

innovationhub

Themes & Insights: Design Thinking Summary

In Support of the Transforming the
Instructional Landscape Project



Prepared for Academic and Campus Events

INTRODUCTION

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Academic and Campus Events (ACE) has recognized that students and instructors need learning spaces that meet their needs. To meet these needs, it is necessary to understand what students need out of their classroom spaces, and design solutions to facilitate learning. Beginning in the fall of 2017, the Innovation Hub undertook an ethnographic study combining long form empathy interviews, participant observation in classrooms around campus, and data lifted from a social media campaign to aid in this understanding as part of ACE's "Transforming the Instructional Landscape" project. Our team determined that **students have strong attachments to space on campus, both because they recognize the importance of thoughtfully managed space to the learning process, and because of the way memories are associated with certain campus spaces.** What follows is a summary of the three key themes, the insights within each theme, quotes that bring the insights to life, and questions that emerged out of the findings. Students' stories will be told through 'personas', which are used in the Design Thinking process to understand someone's needs and experiences. This helps guide the ideation process, and ensures that the end product meets their needs. The personas included in this report are characters created based on the research we gathered. They allow us to share student stories while maintaining anonymity.

THEME 1: Human-Centric Design

Human-centric design takes into consideration human needs that can be met by the effective use of space. For example, classrooms can be designed in such a way as to maximize comfort and collaboration among peers.

Key Insights

- 1) Students need classrooms that facilitate discussion with their classmates to share diverse ideas and learn from one another. This includes furniture arrangements that allow for eye contact and mobility (moving desks to form groups etc.).
- 2) Comfort is very important for students. Room temperature, lighting, and spaces that feel open all play a critical role in how engaged (or disengaged) a student will be in class.

Key Quotations

“In my first year seminar course, when the professor made a circle in the classroom where it was crucial for us to get to know our peers, **this really helped because it made getting to know people a lot quicker, because we were all making eye contact** so no one even had to raise their hand and the discussion. **You don't feel like a number.**” —*Domestic Undergraduate Student*

“There was one day in September on the 3rd floor...and it was 30+, very hot, because the thermostat wasn't working. It was getting very warm. When you step out you could feel a very huge change in temperature, and it **got very difficult to focus... there was no air circulation. I started feeling trapped and anxious...**my professor would be in the middle of something, and I would stand up to go get some air and then go back. I've stood in the hallway within earshot of the professor, **just to get air.**” —*Domestic Undergraduate Student*

“I love **big windows.** They make the room feel very open... I never feel like I'm suffocating.” —*Domestic Undergraduate Student*

THEME 2: Functionality of Space

Classroom spaces should be adaptable. Rooms with equipment that allowed for the versatile use of the space were frequently cited by students as favorites. They believe this allows instructors to seamlessly transition from lectures to discussions.

Key Insights

- 1) Flexible furniture, including rolling chairs and desks, helps to facilitate classroom discussion.
- 2) A room with shared tables, as opposed to individual desks, creates “natural” discussion and project groups.
- 3) The fold down desk tops found in some older campus lecture halls present accessibility issues. Their small size also limits room to store belongings.

Key Quotations

“I don't like **fold down desk tops** because if you have a stomach, the desk rests on it, and it doesn't sit flat, so I'm trying to write on this angle and it's squishing my stomach. **It's really uncomfortable.**”

—Domestic Undergraduate Student

“The best space is the WGSJ Lounge. It has those **hexagon tables** - I love them. And the chairs are really comfy.”

—Domestic Undergraduate Student

“Being able to face each other is very helpful... I've never had a class in Sid Smith where I've had good discussions because **we're all sitting in rows and you have to spin around to look at someone.**”

—Domestic Undergraduate Student

THEME 3: Aesthetics

Many students felt that working in the University of Toronto's iconic buildings was a quintessential part of their university experience. They had fond memories that were tied, directly, to these spaces. Students want to spend more time in these historic buildings.

