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UNIVERSITY OF
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A Space for Student Well-being
Redesigning the Clara Benson Pool Gallery

Themes and Insights: Design-Thinking Summary

UNIVERSITY OF TORONTO
FACULTY OF KINESIOLOGY &
PHYSICAL EDUCATION

UNIVERSITY OF TORONTO
LIBRARIES

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Introduction

Students want spaces to study and connect. In the National Survey of Student Engagement (NSSE), 35 percent of respondents from the Faculty of Kinesiology and Physical Education (KPE) wanted more student-friendly places. Students have also said the same in surveys, Town Halls, and meetings.

Thus, as part of the Clara Benson and Warren Stevens Building renovations, KPE is redesigning the Benson pool gallery into an accessible student space. To ensure it is truly student friendly, they partnered with the Innovation Hub to learn more about students' needs and ask: *How can the Benson pool gallery be redesigned to offer an innovative multi-use community space for students?*

To find answers, the Innovation Hub listened to students' stories about how they use places on campus. We found four aspects of well-being that are connected to space: physical, emotional, social, and mental well-being. All are interconnected and influence one another.

Students interact with all four aspects when they enter a space. A **one-stop shop** accommodates their physical needs, while a **home away from home** comforts and reduces stress. When a space encourages social interaction, students find **room to connect** and build strong relationships. But even when students are not actively interacting, spaces can dispel their feelings of isolation: **being alone together** motivates them and gives them a sense of community. A holistic space combines these aspects to improve students' overall well-being.

In this report, we describe these aspects and related insights. We also use them to create design principles, a design checklist, and user personas that will help the Clara Benson pool gallery designers build a space that fills students' needs.

Methods

Innovation Hub designers interviewed and observed students to learn how they move through campus and use current spaces. We spoke to seventeen students at many levels (undergraduate to PhD) and across many disciplines. To obtain an authentic and comprehensive understanding of their experiences, we sought diverse participants, met them as equals, and encouraged them to speak in depth through empathetic listening and questioning.

By starting from students' stories, and using them to inspire design, the Innovation Hub reveals needs that might otherwise be missed. A thorough exploration of the "problem space" takes us beyond the surface "what" questions to the underlying "why"s and "how"s. We have conducted these in-depth inquiries since 2016 and built a story bank containing hundreds of student narratives. We drew upon some of the recurring themes to supplement the insights in this report.

Themes and Insights

Through these methods insights were further organized under four key themes: **One-Stop Shop, A Home Away from Home, Room to Connect** and **Being Alone Together**. These themes structure the following sections of the report, in which we present the results of our analysis of interviews and additional data.
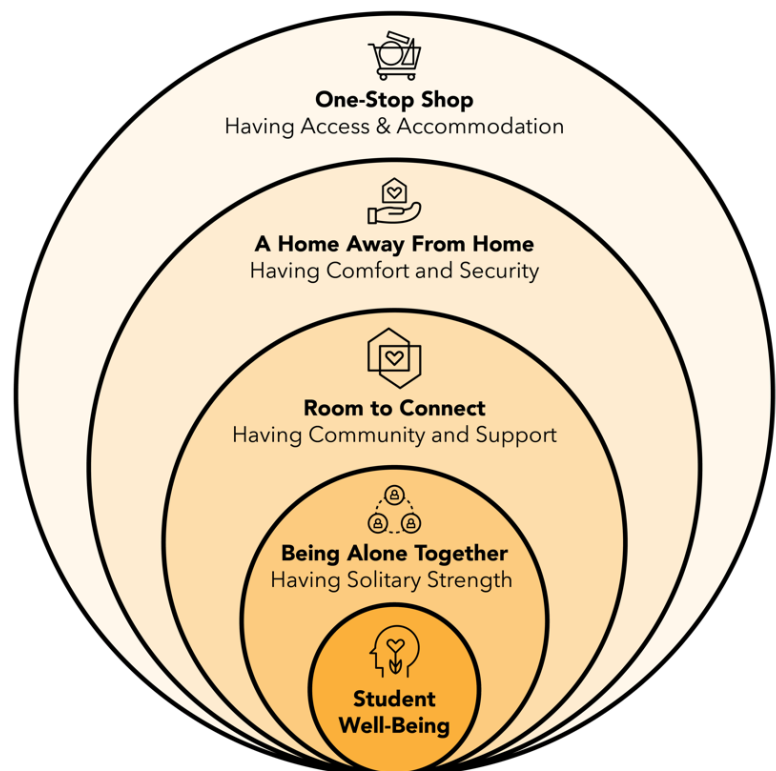

Figure 1. Visualization of four themes

Theme One: **One-Stop Shop**

Students spend long hours on campus. Many have multiple—and long—gaps between classes, and different students have different needs at different times. Some want a relaxing space to lie down and nap; others a place to hang out; and still others a space to study and work. To accommodate all these needs throughout the day, students find themselves migrating around campus: going to the library to study, moving to the food court to eat, then walking to the lounge to hang out. This inconvenient wandering costs students precious time and energy.

