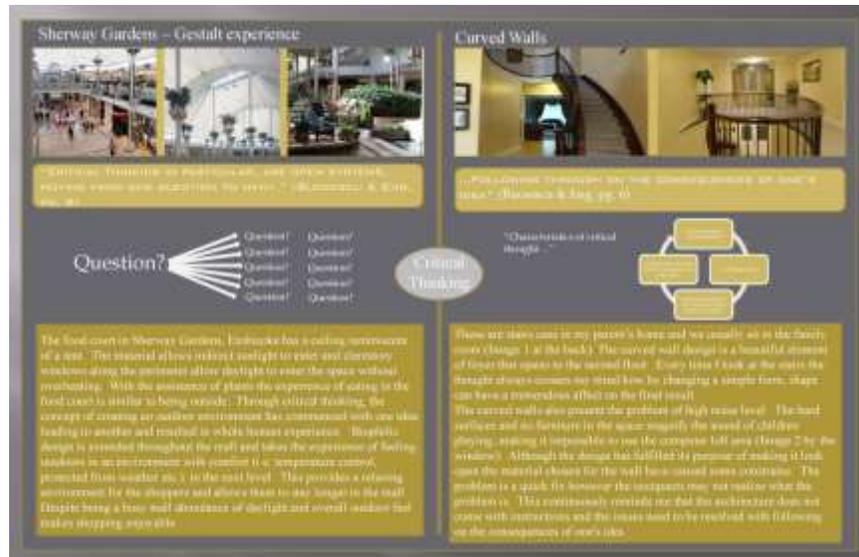
1. Excerpted from Assignment 1 - Critical Thinking and Creativity

“Critical thinking is a reflective thought when we deliberately seek support for belief based in a firm reason. It defines our design to a realistic approach. Our beliefs are deliberate thoughts that claim a connection to reality. Those beliefs/thoughts are based on tradition, authority, passion, etc. Creative thinking, on the other hand, is a realization of our thoughts or discovery thinking. The way it was thoughts [sic] in the Lecture 1: “it occurs when we suspend judgment”. It is letting go of our logical reasoning and letting the creative juices flow. It is literally opening once [sic] mind and seeing if the impossible at that moment can in fact be possible by separating ourselves from what we know.”



2. Excerpted from Assignment 1 - Critical Thinking and Creativity

“This assignment was an eye opener and it seemed to me that the common things that I have seen many times before suddenly looked different and different questions were arising. Many thoughts come through [sic] our mind and we react automatically according to it but I think once we discuss it in words we tend to understand and look at it differently.”



3. Excerpted from Assignment 2 – Environmental Mapping

“After researching and becoming more acquainted with the works of Kevin Lynch, I felt that a post secondary institution project exemplifies the importances [sic] of the elements outlined in Lynch’s Elements of Legibility. The University of Calgary’s campus is a great example of a city but on a much smaller scale. From my personal experiences, this campus can be difficult to navigate and therefore would be a perfect project to reevaluate how some of the ineffective paths, nodes and other elemental points could be redesigned /reconfigured to provide a more effective means to enhance the environment’s legibility for visitors, students and staff.”



4. Excerpted from Assignment 2 – Environmental Mapping

“What I found intriguing was doing this exercise after most of the floors have been constructed and staff have [sic] relocated. How we as designers perceive division of districts and edges are through physical elements. However, from a user’s perspective, staff defined their edges and districts (spaces) with plants, chairs and sometimes reconfigured desks. The value of incorporating an environmental mapping study is practical both at the design stage and especially at completion where the true lessons learnt occurred.

... The further I explored the elements the more I noticed wrong with the overall floor layout. I no longer could focus on the positive attributes the layout provided but its weakness which is probably seen in my study. It is easier to find fault and its modesty that prevents noting the positive. This was an extremely enjoyable assignment.”

