



# CREATING CONNECTIONS IN HIGHER EDUCATION

Engaging Educational Development at the University of Windsor

Amanda Gatto  
Masters Studio - 5200  
University of Detroit Mercy 2020  
Instructor: Wladek Fuchs  
External Advisor: Veronika Mogyorody

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## Chapter 1

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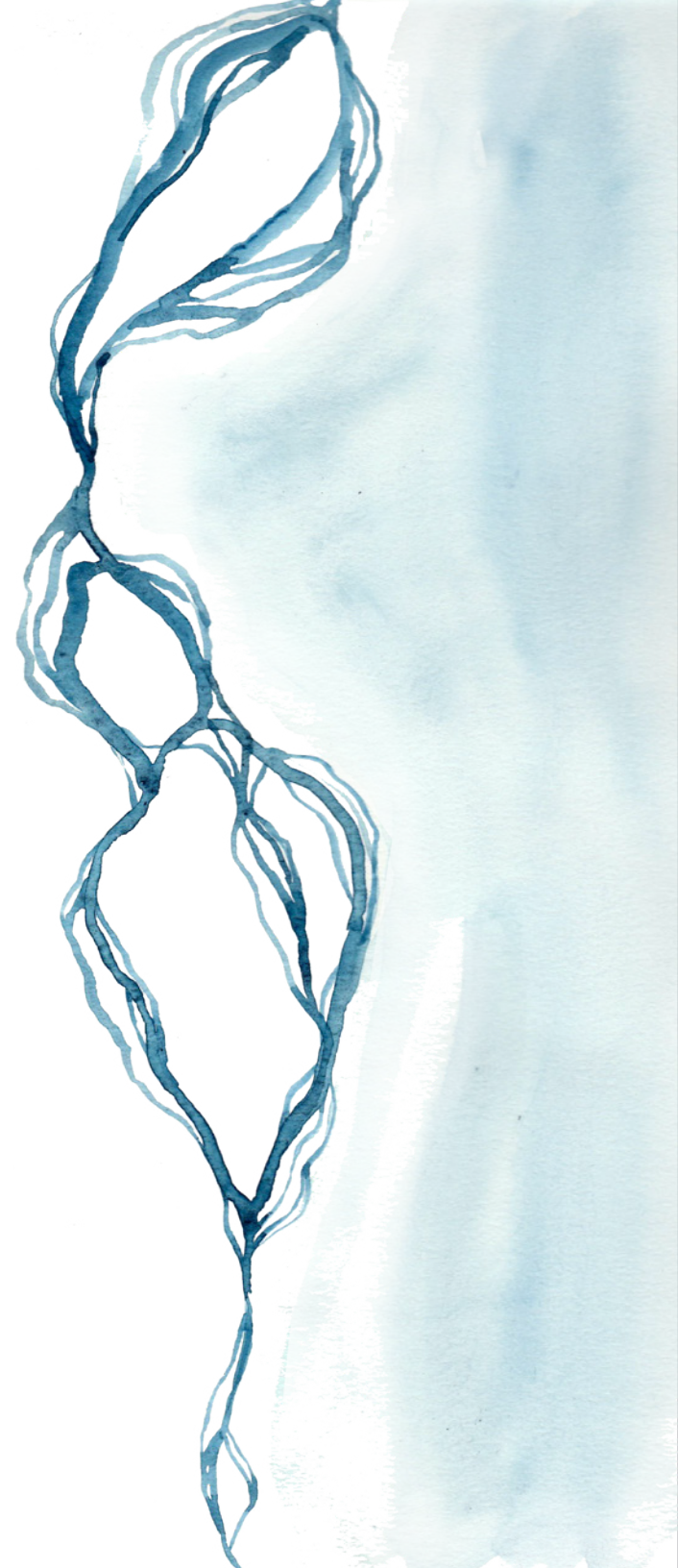
And last, but certainly not least, thank you to my family. To my mom and dad who were kept awake on countless occasions because I was up all night working, for helping me build models when I had no idea how to use tools, and for encouraging me not to give up even when I really wanted to. To my brother who made me laugh even when I was crying. And to Marko, who helped me through every stumble and struggle this year provided, but always reminded me that I could do this. Thank you for bringing me midnight snacks and not letting me cry.



Figure 1.1  
Brain Network of Learning  
Ink

Chapter 2

ABSTRACT



Educational developers are the root system of higher education; not often seen, but they keep teaching and learning alive and healthy. They do this by creating connections between people, places, and ideas. Their methods are research based and experimental. They act as counselors, colleagues, and confidants to faculty members. Educational developers study pedagogy and implement this into how we learn each day as students on campus. They work with faculty and students to ensure that learning is optimized. This thesis investigates how learning creates connections, who educational developers are, and what their spatial needs are. Focusing on the University of Windsor campus located in Windsor, Ontario, Canada, a new hub was designed to house educational developers and encourage a variety of learning types. To acquire this information, literature review, campus studies, interviews, questionnaires, tactile installations, and workshops were used. Key issues that were identified were lack of identity, lack of connections, lack of space, and lack of collaboration. The goal of the design is to create an identity on campus for education developers and to create a stronger connection to campus.

Figure 2.1  
Fluidity  
Watercolour

## Chapter 3

# THESIS STATEMENT

Educational Development in higher education is studying pedagogy and implementing innovative teaching techniques through a variety of methods. At the University of Windsor, located in Windsor, Ontario, Canada, educational development occurs between the Centre for Teaching and Learning and the Office of Open Learning. This thesis studies learning through asking who, what, where, when, why, and how. Based in theories of learning by Piaget and Vygotsky, learning defined as is both an individual experience, driven by one's own curiosity and self-motivation, and a social experience, driven by those around us. Learning is a multi-disciplinary occurrence; we gain knowledge and connect it to past experiences which expands what we know.

Learning occurs in spaces that can be grouped in 3 categories defined by Thornburg, a learning theorist, as the campfire, the watering hole, and the cave. The campfire is a place where knowledge is shared by a person, originally through storytelling and now often through lectures. The watering hole is a place where collaboration occurs, and thoughts are shared among equals. The cave is a place where one can isolate themselves to reflect on their findings, ask questions, and work through information.

Currently around the world the COVID-19 pandemic is closing schools to reduce gathering sizes. This puts more strain on professors to teach effectively Online. It is educational developers who help ease this strain by providing platforms for new teaching techniques both Online and in person. They bridge the gap between professors and students by facilitating new teaching techniques.

To understand the current climate on campus, human movement was mapped, spaces were studied, meetings, questionnaires, and workshops occurred with educational developers, and models were built. As class sizes grow larger and classes remain Online, the need for educational developers is high.

Experimenting with boundaries of public, collaborative, and private space required for learning, the Teaching Support and Learning Commons makes connections between staff, faculty, and students. Located at an entry to campus, the building creates a connection and focus on the importance and value of learning. Expressing the architecture representations of learning through encouraging spontaneous learning, visible work areas, and flexible rooms that can adapt to a variety of learning scenarios begins to show how architecture can enhance learning.

Connections are emphasized throughout the building and the campus. Architectural representations of space can change the way we teach and learn and improve the way we pass knowledge onto others. Although the current global climate challenges the pedagogy of individual learning, by offering a centre to unify faculty, staff, and students to challenge standard higher education practiced and encourage flexibility and collaboration, opportunities for improved learning can still be implemented.

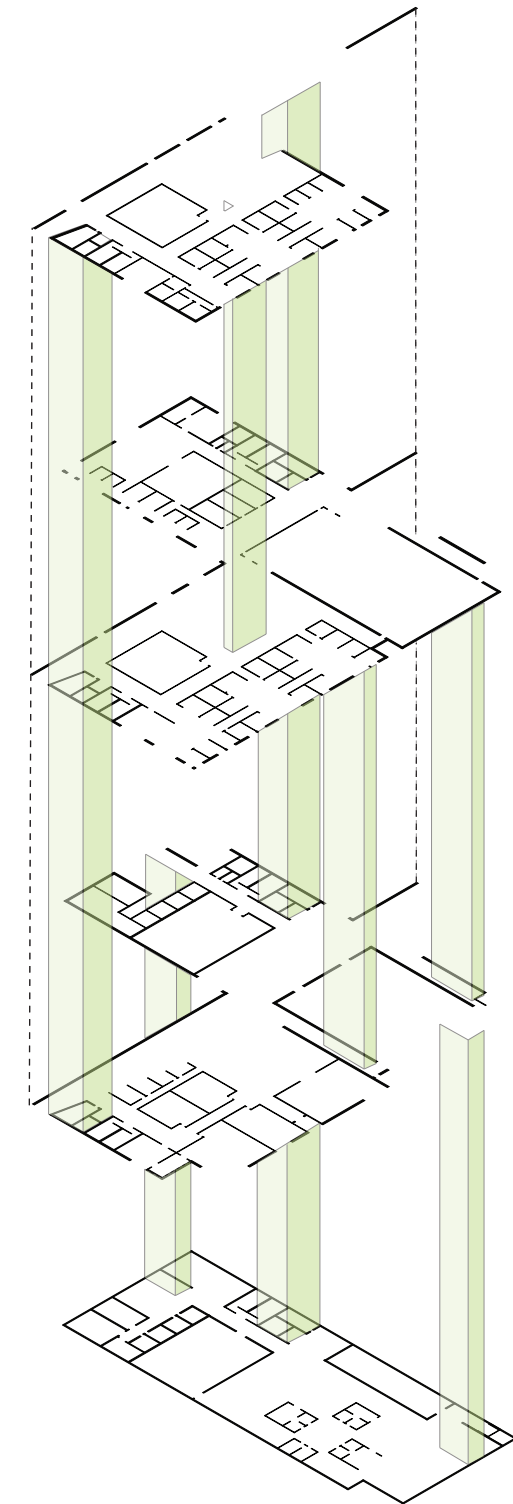


Figure 3.1  
Levels of Connections in Design  
Sketchup, Illustrator

## Chapter 4

# GLOSSARY

**Learning** - "The individual process of constructing understanding based on experience from a wide range of sources" (Pritchard).

**Education** – Passing on knowledge to others.

**Teachers** – "Arbiters of knowledge" (Thornburg, 14).

**Students** – Those who gather knowledge to understand.

**Connections** – Identifying a common theme between two elements that are similar; essential to the learning process.

**Educational Development** - "Helping colleges and universities function effectively as teaching and learning communities" (Felten).

**Educational Developers** – "Individuals who help colleges and universities function effectively as teaching and learning communities" (IGI Global).

**Experimentation** – Testing ideas that have not been tested or verified.

**Gardner's Multiple Intelligences** – A fluid explanation of how different students learn; each student has different strengths and weaknesses in their style of learning.

- **Kinesthetic** – Learning through actions and movement.
- **Visual** – Learning through seeing and reading.
- **Verbal** – Learning through sounds, listening, and speaking.
- **Logical** – Learning rationally.

- **Musical** – Learning through music.
- **Naturalist** – Learning through nature.
- **Intrapersonal** – Learning by one's self.
- **Interpersonal** – Learning with others.

**Piaget's Constructivist Theory** - Stages of development that allow us to make connections between ideas to encourage learning.

**Vygotsky's Social Constructivist Theory** – There are no set stages of development, rather, learning occurs through connections from social experiences.

**Dewey's Progressivist Philosophy** – Teaching should focus on the student and encouraging their curiosity and understanding.

**Gestalt Theory** – Design principles that explain how our brains make connections between visuals to understand images.

**Fluid** – Free movement, able to change quickly and without boundaries.

**Scaffolding** – A teaching method that builds off of student's knowledge to reach new levels of understanding.

**Zone of Proximal Development** – the difference between what one can achieve independently and what one needs help to achieve.

**Liminal Spaces** – 'in-between' spaces.

Chapter 5

# PATH TO EDUCATIONAL DEVELOPMENT

“Educational development is a process of building relationships with academics to support their development throughout their academic careers.”

- Nick Baker, Director of the Office of Open Learning

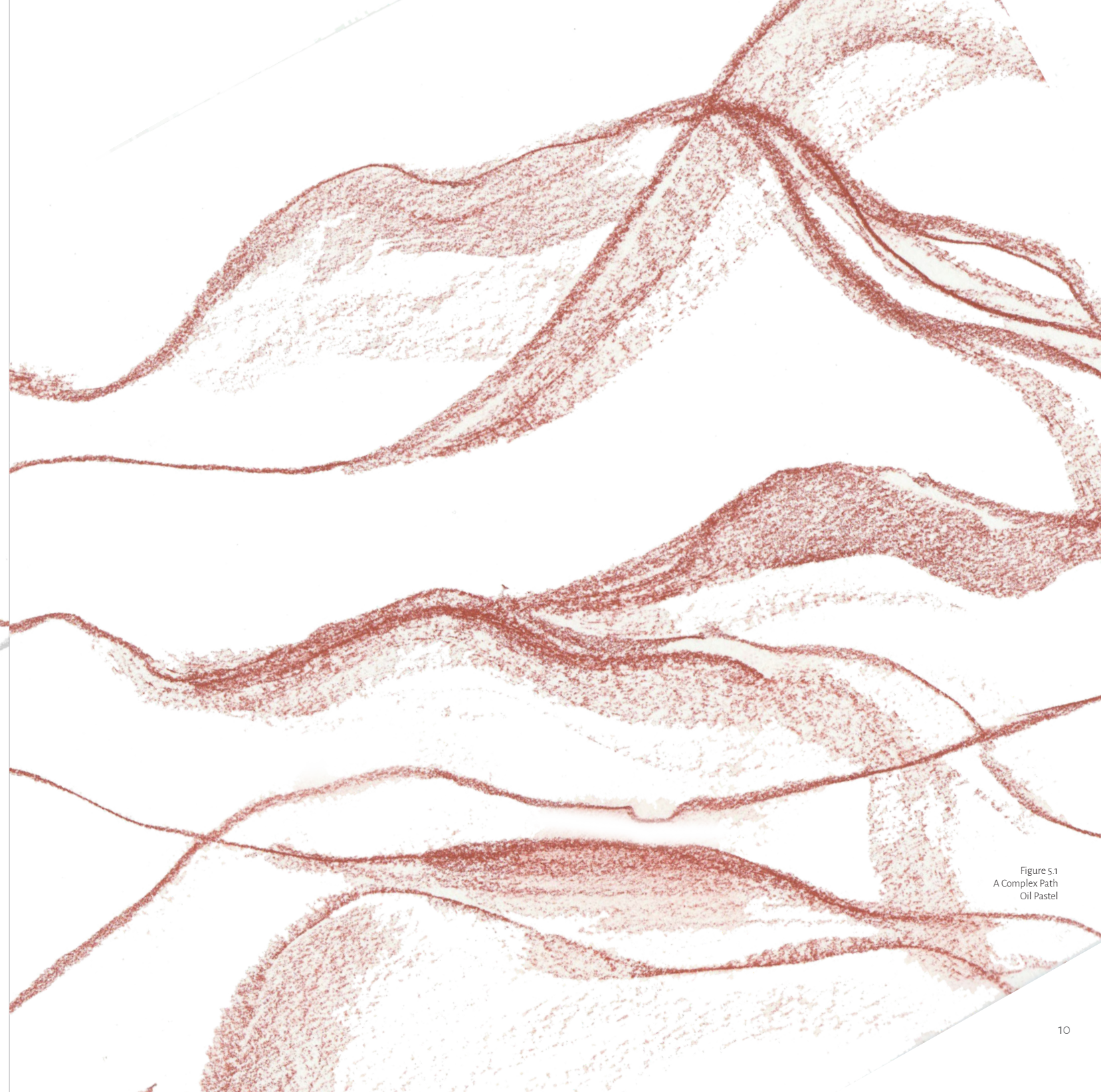
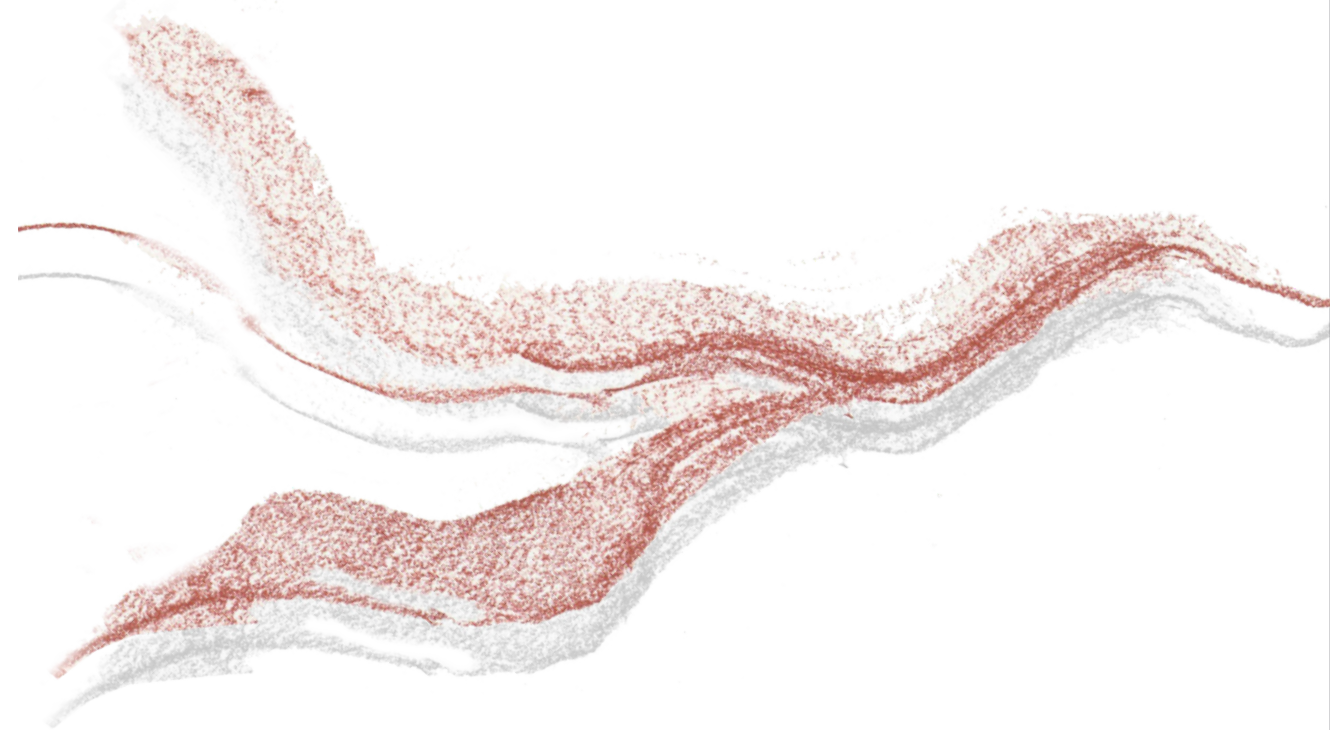


Figure 5.1  
A Complex Path  
Oil Pastel



For my whole life, education has been a guiding force. Starting from pre-school all the way up to my current graduate studies, I have seen learning as an opportunity to excel, to be curious, to expand my knowledge, and to be able to explore the world. Particularly through my own post-secondary education I have been offered many opportunities to do research, to learn new multi-disciplinary concepts, to give presentations, to travel around Canada and the world, and to be able to grow in my understanding. I am a naturally curious person, and that is what I believe to be the essence of learning. Hearing fellow students complain of their experiences in their university and college experiences, I began to become more curious as to why. Why was I having such a great experience in architecture school with my design education, and why were they having such a hard time in other programs? What was the difference between our experiences? How do people learn, and does this affect who enjoys learning? How can architecture play a role to change or improve this? This curiosity developed into the research I was working on as an undergraduate student, and I continued to try to find the answers to these questions as a graduate student.

Through the process of researching and designing this thesis, our world entered an unprecedented crisis with the rise of COVID-19. Everything we knew about school had to change and adapt as students and faculty were sent home. As the school year had to continue, professors had to make their course content available for online delivery. How did they do this? Often, they learn how to use online tools and teaching strategies from people who support the front line of academic life: educational developers. Educational developers are people who work with faculty and students to improve the quality of teaching on campus. When I started this research, many people were not familiar with the title or with the work they did. Now more than ever, we are seeing the huge impact they have on higher education.

Each person has engaged with some form of education in their life, but who has considered how our teachers learn to engage with students and how to pass on knowledge? Learning involves connecting pathways in the brain in a constantly expanding network. Educational developers take on the role in helping people make these connections in higher education. The thesis research is structured through asking five main questions; What is learning? Where do we learn? When do we learn? How do we learn? Why do we learn? These findings influence the ways architecture and learning can overlap and interact to create the most beneficial learning environments for students and faculty.

The goal of the thesis is to design an educational development centre on the University of Windsor campus that connects student, faculty, and educational developers to create a hybrid teaching space fit for the future of education and allowing for experimentation. The ambition is to improve the learning for students and to engage all members of campus as part of a teaching and learning network.



Figure 5.2  
University of Windsor Logo  
Marker

Chapter 6

# WHAT IS LEARNING?

“(Learning is)...The individual process of constructing understanding based on experience from a wide range of sources”  
- Alan Pritchard



Figure 6.1  
Progressivist Teaching Philosophy Graphic  
Ink

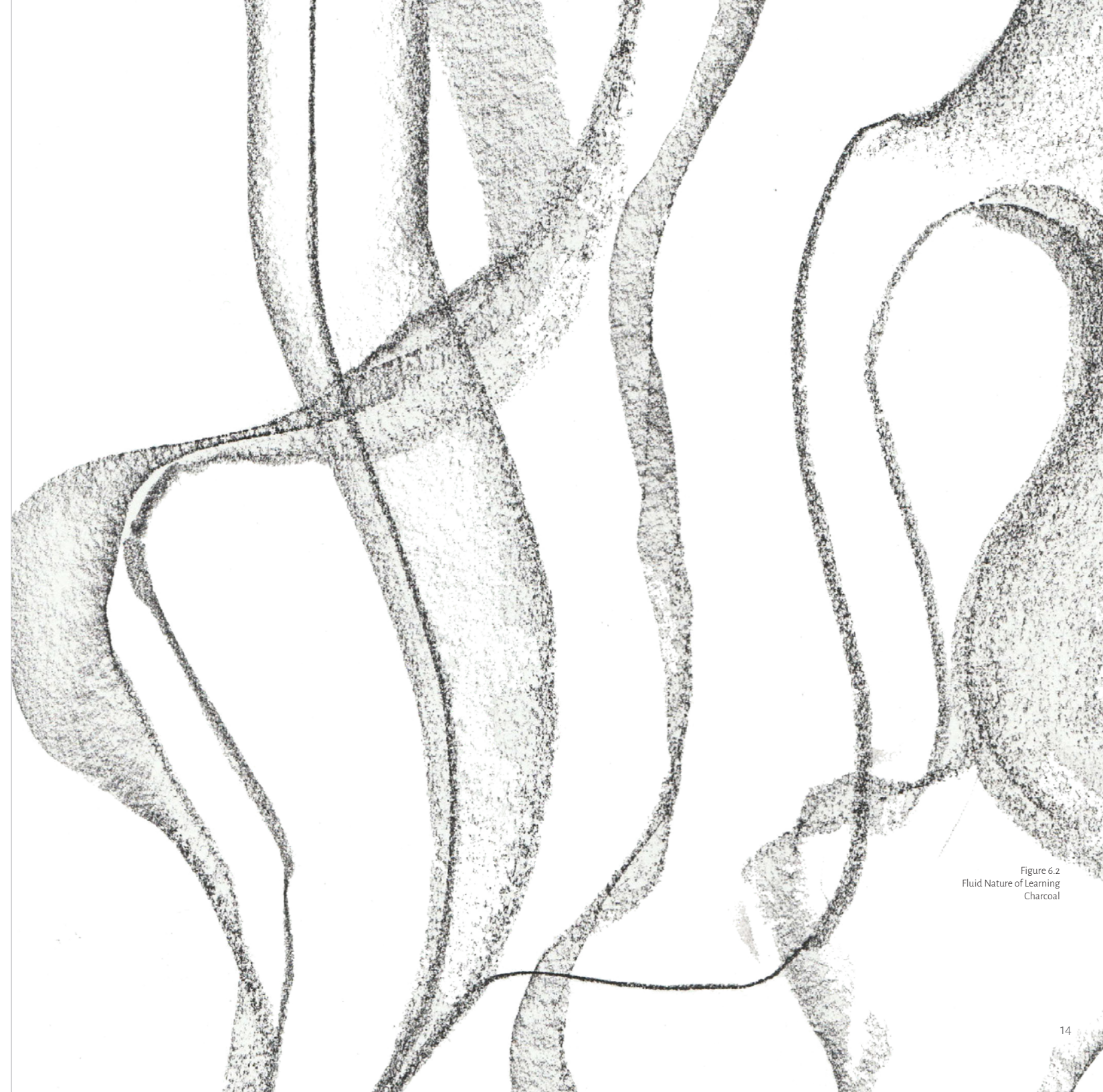


Figure 6.2  
Fluid Nature of Learning  
Charcoal



Figure 6.3  
Hunter Gatherer Learning  
Marker



Figure 6.4  
Agricultural Revolution  
Marker



Figure 6.5  
Beginnings of Learning  
Marker

Learning is defined by Alan Pritchard as, "The individual process of constructing understanding based on experience from a wide range of sources" (Pritchard, 2). Learning is both something that occurs when we are taught, but also that we develop through our experiences. As we connect what we have seen, heard, taste, felt, smelled, or otherwise experienced through our lives, we begin to learn new concepts.

### A Timeline of Learning

As hunter gatherers, humans learned through exploration. We studied plants, animals, and the science of the world through our experiences with it. As nomads, we had freedom to roam and learn wherever we went (Gray). We learned about our surroundings through accompanying adults on their trips, observing their actions, curiosity and replication of these actions, and doing things together. In our modern age, we now do not need to learn the same skills to survive, but our bodies still have the same urges to play, explore, and experience nature (Harari, 40). As the agricultural revolution occurred in Western civilization, we were tied down to our land, and became inclined to work. Learning began to be acquired through working. It is argued by Harari that this was less satisfying for humans because we were tied to one place and devoted to one skill, rather than a variety (Harari, 79). We began to become more focused on growing and producing more crop each year than about children exploring to learn. This continued into the industrial revolution, when children began working in factories for slim wages to support their families. They were taught to be obedient, to work, not to play, and so education and learning was minimized (Gray). As the church became more prominent, they began developing schools. These schools focused on children becoming literate, but also on instilling religious values such as obedience, fear of God, and nationalism (Gray). These traits were taught through forced repetition and removed

play and creativity from the learning process. Although learning through repetition, or behaviouralism, should not be discredited as a type of learning (Pritchard, 18). This is often how artists and makers hone their craft; through mastering the movements and strokes. A reaction to stimulus can be effective to learn, but the focus of this thesis is on learning through understanding, rather than conditioning. As schools have continued to grow, there have been many debates on how and what we should teach children. In the 18th century, Wesley argued that there should be no time for play in schools. In the early 20th century, Montessori began a school focusing on allowing students to take the initiative in their own learning through play and discovery (Gray). With models like this, we are returning to the initial concept of learning through experience, rather than suppressing the human's natural curiosity to explore and use imagination to learn.

Higher education's very first institutions started as ways for philosophers to bring together knowledge from math, science, ethics, art, and history to make connections between them to form new ideas. From Plato's Academy, to the Library of Alexandria, this is evident (Kaligas). This suggests that we as humans have always had the desire to learn more; we are naturally curious about what we do not know. Higher education today is torn between values of expanding knowledge, and the expectation that it prepares people for entering the workforce. A challenge of today is how to resolve this conflict.

Like the progression of childhood learning, post-secondary education is also beginning to re-visit the ideas of a more hands-on learning style. With a rise in active learning and experiential learning, new pedagogical studies are suggesting that students do not learn best in lecture-style environments. Classes that allow for students to collaborate and problem solve together on projects tend to reinforce learning concepts and increase retention. Classes



Figure 6.6  
The Death of Learning?  
Marker

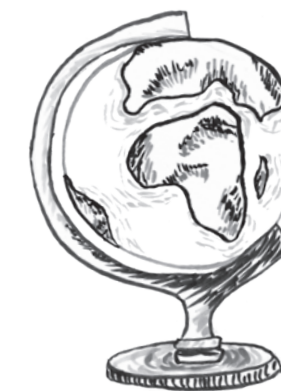


Figure 6.7  
Global Learning  
Marker



Figure 6.8  
Piaget's Constructivist Theory  
Acrylic

are developed to do more than just test a student's competency at reading or writing, but to test their abilities to make connections, problem solve, and critically think about concepts. These spaces have begun to be tested and built into many higher education campuses across Canada.

### Gardner's Multiple Intelligences

This type of learning is validated through many different learning theories that have emerged over the years. Gardner's Multiple Intelligences took the idea of learning modalities and examined it further. Each person may have strengths in learning through visual, natural, auditory, kinesthetic, etc. senses. Gardner also considered whether learners were interpersonal or intrapersonal and took this into account. He theorizes that each person can fluidly learn through many of these different lenses.

### Gestalt's Principles

Gestalt studied the way our brain connects imagery to understand what it is seeing. There are 7 key components to his principles of design; similarity, continuation, closure, proximity, figure/ground, symmetry and order, and common fate. Similarity is that our brains connect elements that are visually similar as one group. Continuation describes how our eyes want to follow the easiest path to understand their route. We will perceive these shapes to be one. An important idea is that of closure; that our brain can see an unfinished image and connect the gaps to understand the image. Proximity groups objects based on their distance from one another. Figure/ground allows our brain to recognize forms in both the foreground and background of images. Symmetry and order describe the way our brains perceive shapes in the simplest way possible by finding the order in them. Finally, common fate explains that we group objects pointing in the same direction

as one another (Chapman). These principles can be connected to how we learn; through finding similarities and connections to what we already know, and building off of it.

### Piaget

Piaget's Constructivist theory began looking at how our brain processes information to make it into understanding. Piaget was a child psychologist in the early 20th century who studied child development (McLeod). He argues that each person has a schema in their mind, like a mental map (Pritchard, 30). Each item we know connects to other items and builds off previous knowledge. As we learn new information, we either assimilate or accommodate the information to create new knowledge. Based on this, all our knowledge comes from experience. He described stages of development that each child goes through on their journey of learning, which will be described in depth later.

### Vygotsky

After Piaget came Vygotsky, a Soviet psychologist of the early 20th century. Vygotsky built off Piaget's constructivism and expanded it further, putting an emphasis on the social aspects of learning. We learn from those we are surrounded by, especially when young and impressionable, to understand culture and communication (Mishra, 2). The teachers are critical in this theory. Teachers can be parents, older siblings, aunts and uncles, schoolteachers, or any elder that passes on knowledge. Vygotsky's Theory of Development focused on language as a tool to learn culture, which greatly impacts how a child views the world (Mishra, 6).



Figure 6.9  
Vygotsky's Social Constructivist Theory  
Acrylic

Dewey

Dewey's Progressivist philosophy of education focuses on the student at the center of how we teach. Rather than focusing on how we teach, it focuses on each student as an individual that may require a different style of help than another (Williams, 92). Each student should use their own curiosity to fuel their learning, rather than a strict guideline or forced memorization. Students learn through everyday life, collaborating together, and problem solving in a multi-disciplinary way. This connects to the fluid nature of constructivism bridging gaps between what we know and exploring the connection between concepts to understand further. These connections keep the student at the focus of all teaching and learning concepts, with the understanding that each student is unique.

Between these 5 theories, there is one clear thread that binds them all together; connections. Gardner connects ways of learning. Gestalt's principles show learning through connecting imagery. Piaget connects schema to expand on learning. Vygotsky connects language to understand culture. Dewey connects students and multiple modes of learning to improve on understanding. Learning is connecting experience to expand what we know.



Figure 6.10  
Gestalt Principles  
Ink

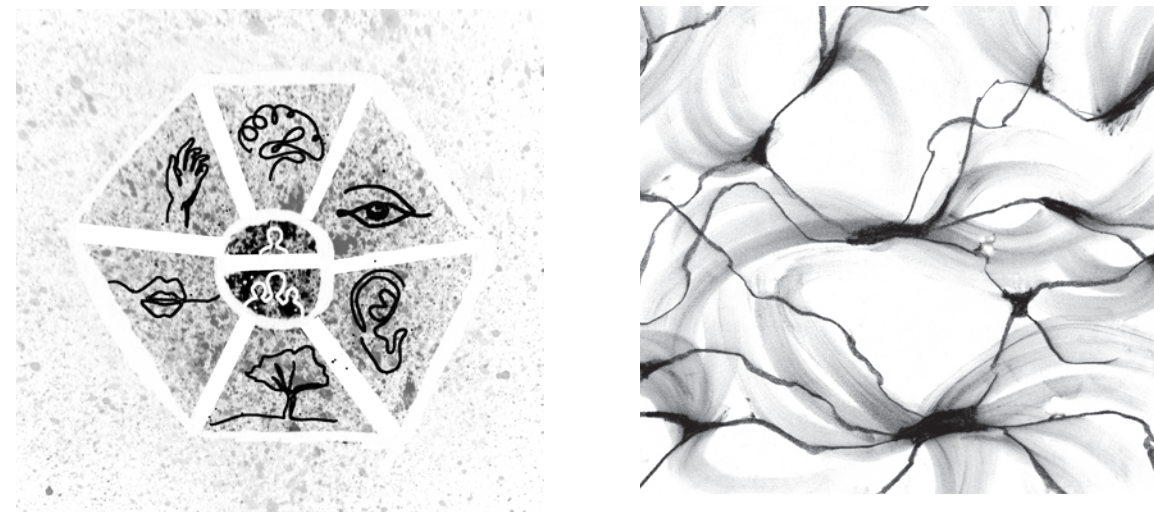


Figure 6.11 (left)  
Gardner's Multiple Intelligences  
Ink

Figure 6.12 (right)  
Connecting Experiences  
Charcoal

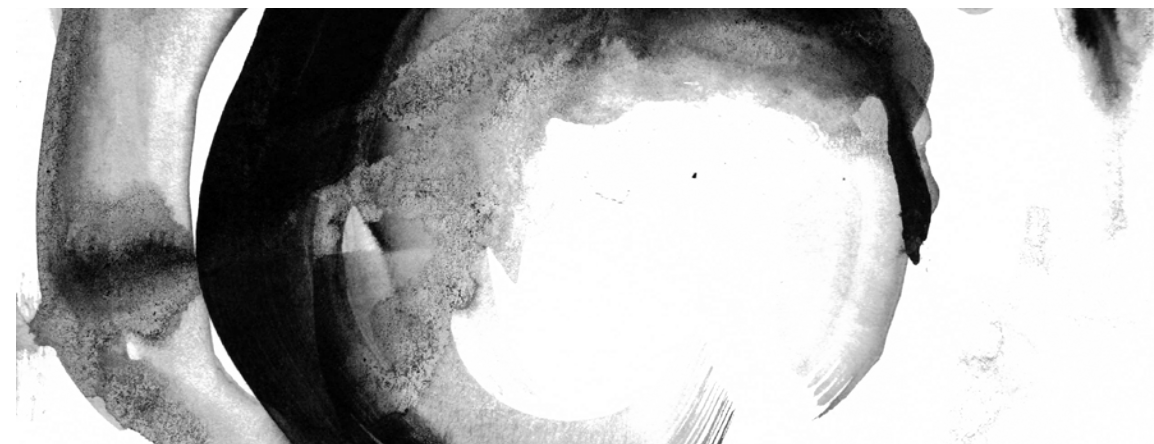


Figure 6.13  
Dewey's Progressivist Philosophy  
Ink

Chapter 7

# WHEN DO WE LEARN?

“Tell me and I forget, teach me and I may remember,  
involve me and I learn.”