Free to Be Me

Students want to control how they act in a space. In home-like settings, they are free to act as they wish, without worrying that they are being inconsiderate of others or breaking the rules. But many current spaces make them uncomfortable by dictating their behaviour: they feel restricted because they are concerned about intruding on others and about violating the norms of the public sphere. For example, in the library, a student must remain quiet and relatively still and sit at the designated desks, using the allotted amount of space.

> *"At home … [it's] just really free. I could open the window, or I could close the window. Or I could lie down, or I could sit, or I could stand and do my work."*

> *"Home is … really free and flexible …. You can sit in weird positions or … do weird things and nobody's gonna say anything […]. You don't feel like you're intruding on other people …. Or you don't feel like you'll be too loud or too bothersome to people."*

> *"Hav[ing] the freedom of movement. Because you can't really move the chairs inside the designated libraries too much."*

> *"If there's couches … then you're more free to lie down or be in whatever position, but if there's only chairs, […] the only thing you could do is sit."*

> *"If you're at home, you can be loud or play your music, take calls …. Sometimes I feel like in libraries, I don't want to get up to go to the bathroom, because it's such a loud process. So [at home], you can freely go to the bathroom."*

Student spaces should let students feel free to be themselves without overly worrying about monitoring and restraining their own actions.

Creatures of Comfort

Students may spend long hours in a space, and they want to be comfortable while they work and play—whatever that might look like. They want furniture that accommodates different physical needs and styles of working. Some students prefer to sit, others to stand, and some to do both. And depending on their bodies, students need to adjust furniture to use it comfortably.

> *"At Daniels [Faculty of Architecture], there's different-height tables. So […] if you need to stand up then you stand up. When you sit down, you sit down, or need to lie down, you go on the couch and you lie down."*

> *"In my home, we have like this countertop that's pretty high space. So sometimes you can stand up if you feel like you've been sitting for the whole day and you want to stand up."*

> *"So I find that in actual libraries, like Gerstein, downstairs, as well as Robarts in the study rooms, the desks are really high. And that makes my shoulders really hurt after a long time […]. So I like somewhere where you can adjust the height of the seats."*

> *"Those benches are metal if I recall correctly …. Those are the most uncomfortable things to sit on …. And there's no one ever sitting on them …."*

To be a one-stop shop, a space needs to make students feel comfortable through long hours. It should accommodate varying physical needs and working styles.

Access to Basic Needs

Students have basic needs throughout the day: for example, water, washrooms, power outlets, and microwaves. When these resources are readily available, students can remain in a space for long stretches without having to move from one place to another, chasing resources.

> *"A study spot … [where there is] water availability … [so I] can fill my water bottle. You get thirsty."*

> *"Usually, 'cause I pack food, if there's a microwave, I like to study near microwaves on campus. As well as a washroom not being a five-minute walk away from the study spot is pretty nice too."*

> *"I always make sure there's a plug in the spot that I go to or [that] my laptop [is] charged."*

Spaces that provide resources within a convenient distance cater to students' basic needs. Otherwise, students must migrate for simple tasks.

Food to Fuel the Mind

Long hours of studying are fuelled by food. Thus, students often decide where to go based on whether they can eat. Many libraries do not allow food, so students must either leave or sneakily eat. They prefer spaces that allow eating, to save the hassle of moving around for a meal or snack.

> *"The Emmanuel College [library] … they have a little seating area and I just sit there and eat my lunch, and then I can go into the library, because you're not allowed to eat in the library. It's nice. So I can sit, eat, and then go in, which I like."*

> *"[In the Knox Library], you can eat candy from the front desk. And there's a kitchen [on] the first floor, so you can make tea and whatever and eat your food. So it's pretty nice."*

> *"Depending on the time of day or if I'm feeling like eating, [I] think about if that place allows food or if I can sneakily eat because … I don't think you're allowed to in Gerstein, but people always eat snacks there. So you think about [whether it's] appropriate to be eating there."*

> *"They're pretty strict on snacking, so I'm not going to go there. Even though I really like that space … I want to eat something, so I'm not really going to go there too often. So that's pretty limiting."*

Students think about whether they can eat when weighing the attractiveness of spaces. If food is prohibited, they must either sneak it in or waste time moving around.

A one-stop shop fulfills students' needs throughout the day. These needs vary and include studying, relaxing, sleeping, and socializing. Students want the freedom to accomplish all these tasks while acting like themselves and without worrying about intruding on others. They also want to feel comfortable while working and relaxing, especially since they may stay in one place for a long time. By accommodating basic needs—including food—spaces allow students to work and rest without constantly migrating to meet the need of the moment.

Theme Two: **A Home Away from Home**

Students want to feel the comforts of home on campus. Given the long hours they spend at university, it is effectively their second home, and they want it to feel as relaxing as the term would suggest. Through décor, ambiance, and a sense of welcome, spaces create an atmosphere of "hominess."

Space to Breathe

Students feel comfortable in spaces where they can breathe and calm down: open areas with pleasant colours, plants, greenery, large windows, and natural light. They also enjoy café-like environments with light music and paintings.

> "Natural lighting, plants …. The colors of the room are important too. I feel like super bright colors are a little distracting for me. Maybe something a little more mellow. Music like light music."