Key Insights

- 1) The university has many appealing spaces that receive relatively little traffic compared to its more famous locales. Increased awareness of all available spaces could manage crowds and leverage existing infrastructure.
- 2) Student's praised the architecture of buildings at Victoria, Trinity, and St. Michael's college. Not only were the buildings appealing from the outside, but the smaller classrooms and natural lighting made them feel warmer and intimate.
- 3) Students remember spaces - good or bad. When they recall their time at the University of Toronto, they associate meetings with friends or academic successes (and failures) with particular buildings and classrooms. There are meaningful emotional attachments that form because of this, especially feelings of nostalgia.

Key Quotations

"Robarts is the only library that seriously publicised - **I've met people who've never been to other libraries**...There are many libraries that aren't well known and aren't occupied that much and that makes it very nice to study there. **I think it would be good for first year students to be aware of all the libraries.**" —*Domestic Undergraduate Student*

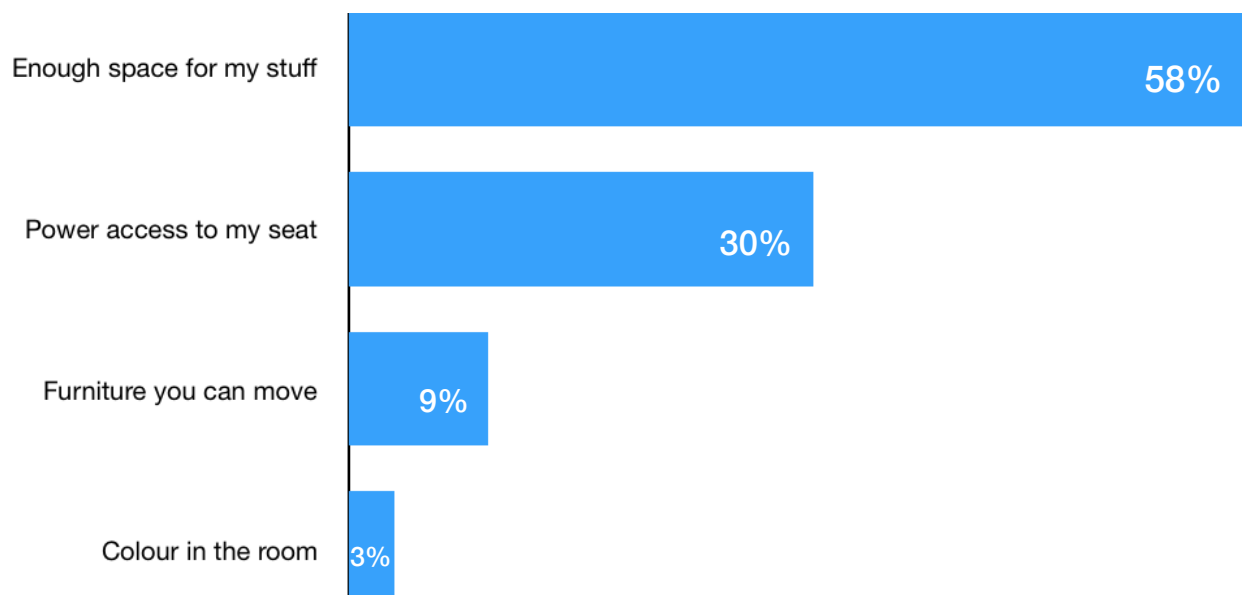
"In general I really like the classrooms in Old Vic because they have that aesthetic that I like to look for. They have **big windows** and lots of **natural light**, which is important for me. **That older architecture gives me a cozy feeling**, but at the same time the tables and chairs are modern, so that makes it comfortable. You get the best of both worlds." —*Domestic Undergraduate Student*

"When you talk to your friends and say '**remember when you used to go here**' and 'remember we met in that ugly classroom in the engineering building, and **now we're best friends**'." —*Domestic Undergraduate Student*