- Xun Kuang, *Xunzi*



Figure 7.1  
Growing With Time  
Charcoal



Figure 7.2  
Moments of Disjuncture  
Ink

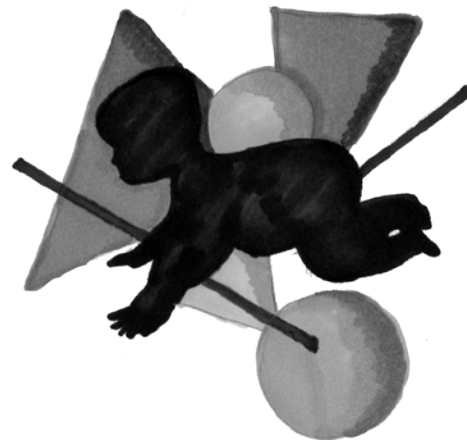


Figure 7.3 (left)  
Sensory-Motor Stage  
Marker



Figure 7.4 (right)  
Pre-Operational Stage  
Marker

As discussed previously, learning occurs at all moments through life. Learning begins at conception, where we learn the most between 3 weeks and 3 months in the womb. (Klein). After birth, we continue this learning. The first 3 years of our lives are the most critical; our minds are like sponges and absorb all that we see. We pick up most of these cues from our social environment. We learn how to communicate, speak, and exist in the world. Piaget's developmental stages explain this.

Piaget's Developmental Stage Theory has 4 stages of development: Sensory-Motor, Pre-Operational, Concrete Operational, and Formal Operational. Sensory-Motor occurs between ages of 0-2, and this is primarily when we only have motor reflexes that we build our learning upon. Between ages 2-7 we are in Pre-Operational stage, when we can represent ideas and mental imagery from our own egocentric point of view. At age 7 – 11 we are in the Concrete Operational stage. Here we can begin to see the point of view of others, but struggle to deal with abstract problems. After the age of 11 we are in Formal Operational stage, where we can think logically and abstractly (Pritchard, 43). Piaget determined this was the ultimate stage of intellectual development. This has been argued in current pedagogical studies.

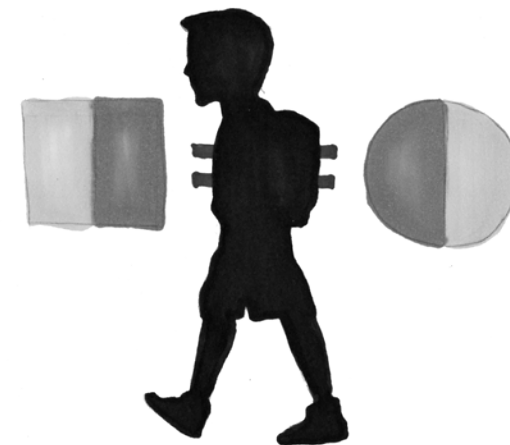


Figure 7.5 (left)  
Concrete Operational  
Marker

Vygotsky described these stages differently. He didn't believe that these stages were set in years, rather were more fluid and could be prolonged or shortened depending on each individual learner (Mishra, 5). His stages generalized that young babies, when confronted with a concept they didn't understand, could not express their curiosity and so would become frustrated and cry. As we grow, we learn how to imagine these concepts, and so can begin to play, draw, sketch, or make things to begin to understand how we would engage with these new concepts. Once we are fully developed, we can begin to use our imagination and theoretical thinking to understand how to approach and solve problems and new concepts.



Figure 7.6 (right)  
Formal Operational  
Marker

This works along with his ideas about the importance of speech through the learning process. Speech is how we primarily communicate, which makes it critical in how we learn from and understand one another. Speech initially begins as an unconscious way for children to express themselves. This is how children process their thoughts, as they cannot do so internally. Soon, this speech begins to develop into an internal speech. Internal speech is the voice in your head; how you process ideas internally without speaking. Once we are fully functioning in our own internal speech, it becomes something that only we can understand (Mishra, 8). If someone else were to hear our own internal speech, it may not make sense to them. For Vygotsky, it is important how humans think through processes and learning.



Figure 7.7  
Moment of Disjuncture  
Marker and Ink

Another key moment of learning is what Jarvis classifies as 'moments of disjuncture' (Jarvis, 131). Although we do learn in our everyday life and moments, often we get caught in a repetitive cycle that becomes usual, typical, or expected. This is not conducive to learning, because we are not looking for new ideas, we lack curiosity, and our brains become bored. When 'moments of disjuncture' occur, we are presented with inspiration, curiosity, or change that jumps out at us and breaks this monotony. Examples of these moments could be a change in the weather that is noticeable, a book quote that inspires us, or meeting a new person. This action, no matter how large or small, can trigger a change in our learning path, a disruption, that sparks our curiosity again. These moments are spontaneous and unpredictable, and so it cannot be defined as an exact time of when learning will occur, more so a moment that changes how learning occurs in everyone.

Learning occurs throughout life. Although stages may be challenging to define, as each person is unique, we can understand that how we learn changes as our brain develops further. As we get older, we have more experience to expand our knowledge from. As post-secondary students are often in the final stage of development, they have a strong understanding of the world and can readily adapt to complex thinking.

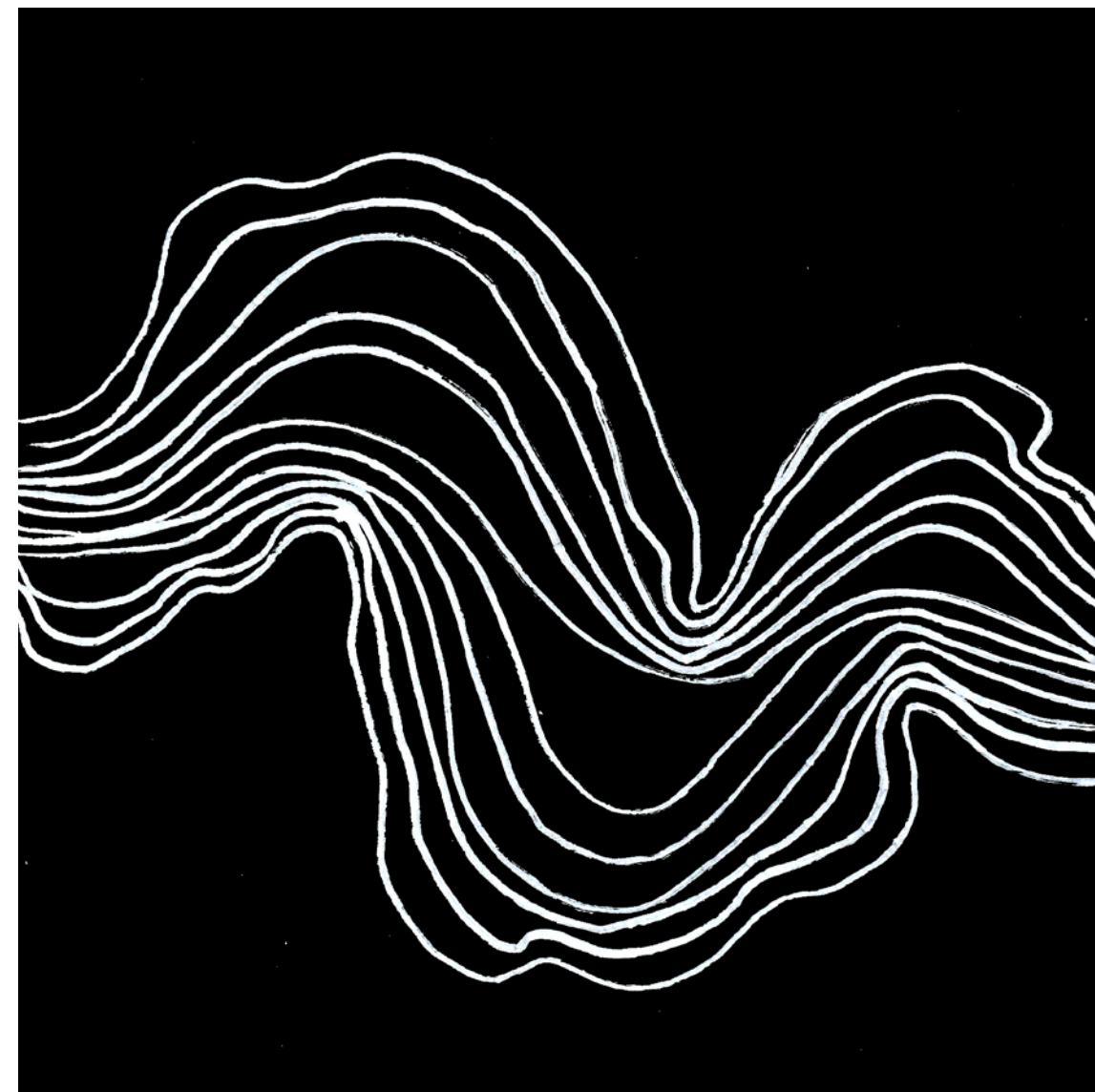


Figure 7.8  
Fluid Timeline  
Acrylic, Ink



Chapter 8

# HOW DO WE LEARN?

“At the core of these activities is still student learning and development; learning theory, educational psychology, and scholarship of (online) teaching and learning, all contribute to this work.”

- Ashlyne O'Neil, Educational Developer



Figure 8.1  
Methods of Learning  
Watercolour, Photoshop



Figure 8.2  
Blending Ideas  
Watercolour

In accordance with the theories described previously, we learn by making connections. Learning is fluid, it is individual to each person, and it is through connections that we learn most effectively through experience. Connecting experiences is the essence of learning. We experience the world with our 5 senses; sight, smell, taste, touch, and sound. We connect the experiences we have to other content and information that we already know. This builds our knowledge base that we all have stored, and since we all experience the world differently, we all have very different knowledge banks. But we cannot learn everything on our own, and guided learning can teach concepts that once seemed impossible. Those who we consider 'teachers' are not necessarily always our schoolteachers, they can be mentors, advisers, our colleagues at school or work, and most essential during childhood years, our parents and family members. From a young age, we learn how to behave socially and culturally from those we see around us. This begins our educational journey. Through stages of life, we learn through playing, experimenting, and asking questions. Our natural curiosity guides us to new concepts and thoughts, and we begin to explore them in the ways that we understand the world.



Figure 8.3  
Personal Experience in Learning  
Acrylic

### Zone of Proximal Development

Vygotsky's Zone of Proximal Development theory describes a teaching technique called scaffolding. Scaffolding is a process that acknowledges the unique nature of the learning process for each individual and reflects that (Mishra, 6). Scaffolding is the teaching theory that describes how teachers must evaluate the "Zone of Proximal Development" for each student, which is the area between what a student knows, and what is too complex for them to understand (Mishra, 7). The area between this is where the teacher becomes crucial. They must provide the supports, or scaffolding, to help students build on what they know up to what they do not yet know. The teacher can assess how much support is needed, and throughout the process readjust this to increase the amount of help given or to take some of the help away, allowing the student to do more on their own. Essentially, this model allows for students to learn by building up to new concepts with the help of another person.

### A Critique

One critique of the Zone of Proximal Development is that there is a scale of what a student knows, and there are some topics that will be out of their grasp initially. They may have no other experiences like the newly presented information, so there is no scaffold for them to build from. On this scale, one end point is knowledge that they know of and can understand. The other is having no knowledge or understanding of a concept. The area that scaffolding is effective in working with is the in-between; where they know of the topic, but do not have the tools to understand it. The area of most concern is where they do not even know of the topic. This is where the student can use tools such as books, the internet, or their peers to begin gathering basic knowledge on the topic.

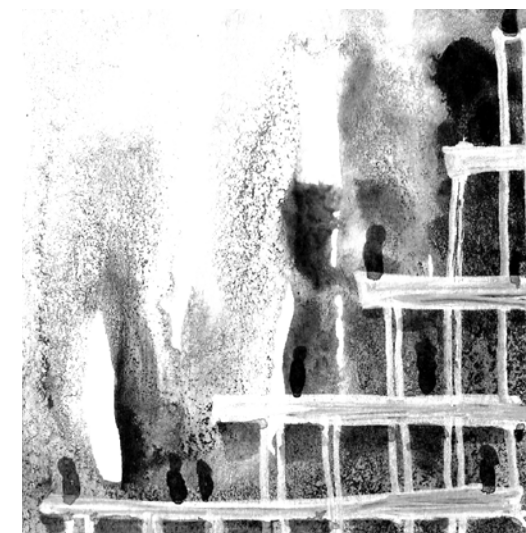


Figure 8.4  
Zone of Proximal Development  
Ink

### Active Learning

Active learning and experiential learning embrace the concept of building and connecting. Active learning allows students to be engaged in their learning; active rather than passive learning. Instead of sitting in classes and being lectured at, they are taught material, and then posed with a problem or project to develop in teams. These application problems often are taught in rooms with movable tables and chairs, so students can gather together to problem solve, as well as white boards to begin sketching and thinking through ideas collaboratively. Laptops are also used as important tools, so access to outlets are key. Screens and projectors often are recommended as supplementary support items. Experiential learning thinks along this same vein of learning. Rather than it simply being collaborative problems though, experiential learning puts students in the actual experience of what they are learning about. Students can be asked to act out, re-imagine, or go into new environments to learn new skills. This can be worked through in many ways. Architectural education highlights this experiential learning with firm visits and mandatory co-op training to get a feel of how architecture firms exist outside of the academic world. Building models and design charettes would fall under the active learning category, as well as peer reviews.



Figure 8.5  
Active Learning Classroom  
Charcoal

Tools

As mentioned previously, understanding the tools of learning will impact the architectural implications of space. Writing notes, reading books, making art, working with experiments, and browsing the Internet can all be tools of learning. These all have architectural impacts. To write notes, spaces tend to be acoustically quieter, with larger writing surfaces, such as desks, for students to utilize. Writing notes by hand improves knowledge retention when studying. Reading books requires a library of books to draw information from, as well as a quiet environment to focus on the information. Making art requires a different type of space entirely, as it will need to be a messy space with access to tools, paints, and larger areas to work in. Experiments, similarly, require labs that have running water, safety stations, access to gas and tools to mix chemicals in. The Internet is a tool that has disrupted our tradition of teaching and learning in recent years. The Internet, paired with smart phones and laptops, allows access to worlds of information at our fingertips. This creates a network that allows learning to occur anywhere.

With the benefit of technology to aid us, we now have the opportunity to learn everywhere we go. We learn by being curious and by experiencing a variety of new things. Architecturally, this means that a variety of spaces are required to encourage spontaneous learning and planned learning.

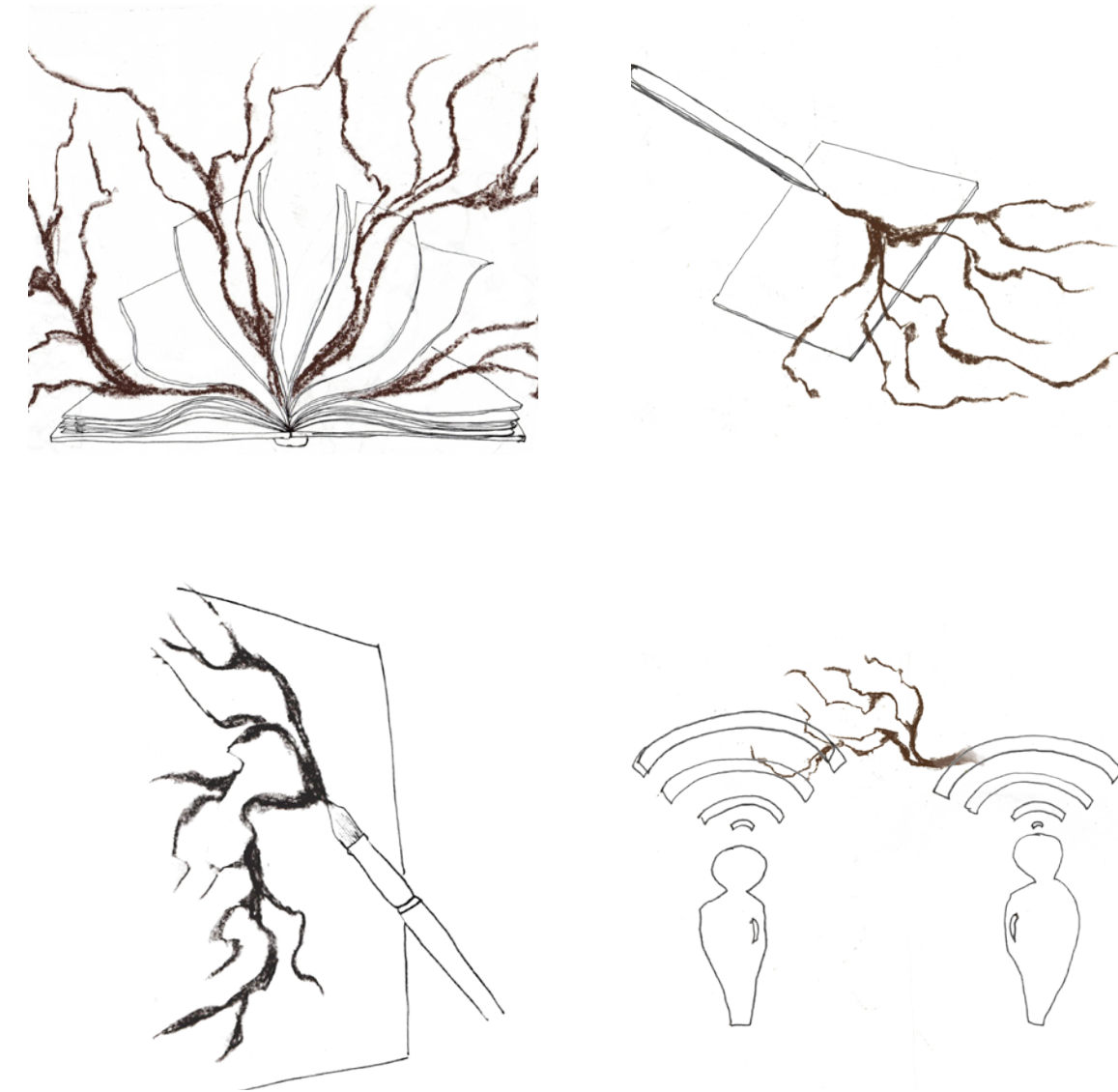


Figure 8.6  
Tools of Learning  
Charcoal, Ink

# WHY DO WE LEARN?

“The more that you read, the more things you will know. The more that you learn, the more places you’ll go.”

- Dr. Seuss, *I Can Read With My Eyes Shut*

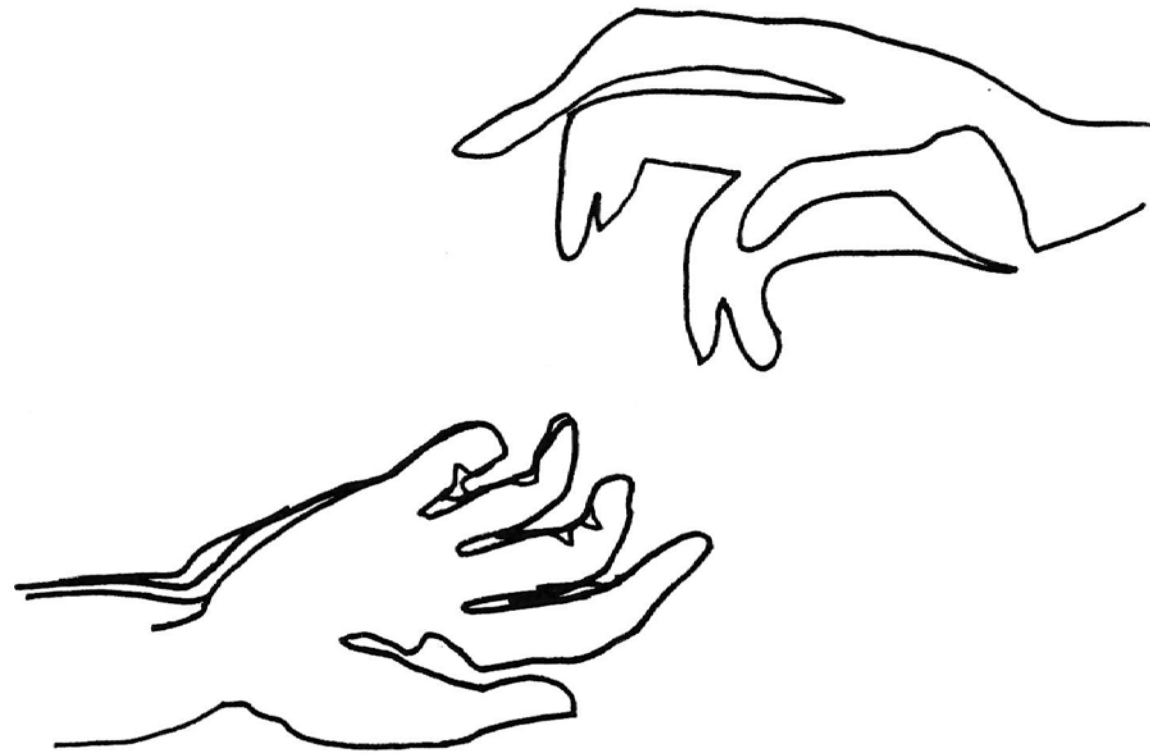


Figure 9.1  
Connecting With Others  
Ink



Figure 9.2  
Connecting Learning Groups  
Watercolour

Historically, humans learned in order to survive. We had to know which berries or plants were edible, the movement pattern of animals, how to adapt to the rain or snow, and where to go at the change of the season. As well, humans found trust in each other through language. This skill was critical in forming bonds that led to higher survival rates, which may have an impact on why social elements are crucial in our learning. Not to mention, communication is key to survival. Nowadays we see education as mandatory for children to gain a good basis for life, and higher education as an important milestone to a good career. Some students pursue post-secondary school to gain knowledge, to explore new concepts, or to seek world change. There are also many students who attain a post-secondary education for the purpose of getting the skills required to join the workforce. What types of teaching can be implemented to both groups of students to provide them both with the skills they need? Each group of students may have different goals, but can have a similar method to obtaining these goals. This is where educational developers come in.

Educational development is "helping colleges and universities function effectively as teaching and learning communities" (Felten, 93). And so, it can be assumed that educational developers are those who facilitate this work occurring in universities. The Centre for Teaching and Learning and the Office of Open Learning on the University of Windsor campus function as the role of educational developers. They research, write papers, host workshops, and experiment with pedagogy and work with faculty and students to improve teaching skills. Based on the 2017 NSSE Student Satisfaction Survey at the University of Windsor, 47% of students struggle learning course material, 37% of first years don't know where to go to get help, and only 57% stated that they received detailed feedback on work (NSSE 2017). CTL and OOL seek to improve this by working with faculty on teaching styles, providing

workshops, one on one meetings, and technology training to help them work with students in a more effective manner. As stated by one Jessica Raffoul of the Centre for Teaching and Learning, "Educational development is about as human as it gets in post-secondary."

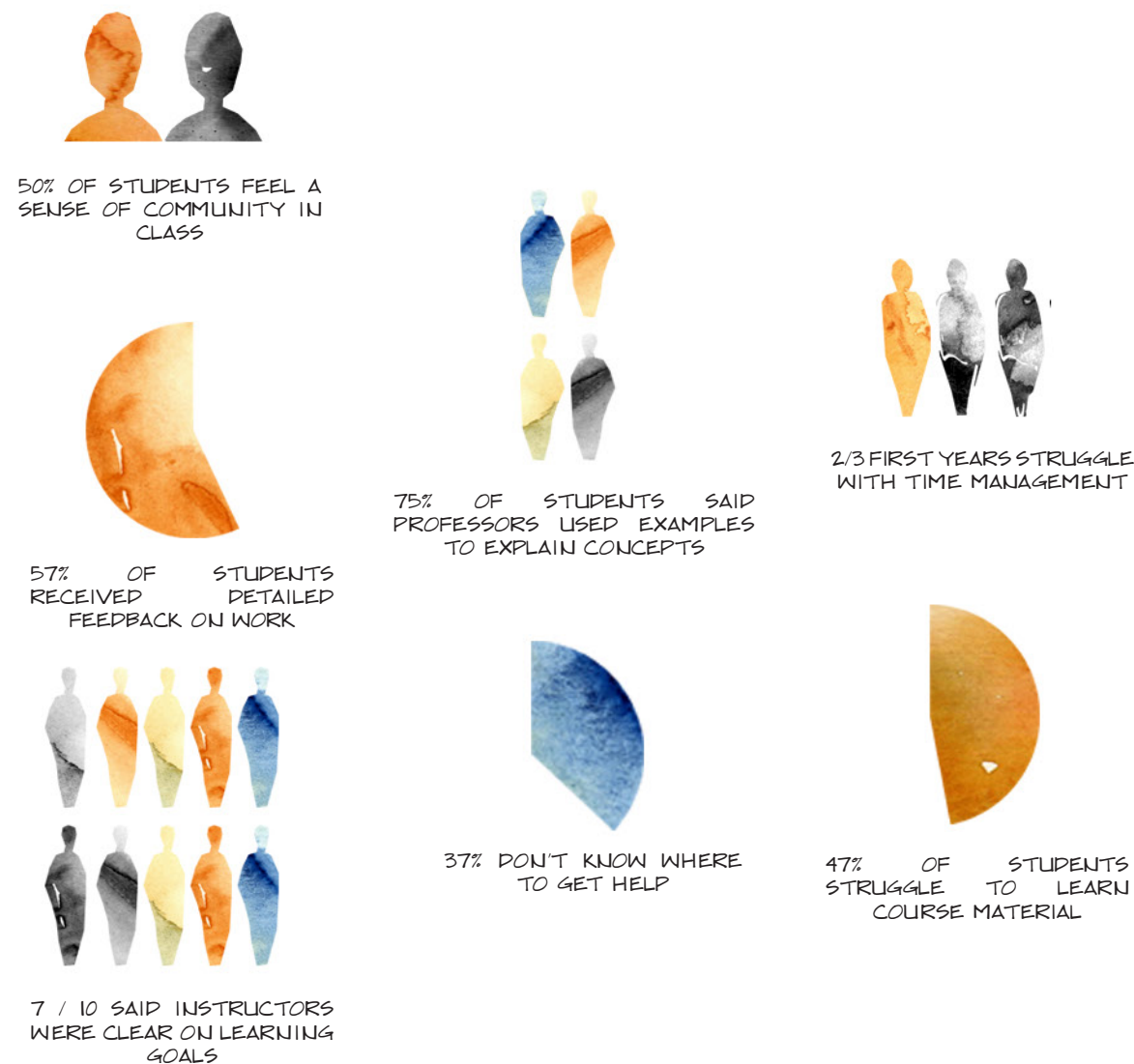


Figure 9.3  
NSSE Statistics  
Watercolour

Chapter 10

# WHERE DO WE LEARN?

“To talk in public, to think in solitude, to read and to hear, to enquire and answer enquiries, is the business of a scholar.”

- Samuel Johnson, *The History of Rasselas, Prince of Abissinia*



Figure 10.1  
The Campfire  
Ink



Figure 10.2  
The Cave  
Ink

On campuses, one may question where all these different types of learning take place. Many theorists argue that since learning occurs everywhere, the spaces are limitless. Examples of spaces that learning can occur in include:

- Lecture style classrooms are not the only type of room that can be used as a 'learning space'; smaller classrooms are often occupied throughout the day when class is not in session to use blackboards and white boards as tools of collaboration and idea sharing. They offer a semi-private place to get work done and come equipped with tools to work.
- Bookable meeting rooms also offer similar amenities for students to work in.
- Libraries offer a more private, quiet, and reflective individual learning to occur.
- Many students find studying in a cafe to be a great solution, due to the proximity to food and the warm ambiance.
- Hallways, benches, stairwells, and other "liminal spaces" become idea sharing areas that students engage each other in and can begin to talk about what they've seen and experiences through the day, and their analysis of these experiences.

### The Campfire

Thornburg theorizes that each of these spaces can be categorized into one of four types of space; campfire, watering hole, cave, or life space. The campfire was once seen as the gathering place where stories were told (Thornburg, 11). An individual would capture the attention of those around them and share their stories. This expression has been represented in our modern education as classrooms, where students listen to a teacher who professes their knowledge.



Figure 10.3  
The Campfire  
Ink

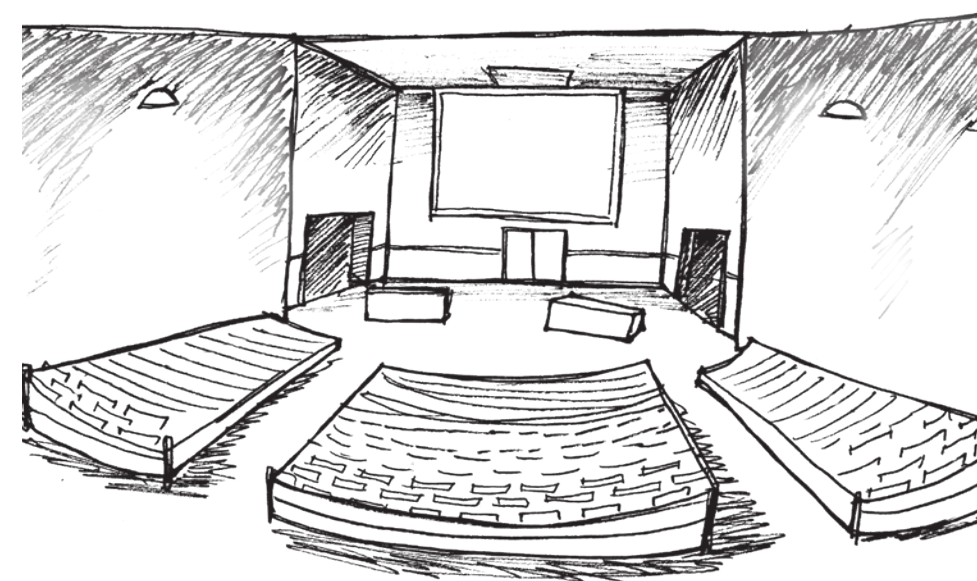


Figure 10.4  
The Lecture Hall  
Ink



### The Watering Hole

The watering hole was where animals would go for nourishment and to gather as a pack (Thornburg, 17). In our educational system this is what we know as collaboration spaces, breakout areas, cafeterias, and libraries. All people gather here to socialize, talk about the ideas they recently discovered at the campfire, share thoughts and their opinions on what they had heard. This type of space encourages the social interaction that Vygotsky argued was highly important in the learning process. By having students interact with one another, it encourages spontaneous and social learning to occur.

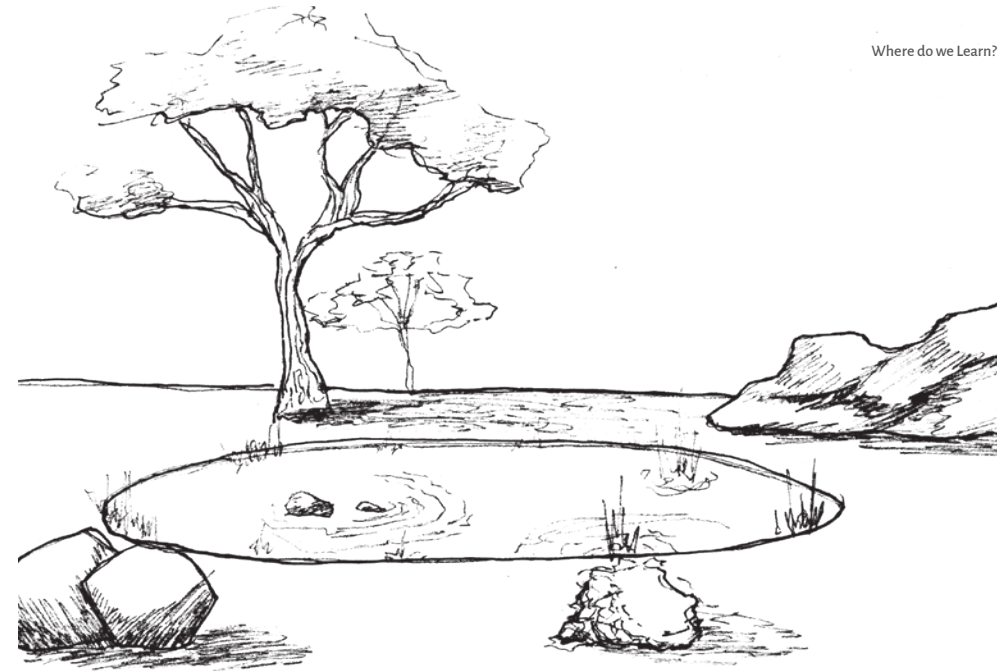


Figure 10.5  
The Watering Hole  
Ink

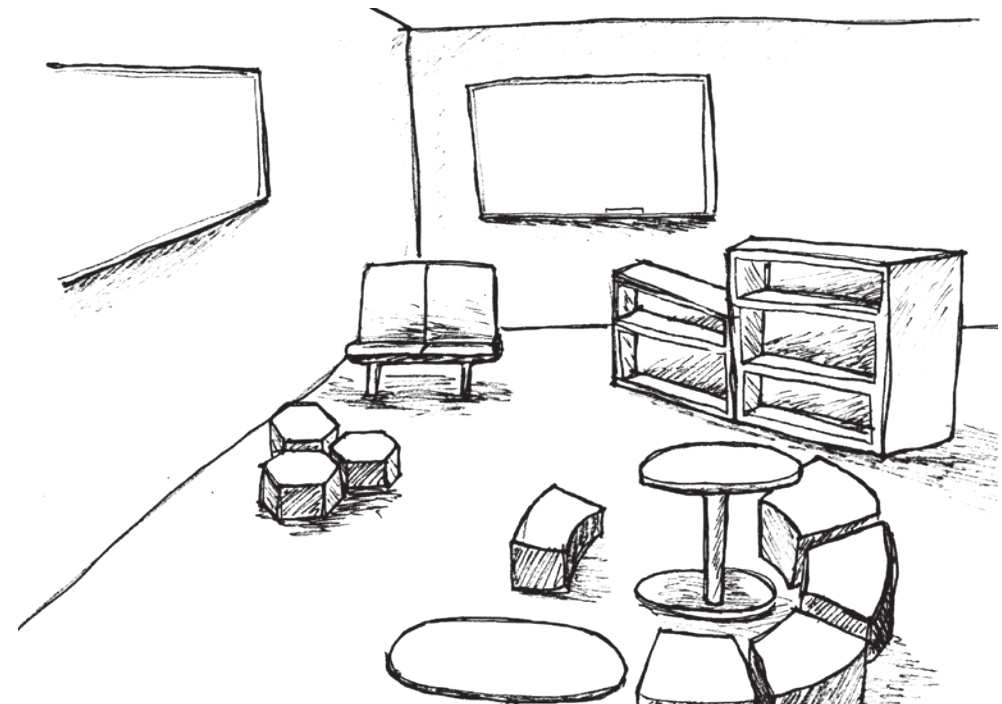
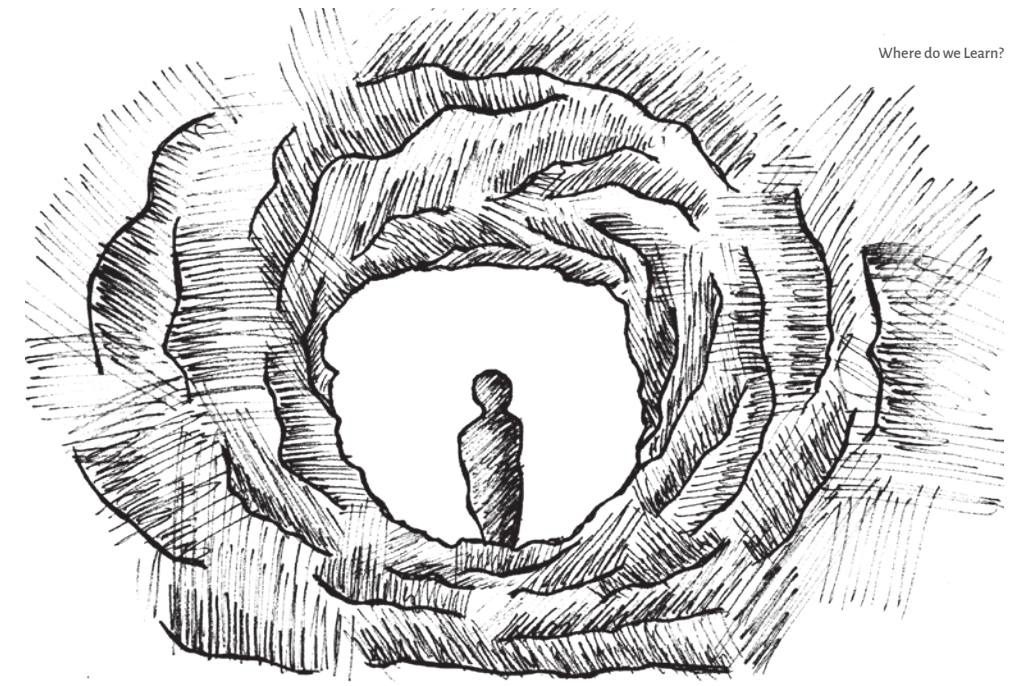


Figure 10.5  
Collaborative Space  
Ink

### The Cave

Caves are private areas that were used for sleep and reflection (Thornburg, 23). Similarly, we now see caves as private study areas or rooms where one can be alone to reflect on their learning. They have the ability to continue reading or exploring ideas individually and to work alone. These times are essential in order to solidify the concepts that are learned and to form an opinion on them. Private spaces offer solitude and quiet that is equally important to social aspects of learning.