> "This study room, or downstairs in Robarts: there's not really any windows and it's just very dungeon[-like] …. I just feel really sad in there. Usually, just like libraries in general."

> "There's a lot of paintings on the walls …. It looks like an actual house, which I like. And it's quiet. So that's where I would go and relax."

> "There's a lot of natural lighting and plants … and there's music. I think … the lights and plants … and the music just make it very comfortable to be in."

> "The ceiling [is] too low …. I feel like I can't breathe."

By providing an open area connected to nature, spaces give students a space to breathe and relax.

Stress-free Zone

Stress amplifies stress, and students associate some spaces on campus, especially libraries, with doom-and-gloom atmospheres. They prefer relaxed environments that accommodate more than just schoolwork, so they can zone out or work on non-school-related projects if they want.

> "Just somewhere that's lively and people don't look like they're stressed and want to cry over there. Which is just kind of what you get in the library sometimes."

> "I like going to those comfortable spots like Victoria College, like The Cat's Eye [a student-run lounge], and I do my work there …. I feel like for me, when I'm in a library, it's just like focus on schoolwork; it gets more stressful for me. When I'm in a comfortable space doing my work, I feel like I can get through it. I think it's just the atmosphere that makes it feel a little better."

"If I go to like a really quiet library, I don't feel relaxed because everyone's stressed …. You can feel it"

"Knox […] I think it's … the best library on campus. That's the least depressing. I don't know why everybody likes to study in Robarts, and they're always like, 'Let's go to Robarts.' It's Robarts; you could just feel the desperation and sense of doom in the air."

"I just think the vibes in Knox [are] good. Because it's … a nice environment."

Lively, comfortable places let students escape from stress-filled libraries. A relaxing atmosphere not only helps them leave school behind, but also puts them in a better mood when working.

Allowed to Be Here

Students often feel uncomfortable or unsure when entering a space, because they do not know if they are allowed to be there. Not finding clear signs that grant permission, they assume spaces are restricted to members of a particular college, faculty, or department. Thus, they bar themselves from spaces that seem attractive, spend less time in them, or enjoy the experience less.

"There's the lounge, [but] I don't think we're allowed to use it. I think it's the Master's student[s'] lounge or whatever."

"I'm not sure if I'm allowed to be there, because I'm not part of Vic[toria] College."

Granting explicit permission to use a space makes students feel welcome. They stop worrying about being kicked out and know they can always come back.

Home is welcoming, stress-free, and a place where you can breathe. Students look for that on campus, in both physical features and psychological environment. They are attracted to places where they feel at home.

Theme Three: **Room to Connect**

UofT is the size of a small city. Lost within the population, students sometimes feel like mere numbers. They follow their schedules from one place to another, leaving little time to make connections. Many students report a sense of isolation and loneliness and feel like they do not belong. To build a support network, students need opportunities to talk and hang out with peers. Stronger relationships will help them maintain their mental health.

Hello Friends! Are You There?

Between classes, students either study or socialize, but though the university has many study spaces, it has few social spaces. Students want more places to hang out with peers and build friendships. Through making connections with others, they develop a sense of belonging, which is crucial for anybody spending long hours on campus, and especially so for those living away from home.

 "It comes with the issue of … not knowing a lot of people on campus and … not developing any relationships there. So it's kind of sad."

"I feel like there's no place to just relax or talk to … or meet people …. It's like, now I'm done class …. What am I supposed to do? I don't know. So let me just go home."

"Because everyone is so stressed about schoolwork, especially when it's midterm season or there's a bunch of essays to do. It's good to have a break. And to take a break, you need [social] spaces to be in if you're on campus. So having those spaces would help reduce the stress. And you get to live your student life a little better. Instead of just focusing only on studies, you'll have time to make friends, strengthen bonds."

"It's a chill space [where you can] just chat with friends … or meet someone real quick, because people come in and out from there."

"There's … a lack of a sense of the student experience and places where we could enjoy each other's company and feel like we belong somewhere."

"I know a lot of KPE students go to the [Benson Lounge] in between classes. So I know that if I walk in, I'll always recognize somebody and I can talk to them …. We can do whatever it is we need to do there because it's a common space for students …. All KPE students go there."

Because they have few opportunities to make connections, students feel isolated. They want spaces designed to help them meet each other and belong.

Birds of a Feather

Shared activities and interests build a sense of community. Many students find their sense of belonging by joining a group or getting involved on campus. Sports teams are one example, but there are many teams and shared activities around which to build a community. Recreational amenities like foosball and ping-pong help students interact with others and find familiar faces.

> *"People play […] movies on the computers. There [are] ping-pong tables, so if you're getting … stressed, then you [can] chill with friends for a hot sec and play some ping-pong or foosball …. In [The] Cat's Eye, there [are] billiards and air hockey."*

> *"And I think there used to be like TVs there too, so people will connect their computers and watch movies at night."*

> *"Another thing that was actually really helpful was when there [were] activities, like physical activities; It might just be going for a walk, or some sort of movement or yoga or a mindfulness session."*

> *"The commuter dons are normally there, so they're always having an event where we can just chill and relax a little bit. I think last time it was puzzle day …. It was a drop-in event where everyone could just come in, do puzzles, and we had snacks and some music and … beanbag chairs. It was just very laid-back and fun."*

> *"So I feel like that's what forms that sense of community … because of the common interests, and you want to share and spend your time with people who relate to you and … enjoy the same things that you do."*

Shared activities connect students. They may be encouraged through physical props, like TVs and foosball tables, or through other signs. For example, the Benson Lounge had pictures of UofT sports teams and a calendar of upcoming events.