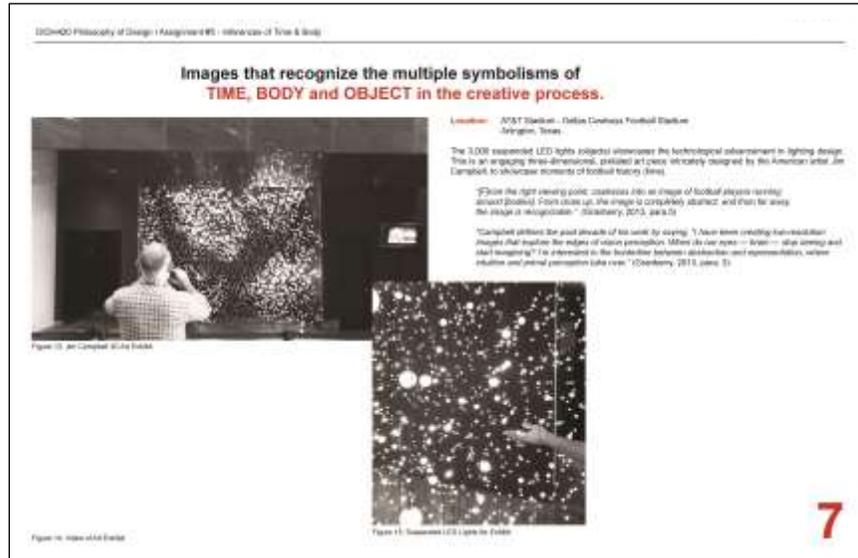


5. Excerpted from Assignment 3 – Territoriality Study

“I found this particular assignment very useful in reinforcing the ideas of personal space zones and territoriality. In addition to these particular themes, the reading on Angulation was an interesting factor in how design can be a major influence in its affects [sic] on human behavior and interaction. From a design perspective, all of these components can provide another level of critical analysis for designers to reflect on the importance in ensuring that sufficient space requirements are provided within any given environment in order to ensure positive behaviors and perceptions of space.”

7. Excerpted from Assignment 5 – Inferences of Time and Body

“What I enjoy about visual study assignments is that it gives students a unique opportunity to try to relate, understand and solidify the very heavy (and sometimes difficult) concepts that we learn about. In many cases the philosophical content was challenging to understand but I did find that once I was able to apply them to a more relatable format, I seemed to make a connection.”

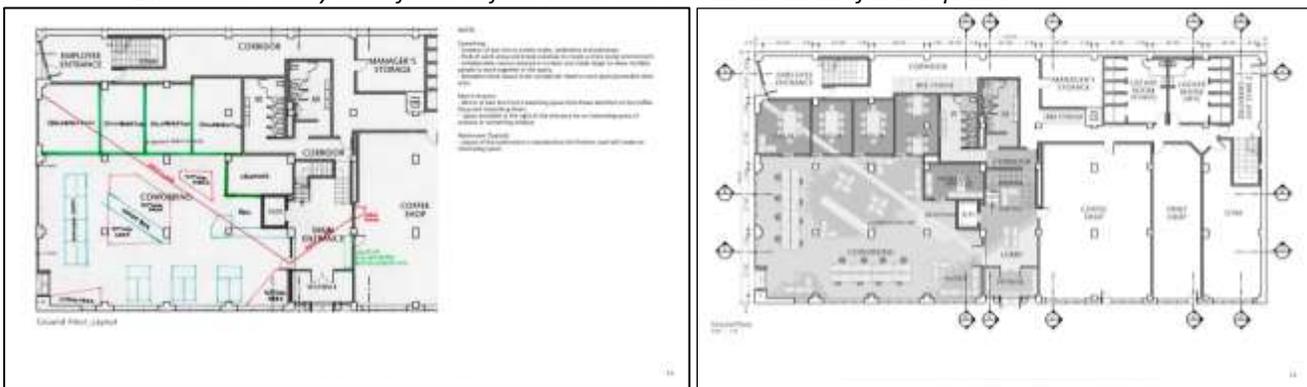


Examples of Student Application of Ideas in Other Courses or Professional Work

**Excerpted from Senior Thesis Project
 Application of ideas from Assignment 2: Environmental Mapping**

“Spatial configurations will be based on the ideas of city elements and their hierarchy pro-posed by the urban planner Kevin A. Lynch. His theory, based on how people experience and create mental maps of cities, is based off of the following five elements (Lynch, 1960):

- *Paths - streets, sidewalks, trails and pathways.*
- *Edges - perceived boundaries (i.e.. walls, buildings and shorelines).*
- *Districts - sections of a city distinguished by some identity or character.*
- *Nodes - focal points and intersections.*
- *Landmarks - easily identifiable objects which serve as an external reference point.”*



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