Where do we Learn?

Figure 10.6  
The Cave  
Ink

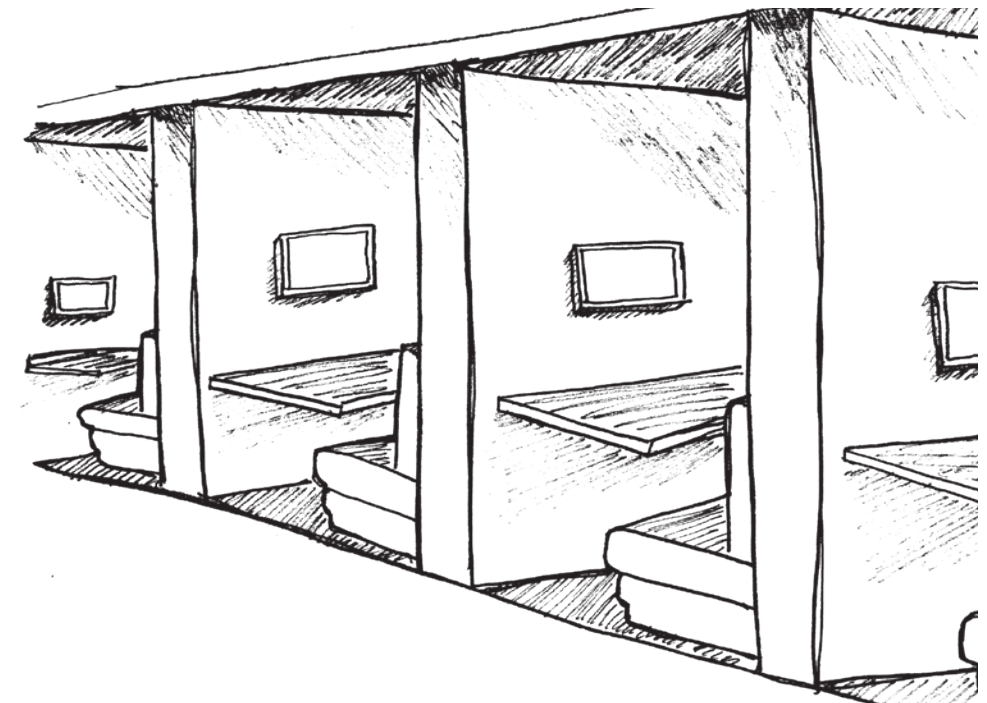


Figure 10.7  
Private Space  
Ink

### The Life Space

Finally, there is the life space (Thornburg, 31). This is where humans go about their day to day activities, walking around, driving, eating, drinking, laughing, and playing. This space is what connects the time between learning and encourages us to take in the everyday as a learning opportunity.

These spaces work best when they are well connected on campus. As a strategy to engage more students on campus, connecting these life spaces offers better access to the tools of learning. Working with students to develop pathways and networks is a strategy to improve quality of life on campus. Human observation is often critical to understand how the life space is used and where target areas should be for future development.

Through a deeper analysis of the campfire, watering hole, and cave metaphor, what new spaces could be developed to strengthen the learning network on campus? Innovative place making will be key to allow for variety and clarity in learning spaces in a new building. In order to be innovative and experimental, understanding the existing typologies but also exploring new typologies of space can offer insight into a more effective solution of where learning occurs. Understanding that learning occurs through connections and experiences, the new development must approach it from the point of view of creating a network to other key areas on campus, and giving students a variety of spaces to engage and experience.



Figure 10.8  
The Life Space  
Charcoal, Oil Pastel

# WHO ARE EDUCATIONAL DEVELOPERS?

“Educational development is about as human as it gets in post-secondary.”  
- Jessica Raffoul, Educational Developer

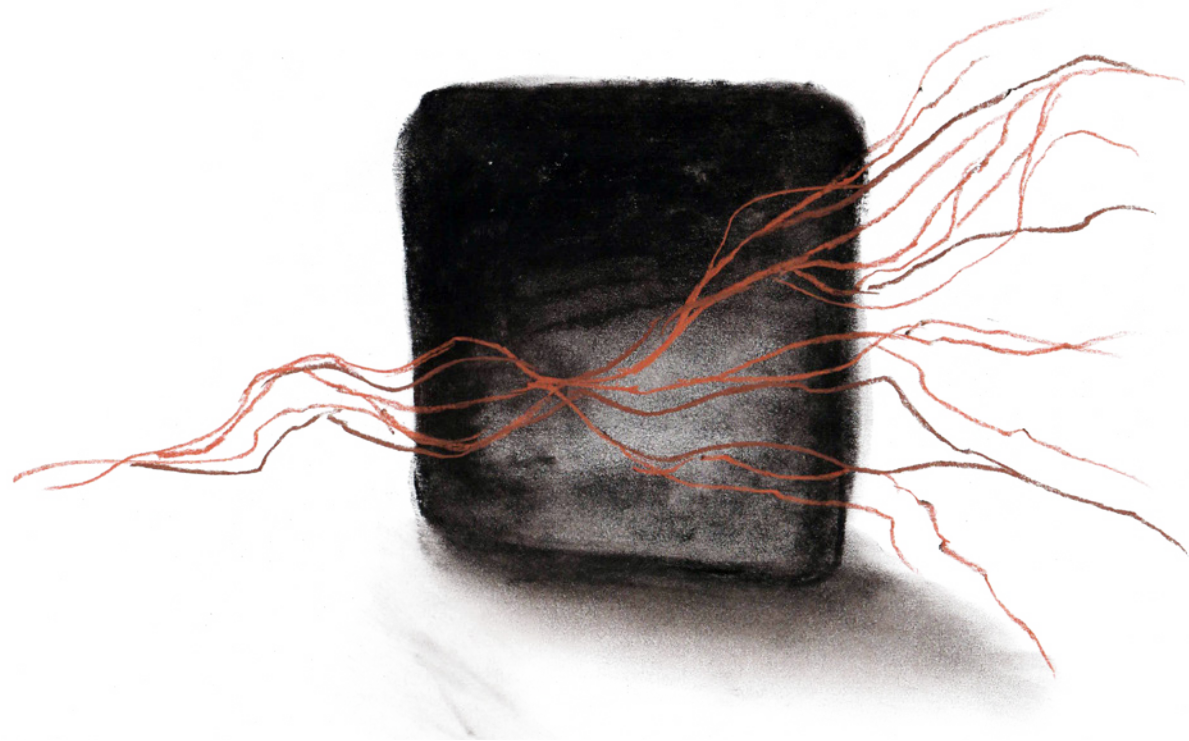


Figure 11.1  
Growing Knowledge  
Charcoal, Oil Pastel



Figure 11.2  
Tree of Knowledge  
Charcoal, Oil Pastel, Watercolour

At the University of Windsor, educational developers are made up of two teams, the Centre for Teaching and Learning (CTL), and the Office of Open Learning (OOL). IGI Global defines educational developers as, "Individuals who help colleges and universities function effectively as teaching and learning communities" (What is Educational Developer). Educational developers base their work and experimentation in data-based research that enables educators to provide the best possible outcomes for students. With the threat of the COVID-19 pandemic sweeping across the world and keeping students at home, educational developers have been working overtime to accommodate for these shifts in dynamics. With students at home, professors must readjust their course content and figure out how to accurately assess levels of achievement in their courses. Educational developers are the leaders in education who can unify the goals of the professor to the finished content that is sent out to students. By providing Online modules, tutorials, and training sessions, educational developers have eased the transition from in-person to Online content for the entire University of Windsor. They play a critical role in connecting faculty and students.

The Centre for Teaching and Learning (CTL)

The Centre for Teaching and Learning is led by director Erika Kustra, PhD. She and her team focus on developing a culture of well-researched teaching. They also work to unify staff, students, and faculty on campus (About the CTL). This work includes in depth research on teaching strategies, working with technology integration, innovations in pedagogy, and supporting faculty in their goals to become leaders in teaching. As higher education becomes more competitive, it is critical for universities to be evolving their teaching strategies to acquire new students. This can occur through teaching consultations, observations, and by supporting new curriculum design. By supporting faculty in the

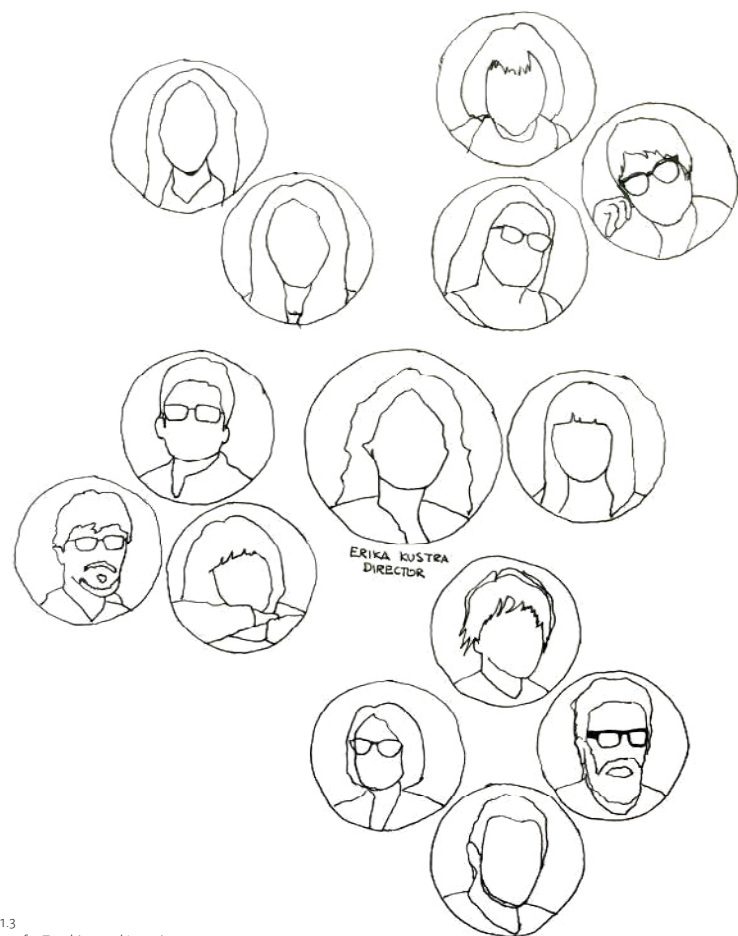


Figure 11.3  
The Centre for Teaching and Learning  
Ink

realm of teaching, they strive towards meeting the University of Windsor mission statement of "Enabling people to make a better world through education, scholarship, research, and engagement" (Our Values and Mission).

The Office of Open Learning (OOL)

The Office of Open Learning is led by the director Nick Baker, PhD. He and his team work with open and Online teaching practices (About Us). This includes work with Blackboard, Open Educational Resources, and Online content. His team includes "learning specialists, administration, and media specialists" (About Us). With the expansion of technology and growth of the Internet, keeping up with technology has become another element involved in the teaching process. OOL seeks to not just keep up with this learning curve, but also to become a part of the growth of it. Finding effective uses of technology to implement new teaching and learning strategies is one of their goals. Whether courses are structured as hybrid classes (with some classes occurring in a classroom on campus, while others are available Online), full Online courses, or as off-campus classes, the opportunity for technology improvement is always present. Technology allows higher education to be more accessible for those who may not be able to attend a traditional post-secondary education.



Figure 11.4  
The Office of Open Learning  
Ink

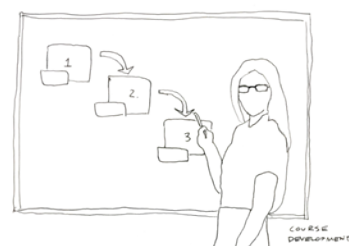
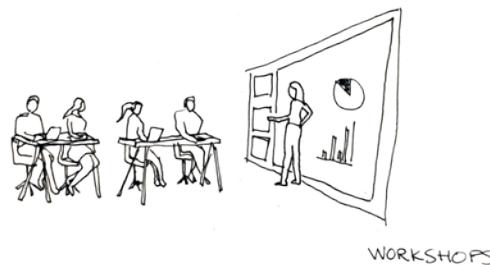


Figure 11.5  
Methods of Engagement Part 1  
Ink

### Methods of Engagement

Methods of engagement used in teaching and learning, as described by educational developers, are as follows:

- Presentations
- Workshops
- Educational Psychology
- Research on Pedagogy
- Creating Networks
- Round Table Discussions
- Training Teaching Assistants
- Teaching
- Practice Teaching Sessions
- Course Development
- Peer Assisted Learning Sessions
- Mentorship
- Teaching BlackBoard and Online Platforms
- Experimenting with Technology
- Book Club Meetings
- 1-on-1 Consultations

Each of these methods requires a unique space for this type of engagement to occur. A 1-on-1 consultation will require a smaller space than a 20-person workshop and will need different amenities than a room that is used to teach Online platforms. The variety of methods also showcases the variety of people that educational developers work with. It ranges from undergraduate students, to doctorate students, as well as tenured faculty. This diverse nature of work requires a hub that can accommodate all necessary forms of engagement.

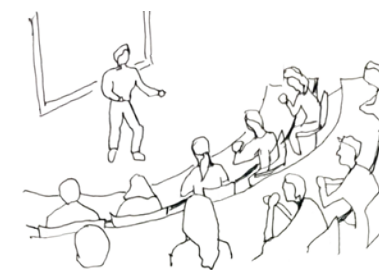


Figure 11.6  
Methods of Engagement Part 2  
Ink

CTL and OOL have been grouped together as one unit and split apart into various offices since the development of the Office of Teaching and Learning (OTL) formed in 1976 (CTL Timeline). Regardless of titles and divisions of groups, the goal remains the same: to improve the quality of education at the University of Windsor.



Figure 11.7  
Evolution of Learning Over Time  
Charcoal, Oil Pastel

## Reflection

I entered the world of educational development at the Centre for Teaching and Learning in 2016, during my second year of study at the University of Windsor. That year I began working with my mentor, Veronika Mogyorod, and we did research on learning spaces. This evolved into a space audit for CTL. Their existing office space was the focus of our research. We had done an extensive literature review, then developed a questionnaire to use during interviews with CTL staff. This allowed me the opportunity to meet with each of them individually, which was a critical moment for me. Each staff member I interviewed was so passionate and excited to talk to me. They welcomed me into their space, chatted with me, and shared stories about the work they did. It was inspiring to see the ideas they had to improve their space, and it sparked my own curiosity. From these interviews, Veronika and I completed a space audit and highlighted some of the major problems that were occurring in their space. This led to us presenting at the Educational Developer's Caucus (EDC) in the Spring of 2018 in Victoria, British Columbia. After that presentation, I knew that I wanted to learn more about educational development, and I wanted to continue working with these wonderful people and hopefully could create a design they loved. From my research, I believe that educational developers are the root system that hold the campus together. They bring in new life with their research in new teaching techniques, which keeps students and faculty engaged and excited to continue learning.

Chapter 12

# METHODS OF LEARNING

“Learning and innovation go hand in hand. The arrogance of success is to think that what you did yesterday will be sufficient for tomorrow.”  
- William Pollard

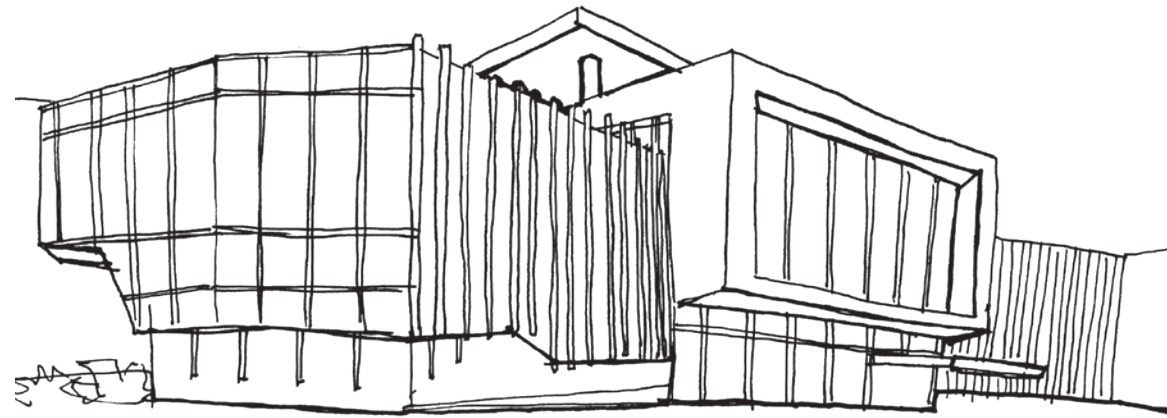


Figure 12.1  
Centre for Engineering Innovation  
Marker, Ink



Figure 12.2  
Campus Connections  
Ink, Watercolour



The process of learning through research occurs using many methods. The literature review creates a foundation to base an exploration of ideas. The literature review of this thesis research produced two main concepts to grow from.

**1) Learning is about connectivity.**

To understand concepts, we connect ideas that we already know to new information that we take in. This new information can be experienced through the senses, read in a book, learned in a class, or made through building. To understand the new information, we find similarities to other knowledge that is existing, and we connect the ideas to make sense of them. Not only is connectivity important to how we learn internally, but also to how we learn externally. We learn from our experiences with the world around us, meaning that we learn from connecting with the people, places, and things around us. The more connections we make, the wider our understanding becomes.

**2) It takes a variety of spaces for learning to occur.**

Everyone learns fluidly. As discovered, learning occurs through experience. Each person will have different experiences that they reference in their understanding of the world. The individual nature of personhood is mirrored in the individuality of learning. Some learners learn best visually, while others learn kinaesthetically. This supports the stance that a variety of spaces are needed for learning to occur. At times, privacy may be best, while at other times learning occurs in large public settings. There are no boundaries to learning.

Case Study

To support these findings, a precedent study was used. The Ryerson Student Learning Centre at Ryerson University in Toronto, Ontario, Canada was the chosen example of flexible student learning space. This building, designed by Snohetta, incorporates flexible furniture, a variety of space sizes, and varying levels of privacy to create a unique learning centre in the heart of Toronto. Dividing program by floor, the building organizes itself vertically. A fritting on the exterior allows users to see into the city, while also remaining semi-private on the interior. Each level is color coded to create an easy to read and understand wayfinding system. Level names include "the sky", "the forest", "the sun", and "the beach" amongst others. Signs on the floor indicate how the space is to be used, which may vary from loud and collaborative, or private and quietly. Levels may be organized based on views to the exterior, creating lounge spaces for students, or on creating different sizes meeting rooms. Creating variety allows learners the opportunity to be in an environment that stimulates their learning needs, and the access to change to a new environment easily. To study the connectivity of spaces, graphic collages were created. The collages explored the connections on the interior of the building, connection to context, connection to nature, and the overall connectivity of the building.

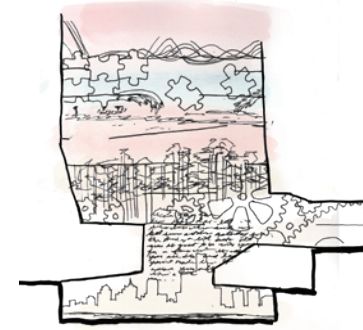


Figure 12.3  
Interior Connections  
Ink, Watercolour

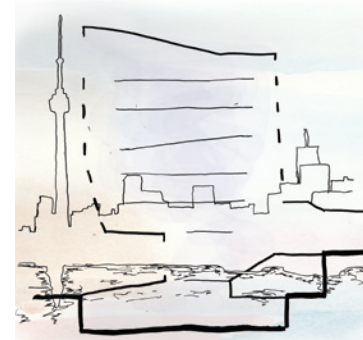


Figure 12.4  
Connection to Context  
Ink, Watercolour

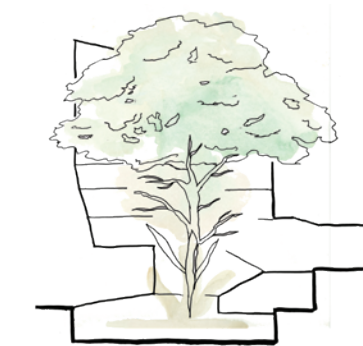


Figure 12.5  
Natural Connections  
Ink, Watercolour



Figure 12.6  
Connectivity at Ryerson Student Learning  
Centre  
Ink, Watercolour

Mapping

To understand the University of Windsor context and its impact on a future educational development centre, maps were developed. The University of Windsor is located West of downtown Windsor and South of the Detroit River. The proximity to the river speaks to the connectivity to the United States of America, with the University of Windsor being Ontario's southern-most university (About Us). The Ambassador Bridge Plaza is directly adjacent to the campus, and the bridge is a noticeable landmark on campus. A national connection remains present on campus. The four main boundary roads of the campus are University Ave. to the North, California Ave. on the East, Wyandotte St. on the South, and Huron Church Rd. to the West. Over the last several years, the university has closed many of the vehicular roads inside this boundary and created primarily pedestrian access throughout campus. Due to this, parking is typically found outside of these boundaries and users walk into campus.

The site map shows the figure ground relationship and density of buildings on campus, as well as main roads. The campus currently is developed with buildings dating from the 1960's to the present, with new development occurring over the past 10 years on campus. Pedestrian movement was studied from various areas on campus to determine where gatherings and main paths of travel exist in the late fall. To express this graphically, a warm orange watercolor expresses density and movement throughout daytime hours, while a deep blue expresses movement at later hours. A large gathering space revealed itself at the connection between the Leddy Library and the CAW Student Centre. Another area of interest was the intersection of Wyandotte St. and Sunset Ave. This was an area of interest because of the high pedestrian traffic occurring, which was attributed to the high volume of parking along Sunset Ave.

This area was further studied to understand the critical intersection. Currently, the intersection of Sunset and Wyandotte is a green space. Historically, a bowling alley was converted into the campus music building, but the School of Creative Arts recently moved to a downtown location. Following this, the music building was demolished, and was replaced with a green space. The current green space is primarily flat with a few small hills. The site also includes benches along a diagonal pathway through the site, a smattering of trees, and lampposts. Although located at a busy intersection, the green space does not appear to be used often by students. Upon observation, few students used the path or interacted with the benches, and primarily walked on the sidewalk surrounding the site. To quantify these factors, a site map was created. Blue colors represent the heavy traffic that occurs on Wyandotte from transport trucks traveling on the ambassador bridge, and vehicular traffic along both Wyandotte and Sunset. Orange represents the density of pedestrian movement, highlighting the crossing from the South of Wyandotte to the North. Smells and noises are mapped in a yellow color, predominantly coming from the adjacent 7-11 and from vehicular traffic.



Figure 12.7  
Site Analysis Sketches  
Ink, Marker



Figure 12.8  
Campus Analysis  
Watercolour

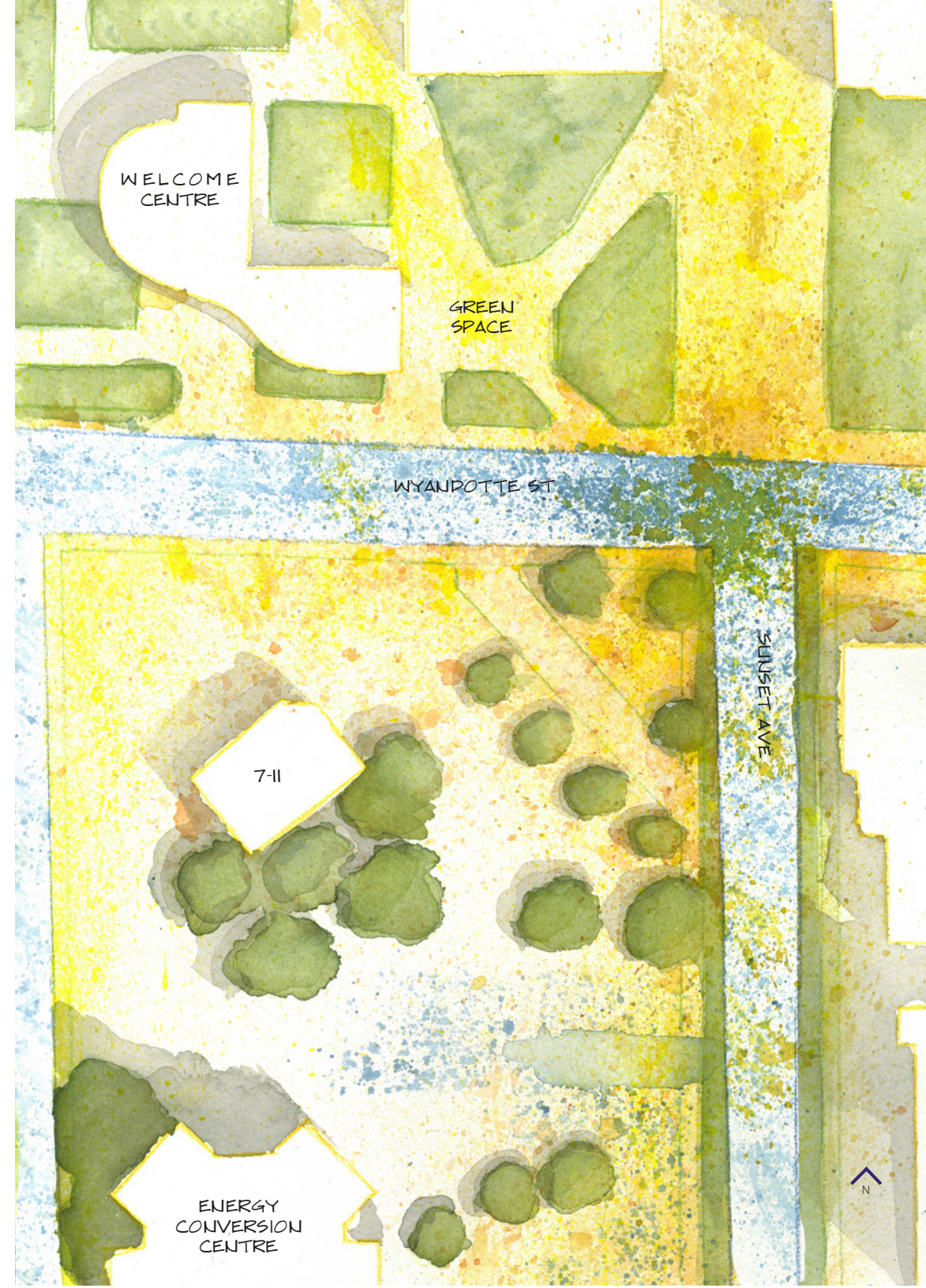
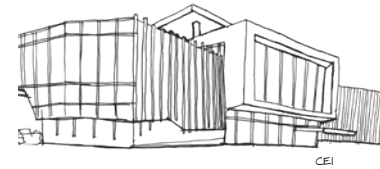
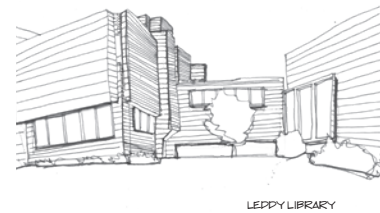
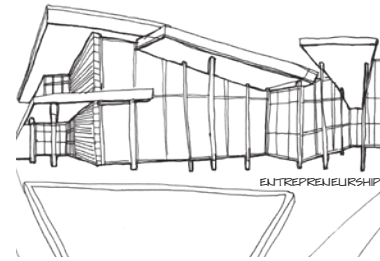


Figure 12.9  
Analysis of Sunset and Wyandotte  
Watercolour



Sketches

To continue understanding the identity of campus, key buildings identified through the mapping process were sketched. These buildings were identified as the Leddy Library, the CAW Student Centre, the Odette School of Business, the Ed Lumley Centre for Engineering Innovation, the Entrepreneurship, Practice, and Innovation Centre (EPI Centre), the Welcome Centre, and Dillon Hall. The library is a high traffic area with students freely flowing in and out throughout the day, as is the student centre. The EPI Centre and CEI are relatively new buildings that attract students despite their location South of Wyandotte St. Dillon Hall and the Odette School of Business are buildings that are often featured landmarks of campus. A variety of building styles are represented, from the solid mass of masonry found in the library envelope, to the modern glazing, concrete, and timber found at CEI. From these differences, it was found that there is no major style of building present on campus, and that style does not appear to impact how frequently a building is used by students.

Figure 12.10  
Collection of University of Windsor  
Building Sketches  
Ink, Marker

Bubble Diagrams

To begin space programming, bubble diagrams were used. The bubble diagram allows free thinking to begin connecting adjacent spaces without applying hard lines or spatial divisions. Main priorities that evolved for educational developers were clustered offices that surrounded a central work area, locating meeting rooms throughout the building, keeping faculty and staff close to one another, and keeping classrooms close in adjacency. The 2D drawings of bubble diagrams soon evolved into a 3D physical bubble diagram. Each space is represented by a sphere that is colored according to its program. By playing with a 3D model, spatial qualities and scale of adjacent programs could be critically viewed. This offered the opportunity to experiment in 3D without using hard lines to define space. The model produced opportunities for discussion about arrangement and human use without becoming attached to a form.

A variety of methods were used to study the University of Windsor campus and connections. A deeper understanding of site boundaries were developed, along with an understanding of space and spatial qualities. This work laid the foundation for further work with educational developers to begin the programming phase of the project.



Figure 12.11  
3D Bubble Diagram  
Styrofoam, Paper Mache, Paint, MDF

## Reflection

*The graphics developed throughout the research were a key part of the process of design. Although graphics are understood to be a typical part of any architectural design process, the abstract and free form nature of the work that I developed helped to encourage my own learning and enhance the quality of the research. For me, this thesis was a journey in my own learning. I typically am quite pragmatic in my education, but this allowed me to expand my thinking and encourage the idea that there are no right answers. This also encouraged me to be more fluid in the design process later in the thesis. Going back to my beginning of my post-secondary education and embracing the artistic qualities I learned from my visual arts degree brought the whole experience full circle.*



Figure 12.12  
Ryerson Student Learning Centre  
Photographic Taxonomy

## Chapter 13

# CLIENT ENGAGEMENT STRATEGIES

“The role of educational developer is as a supporter, a change agent, an advocate, and leader to help improve teaching and learning in higher education...On good occasions, a visionary... Often a confidante, consultant, and colleague.”

- Erika Kustra, Director of the Centre for Teaching and Learning



Figure 13.1  
Roots and Connections  
Oil Pastel



Figure 13.2  
Educational Developer Workshop  
Photo Taken by Veronika Mogorody



Figure 13.3  
Hallway Entry  
Lambton Tower



Figure 13.4  
Shared Central Room  
Lambton Tower



Figure 13.5  
Office Space  
Lambton Tower

A set of unique engagement strategies were developed specifically for the client interaction on this project. These methods were designed to be more personal and qualitative, rather than quantitative and studied from afar. Engaging with educational developers to understand their needs was key in creating a design that responds to their needs.

### Space Audit

As part of prior research from 2017, a space audit was completed for the Centre for Teaching and Learning. At the time the CTL offices were located in Lambton Tower on campus. The space audit process included an in-depth questionnaire for each staff member detailing how their office space was used and daily routines they participated in. Interviews occurred along with the questionnaire to get an in-depth understanding of what worked in their space and what did not. This space audit revealed a set of issues presented in their existing location. The major issue raised was the lack of identity for the centre on campus (Mogyorody). The offices were in a square formation around the perimeter of the building and surrounded a large meeting room. The corridors through this space did not reflect or highlight the unique work done by those inside but were quite typical. A small seating area was offered as an entry but was located next to the xerox room. The space did not feel like an area where pedagogy was tried and tested daily. Posters on the walls began to speak to the nature of the work done inside, but the architecture did not allow for the flexibility or transparency that highlights learning. Another concern was the lack of space (Mogyorody). Small offices led to needing more meetings to occur in other locations, but with only one central room for over ten people to use, scheduling the space became hectic. The central room was used as a workshop space, kitchen and lunchroom, meeting area, and presentation room. If this space was in use, staff had to go outside of their

domain to acquire the spaces they needed. The next concern was lack of connectivity (Mogyorody). Their space did not offer a place for students or faculty to work and engage with the staff. No reception or lounge area, as well as the lack of identity, created an area that did not allow for as much connectivity as possible.

### Online Questionnaire

Using the Space Audit as a starting point of research, a new questionnaire was developed specifically focused on the thesis research. This questionnaire was distributed online via Google Forms and sent to both CTL and OOL. This method was chosen because it offered easy access to those involved in the hopes it would attract the most responses. The questions asked about privacy, work habits, and important programs in a new building. The results showed that most staff members preferred private offices with natural light, private meeting spaces, accommodations for staff, student, and faculty collaboration, and a need for larger lecture rooms, small breakout spaces, and experimental technology rooms.



71% INTERACT WITH STAFF, STUDENTS, AND FACULTY DAILY



85% WOULD LIKE OFFICES TO BE CLUSTERED IN SMALLER GROUPS

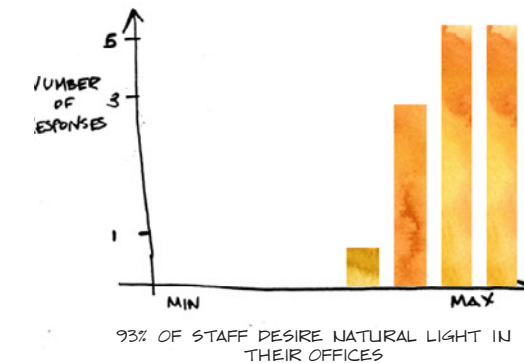


Figure 13.6  
Educational Developer Questionnaire  
Watercolour, Ink

## Interviews

The questionnaire was the first step in working with the educational developers on understanding their spaces. The next step was becoming more informed on the current status of both CTL and OOL. In August of 2019 each group moved into the Centre for Engineering Innovation building. Prior to this, the departments were in different locations on campus. From speaking with Veronika Mogyorody (Teaching and Learning Senior Scholar), Erika Kustra (Director of CTL), and Nick Baker (Director of OOL), key elements of their new space were noted.

- The square footage in the new location is less than the old locations of offices.
- Less than half of the offices have access to natural light.
- Many windows overlook the top of a white roof and produce glare.
- Noise and privacy is a concern in the new offices due to the construction of the walls.
- Hallways are quite narrow, and this reduces the amount of informal or spontaneous conversations that occur between staff members.
- An entry area is beneficial, it allows guests to relax and feel comfortable should they have to wait to attend a meeting or presentation.
- Having 2 meeting rooms of different scales is beneficial; one on the main office level is helpful for smaller group presentations, and a larger one the level below offers options for larger groups.
- More transparency in the larger meeting room creates a stronger visual connection to the campus.