Theme Four: **Being Alone Together**

Students want to be an active part of a group, but they also want to be alone without feeling isolated. Even when they are studying or sitting by themselves, they get a sense of comfort from knowing that other students share similar experiences. This quiet connection normalizes their experiences. Rather than feeling like their challenges are individual shortcomings, they see them as part of how it feels to be a student.

Motivated in Tandem

Students want to see other students studying, so they will be motivated to do their own work. These mutual, yet individual, efforts create an energizing atmosphere of collective experience. Psychologists call this social facilitation and showed that people perform better on individual tasks when they are surrounded by others.[1]

> *"I like places that have large tables and multiple tables [so] I can see other students working, because it also motivates me to do some work; if I see others working, [...] I'll just feel bad if I'm on my phone the entire time, so it helps me to put my phone down and do some work."*

> *"I see people doing their work and I'm like, 'Yeah, I should be doing that.' So I really need to see people doing their work to motivate me."*

Even when students do not interact, open spaces with large tables help them feel the presence of others. They are more motivated to work hard when others are modelling that behaviour around them.

Part of Something Bigger

Being surrounded by other students not only incites motivation, but also a sense of comfort and reassurance in knowing you are not alone. Students feel less isolated when they can see other students, even if they choose not to actively interact. This sense of familiarity is particularly pronounced when they think surrounding students share similarities with them, for example through faculty or program affiliation.

> *"It was nice to be able to go to a quiet space where other grad students were, and not be expected to engage in a conversation, and also not being asked questions …. And not be alone, and bonding with other grad students if they felt like it, it made it feel more like a community that way."*

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[1] Mcleod, S. (2011). Social Facilitation. Retrieved from https://www.simplypsychology.org/Social-Facilitation.html

"I felt really comfortable [at the residence study rooms] …. I felt comfortable there because it's … [a] student atmosphere. I feel like students … share a common ground … [so] all students can come together."

"Because you guys kind of go through the same things, and so you can relate with each other. And when […] you're suffering together, when you succeed together, there's kind of that feeling of you feel united in a way […]. That's what a community is about."

"[The student lounge in the Kelly Library] is … a nice open space where all the students are, and you [don't] feel like … a lonely little commuter."

"I am somebody that likes … to see other people. I don't really like isolated places."

"Different people would have different places where they feel like they're in their comfort zone. So I think it really depends on your program. Because for example, […] engineering students will feel better if they're in [Galbraith Building] or [Sandford Fleming Building]. And … Health Sci[ence] students feel at home in Med[ical] Sci[ences Building] …. Architecture kids usually hang out in the architecture building …. I guess people do that because they feel like they're with their people."

A comforting atmosphere puts students at ease, especially when they feel like they are relating to others without having to interact. This feeling is strong in dedicated spaces that are exclusive to students, rather than open to the public. Residence study rooms and student lounges are two examples.

Being together does not have to be an active event. Students also derive comfort from being collectively alone. When they are surrounded by other students, they feel like part of a community, and when those other students are working, they feel motivated to work as well.

Personas bring students' stories to life. While they describe fictional characters, they are based upon real experiences that students recounted in interviews. These are the people spaces should be designed for—how well do the design ideas match their needs?

Carl

- **Commuter**
- 2nd Year Domestic Student
- Studies Kinesiology

I'm a second-year KPE student. I live in a Brampton apartment with two roommates, and I work part-time as a barista. Recently, I joined an intramural volleyball team with my buddies and classmates. We play once a week.

It takes me 1.5 hours each day to commute to campus. That includes walking, riding the GO bus, and taking the TTC. My classes usually start at 10 a.m. and finish around 5 or 6 p.m. Because it takes so long to get home, I usually leave as soon as they're done.

While I'm on campus, I go to classes, hang out with friends, look for places to study, and eat. I enjoy cooking, but it's really hard to wake up early enough to prep lunch and still catch the bus. So I usually end up looking for cheap and convenient food, like the food trucks. When I do get my act together and bring my own food, that also wastes time, because I have to wander around looking for a microwave, and the dining halls are usually packed.

Between classes, I hang out with two close friends, but unfortunately our schedules don't often match up. I would like to meet more people, but I'm an introvert, and I struggle to talk to new people. There's no good opportunity to do it: everywhere on campus feels really intimidating. Although this is my second year, and I've tried to join extracurricular activities, I still feel disconnected when I'm at UofT and I don't feel like I belong. My family lives back in Calgary, and I only get to visit once a year. I often feel lonely.

When I don't have anyone to socialize with, I spend time between classes either studying or watching Netflix on my phone. It can take a while and a lot of wandering to find a quiet place that has comfortable seating and isn't too crowded.