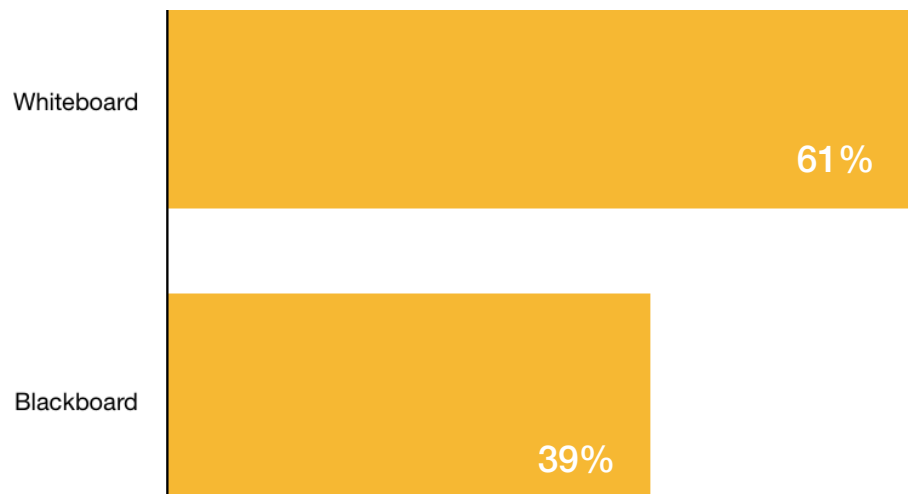
Social Media Data

The following data was collected via a social media campaign carried out in conjunction with ACE in February 2018. Students were asked to give their opinions on certain classroom design elements, and were also asked to describe their ideal classroom space. The data collected through these channels corroborates many of the themes emerging from interviews. One important departure was the emphasis on room for storing belongings in poll data, which had limited representation in interview data. While whiteboards were the preferred writing surface for students, a faculty perspective on this topic in particular would benefit the design process.

Which of the following is most important to you in a classroom?



What writing surface do you prefer in a UofT classroom?



PERSONA 1:

Cozy Chun Yin



- **Domestic student**
- **Undergraduate student**
- **Needs the right balance of comfort to focus in class**

"I really didn't like Con Hall - that place was always cold. Temperature is a big thing for me because I'm usually cold and that space is just too big."

I am doing my Bachelor's in Applied Science here at the University of Toronto and I am in my fourth year. During my time here, I have come to realize over the years that my favorite study spots and classes have been in some of my favorite classrooms and other spaces around campus – and I don't think this is a coincidence!

For instance, I really like to study at Gerstein on the second floor – it's sunny and spacious and quiet but not quiet to the point where people stare at you if you flip a page – and the temperature is perfect. There's a heater and a ventilator so it doesn't get stuffy, and there are lights and outlets on individual tables.

Some of my worst memories of classrooms had to do with the temperature of the room, believe it or not! I recall when I had to write exams in rooms that are really cold. It made it much worse. I was in Sid Smith and brought a sweater and had to put it over my face because it was so cold! It's always the little rooms that have weird temperatures because they don't regulate it. Really large rooms can get drafty like the giant University College rooms on the upper levels.

I also remember one classroom that always had uneven temperatures in St. Mike's. It's right by Alumni Hall. I had a bunch of classes there on the third floor and the temperature was never right. On hotter days, we would open the window and it was so hot. It made it so hard to concentrate! It was a tight classroom with not enough room to move around.

I have realized that it is important for me to have the right temperature in class – not too cold or too hot – where I am comfortable enough to focus, yet not so comfortable that I fall asleep! Call me Goldilocks.

PERSONA 2: Interactive Irwin



- **Undergraduate Student**
- **Domestic Student**
- **Learns more through discussions than lectures**

"I really liked to be seated in groups - or just not in rows, you know. Sitting in rows with your fold-up desks make you feel like a number in a class"

I am majoring in pharmacology with a minor in economics at University of Toronto and am now in my fourth year. I have always got the most out of a class from the discussions with my classmates and the professor. I want to learn from the interesting discussions we have in class rather than being taught like I am just a number in a big class.