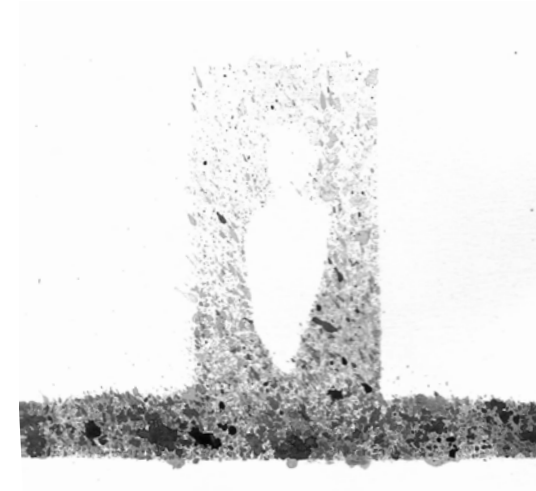


Figure 13.7 (left)  
Lack of Identity  
Ink



Figure 13.8 (right)  
Lack of Connection  
Ink

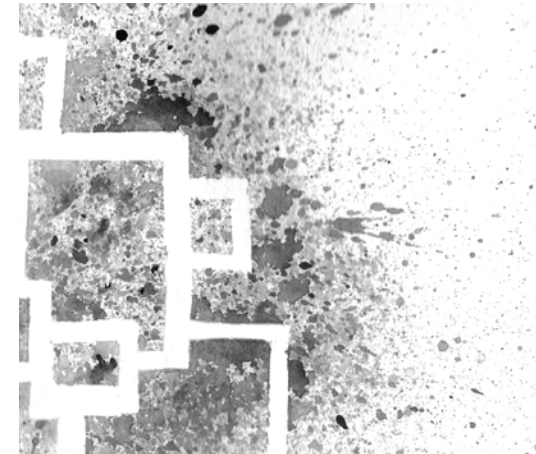


Figure 13.9 (left)  
Lack of Space  
Ink

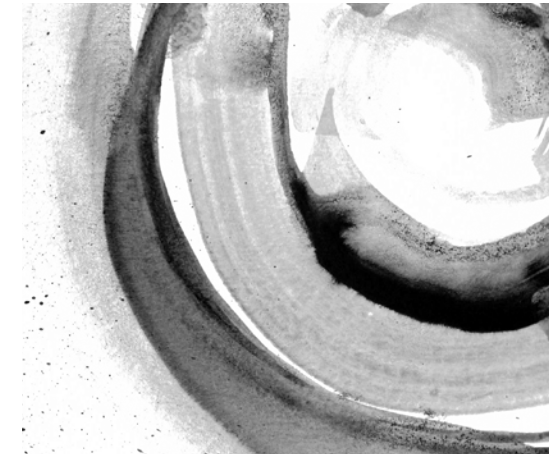


Figure 13.10 (right)  
Lack of Collaboration  
Ink



### World Café Workshop

After analyzing the data and gathering information about CTL and OOL, the design phase began. A community design approach was taken throughout the research phase and was continued into the design phase. To get client feedback at the beginning of the design process, a World Café Workshop was used.

World Café Workshops are a technique that was recommended by an educational developer. To use this style of workshop, tables are set up around a room with seats at each table. A presenter presents a set of ideas to the attendees and presents a question or problem based on the ideas. Each table has a specific idea that they use to answer the question. At each table there is also a host, who is prepared beforehand with additional knowledge about the idea that their table has and remains at the table. For a set amount of time, the attendees work to answer the question or problem with their host. When time is up, the attendees would rotate to the next table. They would then repeat the same process but focus on a different idea that was presented. This continues until attendees have been at each table. (World Café Community). Using this style of workshop brings a variety of ideas from different perspectives all responding to the same initial inquiry.

The goal with the World Café Workshop was to see how educational developers would lay out a building for themselves. The workshop was set up as 3 tables, with groups of 3 staff members at each table. Each table had an overview page, stating the assigned design concept, precedent imagery and a bubble diagram to inspire their process, and coloured paper squares representing program. Each different program was determined by a square footage spreadsheet created to list all necessary spaces in the building. Each program was represented by a different colour and was cut to scale of a typical square footage. The tables

also had site plans to scale, trace paper, and markers. To begin, findings from the research were presented. Then the three design concepts were presented. The three chosen design concepts were The Campfire, The Watering Hole, and The Cave, Roots and Connections, and Learner Central. The Campfire, Watering Hole, and Cave design concept challenged staff to think about clustering program based on if it was a teaching space, collaborative space, or private space, and to place these on the site according to where they felt the most public or private spaces should be. The Roots and Connections design concept focused on which programs needed to be closely connected, or how they could be placed to allow for more spontaneous connections to occur. The Learner Central design concept focused on keeping learning spaces at the heart of each level or area, and supporting spaces surrounding them. Groups had 15 minutes to place the program and trace it with sketch paper. After the time expired, groups then moved to the next table and looked to design with another concept in mind. Hosts remained at their tables and helped the groups evolve their design process and kept notes on common themes or issues that arose. One each group had been at every table, a discussion occurred. It noted commonalities between designs, potential problems, and strong concepts that emerged. Notes were later written on a whiteboard and photographed.

The sketches made by educational developers were then scanned and digitally collaged to begin to understand where common areas existed. This led to a synthesis design that documented where educational developers typically placed program through the building. Next, a space planning diagram was created to develop these ideas further. This was the foundation for the building's design.

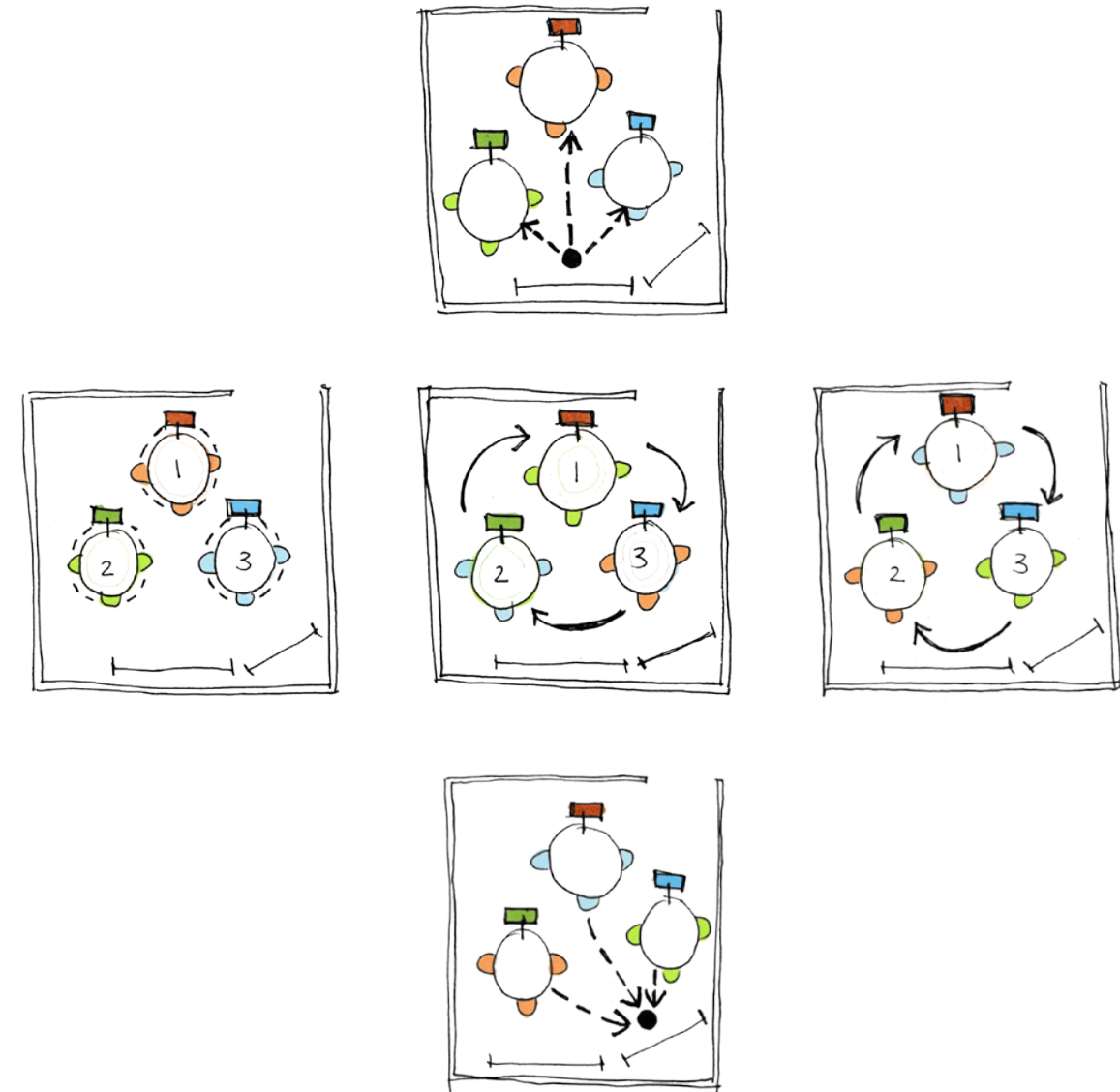


Figure 13.11  
World Café Workshop Format  
Ink, Marker

Figure 13.12  
Design Concept 1  
Roots and Connections  
Oil Pastel



Figure 13.13  
Design Concept 2  
Campfire, Watering Hole, Cave  
Ink

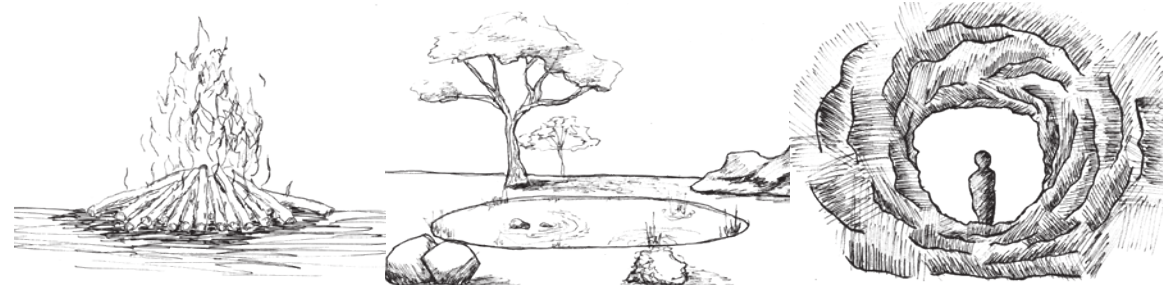


Figure 13.14  
Design Concept 3  
Learner Centred  
Ink

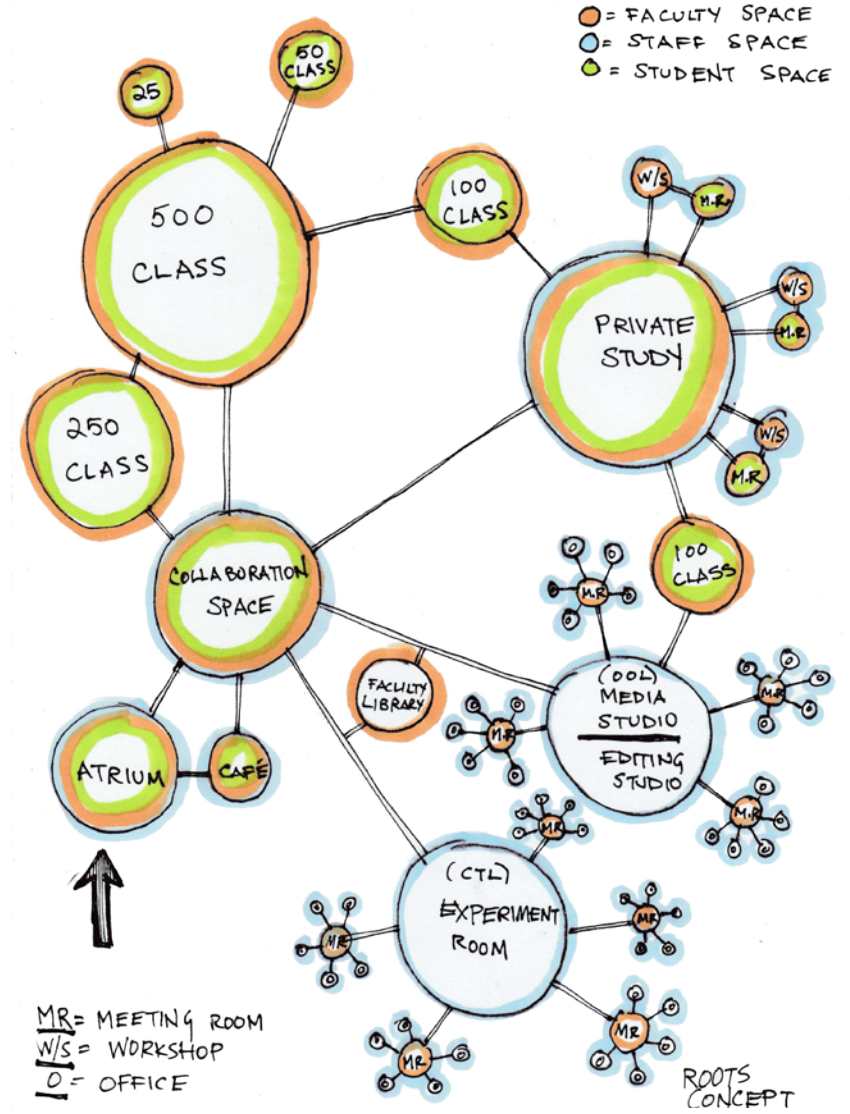


Figure 13.15  
Bubble Diagram  
Roots and Connections  
Marker

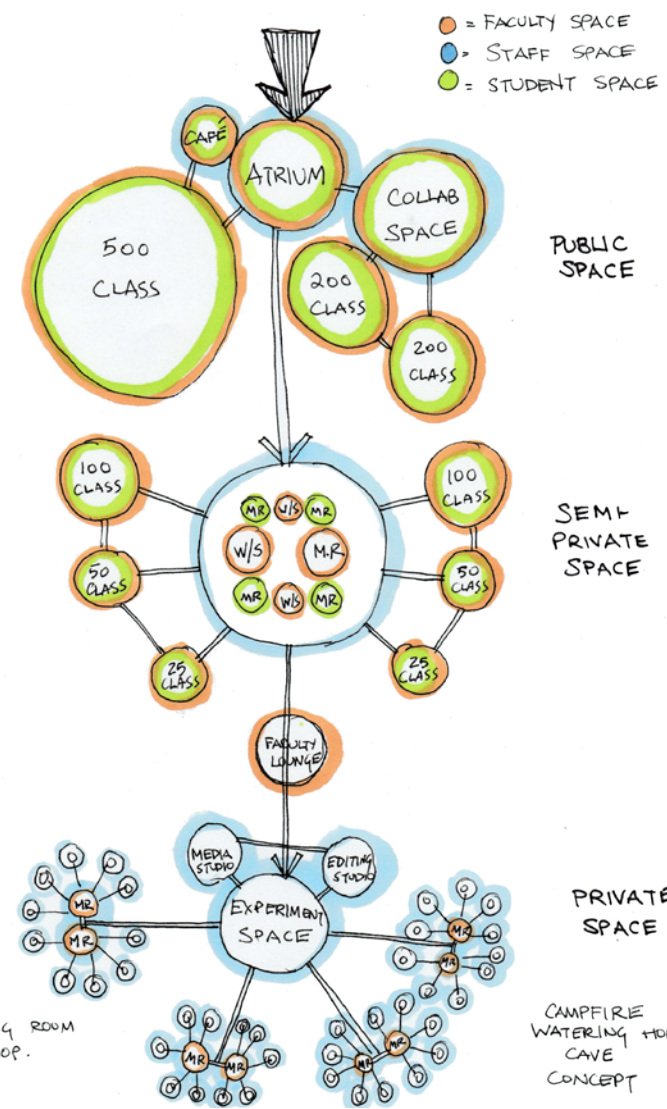


Figure 13.16  
 Bubble Diagram  
 Campfire, Watering Hole, Cave  
 Marker

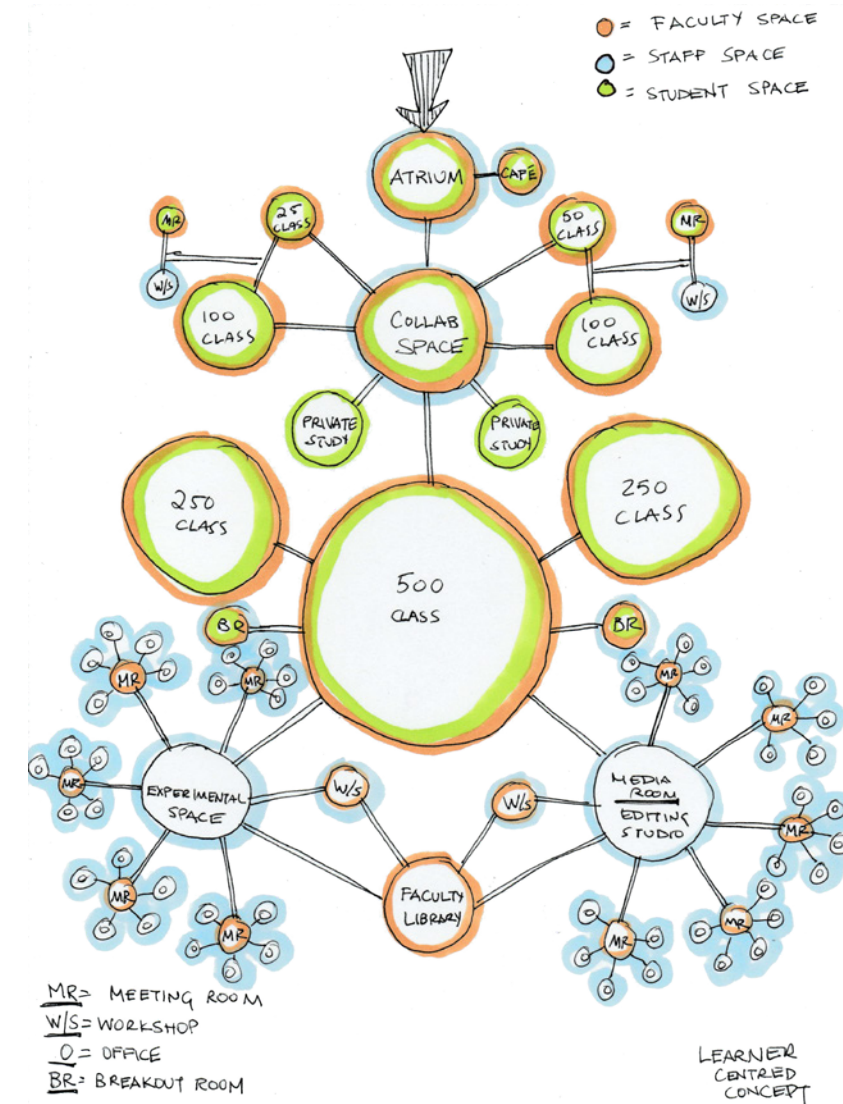


Figure 13.17  
 Bubble Diagram  
 Learner Centred  
 Marker

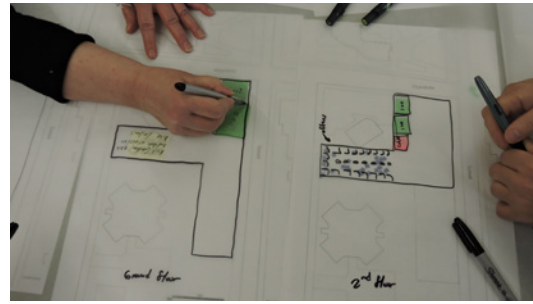


Figure 13.26  
Client Sketches  
Marker, Collage



Figure 13.27  
Synthesis  
Ink

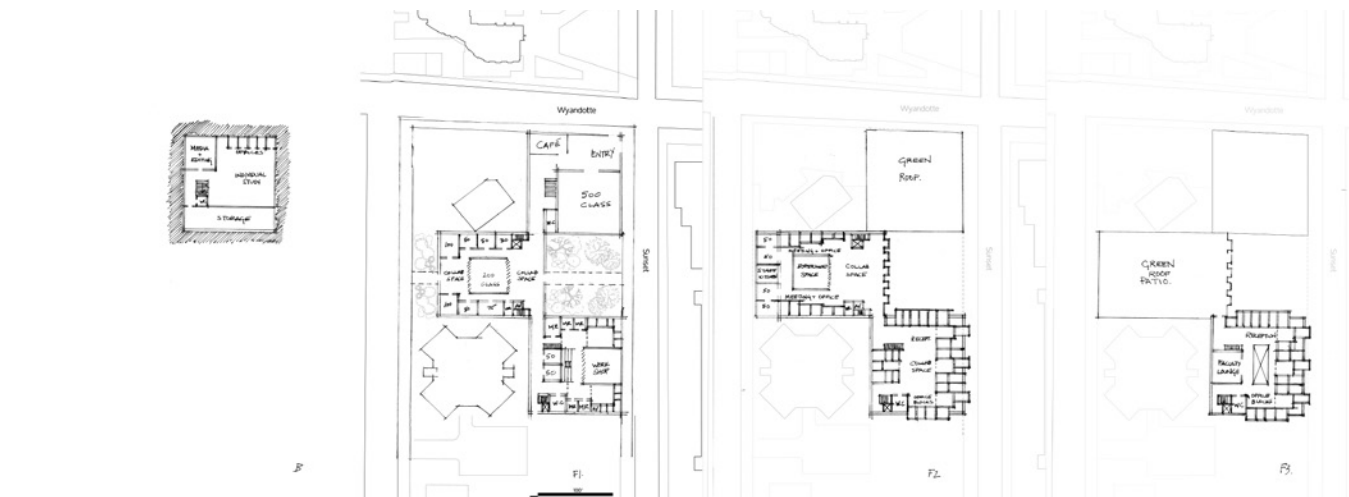


Figure 13.28  
Space Planning  
Ink

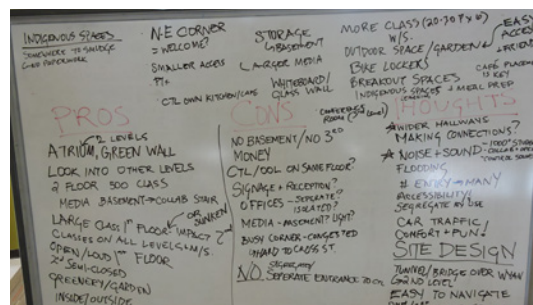


Figure 13.18 - 13.25  
World Cafe Workshop  
Photographed by Veronika Mogyorody

Precedent Presentation

As the design moved forward and began to become more detailed, another workshop was hosted. To understand how educational developers wanted to define their space, precedent images were shown for key areas in the building. The atrium, green roof, outdoor furniture, flexible indoor furniture, media rooms, and experimental classroom spaces were investigated. This allowed for insight from those who would be using these spaces on which details would be more successful for the spaces they use. The important design moves were found to be:

- An atrium that felt alive was critical.
- Furniture in the atrium was encouraged.
- The green roof should incorporate shaded areas, comfortable seating, places to work, and should be accessible for staff, students, and faculty.
- Outdoor furniture should offer shade and areas to work for warmer months.
- Flexible furniture that was not too enclosed, rather was easily movable and inviting.
- A variation of furniture would be needed, which allows for a variety of ways to use the space.
- Media rooms should be double height spaces that are flexible and can easily move furniture in or out.
- Experimental classrooms should have a combination of high technology options, as well as low-tech options.

Working with educational developers on the design brought additional knowledge to the building. The foundation of the project came from their thoughts and ideas and was developed by their feedback. By working with the client, the building was designed to better fit their unique needs.

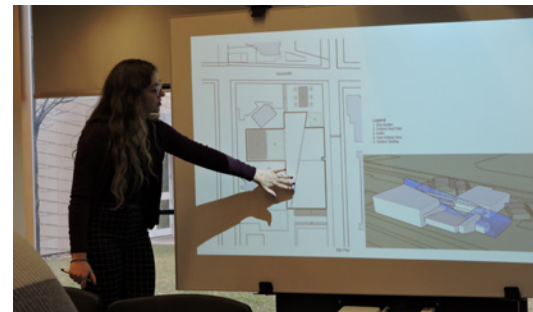


Figure 13.29 - 13.31  
Precedent Presentations, March 2020  
Photographs by Veronika Mogyorodj

Reflection

CTL and OOL were truly wonderful people to work with on this design project. I believe that through the interviews, presentations, and workshop, I was able to do represent their desires in a built project. One opportunity that I feel could have been explored is the opportunity to shadow a few educational developers and understand their typical day better. This would confirm the validity of their responses to questions about the work they do in the day, how spaces are used, and emphasize current problems that exist in their space. Despite this, a variety of engagement methods were used and I felt it was successful to learn about them through face-to-face interaction, over the phone conversations, and by sending out periodic emails.

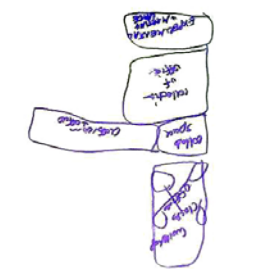
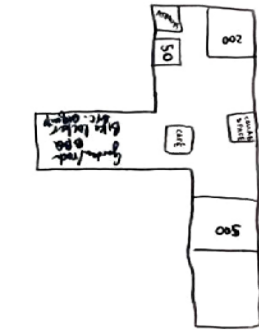


Figure 13.32  
Educational Developer Sketches  
Marker

Chapter 14

# SMALL SCALE DESIGN PROBLEMS

“By seeking and blundering we learn.”  
- Johann Wolfgang von Goethe, in conversation

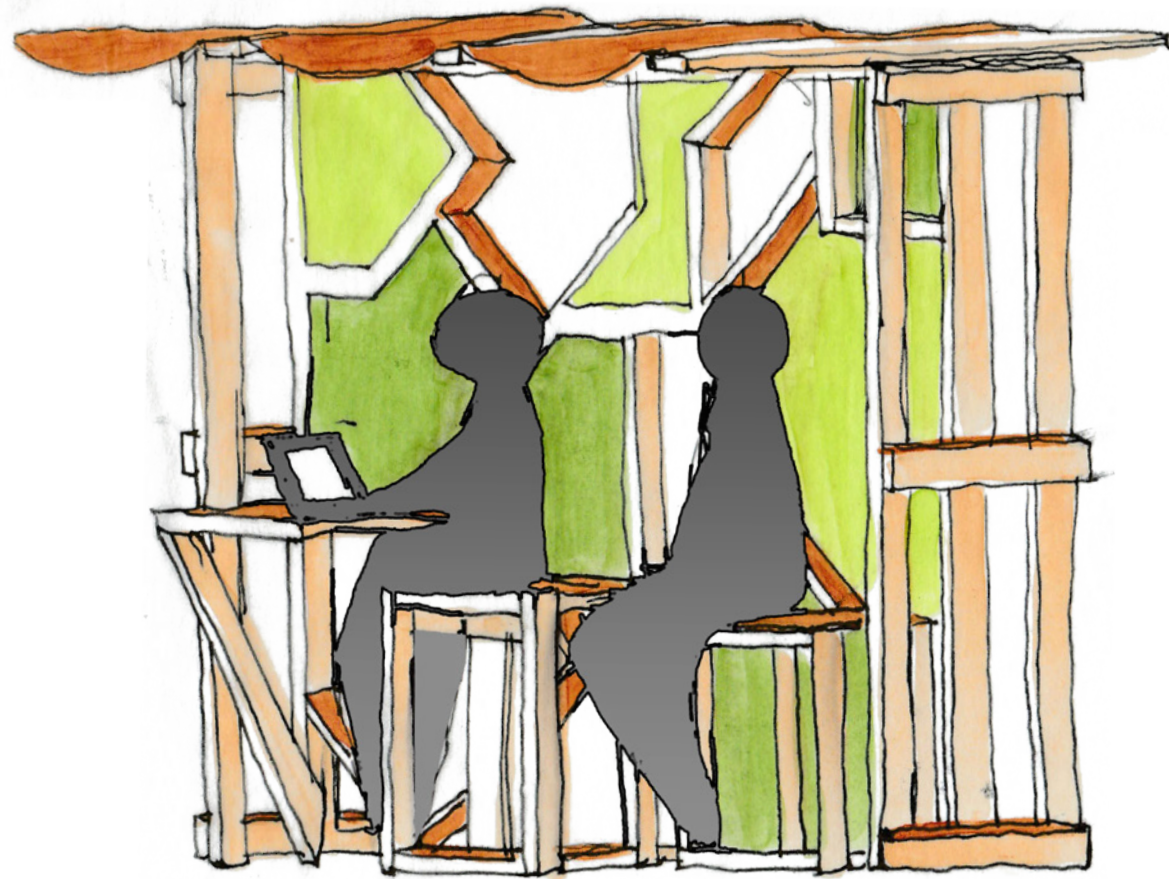


Figure 14.1  
Satellite Learning Space  
Marker, Photoshop

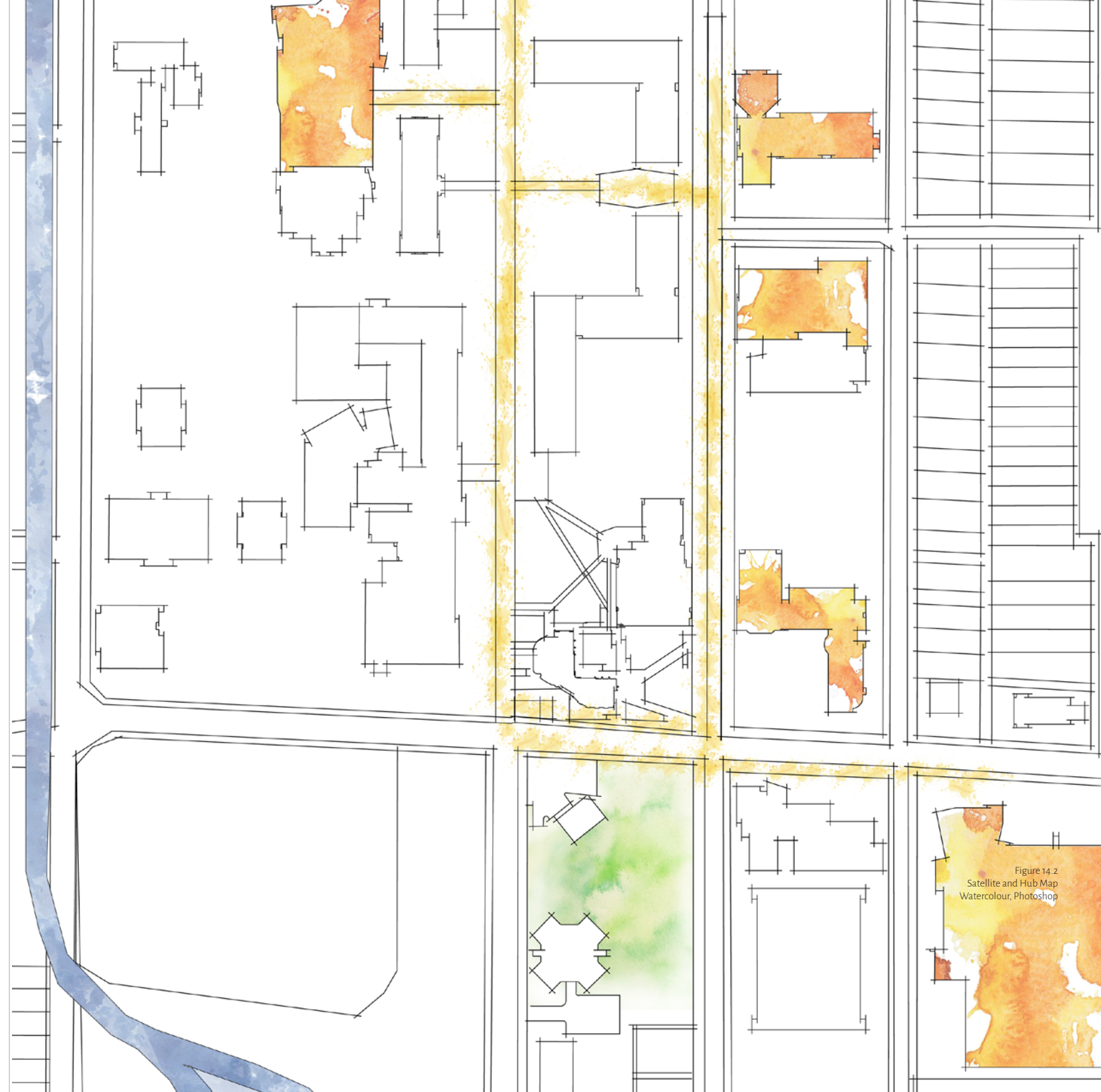


Figure 14.2  
Satellite and Hub Map  
Watercolour, Photoshop

Before beginning to tackle a large building design, sketch problems were used as small-scale design interventions based on focused research questions. These questions tackled specialized issues that were questioned through the research process and needed to be explored more in depth.

### An Installation in Learning

Jointly with a partner, John Turner, a design for students with autism in higher education was developed. Combining his research with mine, we developed a semi-permeable wall installation to begin defining space for autistic students on campuses. Based on principles such as allowing visual permeability in the wall, keeping textural qualities, and focusing on sensory aspects such as light and sound, a semi-enclosed space offered as a refuge for autistic students. Focusing on the senses is an aspect of designing for autistic students that helps keep them calm and relaxed in overwhelming situations.

To implement this design, we developed a wall made from 2x4's that created a pattern. This pattern was filled with a variety of materials that offered different levels of transparency to allow for connection to occur between the wall, while still providing relief to the senses. To encourage interaction of all people within the space the installation was not fully enclosed, but used semi-transparent panels to provide a division of space at the edge. Soothing heartbeat sounds were played from above, with a roof system keeping the space feeling enclosed and controlled. Light was implemented with a colour changing orb and lamp that projected light in star shapes. Low to the ground seating was used to encourage a comfortable and safe environment, along with soft blankets and a rug to reduce the harsh existing flooring. The design of the wall also included front posts that were used as informational boards to post on.

As the research moved forward, the design was adapted away from the original intention of aiding students with autism, and more towards being a satellite installation for the educational development centre. To create a more connected and unified whole of campus, satellite installations would create a stronger identity for educational development on campus and offer connections back to the hub. Due to the easily assembled nature of the installation, pop-up locations could be dispersed in various buildings on campus to be used by faculty, staff, and students.

To redesign the installation, fixed tables were added to one side of the installation, along with flexible seating. This encouraged use and offers space for work to be completed using the fixed elements. The different levels of permeability were kept, offering a partial barrier between different sides of the installation. On the opposite side of the installation, opaque infills would be used as informational boards to share updates about educational development, as well as whiteboards which allow for collaboration. The roof element was unchanged, keeping a feeling of enclosure and making the installation feel more comfortable to work in.

By designing and building a 1-to-1 scale installation, real life situations could be tested to see how post-secondary students responded to the space. This test was successful, with many users gathering in the seats to relax and enjoy. Tactile elements were used quite often, as was the rearrangement of furniture depending on who was in the space. Overall, the response to the space was positive and proved that this installation could be implemented in post-secondary campuses.