Though I would like to get in better shape, days on campus just feel so long. I'm exhausted and have no motivation to work out. When I go home, I'm so out of energy, I just zone out by playing video games or watching TV.

My UofT experience has been okay so far, but I wish I could make more of my time while I'm here.

Ruby

- **Lives near campus**
- 4th Year International Student
- Studies Life Sciences
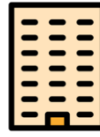
I'm a fourth-year student from China studying Life Sciences. After graduation, I plan to go to medical school. I feel a lot of pressure from my parents to succeed, because they spent a lot of money to send me to study in Canada, and I don't want to let them down.

Luckily, I live downtown near campus, so I can get to and from school quickly. I often study at Robarts until pretty late at night. When I'm really busy, like during exam time, I stay past midnight. I feel the pressure this year because I'm applying to med school, so I spend a lot of time working.

School's a great place to work. I'm never productive at home, because it's *too* comfortable, but at the library, I see other people around me, and I feel motivated.

But when I'm not studying, I don't hang around. There aren't that many places to relax on campus—it feels like all you can do is work. And anyway, school just reminds me of stress, so when I want to see friends, we go elsewhere to find a café, bar, or restaurant. We need some time away!

To show how students use university spaces, the following journey maps follow two students – a commuter student and a residence student – through a typical day. How do their space needs change throughout the day, and how can the Benson pool gallery redesign support them at all points?

Journey Map of Carl: The Commuter Student

	COMMUTE	STUDY	LUNCH	GROUP WORK	HANGOUT WITH FRIENDS
CONTEXT	Wake up at 6:30 a.m. to catch the 7:30 a.m. train. Ride train, take subway, and walk to 9:00 a.m. class	Study for test after a morning class	Move to reheat and eat lunch because food is prohibited in Sidney Smith Commons	Work on project with classmates in the afternoon	Hang out with friends after group work
PAINPOINTS	● Remembering and carrying possessions around all day	● Sidney Smith Commons is often packed	● Long line for the microwave ● Packing everything to move for lunch ● Crowded cafeteria	● Hard to find a private group-study space	● Need to move outside of campus
OPPORTUNITIES	● A safe space on campus to store possessions overnight	● A comfortable, quiet space with enough room	● An informal study space that allows eating ● Microwave	● Multi-purpose space which caters the need for group work ● Movable furniture, round tables, and whiteboards to discuss project	● A relaxing and informal space that allows conversation and entertainment

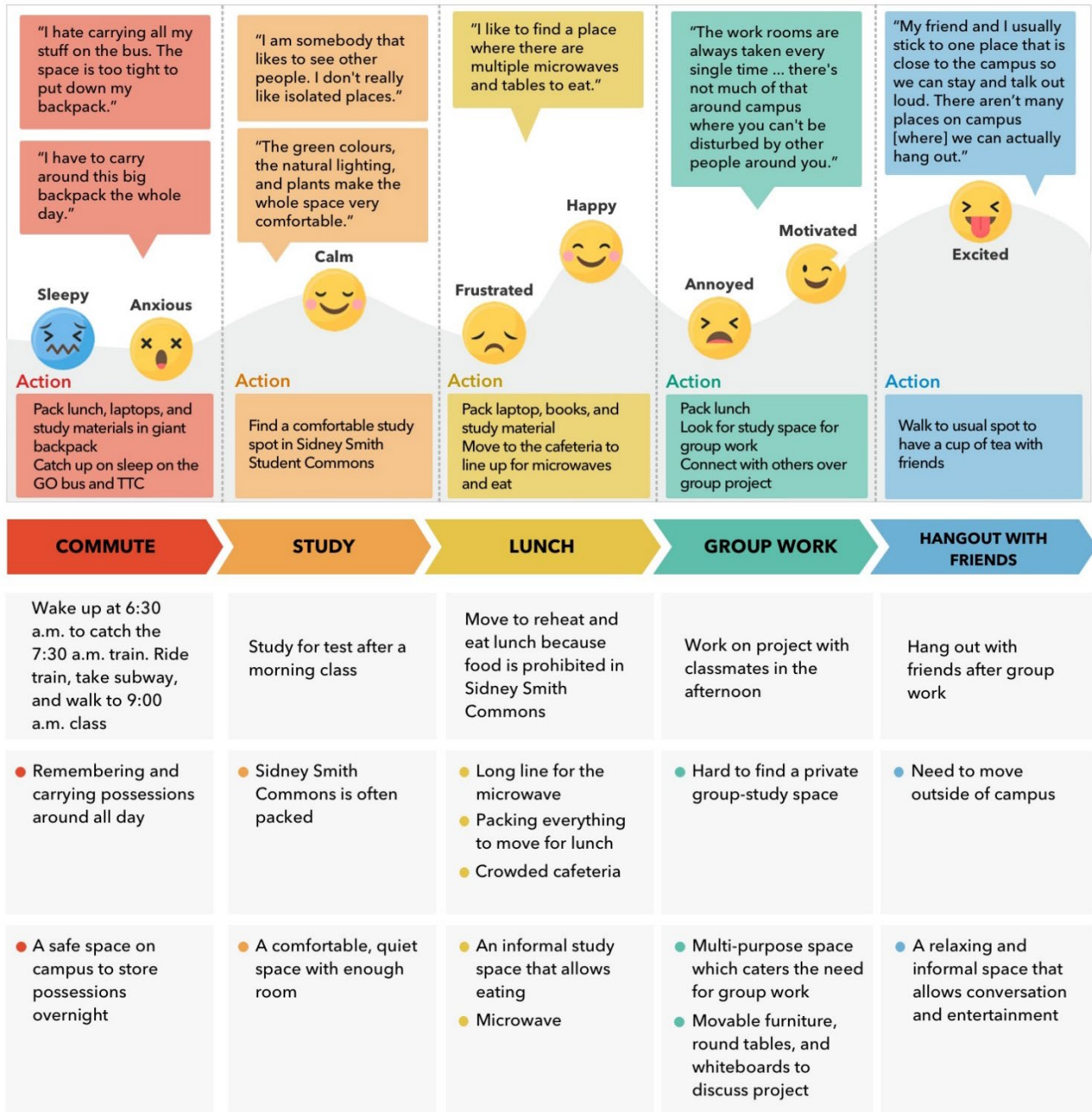*Figure 2. Journey Map for UofT Commute Students. An accessible version is provided in Appendix A.*