I hate fold-down desks. When the tables are stuck to the chairs – it's so annoying because it's hard to get in and out of chairs during a class. You distract everyone around you as well. When we break into a discussion, it become difficult to move through these stuck chairs and tables, and you're trying to form groups but just end up turning around to the face somebody and it turns into such a hassle.

I like those hexagon tables – I love them. That kind of arrangement is just so conducive to my learning. When the chairs are not fixed, I get the freedom to move around and easily connect with someone. When you're in a more interactive learning environment, we are all making eye contact so no one has to raise their hand and the discussion feels more natural. It also helps to be able to see everyone you're in class with- it helps you keep engaged and participate. If I am sitting in a row, and someone sitting behind me participates, I just zone out. I can't concentrate on what they're saying.

Over the years, I have realized I have learnt most through discussions and interactions with my peers. I want to be an active member in the classroom, not just a passenger!

PERSONA 3: Nostalgic Nanaka



- **Undergraduate Student**
- **International Student**
- **Wants a “real university experience”**

“I wanted the University of Toronto experience – like Harry Potter!”

I am an international student in my third year studying economics at the University of Toronto. When I first visited the campus with my parents, I fell in love with the old buildings. We don't have anything in this style back home. It reminded me of something I would see in the movies. I wondered what it would be like to attend classes in them.

As a student, it turns out attending classes there is pretty great! In fact, it is one of the most memorable parts of my experience here. I can send photos to my friends back home and they can't believe I work in such beautiful old buildings. The classes themselves are quite cozy too. This is especially nice in the winter, though they can get drafty around the windows. Usually buildings like Old Vic have really large windows, so the rooms are well lit without fluorescent lighting. I love the décor- the book shelves, paintings, and leather furniture. Some rooms are outfitted with newer furniture as well.

When I first arrived here, I remember meeting with members of the first club I joined in the classrooms at University College. When I walk past front campus, I have fond memories. We live off campus now, but this is where we bonded. Seeing University College in pictures online brings back those memories too. It's nice to think that, 10 or 20 years down the road, these buildings will still be standing and my memories will come rushing back whenever I see them.

I think I'm quite fortunate to have gone to a school with this sort of history. Now, I'm making my own history here too.

CONCLUSION

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We have completed step one of the Design Thinking process, Empathize, in which we “learn about our audience” by listening to the needs of students, and step two, Define, in which we “construct a point of view” based on students’ needs. After generating the student personas based on direct quotations, and identifying students’ needs, we are better equipped to think about three core questions:

- 1) How can we take a human-centric design approach to spaces that are inflexible?
- 2) How can we modify existing spaces to ensure that they can adapt to the demands of students and instructors as they change between classes and over time?
- 3) How can we leverage the unique atmosphere and feel of iconic spaces at the University of Toronto to further enhance the learning experience?

Now that we have framed the challenge through these three questions, next steps would involve moving into the remaining phases of the Design Thinking process—Ideate, Prototype, and Test—in which solutions are generated, prototyped, and tested through user feedback.

Design Checklist

The following checklist can be used to design or redesign spaces to ensure they meet the above design principles:

- ☐ Seating allows for the creation of “natural” discussion and project groups.
- ☐ There are easily accessible outlets.
- ☐ The space allows students to face each other.
- ☐ Desks and chairs can be rearranged to suit the needs of the class in question.
- ☐ Desks and chairs are accessible for all body types.
- ☐ There are open windows or natural bright lighting.
- ☐ There are plants.
- ☐ It is an open and breathable space.
- ☐ The space is a comfortable and appropriate temperature for the season.
- ☐ There are comfortable chairs and enough tables for students to do work.
- ☐ There is bright lighting.

Student Contributors

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