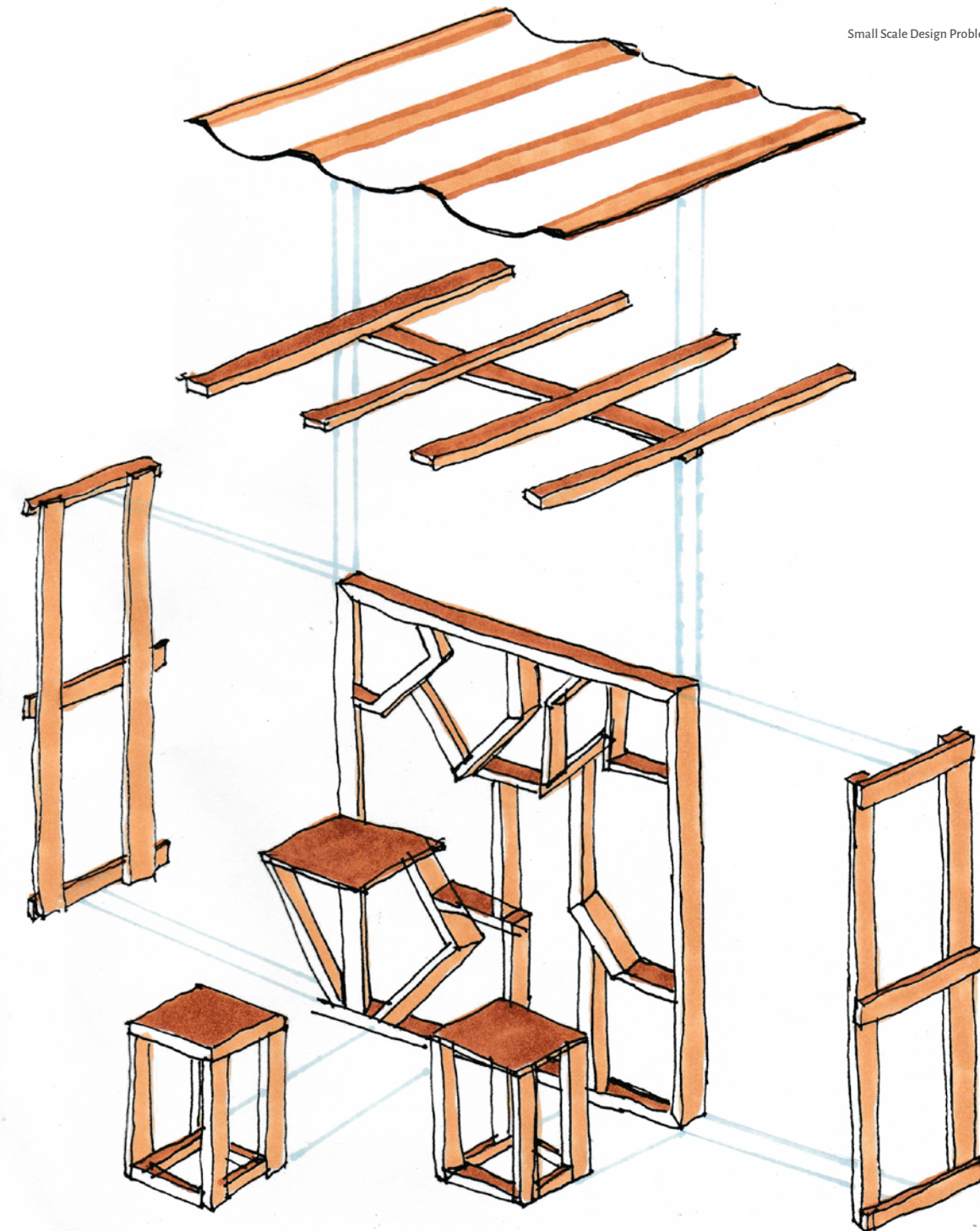


Figure 14.3  
Exploded Axonometric  
Ink, Marker

Figure 14.4  
Overall Installation



Figure 14.5  
Seating Area



Figure 14.6  
Varying Permeability



Figure 14.7 (right)  
Installation Iteration 2  
Marker, Photoshop

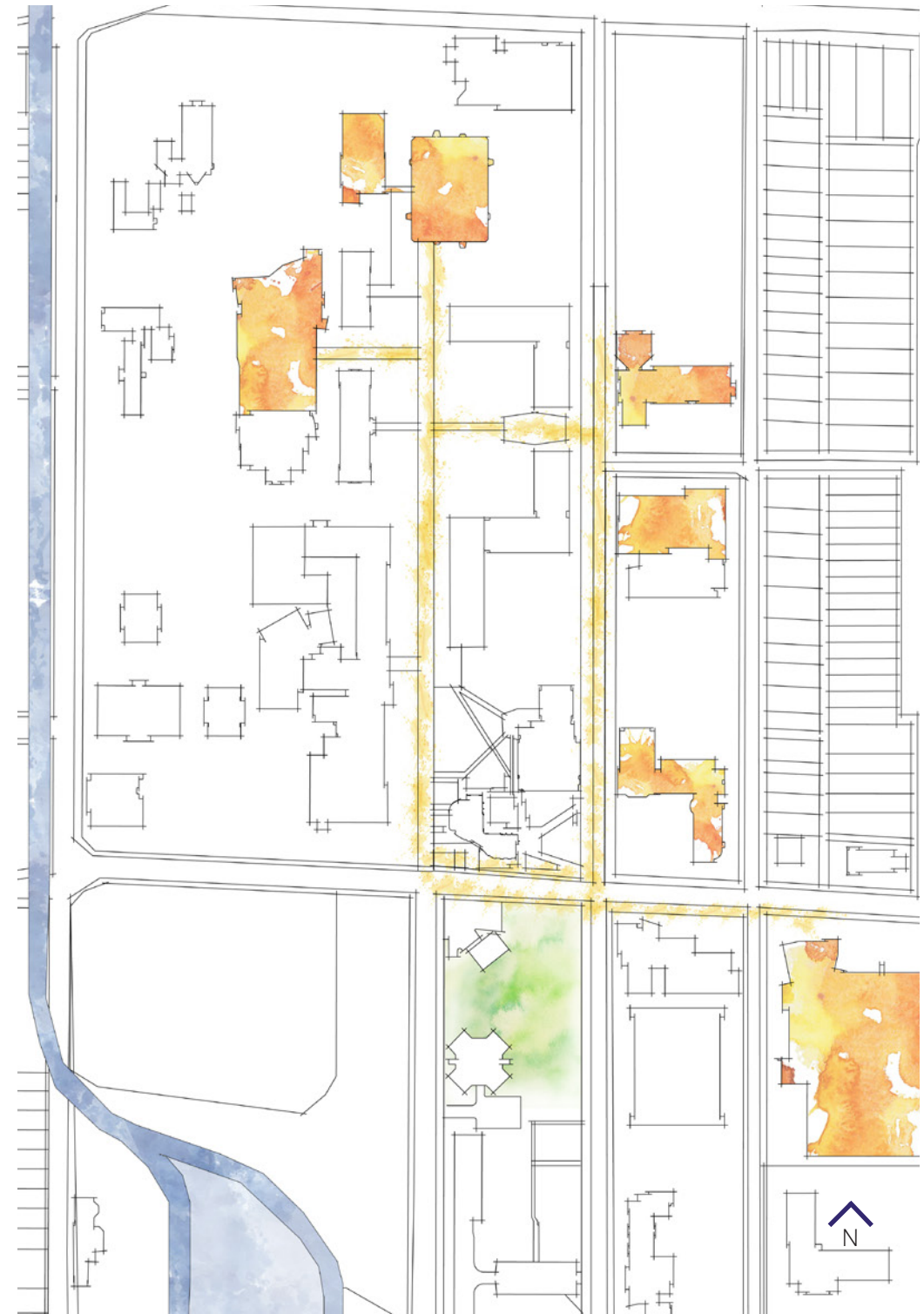
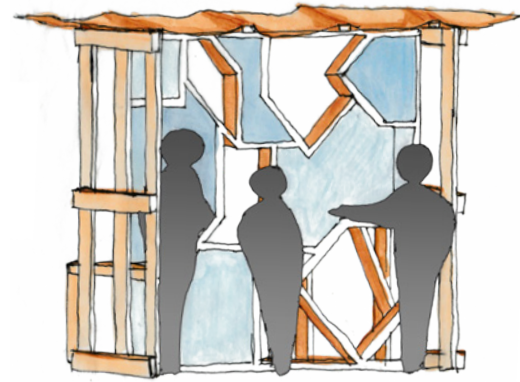


Figure 14.8  
Satellite and Hub Map  
Watercolour, Photoshop



### Redefining the 500-Person Lecture Hall

One of the design elements requested to be in the educational development hub was a 500-person lecture hall. While this offers the opportunity for many people to learn at one time, the space itself occupies a large amount of square footage and is not used throughout most days. The large lecture hall presented a problem, and the response to this problem was to test flexible design principles in this space. Could a large lecture hall be available, but host other programs when it was not in use?

Identifying various flexible features was the first step in the design process. Flexible walls and partitions, movable furniture, and doors that could open to the exterior were initial ideas. Bleacher seating was another investigation, with seats that could be pulled out for class time, but retracted afterwards, revealing a large open space that could be adapted to the needs of users. While this was an option, it raised questions about what to do with the towering bleacher stands that would be left behind. Balconies were tested, questioning if a fixed second level could be opened for larger lectures, and closed off as smaller educational spaces otherwise. This inspired a new question; what if seats could disappear from the room entirely?

To pursue this idea, rotating bleachers were explored. If sets of bleachers could be flipped 180 degrees and rest in the floor, this would allow more clear floor area for other programmed use, while not leaving behind any trace of furniture. To make this design complete, the room was divided into six sections. Four contained square shaped bleachers that seat 100 students. The other two were tapered shapes that seat 40 students each. These 6 elements were radially placed and encircled a central teaching space. Not only does this design offer flexibility, but it encourages using alternative teaching methods, such as teaching in the

round, to experiment with the effect of various teaching styles. Once the lecture is complete, the tapered bleachers could be flipped into the ground, offering clear floor area. Once this step is complete, the other bleachers are free to turn on an axis to create a room symmetrically divided, with each set of square bleachers aligned to the walls. Next, the space can be divided with movable walls. This can create either 200-person or 100-person classrooms, which would have more use throughout the day and could be used for additional conference or workshop services provided.

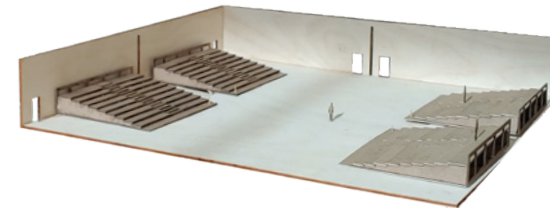


Figure 14.9  
500-Person Lecture Hall Model  
1/8" Baltic Birch Plywood, 1/16" Chipboard,  
1/4" Eska Board

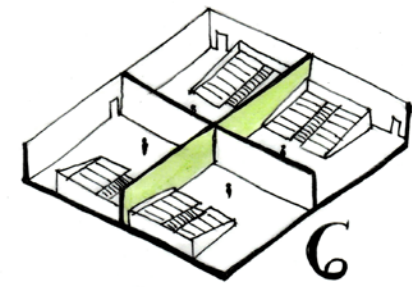
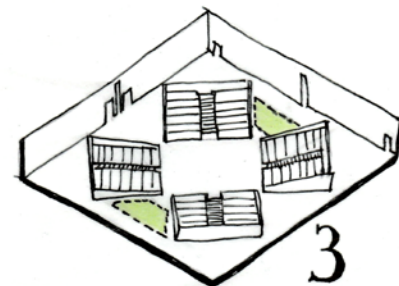
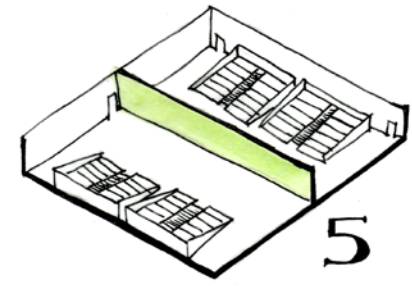
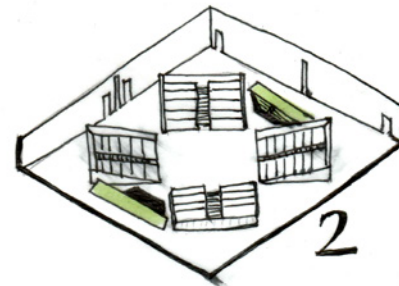
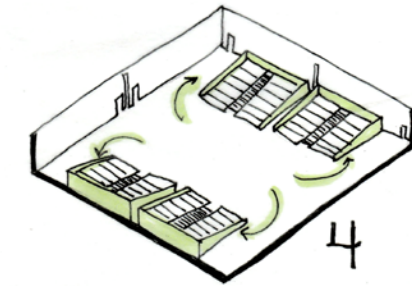
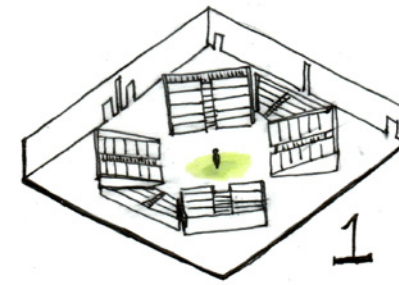
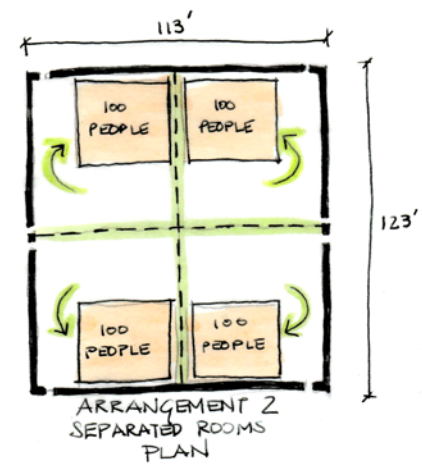
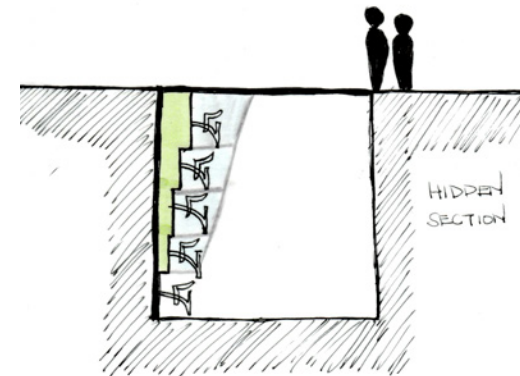
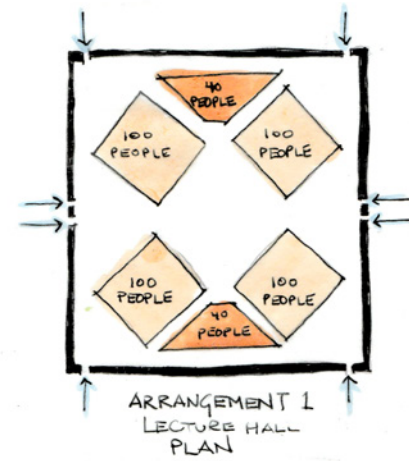
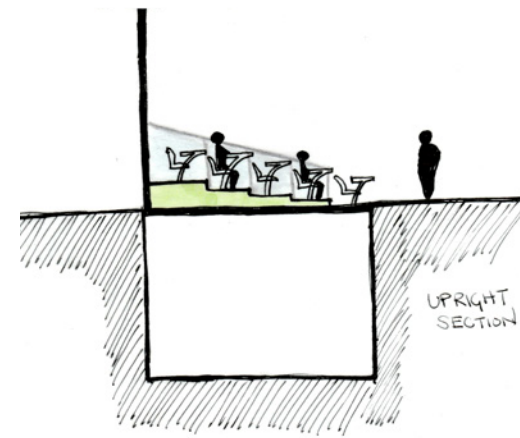


Figure 14.10 (left)  
Rotational Sections  
Marker

Figure 14.11 (right)  
Rotational Plans  
Marker

Figure 14.12  
Stages of Movement  
Marker

## Reflection

The experience of building an installation to scale taught me a lot about my abilities as a creator and it felt wonderful to see my design truly come to life and experience activity within it. Seeing people interact with a design that I participated in making felt truly amazing. It also was satisfying to see that the space was used as we had intended it to be. The opportunity to expand these satellite zones throughout campus is something I would love to pursue in the future; refining the built elements into a more modular design that could be easily replicated and assembled throughout campus while still offering a space that is embraced by those on campus.

Although the 500-person lecture hall design was not ultimately used in my final design, I felt it was an experiment that allowed me to think outside of the box. I did not restrict myself to a design that was "typical" or even necessarily something that would be built in real life, regardless of how much it cost. The value was in the exploratory process, and again in the making. To make a model that had movable parts and successfully negotiated tricky corners and angles felt like an accomplishment. These models allowed me to grow as a designer and encouraged me to experiment more with making physical models when I reached tricky design challenges.

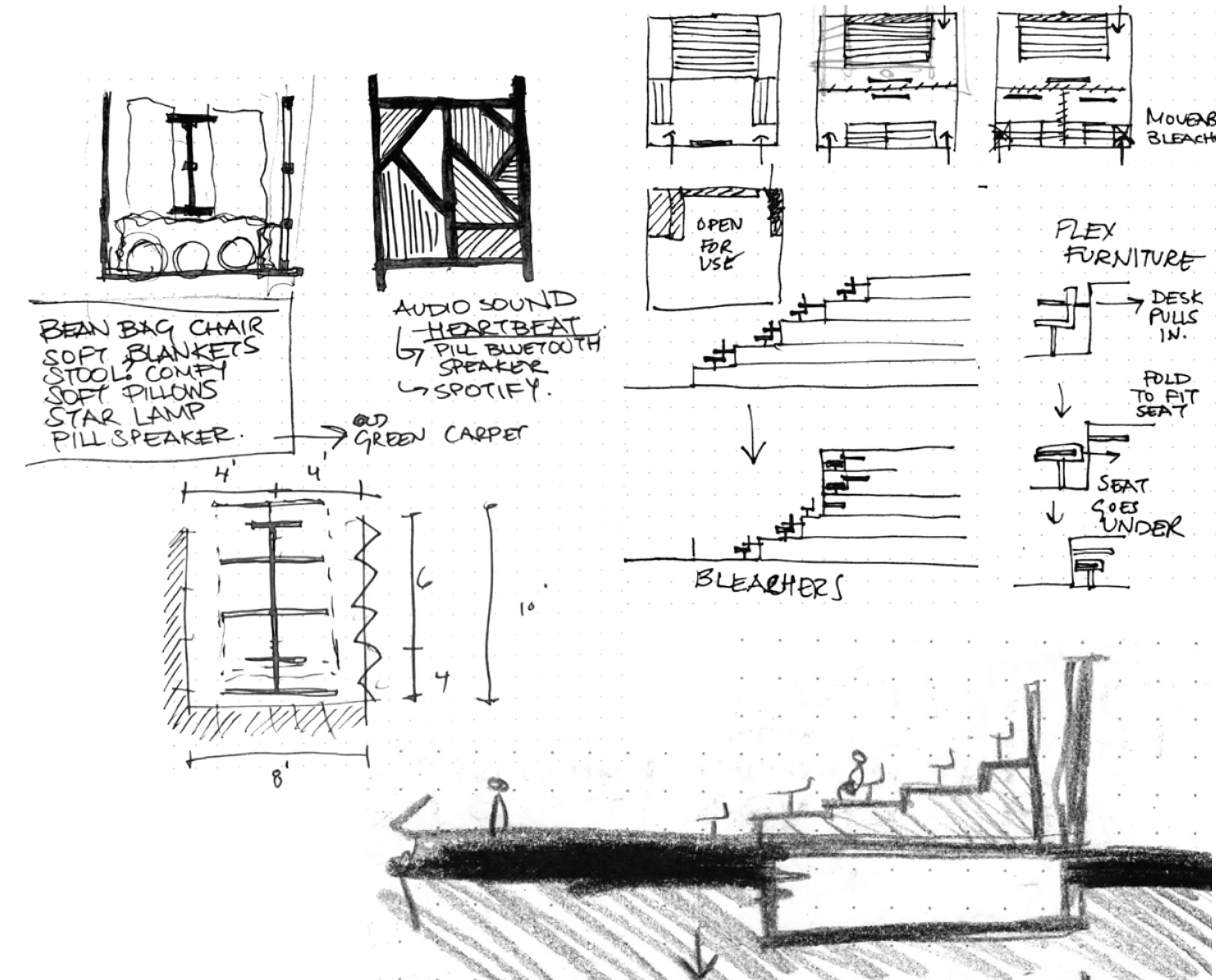


Figure 14.13  
Sketch Problem Sketches  
Ink, Graphite

## DESIGN BEGINNINGS

“I see it as a way of transforming courses and programs from what I (usually) experienced – mostly dull lectures from people who weren’t all that interested in teaching – to places of possibility – fostering, for example, interdisciplinary conversations and collaborations that invite people to think about things from different perspectives, thinking strategically about how to support students throughout their degrees, and providing safe spaces to take some risks and authentic chances to grow.”  
- Allyson Skene, Educational Developer



Figure 15.1  
Meeting Spaces  
Watercolour



Figure 15.2  
Collaborative Spaces  
Watercolour



Figure 15.3  
Site Photo  
Taken from Rooftop of Parking Garage



Figure 15.4  
Southern Area of Site

### Site Selection

The first challenge of design was selecting a site for the educational development centre to be located. Due to the nature of the collaborative work that educational developers do, the site wanted to be close to main campus and the areas where many people travel each day. This presented a problem because much of campus is already developed and to place a building in the heart of campus would mean taking away space from other faculties. Options included vacant houses that border campus on the east, a green space that once housed a residence on Sunset Ave., or a green space that once housed a music building on the corner of Wyandotte and Sunset. Due to the previously mentioned pedestrian traffic that is heavy on Wyandotte and Sunset, the music building green space was chosen as the site for the educational development hub.

### Traffic

Primary pedestrian traffic occurs crossing from the South side of Wyandotte to the North side where main campus buildings are located. This connection is key because North of Wyandotte is the heart of campus, but South of Wyandotte is where parking lies. With a large part of the student population commuting from the Windsor-Essex area, there is a large volume of cars on campus and parking is often full. This leads to many students walking across the Wyandotte threshold onto campus. This site allows for the pedestrian traffic to be an opportunity to connect to a larger audience of users. The traffic also presents a challenge; vehicular traffic. The site is located one street East from the Ambassador Bridge Plaza, which brings in a high volume of transportation traffic. As well, there is student traffic from parking areas nearby. Safety and connectivity were two identified opportunities that came from the traffic of the area.

### Neighbours

Neighbouring buildings also presented challenges to the design. The Northwest neighbour of the site is a 7-11 building. The building is one-story and made of CMU and has an accompanying parking lot. The opportunity of this neighbour was that students enjoy being close to amenities such as food, but the challenge was that the building produces sights and smells that are not always enjoyable. To the Southwest of the site is the Energy Conversion Centre, which is a large 115ft tall plant that is shaped like a rocket ship. This design acts as a landmark on campus, but blocks views and creates a narrow piece of usable land between the conversion centre and the 7-11. Neither of these sites could be proposed to be removed, so the design needed to respond to its immediate neighbours.



Figure 15.5  
University of Windsor Campus,  
Taken from Rooftop of Parking Garage

### Program Requirements

Determining the appropriate programming and square footage was the next step in design. Working with educational developers on this was critical, as they know best what spaces are required for the building to be successful. The office is a key area for any staff member. Most prefer natural light, but also require privacy. Due to the personal nature of the job, many staff members find that conversations with faculty members or students are often confidential and must remain private. The option of flexibility was key to keep the offices welcoming, but also to be able to close them off when appropriate. Meeting rooms followed similar restrictions to offices; a desire to be open working spaces, but also to host private sessions. They also required a variety of sizes to ensure that all types of gatherings could be accommodated (Erika Kustra, PhD, phone interview, October 12, 2019). The next issue was classrooms. While CTL and OOL use classroom spaces for workshops, presentations, and conferences, they do not often use tiered style lecture halls. This corresponded with research done on active learning and experiential learning, which often are applied in a flat classroom space (WALS). The larger lecture halls were included because they fulfill a need that the University of Windsor has (Veronika, PhD, Skype Interview, November 6, 2019). To accommodate for larger class sizes, larger teaching spaces were needed as well. This meant significantly more square footage was needed than was originally anticipated, which allowed the site to expand further into the parking areas South of the site. Collaborative spaces that engage students, faculty, and staff were also requested. This encouraged more communication between the various levels and offered learning to expand between the three groups. Also to encourage communication, a faculty library and lounge was added. There is currently no space for faculty members to hang out and relax on campus, or for part-time professors to have a designated work zone, and the library lounge fills that need. By offering faculty space close to

educational developers, it makes their presence more known in the community and their identity is more present in faculty's day-to-day lives. Finally, media and editing rooms were required. Due to the growing presence of technology in teaching, faculty and staff are often working digitally to produce content for students. This content must be created somewhere, and the media and editing rooms offer places to do this. These spaces provided a place to teach technological tools to faculty, as well as experiment and produce content with them.

Category	Space	Square Footage	
<b>Classrooms</b>			
<b>Note: ALS, flat room</b>	10-15 people	200	
	25-30 people	300	
	30 - 50 people	500	
	50 -100 people	1000	
	100 - 200 people	2500	
	500 people	7500	
<b>Meeting Rooms</b>			
	4-6 people	200	
	6-10 people	350	
	10 - 20 people	600	
<b>Offices</b>			
	Head Offices	175	
	OOL Offices	150	
	CTL Offices	150	
	Quality Assurance Office	150	
<b>Student Space</b>			
	Offices	150	
	GATA Room	500	
<b>Library</b>			
	Faculty Library Lounge	500	
<b>Workshops</b>			
	20 40 People	2000	
	Experimental Space	2500	
	Media Studio	1000	
	Editing Studio	1000	
<b>Collaborative Spaces</b>			
<b>What services would be req'd?</b>	Café	1500	
	Collab Space	1500	
	Entry Atrium	1500	
<b>Support Spaces</b>			
	Xerox	100	
	Washrooms	600	
	Universal Washrooms	100	
	Elevators	60	
	Large Storage	1000	
	Small Storage	500	
	CTL Reception	200	
	OOL Reception	200	
	Cleaning/ Facility Spaces	200	
	A/V Closets	200	
	Locker Rooms	1000	
	<b>Total Square Footage</b>		<b>39310</b>

Figure 15.6  
Square Footage Spreadsheet  
Microsoft Excel



Figure 15.7 (left)  
Offices  
Charcoal



Figure 15.8 (right)  
Indigenous Smudging Space  
Ink



Figure 15.11 (left)  
Collaborative Space  
Watercolour

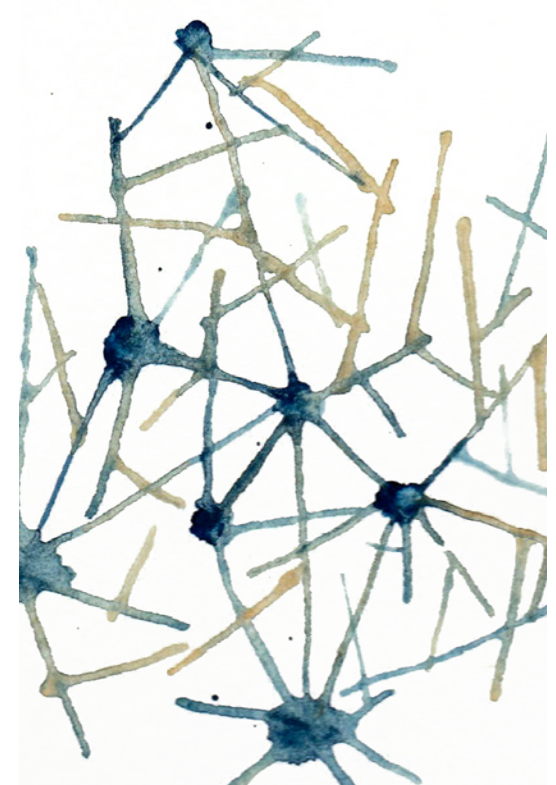


Figure 15.12 (right)  
Experimental Space  
Watercolour



Figure 15.9 (left)  
Faculty Lounge  
Watercolour

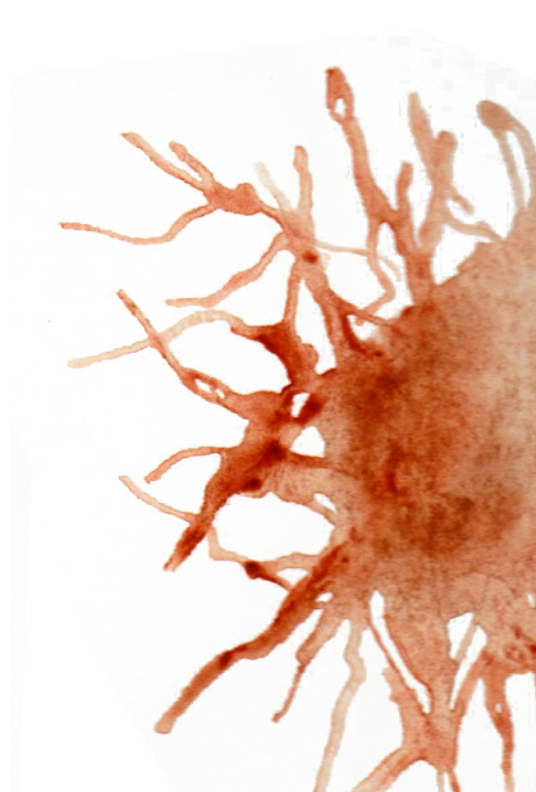


Figure 15.10 (right)  
Library  
Watercolour

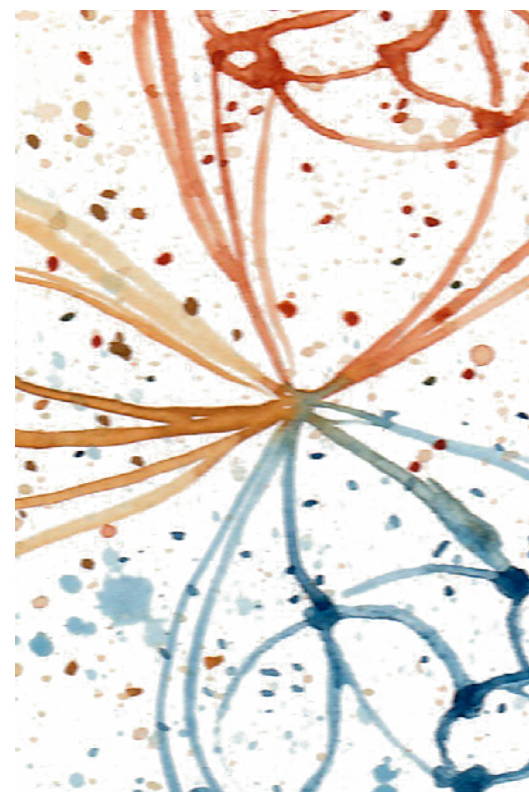


Figure 15.13 (left)  
Reception  
Watercolour

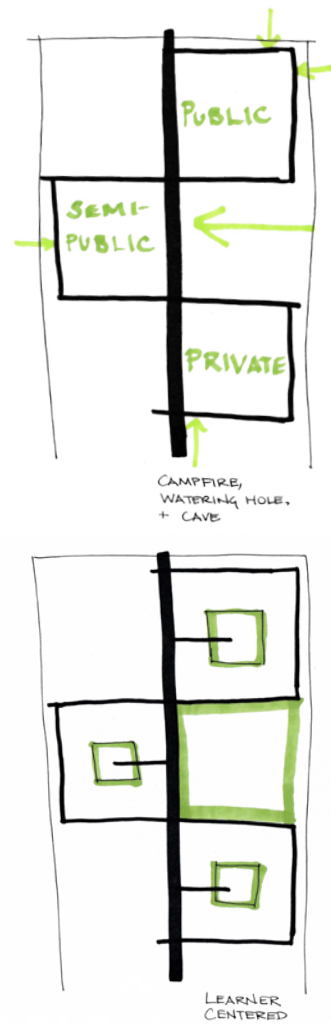


Figure 15.14 (right)  
Meeting Rooms  
Watercolour

## Design Concepts

After interviews, emails, and phone calls with the educational development directors, a list of required programs and tentative square footages was created. Based on this program spreadsheet, a workshop was created to engage the clients. The workshop generated ideas for program adjacencies and connections both on the interior and exterior of site. The main take-away was the concept of breaking the site into quadrants: a public entry in the northern quadrant, a classroom based central quadrant (broken into one quadrant for the 500-person classroom, and a western area including more classes), and a private quadrant to the South. This division exemplified the campfire, the watering hole, and the cave. Each quadrant had a different function and level of privacy. The next step was space planning. With the program divided, a connecting element was needed. A spine draws users into the building, unites the four quadrants, and highlights connectivity in learning. An angular shape is used to taper to the South and become wider in the North to represent the connection to campus. This shape offered a large gathering area in the North, to be used as an atrium, and provided a view to campus across Wyandotte St. The spine also created a North-South axis through the building, further strengthening the public to private gradient going from North to South.

Figure 15.15  
Concept Sketches  
Marker, Ink



## Initial Designs

Moving into the schematic design phase, the program began to take shape. Space planning aside, the design lacked connectivity to campus. To turn this problem into an opportunity, an underground passage was devised. Due to the high traffic along Wyandotte, an underground passage provided a safer route for users to cross the street and offered the opportunity to branch out and touch campus with this design. With a green space mirroring the chosen site, it seemed natural to engage the two halves as equal elements of design. Using an urban design approach with the stairs underground, which incorporated a ramp and greenery, the staircase was wide enough to allow natural light into the space and not feel too narrow. Placing a café program underground also gave the building a definite sense of place and identity. The stairway connecting the lower level to the upper level was incorporated into the spine axis. This also allowed the 500-person lecture hall to have one level in the underground area, and one on the main level.

Through speaking with clients and advisors, the underground passage was found to not be feasible. Due to heavy transport traffic on Wyandotte, the underground tunnel would need plenty of engineering and reinforcement. While this is a problem that could be solved, issues with proximity to the ambassador bridge, as well as water levels due to proximity to the Detroit River halted progress on the development of an underground tunnel. Although basement levels are not impossible, bridging underneath a major roadway was not possible in this situation.