Journey Map of Ruby: The Residence Student

"Just somewhere that's lively and people don't look like they're stressed and want to cry over there. Which is just kind of what you get in the library sometimes"

"I am worried when I leave my stuff unattended."

"When I had to stay pretty late at Robarts, I got a bit uncomfortable, because I'm in the same place for so long."

"I can only order outside food at night."

Annoyed

Stressed

Worried

Delighted

Uncomfortable

Frustrated

Action
Wander around to find a study space with a comfortable chair and outlets

Action
Leave possessions in study space and go downstairs to eat

Action
Take a quick nap with head on the table

Action
Order food by phone

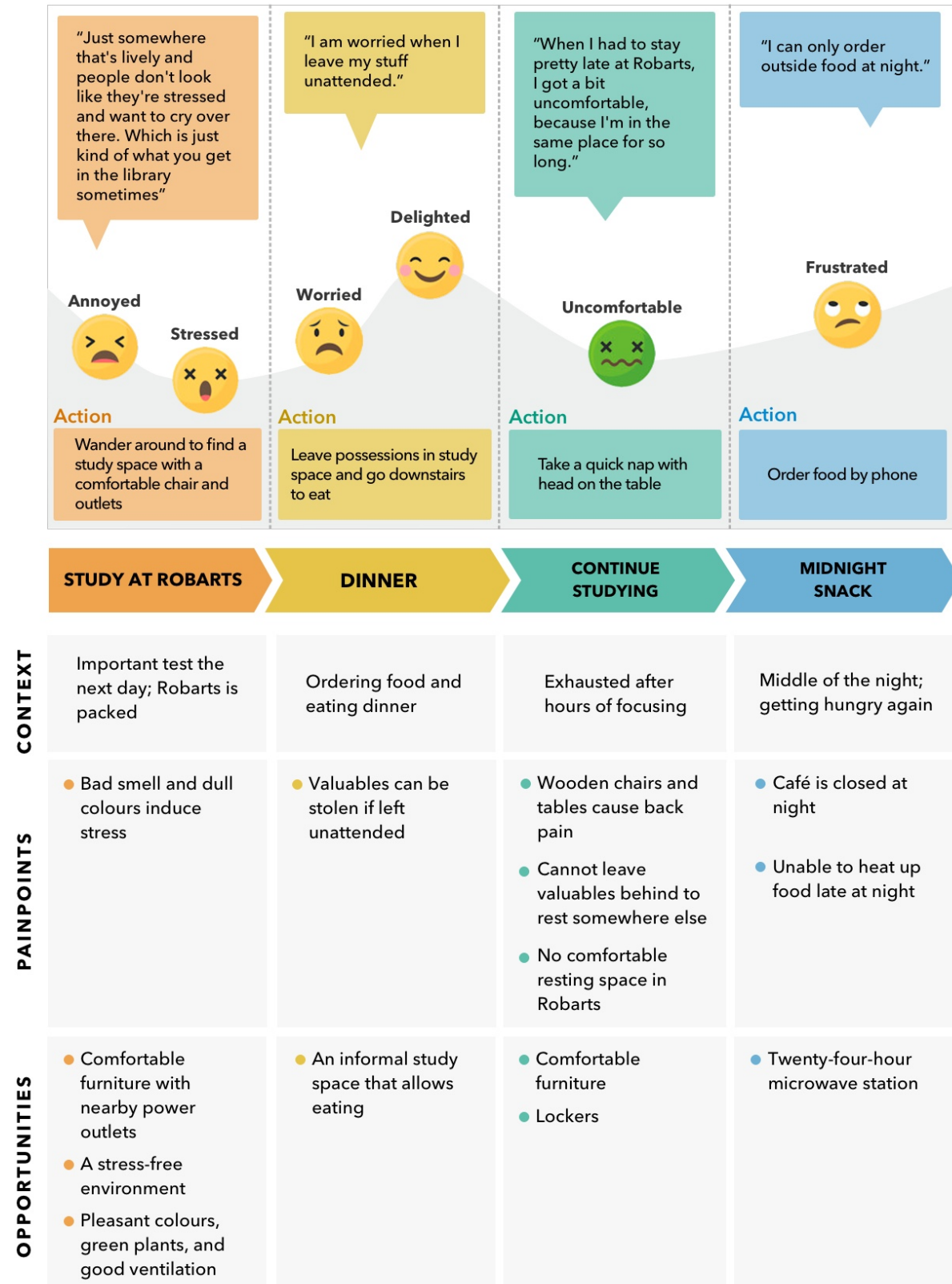| STUDY AT ROBARTS	DINNER	CONTINUE STUDYING	MIDNIGHT SNACK
CONTEXT Important test the next day; Robarts is packed	Ordering food and eating dinner	Exhausted after hours of focusing	Middle of the night; getting hungry again
PAINPOINTS ● Bad smell and dull colours induce stress	● Valuables can be stolen if left unattended	● Wooden chairs and tables cause back pain ● Cannot leave valuables behind to rest somewhere else ● No comfortable resting space in Robarts	● Café is closed at night ● Unable to heat up food late at night
OPPORTUNITIES ● Comfortable furniture with nearby power outlets ● A stress-free environment ● Pleasant colours, green plants, and good ventilation	● An informal study space that allows eating	● Comfortable furniture ● Lockers	● Twenty-four-hour microwave station