Figure x.x  
Floor Plan Sketch  
Graphite, Ink

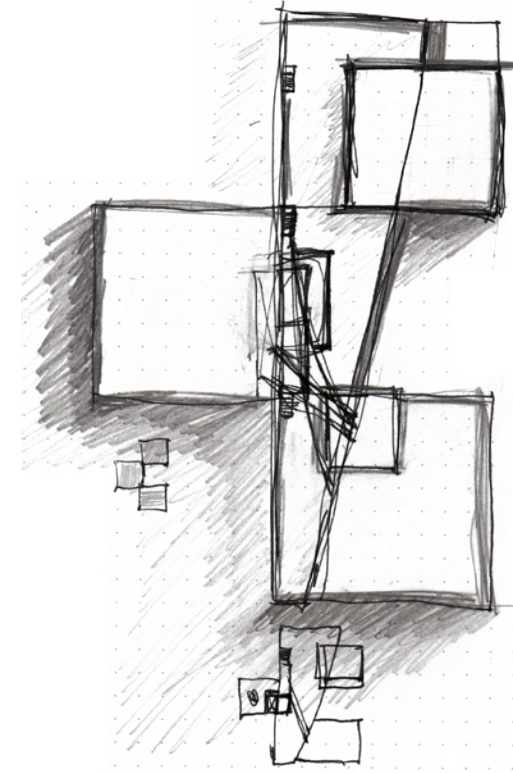
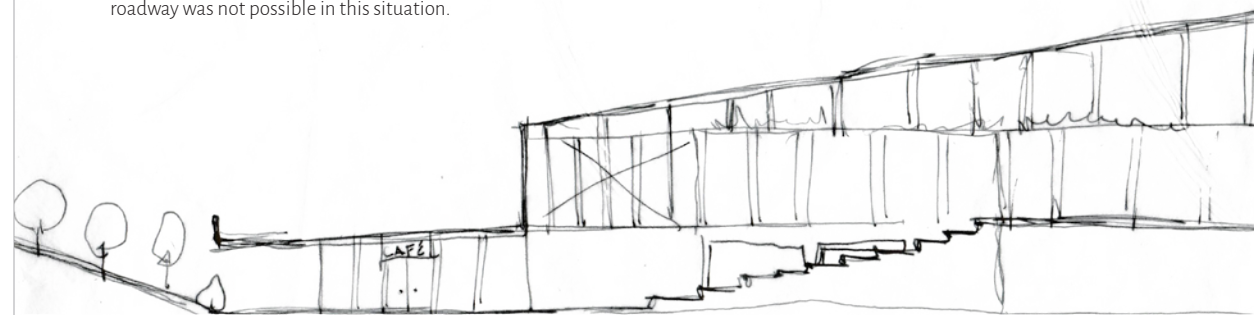


Figure 15.16  
Tunnel Under Wyandotte Section  
Graphite, Ink





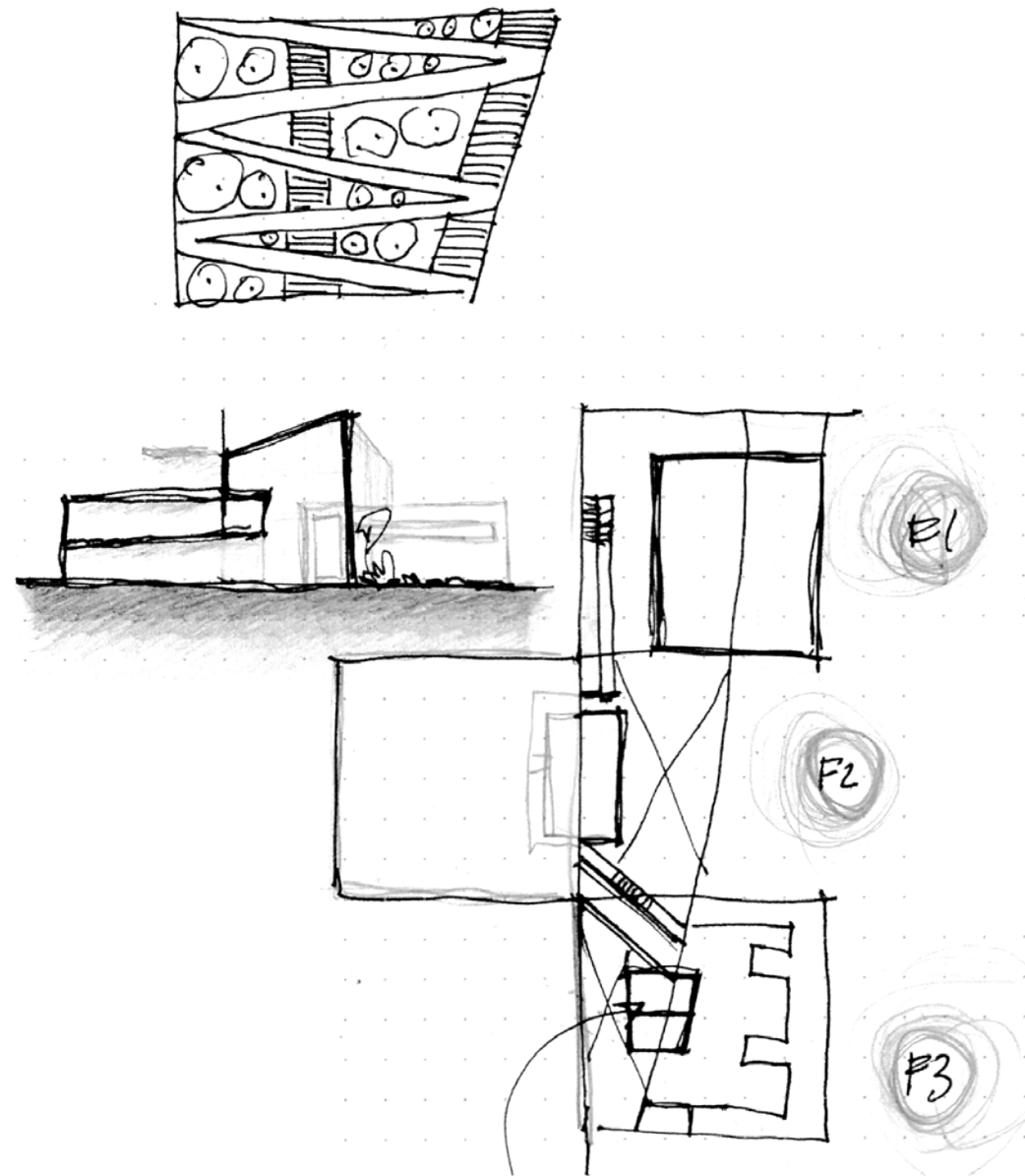


Figure 15.17  
Initial Concept Sketches  
Ink, Graphite

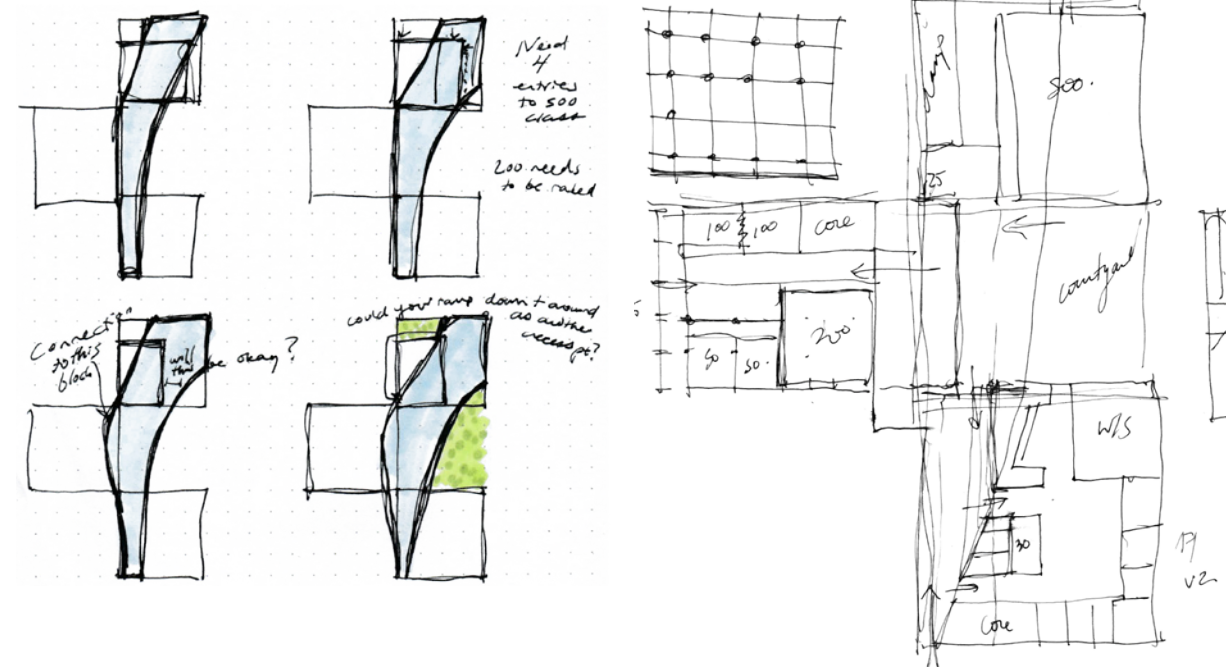


Figure 15.18 (left)  
Spine Form Sketches  
Ink, Marker

Figure 15.19 (right)  
Ground Level Sketch  
Ink

### Back to the Concept

Returning to the basis of design concepts, shifts were made. With a few slight rearrangements, the project continued on the same track of dividing the site into quadrants and keeping a connection but re-arranged the courtyard to the Northern edge of the site. This allowed the connection to campus to be through the mirroring of green space both North and South of Wyandotte St. By moving the 500-person lecture hall more Southern, it allowed for an East-West connection to reveal itself, creating another axis. The idea of utilizing underground space was not lost, and a lower level was developed again, this time connecting Sunset Ave. to Patricia Rd. The grand gesture to the lower level is the entry that occurs underneath the cantilevered large lecture hall on Sunset Ave. The slope of the lecture hall was mimicked by the slope of the staircase underneath. This design move allowed for the E-W axis to shine. With these design moves in place, the final component of the design began.

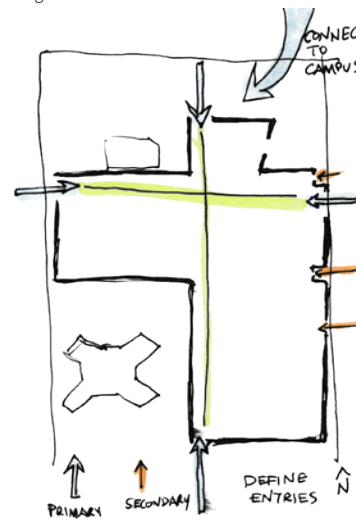
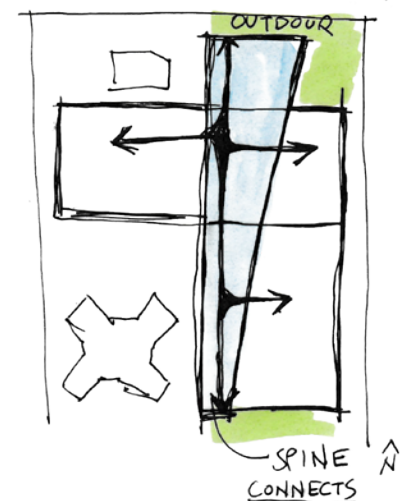
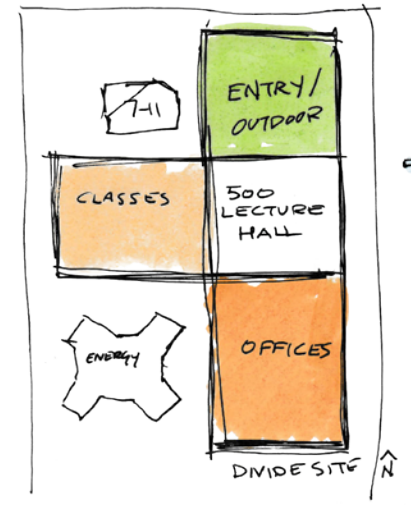


Figure 15.20  
Concept Sketches 2.0  
Ink, Marker



### Reflection

The idea of connectivity was present through the entire design process, and each iteration was challenged with questions of “where are the connections” and “how are connections represented?”. The underground tunnel connection was a concept that I strongly believed in and felt represented the research I had previously endeavored on. It was challenging to let go of this idea, because I felt it connected the site to campus, provided safety to students, and offered the opportunity to expand the site across Wyandotte. Unfortunately, this design concept could not occur for practical reasons. This was one of the toughest parts of working with clients in a project that is designed to fit their situation. I had to respond to their desires and design dreams, but had to be practical in designing a space that could potentially be built for them. This meant the design could not tunnel underneath roads and had to include additional spaces for larger classrooms that could be used for a variety of the programs on campus and incorporating a large amount of meeting rooms and flexible space. For this building to be reasonable, it had to be engaging for other players at the University of Windsor to invest in. It could not simply be a design that was only for their specific user group, it had to consider the current climate and needs of the campus as well.

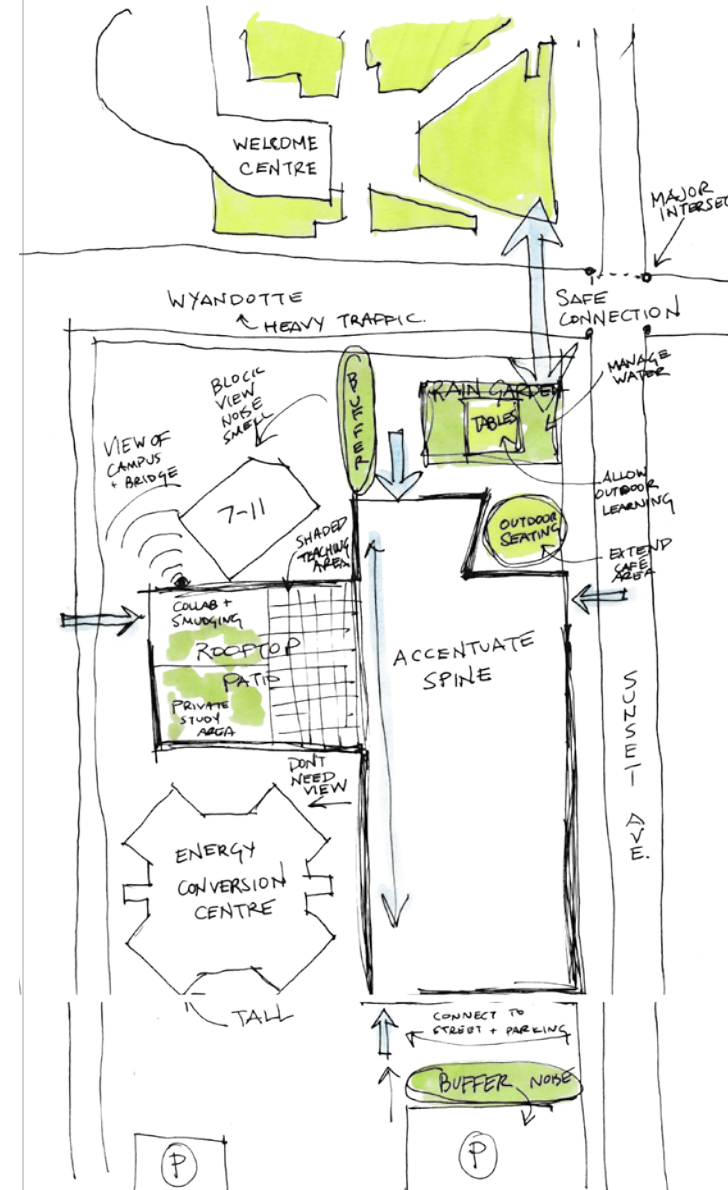


Figure 15.21  
Site Design Sketch  
Ink, Marker

# THE TEACHING SUPPORT AND LEARNING COMMONS

“Educational development to me is about creating a dynamic teaching and learning environment where students and instructors alike are engaged in ongoing inquiry, open and honest constructive criticism, and where all are included and treated with respect.”

- Allyson Skene, Educational Developer

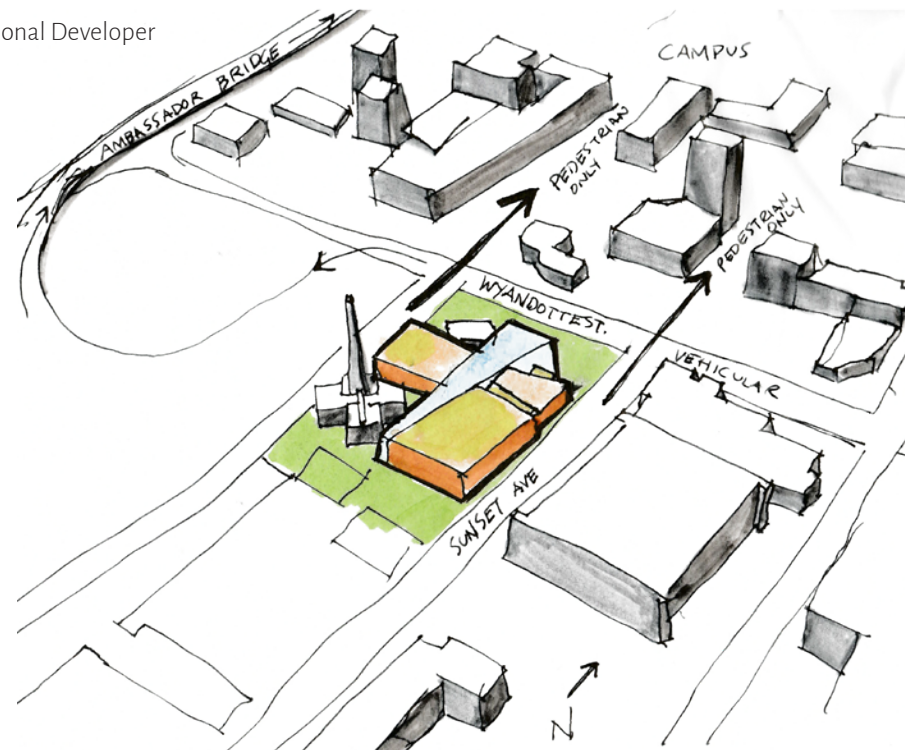


Figure 16.1  
Building Axonometric Sketch  
Ink, Marker



Figure 16.2  
Northern Entry  
Revit, Illustrator, Photoshop

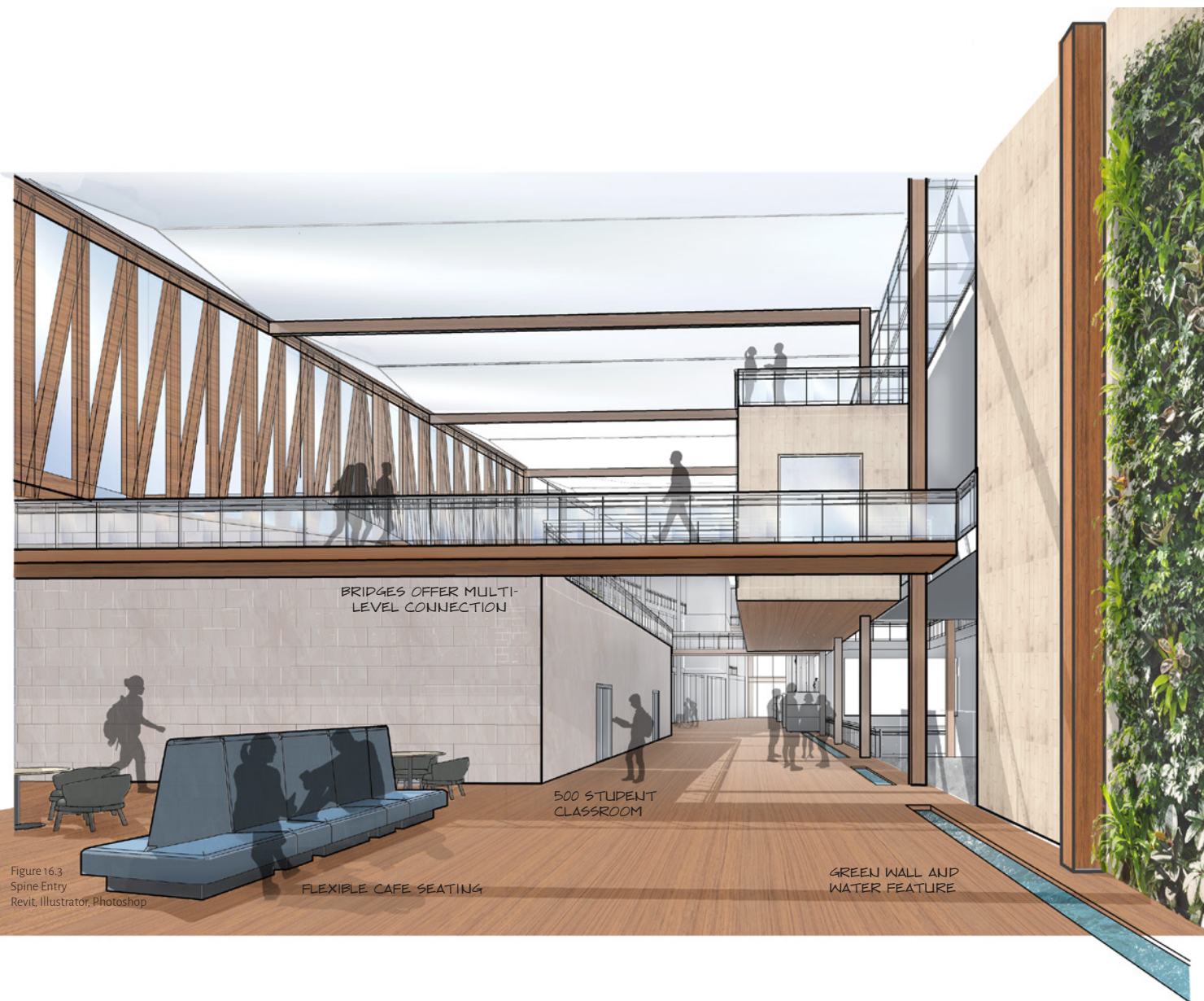


Figure 16.3  
Spine Entry  
Revit, Illustrator, Photoshop

### The Spine

The Teaching Support and Learning Commons was designed as a synthesis of the preliminary design and site analysis work, as well as a result of the workshop with educational developers. The site is divided into 4 quadrants, representative of the campfire, the watering hole, and the cave. The Spine, a N-S axis in the building, connects these quadrants. Due to its glulam structure, it can span all three floors vertically, and offers glazing on the North, East, and South façades. From the main Northern entry of the Spine, the activity of the building is visible. With bridges running E-W on the second and third floors, and many gathering spaces incorporated throughout, it represents the concept of connecting ideas and bringing people together to share ideas.

Ground Level

The Northern section of the site on the ground level is the campfire, the primarily public entry to the site, along with the largest classroom space. The Northern quadrant of the site creates a connection to campus, and an outdoor courtyard allows students to mingle and enjoy the exterior space. The atrium allows students, staff, and faculty to enter the interior flexible work area that includes a café and green corner. As users move South, they encounter the 500-person lecture hall that is inserted into the spine. Further South is additional classrooms and workspaces, including a workshop, presentation stairs, and a variety of meeting rooms. The Western portion of the building is primarily the 200-person lecture hall and the double height space of the media and editing rooms in the lower level.

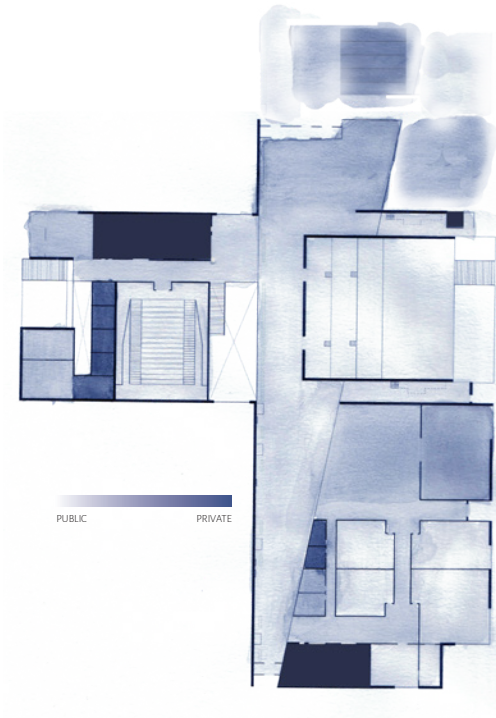


Figure 16.4  
Privacy Diagram L1  
Ink, Watercolour



Figure 16.5  
Connections Diagram L1  
Ink, Watercolour

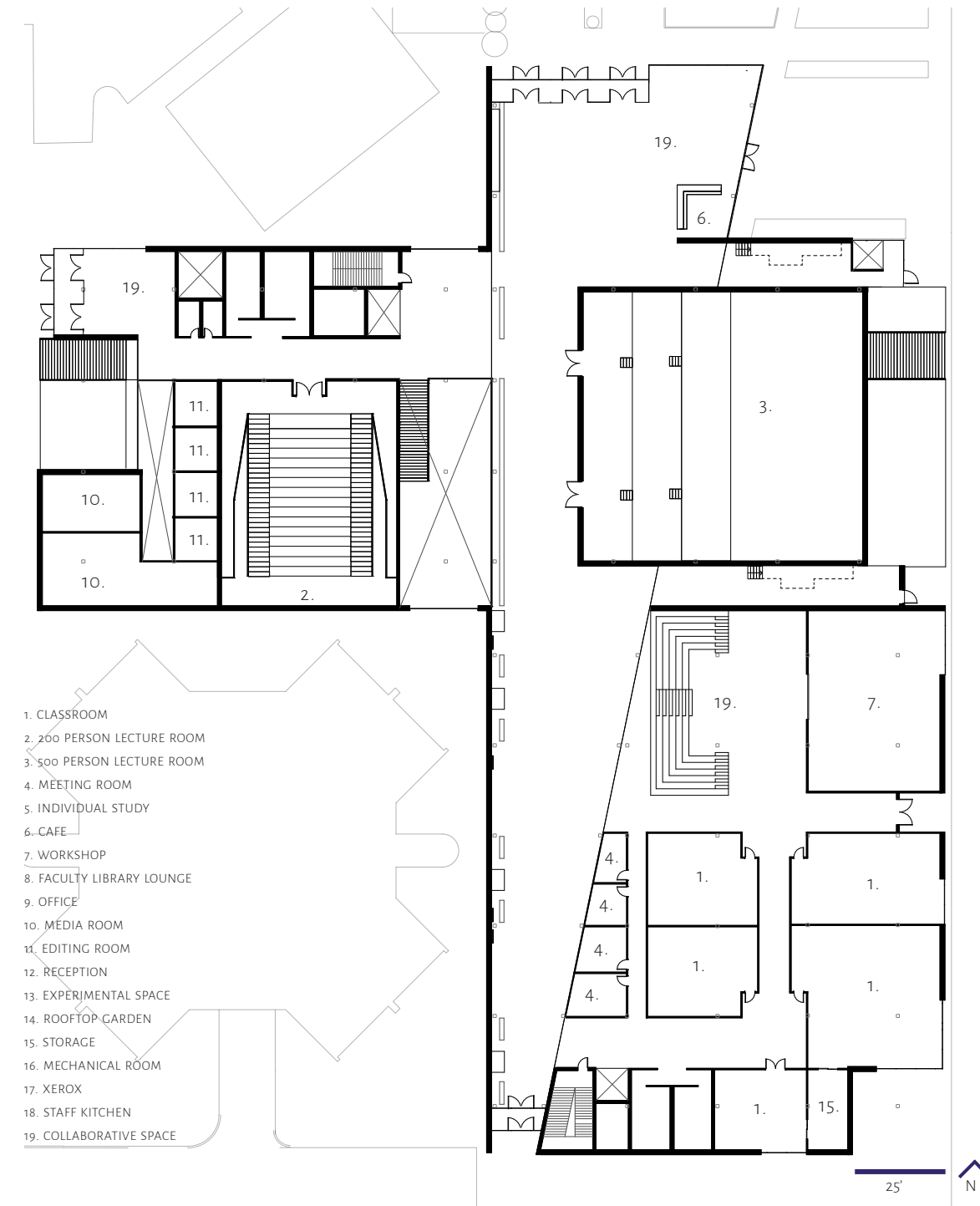


Figure 16.6  
F1 Floor Plan  
Revit, Illustrator

Second Level

The second level of the building keeps the spine portion open to below, allowing for views into the atrium. Bridges connect the Eastern program to the Western program. In the North, the upper level of the 500-person lecture hall dominates. Exits from the top of the lecture hall extend and bridge to the Western portion of the building, which features a range of small to large meeting rooms, a small classroom, and a faculty lounge that also has kitchen amenities. The faculty lounge opens to a collaborative space. In the South of the building, offices for the Centre for Teaching and Learning are located. Offices are clustered in a U-shape and surround a central collaborative space that is flexible and offers more informal space for colleagues to share ideas and communicate with one another. Due to the number of offices required, not everyone could receive a window. In response to the questionnaire, in which majority of staff said they would prefer to have natural light in their office, a large window was placed in the collaborative area, with frosted glass and blinds implemented on each office. With this strategy, each office receives natural light from the glazing, but can remain private and even fully closed off if there is a confidential meeting occurring. Each collaborative zone connects to the next and to the main reception area of the offices, which prevents isolation of staff members from occurring. A communicating stair is at the center of the reception area, allowing access to the third level.

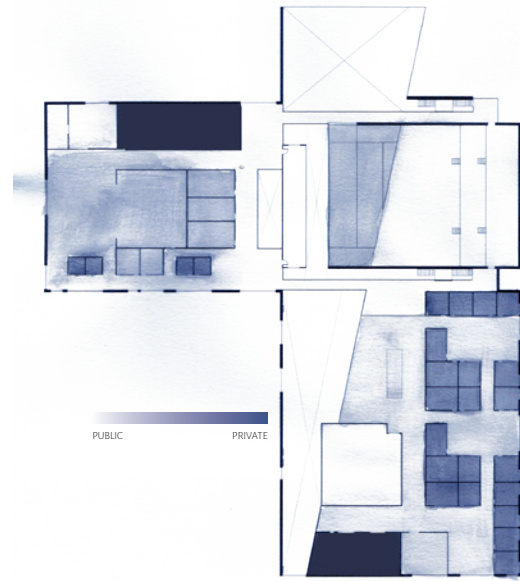


Figure 16.7  
Privacy Diagram L2  
Ink, Watercolour



Figure 16.8  
Connections Diagram L2  
Ink, Watercolour



Figure 16.9  
F2 Floor Plan  
Revit, Illustrator

### Third Level

The third level of the Teaching Support and Learning Commons offers offices in the South for the Office of Open Learning. Again, using clusters, the offices allow for collaborative zones, as well as media and editing rooms in the South end of the offices. In the hallways connecting the clusters, open-to-below areas offer the opportunity to look down into the level below, allowing for communication between colleagues, despite the physical boundary of the floor. To the West, there is a patio that is accessible to staff, faculty, and students. The patio offers a variety of covered and uncovered space, and a view out to campus and the Detroit River. The bridge connecting the patio to the offices includes 'bump-out' spaces where the path is widened to allow for a few users to sit and overlook the expansive atrium below.

Figure 16.10  
Privacy Diagram L3  
Ink, Watercolour

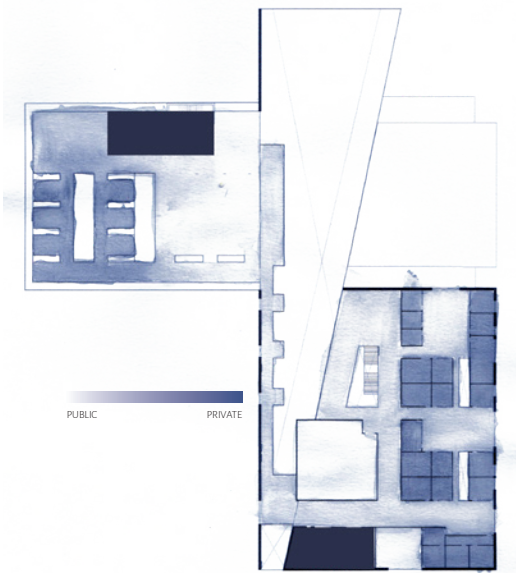


Figure 16.11  
Connections Diagram L3  
Ink, Watercolour

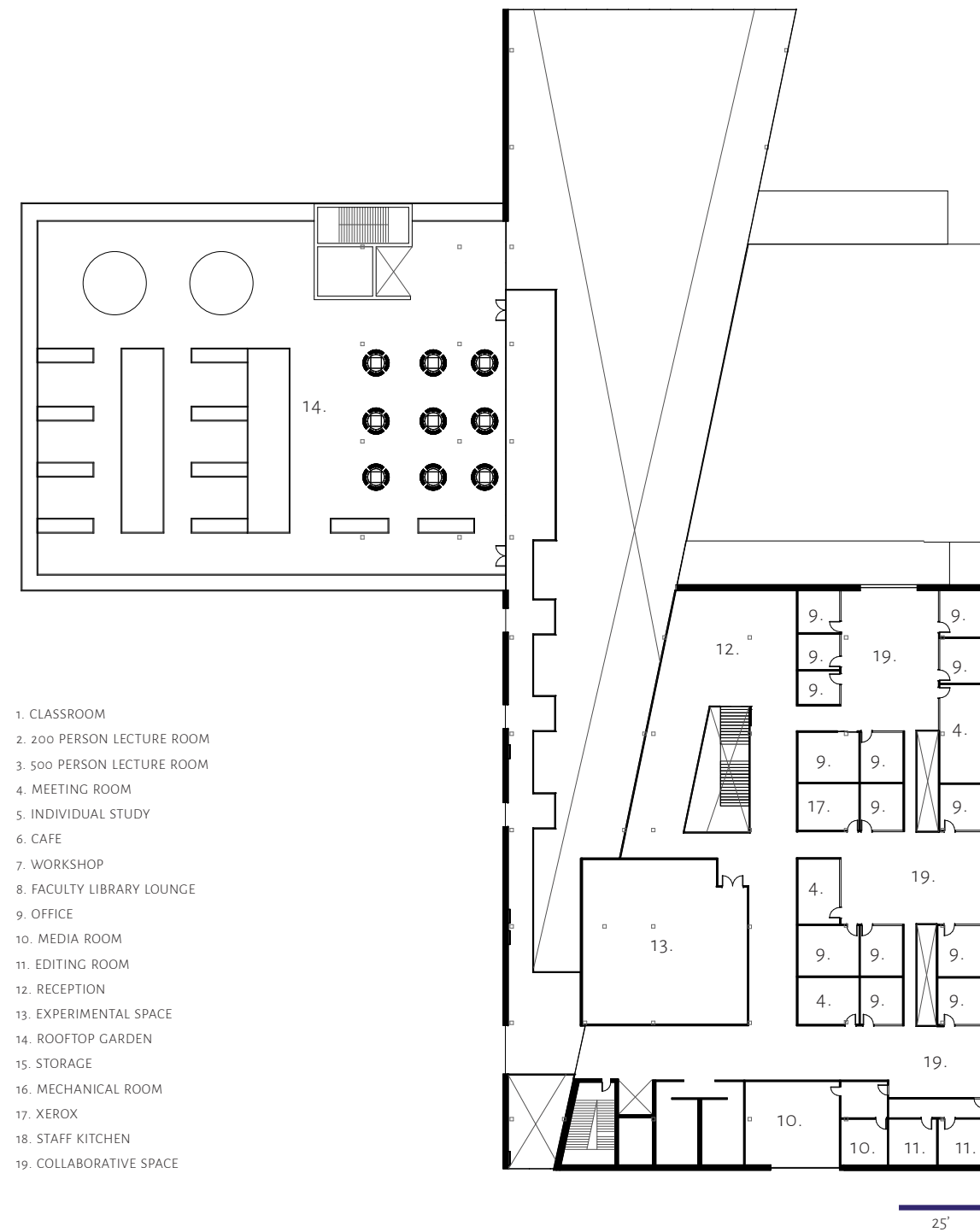


Figure 16.12  
L3 Floor Plan  
Revit, Illustrator

Lower Level

The lower level highlights the E-W axis of the building. This level provides program such as media rooms, editing rooms, a 200-person lecture hall, and a flexible collaborative zone. The collaborative zone offers enclosed rooms for small meetings or study areas that can be booked by staff, students, or faculty. Small and medium rooms allow for groups of different sizes to gather. Outside of the enclosed rooms are open areas that are developed with problem solving in mind. Near the Southern wall there are private study pods for those choosing to work individually. In the centre there is lounge seating. The Northern areas are open work spaces with movable furniture. Each area includes whiteboards, flip charts, and movable furniture to optimize functionality and flexibility of the space. Users are encouraged to adapt the space to their needs in order to learn efficiently.

Figure 16.13  
Privacy Diagram LL  
Ink, Watercolour

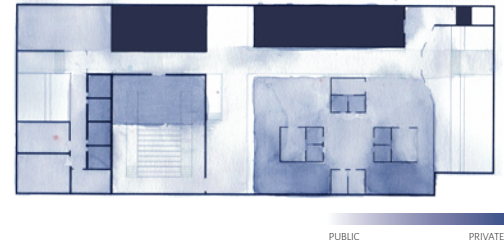
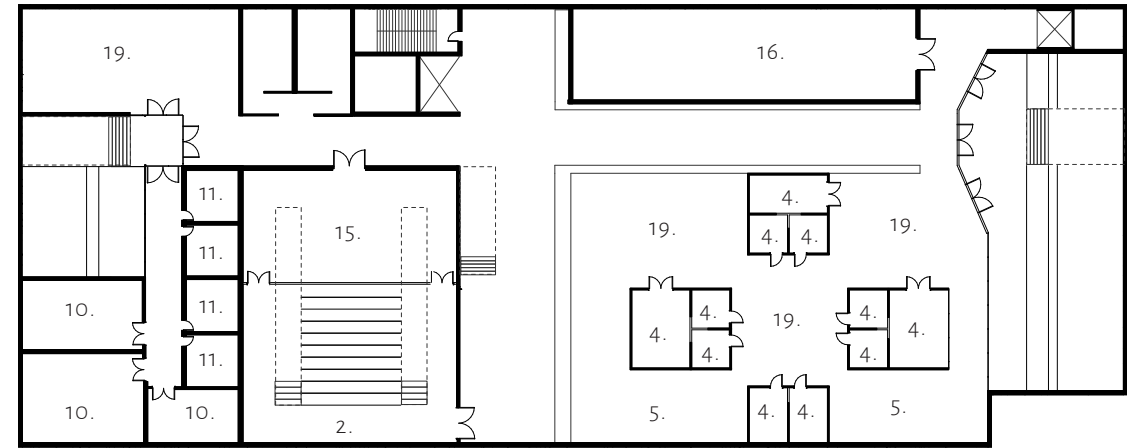


Figure 16.14  
Connections Diagram LL  
Ink, Watercolour



- 1. CLASSROOM
- 2. 200 PERSON LECTURE ROOM
- 3. 500 PERSON LECTURE ROOM
- 4. MEETING ROOM
- 5. INDIVIDUAL STUDY
- 6. CAFE
- 7. WORKSHOP
- 8. FACULTY LIBRARY LOUNGE
- 9. OFFICE
- 10. MEDIA ROOM
- 11. EDITING ROOM
- 12. RECEPTION
- 13. EXPERIMENTAL SPACE
- 14. ROOFTOP GARDEN
- 15. STORAGE
- 16. MECHANICAL ROOM
- 17. XEROX
- 18. STAFF KITCHEN
- 19. COLLABORATIVE SPACE

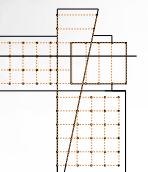
Figure 16.15  
LL Floor Plan  
Revit, Illustrator







Figure 16.16  
E-W Building Section  
Revit, Illustrator, Photoshop



The design of the Teaching Support and Learning Commons building focused on creating opportunities for collaboration, connection, and communication. Each of the 4 levels offers a variety of learning spaces that engage faculty, staff, and students at the University. Creating collaborative zones with flexible furniture to allow for learners to react and adapt the space to their unique preferences was critical.

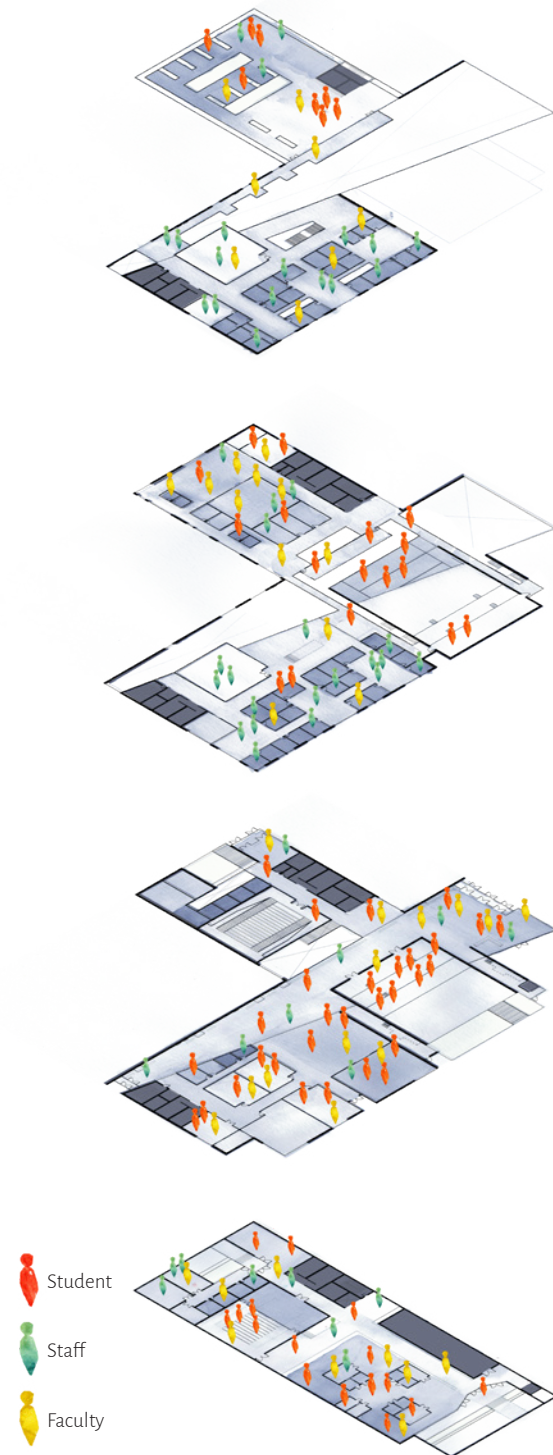
The ground level of the building offers easy movement of large groups of people between high traffic areas, such as a 500-person and 200-person classroom, and atrium cafe space. This level creates opportunities for faculty, staff, and students to interact.

The second level creates connections between office space for educational development staff and between faculty and student areas. With meeting rooms, student study areas, a faculty lounge, and staff offices, this level focuses on more intimate learning gatherings. Most of the traffic is created from staff and faculty.

The third level creates connections between offices with a connecting stair and open-to-below areas that look into the office level below. The interior of this level prioritizes staff interactions, with additional opportunity for faculty involvement. The exterior patio offers use for staff, faculty, and students with elevator access and allows for a variety of learning environments.

The lower level creates opportunities for a variety of work and study. With media and editing rooms to the West, faculty and staff can create content for courses. On the Eastern side, students can develop their skills in their preference of work setting, whether that be a private study room, or more open collaborative area.

Figure 16.17  
Human Use Axonometric  
Watercolor, Illustrator, Photoshop



In these diagrams, the deep orange represents campfire learning spaces. The yellow represents watering hole learning spaces, and the blue represents cave learning spaces.

Patio

The rooftop area highlighted the variety of learning spaces available. The covered area of the rooftop garden is the learnings space, as classes could gather here as a group. The private cave area begins to be broken down into smaller zones for fewer people with planter beds, and the watering hole zone incorporates circular planters to be used as a smudging zone by indigenous groups. This was a design strategy implemented because there are no smudging zones currently located on campus, and for indigenous groups to smudge, they must go through paperwork and the process of finding space to do so. The collaborative smudging area offers a designated space for this activity to occur. This area also offers the best view onto campus and to the Ambassador Bridge over the Detroit river.

Experimental Classrooms

The experimental classrooms on both the second and third level represent flexibility in design. Modeled with active learning in mind, the tables and chairs are all movable components that can be changed from class to class, depending on the content of the class and the professor's teaching style. White boards offer group work and collaboration, while screens around the room offer the opportunity for the teacher to move around as they see fit. An observation room in the corner offers the opportunity for educational developers to sit in on the sessions and give feedback to professors.

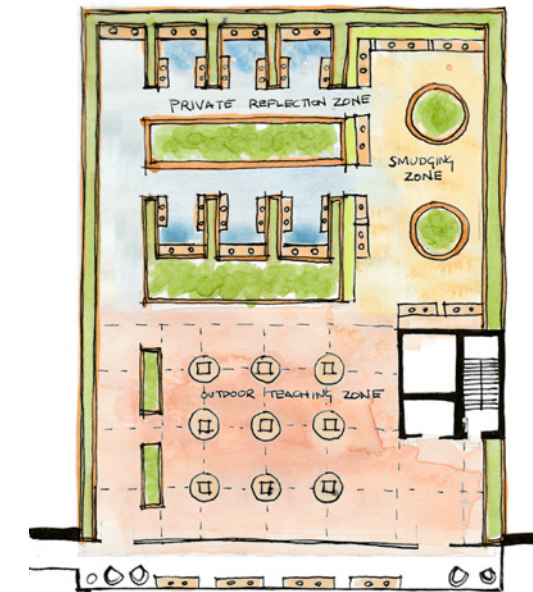


Figure 16.18  
Patio Diagram  
Ink, Watercolour, Marker

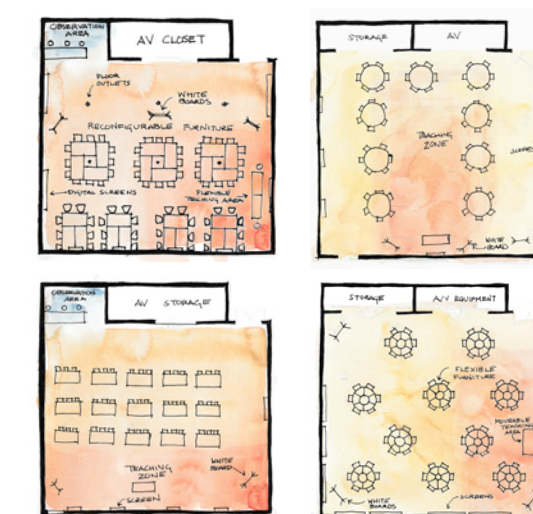


Figure 16.19  
Variations of Experimental Classroom  
Ink, Watercolour

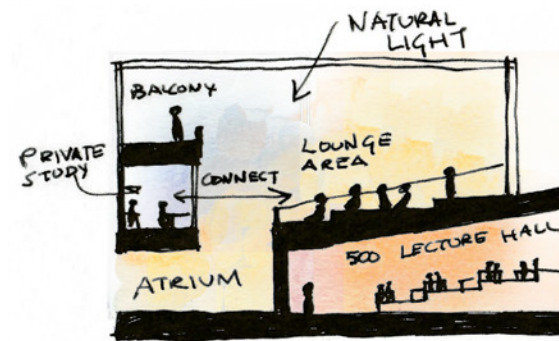


Figure 16.20  
Individual and Lounge Diagram  
Ink, Watercolor

### Student Lounge

On the second level, one of the main student connections occurs in section between a lounge area above the 500-student classroom and the individual study room. While the individual study room cantilevers above the atrium, the lounge area is incorporated on top of the large lecture hall. A visual connection between the adjacent areas connects learners and highlights the variety of spaces in the building. Inspired by “The Beaches” in the Ryerson Student Learning Center, the lounge offers ramped access and includes comfortable furniture such as beanbag chairs. This area is designed to be relaxing and enjoyable, overlooking the atrium below, as well as the movement of the bridges on the second and third levels. The relaxing and communal area contrasts the individual study room, which is more private and enclosed. To highlight this dichotomy and encourage connection, these spaces are located directly across from one another and have sightlines to each other.

### Faculty Lounge

The faculty lounge offers connection between colleagues. There is a private work area, library component, lounge area, and attached kitchen space used by both faculty and staff that can be divided off if needed. Sliding door elements offer an opportunity to reach out and connect to more collaborative spaces. The library element encourages a culture of teaching and learning at the University of Windsor with faculty members. The goal is for professors to have easy access to readings on pedagogy and teaching. As well, there is no lounge available on campus for professors to relax in, so there is a need for a communal area. Private work desks are also available to offer a safe haven for part-time faculty who may not have dedicated office space and need areas on campus to have privacy and do work.

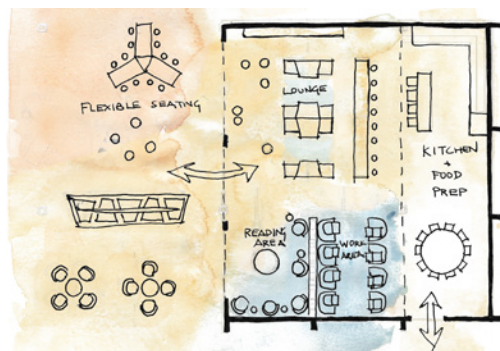


Figure 16.21  
Faculty Lounge Diagram  
Ink, Watercolour

### Office Clusters

The office clusters offer a sense of community in the workplace. By placing offices around a central collaborative space, it offers the opportunity for more engagement. Easy to move furniture allows the central zone to be easily changed to fit the staff needs and create a learning zone. Connections between collaborative zones and the main reception keep the clusters from feeling isolated and continue the idea of creating a community.

### Workshop

The workshop is a space that could expand a learning community. A learning space that can be reconfigured easily allows for many types of learning to occur inside, but with large sliding doors, this workshop learning space can also spill outside and become a presentation space. Presentation stairs offer seating for students and a place to give feedback on ideas.

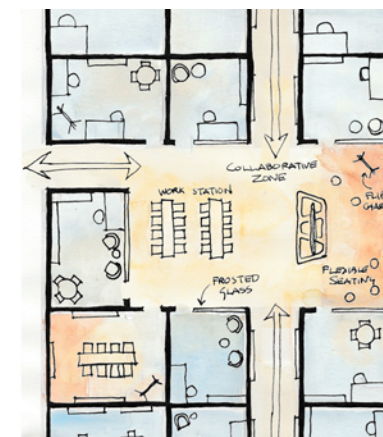


Figure 16.22  
Office Collaborative Diagram  
Ink, Watercolour

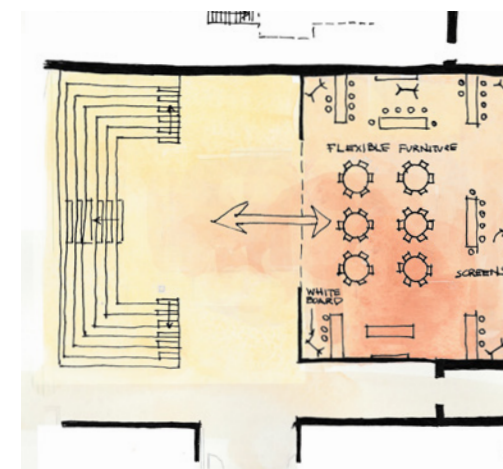


Figure 16.23  
Workshop Diagram  
Ink, Watercolour

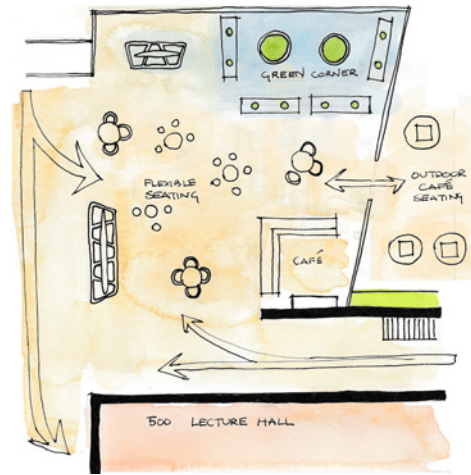


Figure 16.24  
Atrium Diagram  
Ink, Watercolour

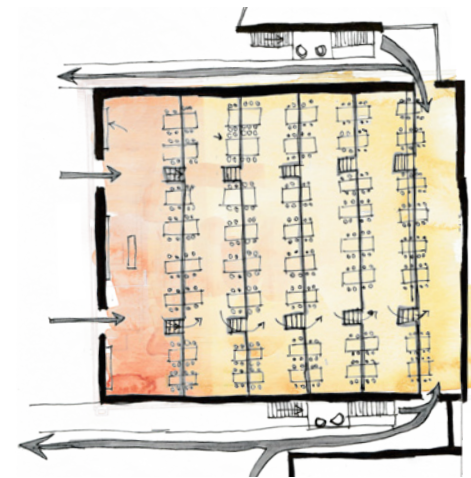


Figure 16.25  
500-Person Lecture Hall Diagram  
Ink, Watercolour

### Atrium

The atrium creates a social community at the main entrance to the building by offering goods at the café to draw people in. Flexible furniture allows for students, faculty, and staff to use the space as they see fit.

### 500-Person Lecture Hall

The 500-person classroom becomes more than a standard lecture hall and more of a collaborative community by using a stepped approach to the classroom but implementing tables for 4-6 people to work together. This offers the opportunity for group work and problem solving to occur during lecture, which a standard tiered lecture hall would not offer.

### Collaborative Work Zone

In the lower level, the focus was to develop a variety of learning areas that worked together. Creating small, private meeting spaces for students to work quietly in, as well as larger meeting rooms for teams to work in, the space offers some private areas for group study. Individual study pods are also placed along the Southern edge to offer workspaces for single persons. Surrounding these private zones are more collaborative working areas, with a central lounge, and other various presentation spaces and collaborative areas. Flip charts and white boards are critical for learners to document and work through ideas.

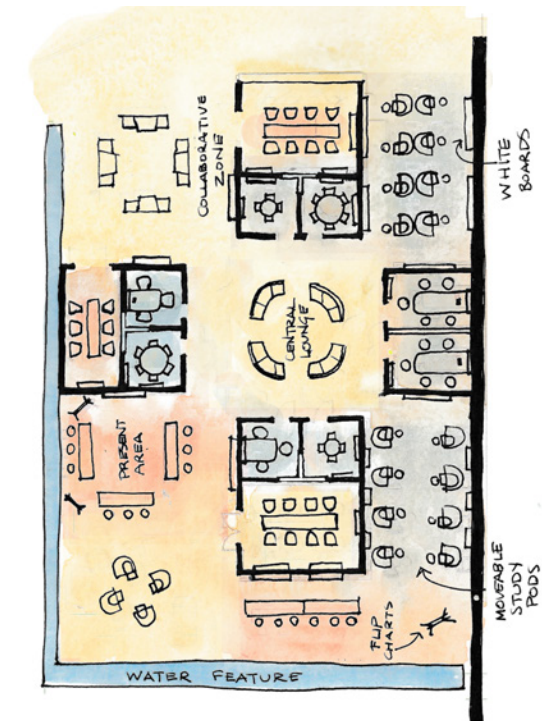
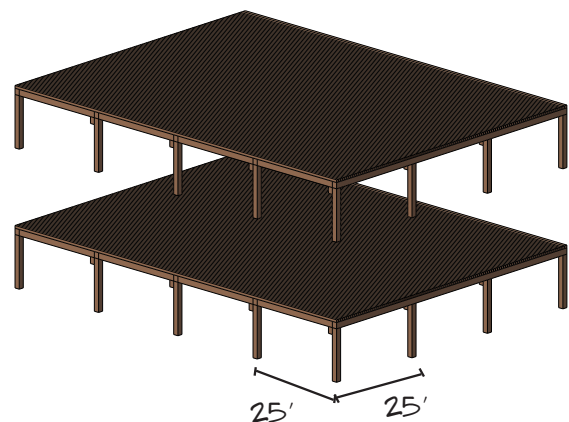
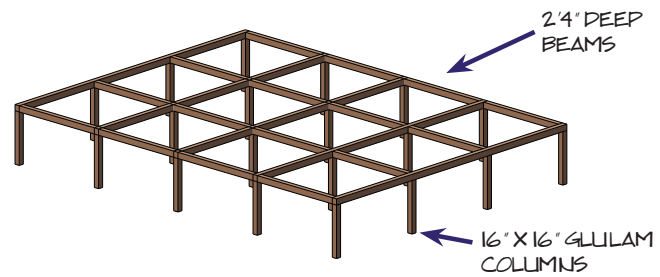
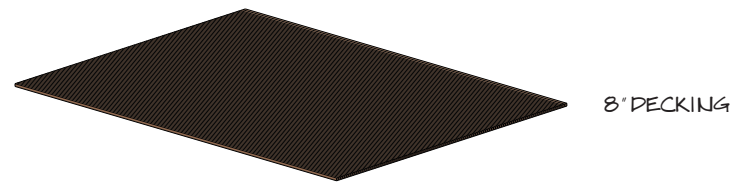


Figure 16.26  
Lower Level Collaborative Diagram  
Ink, Watercolour



OFFICE AND CLASSROOM STRUCTURE



OFFICE AND CLASSROOM STRUCTURE

25' X 25' STRUCTURAL BAYS ALLOW FLEXIBILITY IN OFFICE AND CLASSROOM SPACE

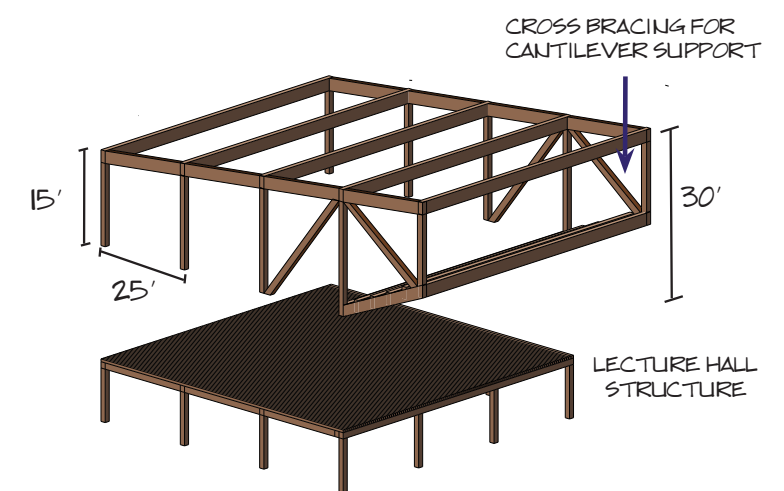
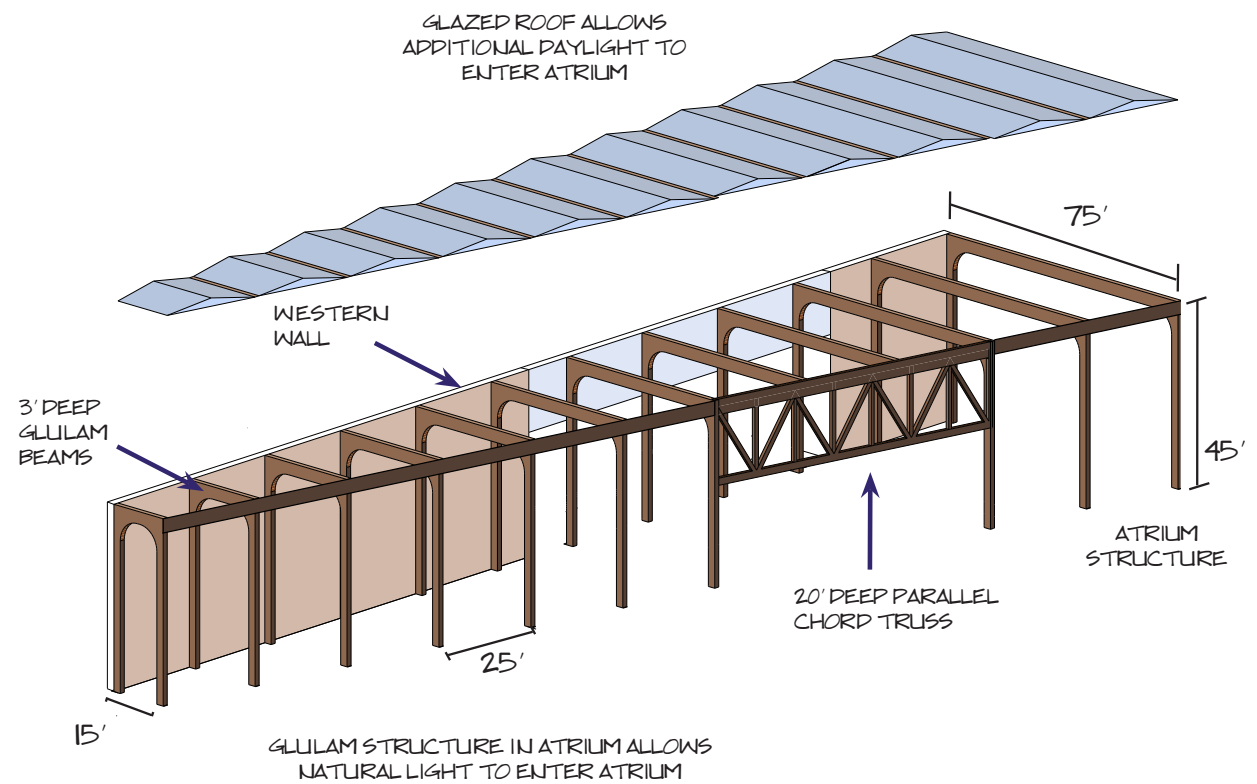
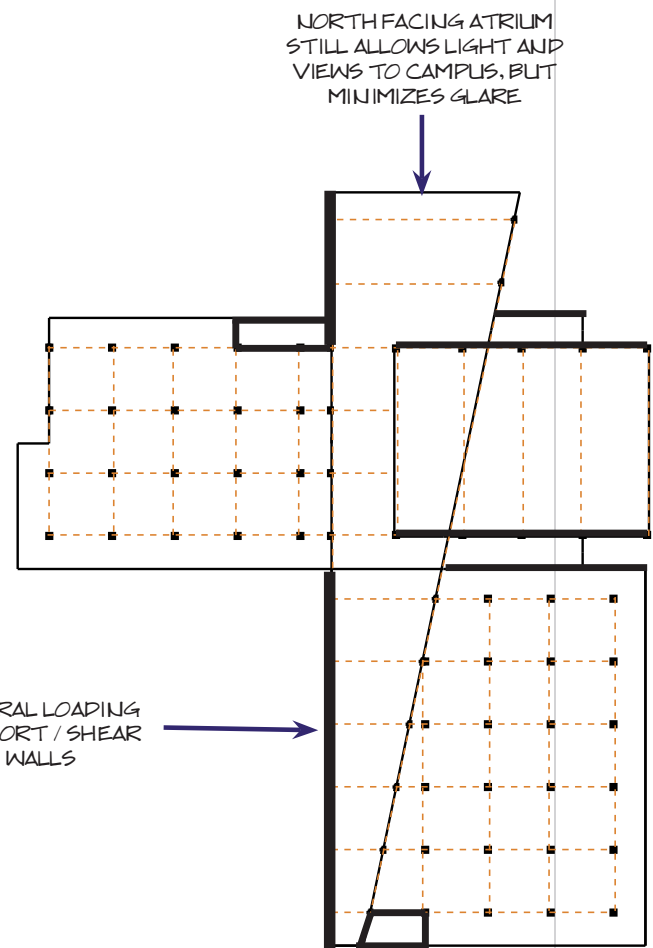


Figure 16.27 Structural Diagram Sketchup, Illustrator



Figure 16.28  
North Elevation  
Revit, Illustrator, Photoshop



Figure 16.29  
South Elevation  
Revit, Illustrator, Photoshop

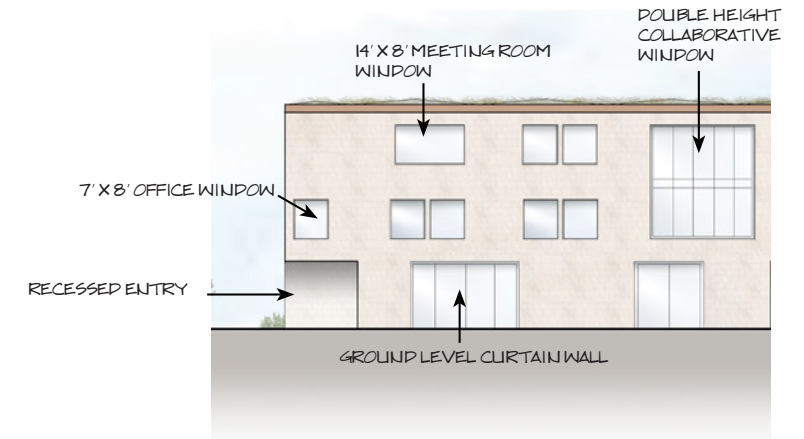


Figure 16.30  
Eastern Elevation Detail  
Revit, Illustrator, Photoshop

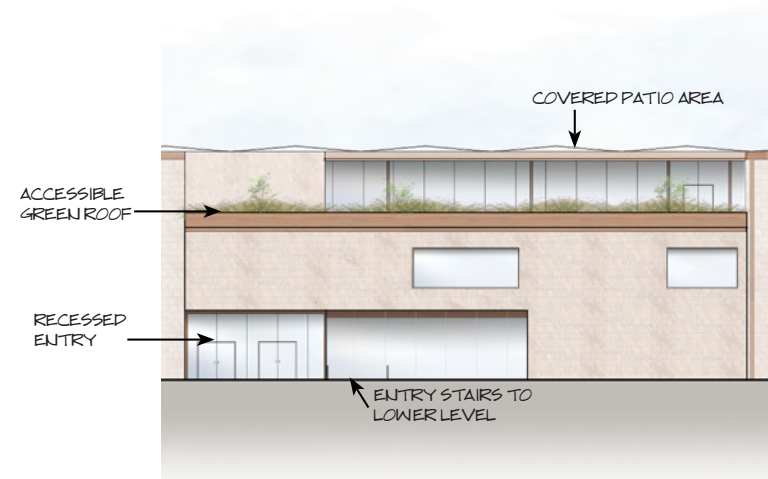


Figure 16.31  
Western Elevation Detail  
Revit, Illustrator, Photoshop

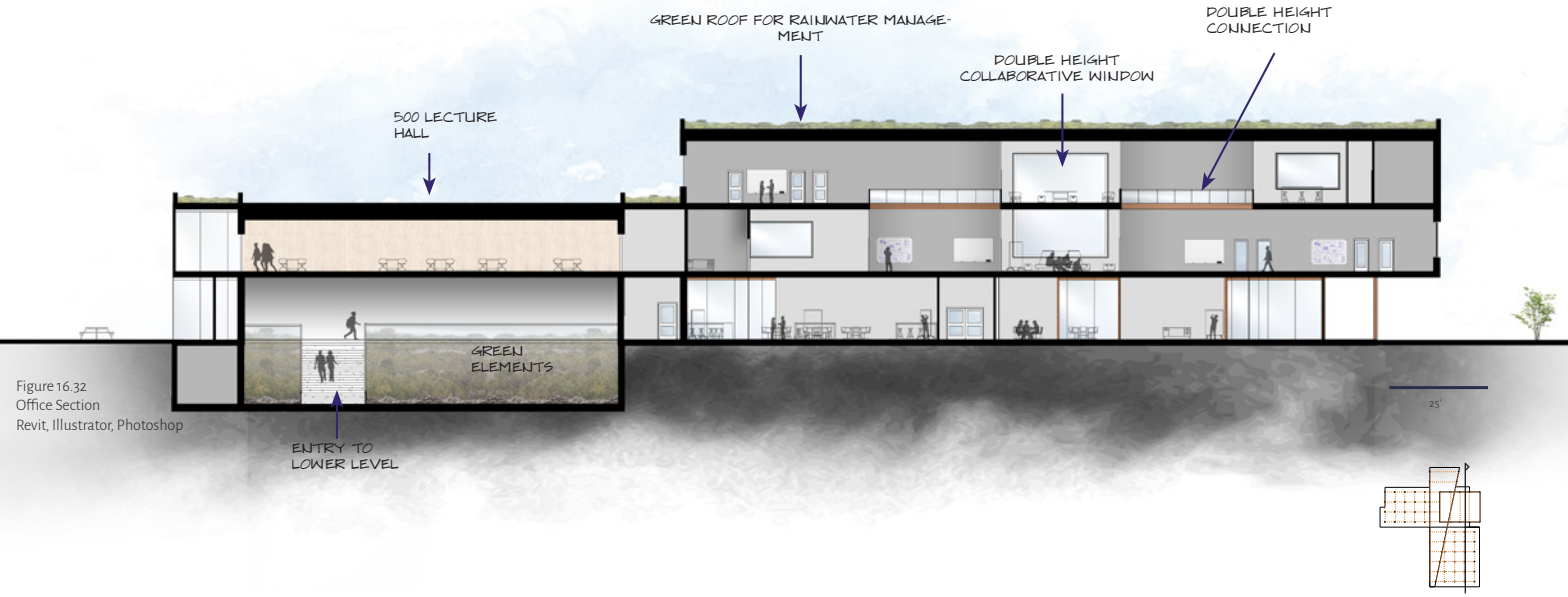


Figure 16.32  
Office Section  
Revit, Illustrator, Photoshop

Office Section

Vertical connections were emphasized strongly through the project. Office levels are connected not only by a central staircase but also through double height areas. On the third level, corridors between collaborative spaces reveal open to below areas that look into the level below. This creates opportunities for spontaneous engagement between staff members. Also in the office section, the Eastern stair into the lower level is shown. Since the staircase lowers into the ground, greenery was placed on a slope to make the space feel alive and natural. Glazing at the lower level allows the daylight to enter the space and feel brighter.

Spine Section

The Spine Section begins to define the Western wall of the atrium. A opaque wall was chosen, not only to be a structural support, but also because the views out of the building would be on the 7-11 convenience store and the large industrial Energy Conversion Centre. It also was chosen to help reduce noise in the large open area. The wall is 3 stories high, which led to a need to break up the harsh appearance. Along the main level, digital screens were implemented to allow for informational videos or images, wayfinding strategies, and general signage. To the Southern end of the building, individual work pods were placed to offer a place of work for users. Display areas were installed to place celebration of teaching and learning awards and mementos. On all three levels, green elements were introduced. On the second and third levels, windows punctuate the wall to offer natural light in the space and offer views that are less impeded by neighbouring buildings.



Figure 16.33  
Spine Section  
Revit, Illustrator, Photoshop

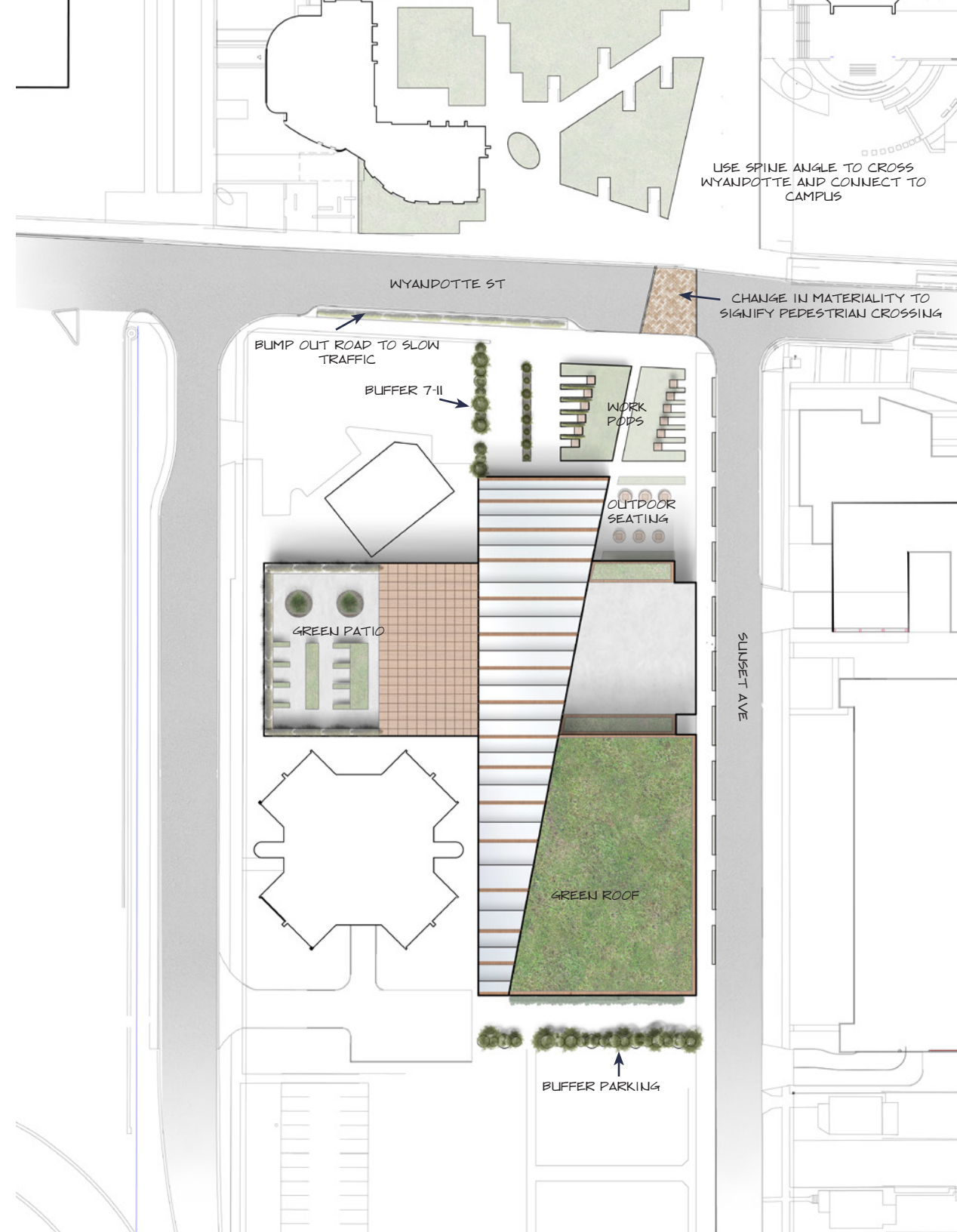


Figure 16.34  
Site Design  
CAD, Illustrator, Photoshop

The site plan intended to connect to the majority of campus located North of Wyandotte St. To do so, a textured brick crosswalk was designed. The crosswalk follows the skewed angle of the building's spine and carries that angle across the street to the pedestrian thoroughfare. In the Northern courtyard, rain gardens are implemented to deal with on site rainwater management. In the gardens, seating is embedded. Offering shaded and unshaded areas, concrete tables and seats offer outdoor work stations. To the East of the courtyard, circular seating occurs as an outdoor extension to the interior cafe. On the Western edge, trees buffer noise, sound, and sight from the neighbouring convenience store.