Figure 3. Journey Map for UofT Residence Students. An accessible version is provided in Appendix B.

Design Principles

The following design principles emerged from the themes and insights. They provide guidelines for designing a welcoming student space.

Build Your Niche	**Basics Within Reach**	**First Comes Comfort**
Community of Connections	**Students Are Welcome**	**We're in This Together**

1) **Build Your Niche:** Students have different needs at different times, but they share a common desire to control how they occupy space. Flexible spaces let students configure the environment to fit their unique needs.

2) **Basics Within Reach:** When students have convenient access to basic necessities, they can settle into a space. They are more comfortable and worry less about where and how to get resources.

3) **First Comes Comfort:** Whether relaxing or studying, students need to feel comfortable for long stretches. Intentional furniture choices and a calming ambiance help students slip into the right mood to work or lounge.

4) **Community of Connections:** When spaces invite students to gather, they help them foster relationships with each other. On a large campus, collective spaces provide a community that draws students closer together.

5) **Students are Welcome:** Students feel welcome when they know they are allowed within a space. Explicit markers of permission invite them to use student areas.

6) **We're in This Together:** Even when students are intentionally alone, they want to feel connected to those around them. Being surrounded by other students provides comfort and reduces feelings of isolation.

Design Checklist

Based on the design principles, we suggest some concrete actions to consider when designing a student space.

1. **Build Your Niche:** Is the space flexible in its design giving students control over how they choose to occupy it?

   ☐ Furniture is movable and adjustable

   ☐ Seating areas are diverse

   ☐ Students are free to be themselves

2. **Basics Within Reach:** Are all students' basic needs being met in the space?
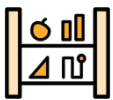
   ☐ Power outlets are readily available

   ☐ Enough microwaves are present

   ☐ Food, bathrooms, and classes are nearby

   ☐ Students can get drinking water

   ☐ Student resource information is provided

3. **First Comes Comfort:** Does the space provide comfort and relaxation for long periods of time?

   ☐ Plants and greenery are present

   ☐ Windows are large and let in natural light

   ☐ Seating is comfortable

   ☐ Music is light and mellow

   ☐ Colours are comforting

   ☐ Space is open and roomy

   ☐ Temperature is appropriate for the season (neither too hot nor too cold)

   ☐ Air flow is sufficient

4. **Community of Connections:** Does the space design facilitate the formation and strengthening of connections between students?

   ☐ Tables are the right shape and size for people to gather

   ☐ Conversational noise levels are allowed

   ☐ Social activities are available (for example, foosball tables and board games)

5. **Students Are Welcome:** Do students feel invited and welcomed to be in the space?

   ☐ Signs clearly state that students are allowed to use the space

   ☐ Spaces are promoted to students

6. **We're in This Together:** Does the space invoke feelings of mutuality between students and reduce feelings of isolation?

   ☐ There are both quiet and conversational lounge areas

   ☐ There are spaces for both individual and group work

   ☐ Students are able to observe other students doing work

Limitations and Next Steps

There are limitations to the data and findings in every project, and it is important to consider how the analysis may fall short or require follow-up. Suggestions for next steps recommend inquiries or actions that may be incorporated into future work related to this project.

Limitations:

There are two main limitations in our participant sample.

First, the participants were not evenly distributed across the student cohort. Seventy-one percent of our participants were undergraduates. Of those, most were in their fourth year, with roughly equal amounts in years one to three. Also, 30 percent were enrolled in KPE. Thus, the themes described here may reflect most closely the experiences of upper-year undergraduate students and students from KPE—though the latter may not be a downside, as they are the primary audience for the pool-gallery redesign.

Second, some student groups with special interests were missing from our sample. These include students with accessibility needs, student parents, transfer students, part-time students, and others. Talking to students with more diverse needs would provide additional insights.

Next Steps:

Future design inquiries should focus on balancing the participant distribution and including more diverse student experiences.

Nevertheless, this project provides useful insights into what students need from campus space. To start turning these insights into more student-friendly spaces, we suggest the following steps:

- ☐ Discussing the findings and design principles with university stakeholders,
- ☐ Circulating the report within UofT communities,
- ☐ Collecting data from students requiring accessibility assistants and connecting with accessibility communities on campus,
- ☐ Conducting a cognitive walkthrough to imagine the interactions between students in the renovated space, and
- ☐ Implementing practical solutions, guided by the design principles and checklist.

Each of these steps will move us further towards creating spaces that truly meet students' needs.

Conclusion

In this project, we discovered what students want from campus spaces. Fundamentally, they need to feel comfortable and welcomed. This need manifests in four different ways: physically, emotionally, socially, and mentally. We identified themes that reflect these interconnected aspects, including *one-stop stop*, *home away from home*, *room to connect*, and *being alone together*.

The themes and design principles will help KPE renovate the Clara Benson pool gallery into a multi-purpose student space. But the benefits extend beyond that: these are universal insights about student spaces, and both KPE and other departments can use them to improve other common spaces. The more places UofT offers for students to live, connect, belong, and feel at home, the more vibrant campus life becomes.

Discussion Questions:

1) How might we design a space that combines all the needs of students?
2) How might the space infrastructure help students feel relaxed away from the comfort of their homes?
3) How might a space design facilitate the making and strengthening of student connections?
4) How might the re-designed space create a welcoming atmosphere for students and reduce feelings of isolation?

Appendix A: Journey Map of Carl - The Commuter Student
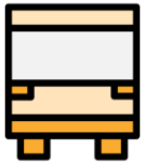
Today, Carl needs to study for a test. He feels tired and stressed. He wants to find a quiet, relaxing, and comfortable study space where he can focus. He also enjoys being surrounded by other studying people. Unfortunately, most spaces on campus are too packed to give him the right study vibe. Some popular places, including Robarts, are stressful and uncomfortable. He ends up in Knox Library.

At noon, Carl packs his study materials and heads to Sidney Smith to find a microwave, because he is not allowed to eat in the library. Carl says, "Sometimes finding space and time for lunch is a struggle." He is often frustrated by the crowded eating space at Sidney Smith and the long line for the microwave. However, the frustration disappears and turns into happiness the moment he has his lunch—which he brought from home, because the healthy food options on campus are expensive and bland.

In the afternoon, he meets his teammates to work on a course project. He loves team projects, because he feels motivated while working with others. The team spends half an hour walking around on campus, trying to find an available study room, which is annoying.

After the group project, they hang out as friends. They always go to the same bubble-tea shop near the campus, a place where they can talk loudly and relax.

There are many opportunities to help Carl on his journey. For example, a multi-purpose space could provide microwaves and more food options and cater to both group and individual work. If it also has a relaxing atmosphere for conversations and entertainment, it could even host his friendship group's hang-out session.

Appendix B: Journey Map of Ruby - The Residence Student
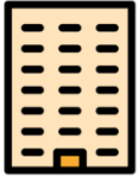
Ruby wakes up late and heads to Robarts Library to study for tomorrow's test. Even though she usually goes to Robarts, she doesn't like the smell or the industrial grey colour scheme. She feels stressful and annoyed by the unpleasant environment. However, it is her only choice for studying overnight. She says, "If possible, I prefer somewhere that is lively and [where] people don't look like they're stressed and want to cry."

At dinnertime, she orders family-kitchen food from WeChat, which is affordable and relatively healthy. Because the library is packed, she leaves some of her belongings to keep her study spot while she eats in the cafeteria, but she is worried that her things will be stolen.

After dinner, she continues studying. She has been here for five hours, and she is tired and uncomfortable. The wooden chairs and the tables give her back pain. She decides to take a quick nap by leaning on the table. She wishes there was an appropriate resting space in the library.

When she gets hungry again at midnight, she opens Uber Eats to order food. She wants to stay healthy, but only fast-food restaurants are still open. She is frustrated and ends up ordering fried chicken.

There are opportunities to help Ruby in her journey. For example, she might feel less stressed and frustrated in a comfortable study space with bright colours, green plants, good ventilation, comfortable furniture, and lockers. It the space also had all-day microwaves and permitted students to eat, she would not have to move or worry about her things being stolen during meals.

Zahira Tasabehji, Design Research Team Lead, 5th-Year Undergraduate, Political Science, Psychology & Education Studies

Jamie Lee, Design Research Assistant, 4th-Year Undergraduate, Commerce, Management & Economics

Iris Gao, Design Research Volunteer, 4th-Year Undergraduate, Computer Science & Statistics

Gianina Ann Ramos, Design Research Volunteer, Master of Information Candidate, User Experience Design

**For more information, or to work with the Innovation Hub, please contact
Julia Smeed at julia.smeed@utoronto.ca or 416-978-8619, or visit our blog at
uoft.me/innovationhub**

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