A rooftop patio was designed atop the second level of the Western quadrant. Shaded areas were used as an extension of the wooden atrium structure and offer areas for classes to take place. Planter boxes begin to define space in the Southwest corner to offer a more private space for reflection and study. The collaborative space on the Northwest provides the best view of campus and the Ambassador bridge. A green roof was added atop the Southernmost third level to manage additional rainwater on site.

The design of the Sunset and Wyandotte site strives to extend onto campus and create a connection that is safe for all users to cross. Seating and work space is used to highlight the educational intention of the building, and offer use of the courtyard in summer months.

In conclusion, this building was designed to connect people to one another, offer collaboration throughout, and to offer various types of learning spaces. The site design looks to bridge the site South of Wyandotte St. to the rest of campus North of Wyandotte. Through these tactics, the Teaching Support and Learning Commons building offers a new identity for educational developers on University of Windsor campus.

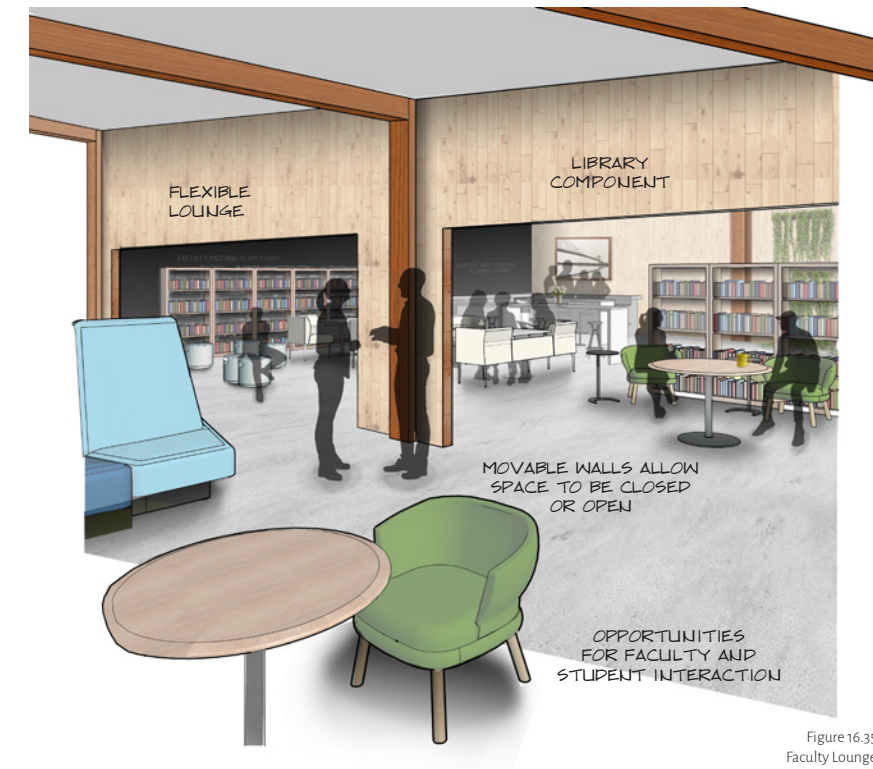


Figure 16.35  
Faculty Lounge  
Revit, Illustrator, Photoshop



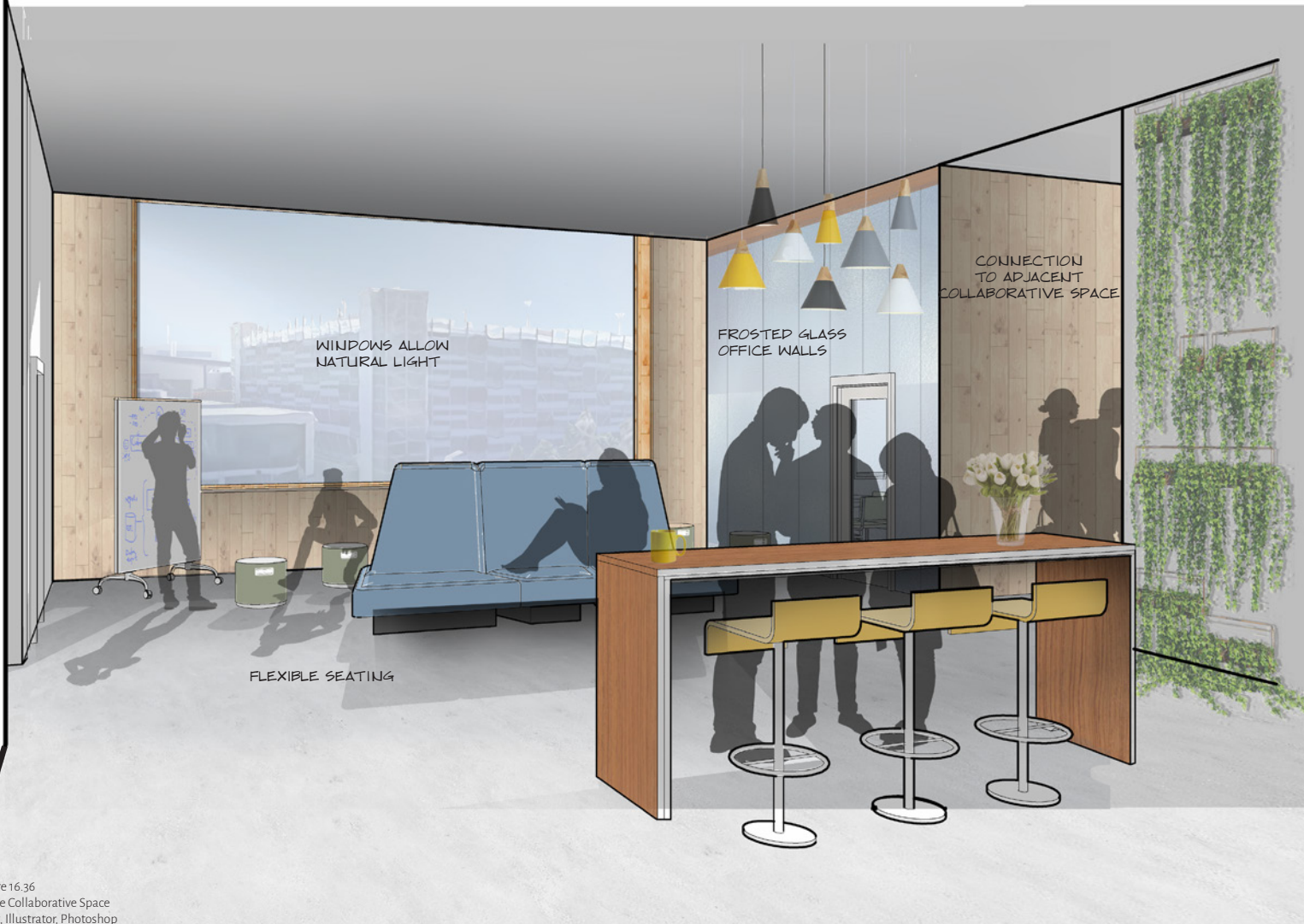


Figure 16.36  
Office Collaborative Space  
Revit, Illustrator, Photoshop

## Reflection

There were some elements of the design that I would have liked to develop further in this process. A major concern in this space would be the acoustics. In any educational building this should be a main concern, but this design would need careful thought due to the atrium design. Sound would be very impactful if the space was used as intended, so an acoustic strategy would need to be developed. Unfortunately, this was one element that did not become defined as I would have intended it to. I also feel that the landscape design in the North courtyard could have been explored further, as well as creating a stronger connection by redefining the green space North of Wyandotte. Although there were design elements that were not able to be taken to the next level of refinement, I believe the project was successful in achieving the goals of creating connections and creating identity.

# BENCHMARK PROCESS

“Learning is synthesizing seemingly divergent ideas and data.”  
- Terry Heick



Figure 17.1  
Spine Section Annotated  
Marker, Photoshop

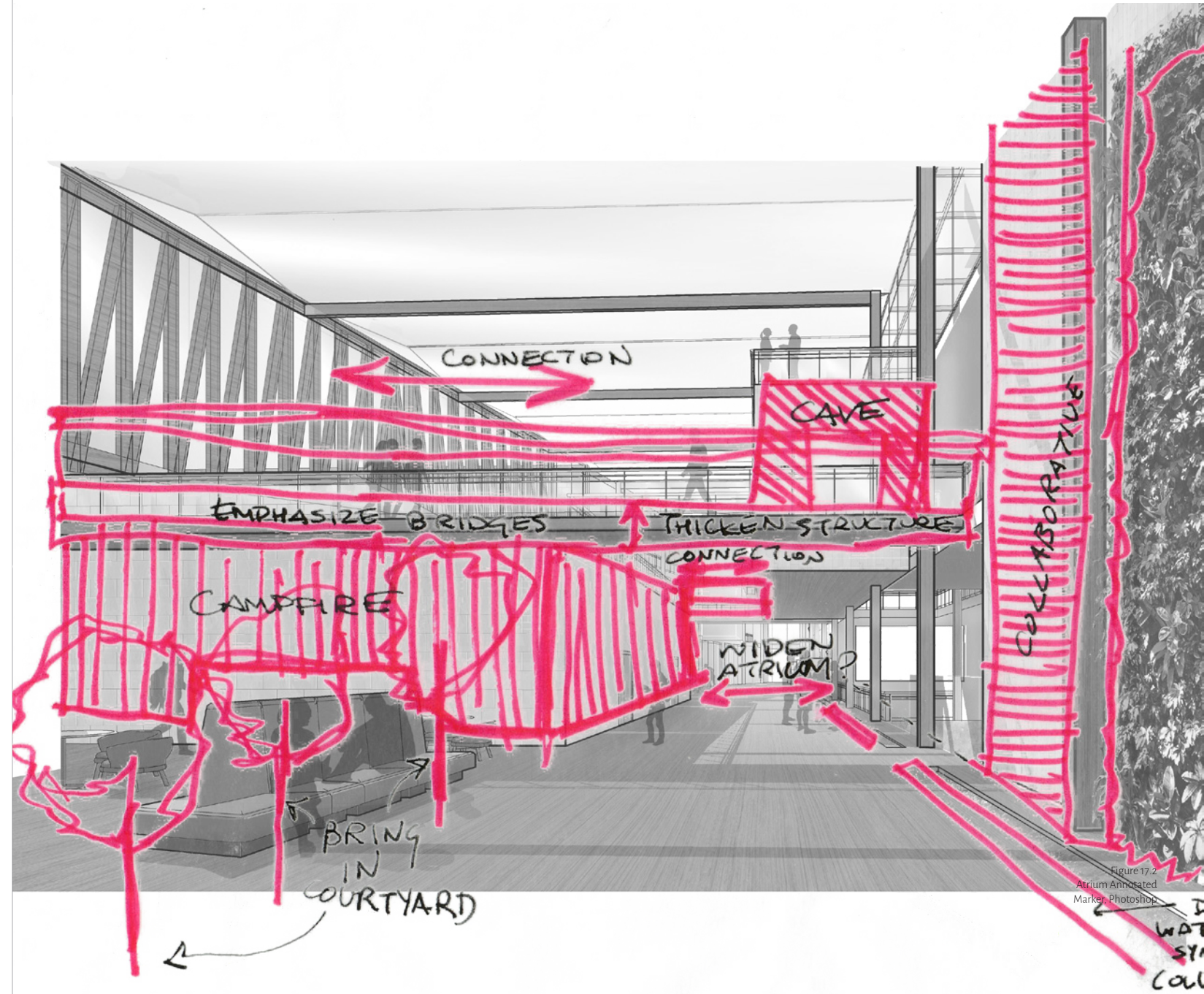


Figure 17.2  
Atrium Annotated  
Marker, Photoshop

Through this architectural thesis process, four benchmarks are used to evaluate the strength of student work and assess areas of improvement. Outside critics are brought to view the work of each project and determine strengths and weaknesses. These critiques allow for students to receive a new perspective on their work and continue to develop their ideas in the process. The final benchmark provides feedback on the overall design strategies and connections to the research completed. The goal is to create an architectural design that responds to the findings of the research.

Interior and Exterior Connection

In response to the Teaching Support and Learning Commons building, feedback was focused on the development of the design. Although there was attention to the exterior of the building and intention to create connections, the design was not strong enough to truly connect. As well, there seems to be a strong separation between interior of the building and exterior of the building. The outdoor courtyard should have a stronger design element that is reflective of the interior and the interior should be an extension of this courtyard. A next iteration could include the Spine becoming more integrated into the courtyard. This change would also strengthen the connection to campus. Although the widened crosswalk and texture would allow for more access, it seems the gesture is not strong enough. Another part of the new iteration could be a re-design of the green space North of Wyandotte St., which would provide a stronger connection to campus.

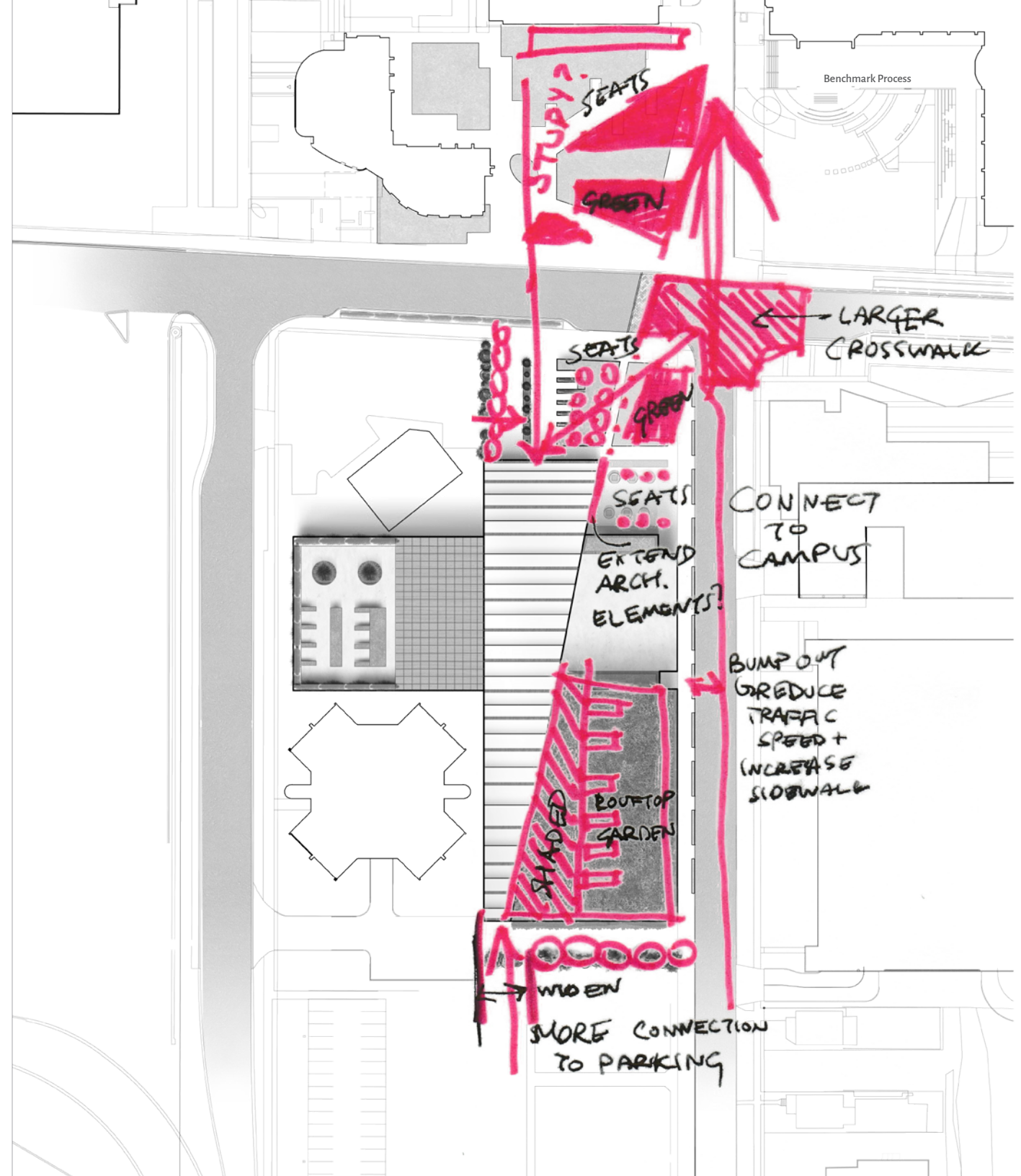


Figure 17.3  
Site Annotated  
Marker, Photoshop

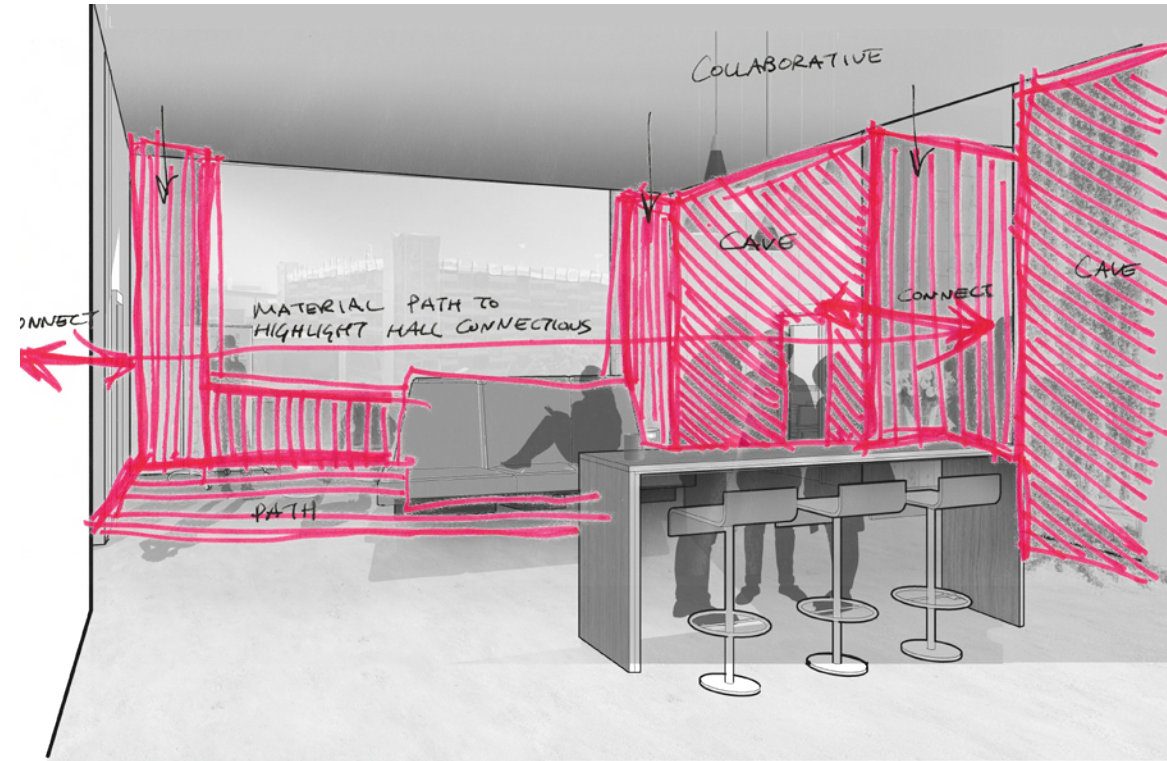


Figure 17.4  
Office Collaborative Space Annotated  
Marker, Photoshop



Figure 17.5  
Faculty Lounge Annotated  
Marker, Photoshop

### Defining Spaces

The campfire, watering hole, and cave concept was present throughout the building. This concept drove many design decisions. While this was evident through diagramming, it felt absent in the rendering of the building. To further this design feature, it was suggested that each space type could have a defined material choice that let people know what type of space they were in. Not only would this strengthen the idea, but it allows users a wayfinding tool throughout the building and will signal how the spaces are intended to be used. To create this definition color, texture, materiality, furniture, or signage could be used.

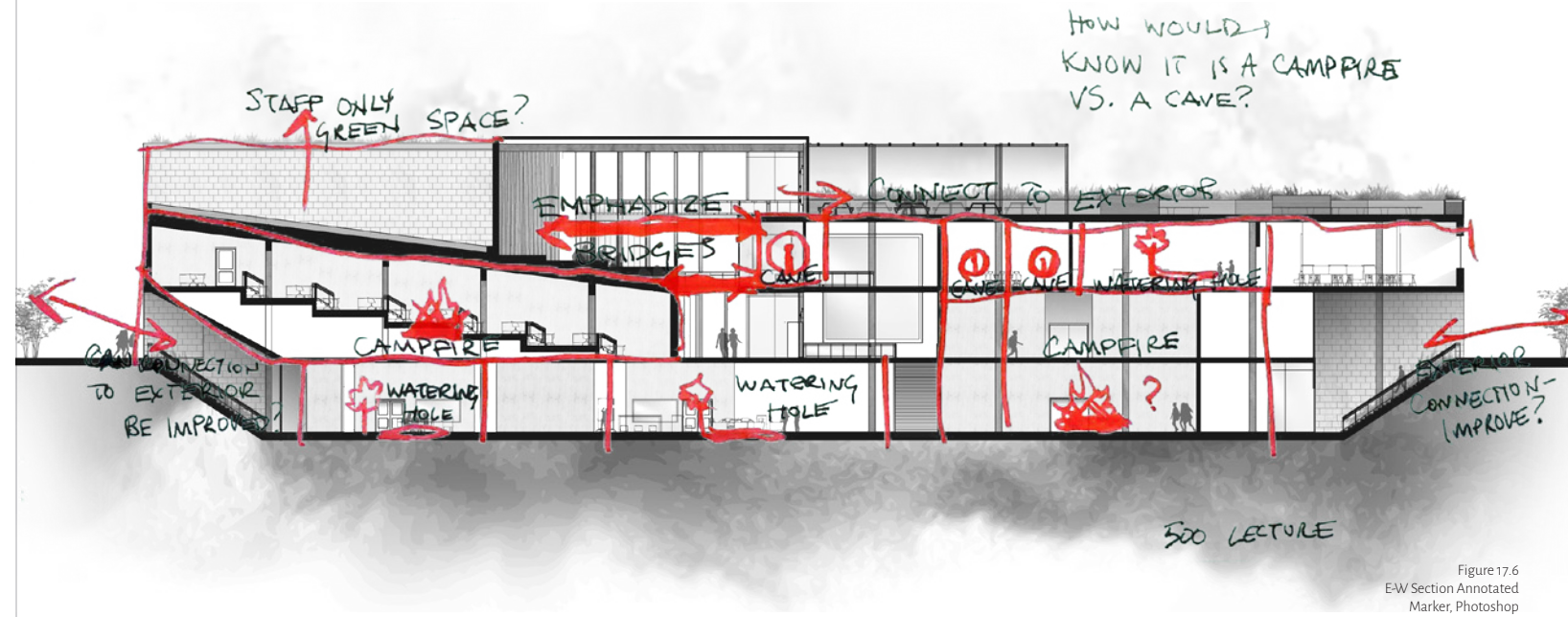


Figure 17.6  
EW Section Annotated  
Marker, Photoshop

### Elevation Celebration

Finally, the elevation was discussed. While the Northern entrance is the main entrance, the Southern entrance would also be a primary entry that would ideally have a high volume of user traffic. The Southern entry is not celebrated in the same way that the Northern entry is. Simply pushing back the entry doors does not highlight this as a primary entrance to the building. Signage or a change of materiality could be used to create a stronger gesture of entry. Similarly, throughout the entire elevation there could be a further definition of space. While the window systems respond to the interior of the building, it could be pushed to another level. By changing material colour or changing material altogether, specific details or key areas could be highlighted.

Each of these critiques are intended to strengthen the quality of the design. Since connections and the campfire, watering hole, and cave were presented as main concepts in the building, the focus is on how they were applied architecturally.



Figure 17.7  
South Elevation Annotated  
Marker, Photoshop

### Reflection

*One thing I have learned through my architectural studies is that designs are never truly complete. There is always room for tweaks and changes and added details. In school, this should never be a bad thing. We receive feedback so we can think more in depth about our design, and so we can learn more. Being introduced to new points of views, theories, and precedents helps us to make our design stronger, and this is the reason for the critique. I would love to be able to go back and continue getting even deeper into the design of this building in the future. I believe creating a stronger connection system and interior and exterior connection would strengthen the design of the building overall. There never seems to be enough time in the semester to get all the details right, but it is part of the experience to continue receiving feedback and applying it as best as we can. We learn from our mistakes, and at the end of the day, it makes us better designers.*

## CONCLUSION

“For me, educational development is more than a set of skills and knowledge, it is an approach, a mindset, and a passion. The focus is on helping others improve, rather than helping yourself.”

- Erika Kustra, Director of the Centre for Teaching and Learning

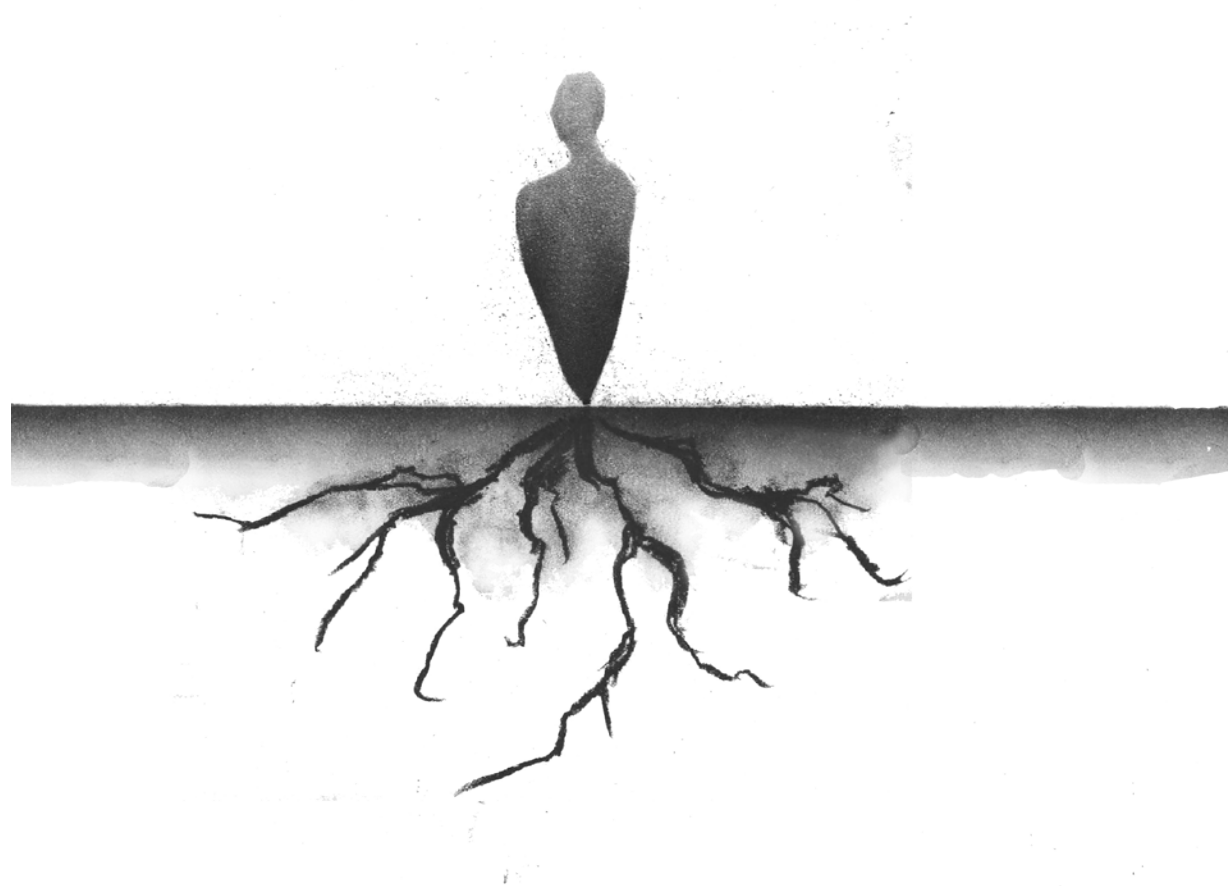


Figure 18.1  
Roots of Knowledge  
Charcoal



Figure 18.2  
Imagination  
Charcoal

All the theories, ideas, and questions explored have led to a common theme; learning is about connections. Connections of experiences, concepts, people, and places. Learning requires the connection of many disciplines to fully grasp and understand concepts, and to see the bigger picture of questions we may have. A fully explored concept is not defined simply by biology or philosophy, but in the way these concepts can overlap and work together. This connectivity also lends itself to the fluid nature of learning. Learning can cross over many disciplines, areas, ways of learning, types of expression, and places. There may not be one right answer, but merely different approaches to the question from a variety of perspectives. There is not one right answer to the question "what is learning"; it is interpreted differently by all people.

Learning happens in many ways. I personally have always been curious by nature. Because of this, I challenged myself to learn in new ways through the thesis process. I experimented with new graphic techniques; using watercolour, charcoal, ink, and other mediums to represent data and research in an abstract way. I experimented with building models at a 1:1 scale, and at a small scale to test my ideas physically. I engaged one-on-one with clients and built relationships to attempt to understand in what ways architectural design could benefit the work they do on campus. This challenged me as a designer, but more importantly, as a thinker. I began to push the boundaries of what I knew to discover new things. If nothing else was gained from this project, it was that I learned how to blend a practical thought process with a creative spirit.

Through the design process, the goal was to create a space that was connected to educational developers. Returning to where my post-secondary education began, I felt a strong connection to the project. I feel that the Centre for Teaching and Learning and Office of Open Learning are the root system of campus; they connect disciplines through pedagogy, they bring together staff and students, and the work they do nourishes the quality of education. They are what keeps the campus alive. During this pandemic we have seen the impact of the work that they do. Students can finish their degrees Online from home. Professors are learning new technology to share their knowledge with others. The tools at our disposal are being used to encourage learning despite the uncertainty and confusion. The value of the work done by educational developers is undeniable.



Figure 18.3  
The Journey of Learning  
Charcoal, Chalk

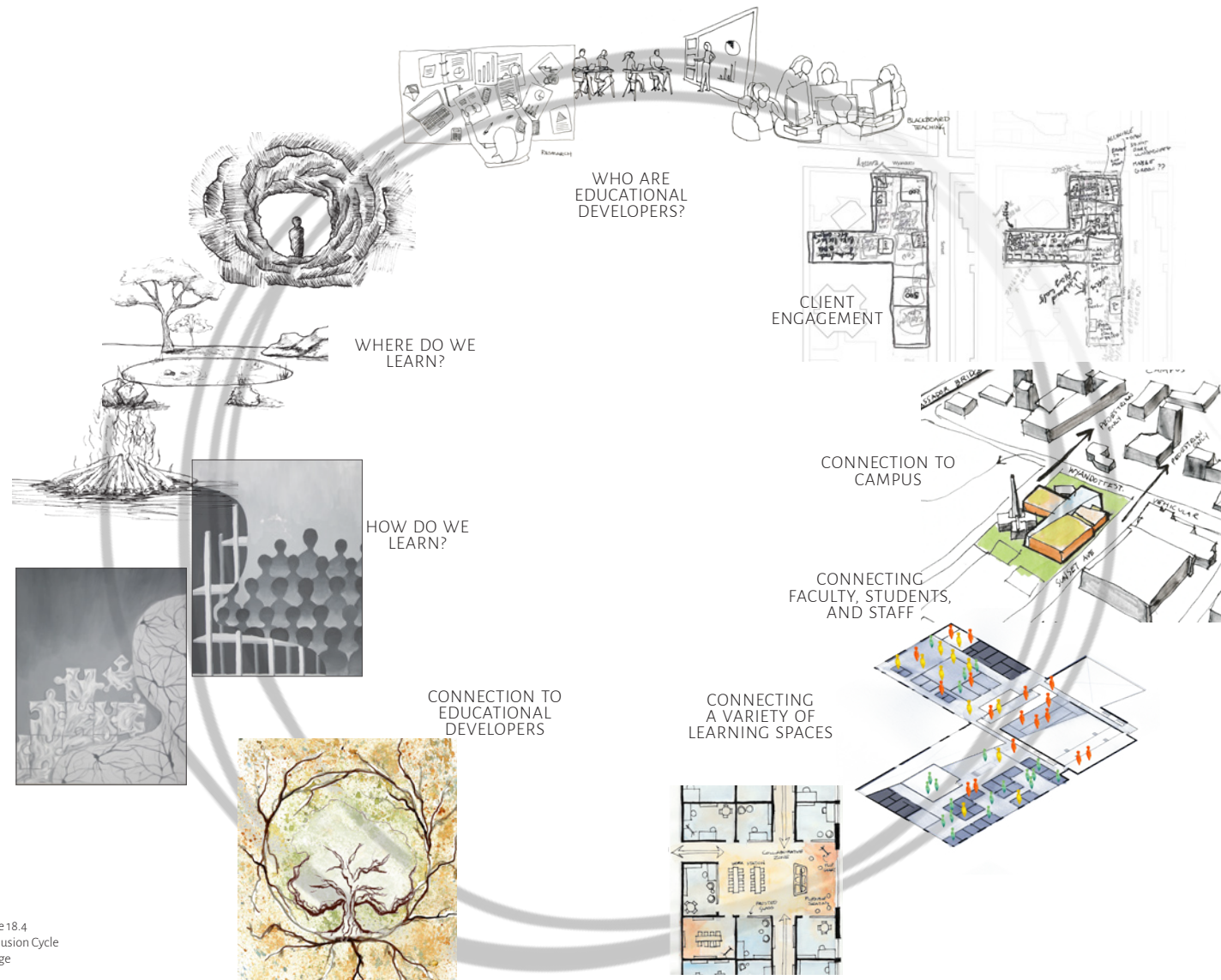


Figure 18.4  
Conclusion Cycle  
Collage

To showcase the importance of their work in this project, I tried to connect each new idea or method to another concept that I knew. Starting with my foundational knowledge of educational developers, I branched my research into asking questions about learning. This led to thoughts about where we learn, and how spatial qualities impact learning. These spatial ideas were then tested by educational developers in a workshop that formed the bases of design and identified key goals. Each goal referenced connections. Connecting to people, campus, and learning spaces were critical. To bring together these goals, the initial research was referenced to understand what design choices should be made, and the client was consulted throughout this decision making. This process was not linear. Graphically, it would likely resemble a web. Each thought or development was woven back to another piece of research or data collected. This puzzle could not have been solved without each individual piece that came before it.

There is not one right answer in learning. Some design choices had to be adapted, modified, or removed altogether before reaching a 'final design'. And still, the design could be entirely re-done and have a different outcome. This does not mean that one is correct and the other is incorrect, rather that the information was interpreted differently. The way I learned the first time around may not be the same way I learn the second time around. What I expected to design at the beginning of this process, a building that would have a 100' x 100' footprint, may not meet what I finished designing, and it surely did not account for the variety of work that occurred in between. The process of ups and downs, ebbing and flowing through research and design, changed my initial thoughts. It reshaped what I thought I knew. And that is what I believe to be the nature of learning. To always challenge what we know, to look at it from a new point of view, and to evolve our ideas with it.

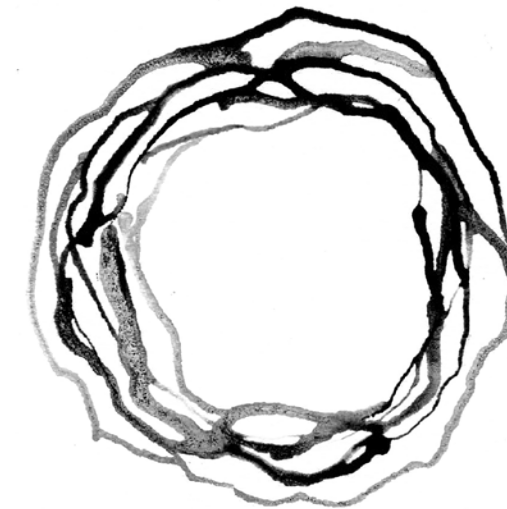


Figure 18.5  
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## Chapter 19

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Figure 16.4  
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Figure 16.5  
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Figure 16.8  
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Figure 16.9  
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Figure 16.17  
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Figure 16.35  
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