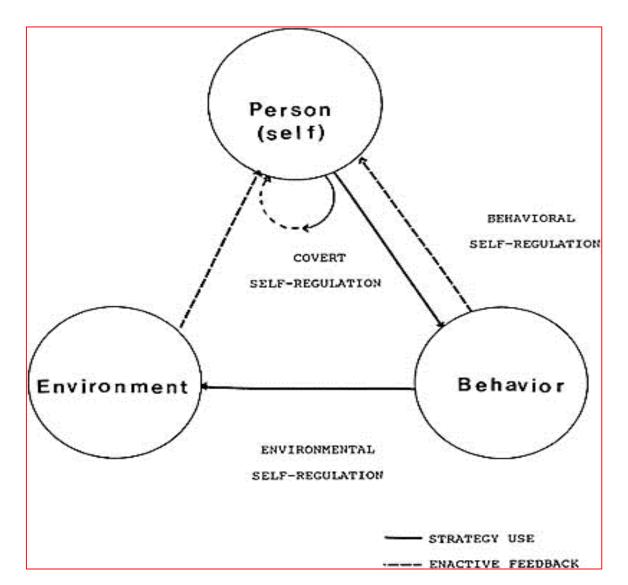




the biggest challenge for learning space design researchers involves the fundamental question...

what is learning and how is it evaluated?"

Zimmerman: Self-regulated learning

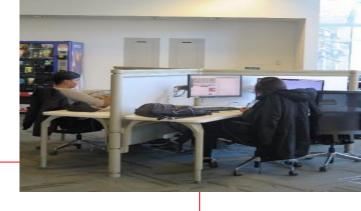


Why do students choose specific spaces in the TFDL as their learning space?



- Interview Questions focused on
 - Students' learning styles
 - Learning activities in the library
 - Preferred location for study
 - Description of ideal learning space
 - Response to types of learning spaces in the TFDL review 15 photos of representational spaces in the TFDL
- Analysis open and axial coding using NVivo software

Library Space Design Features



COLLABORATIVE

- Floors 1-3
- Café
- Social areas with tables
- 27 Workrooms
- Workstations, some dual monitors
- Public access computers
- Comfortable lounge areas
- Varied seating choices
- Distributed wiring

QUIET SPACES

- Floors 4-6
- Classrooms (2 traditional and 2 collaborative) with pc's
- Study carrels
- Study tables
- Individual study tables
- Some lounge seating
- Some pc's
- Varied seating choices
- Distributed wiring

Demographics

- Interviewed 21 students (M=10, F=11)
- 20 Undergraduates: 11 2nd year or below; 9 – 3rd year or up including 3 with previous degree
- 11 in STEM, 10 in Arts and Humanities

Level of use:

- N=18 3-5 times per week
- N=14 average stay 1-3 hours
- N=7 average stay more than 3 hours

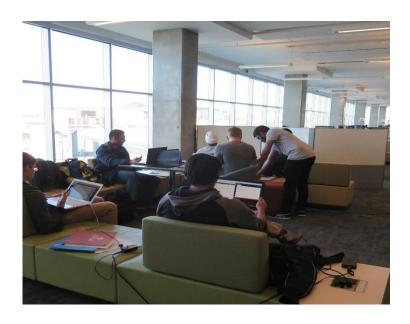


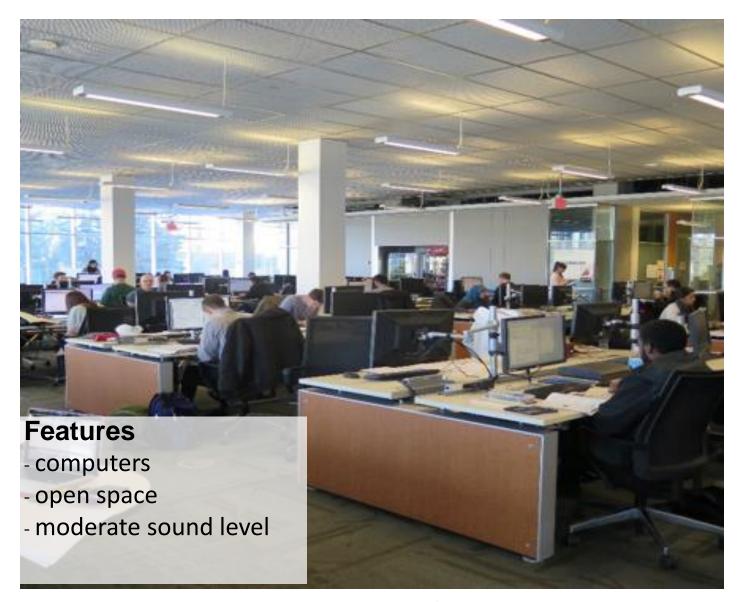
Learner preference: Same spaces; different uses

- Students often agreed on spaces and what they could see as supporting learning, even if they would not use the space themselves.
- This is an indication of **learner space awareness**.









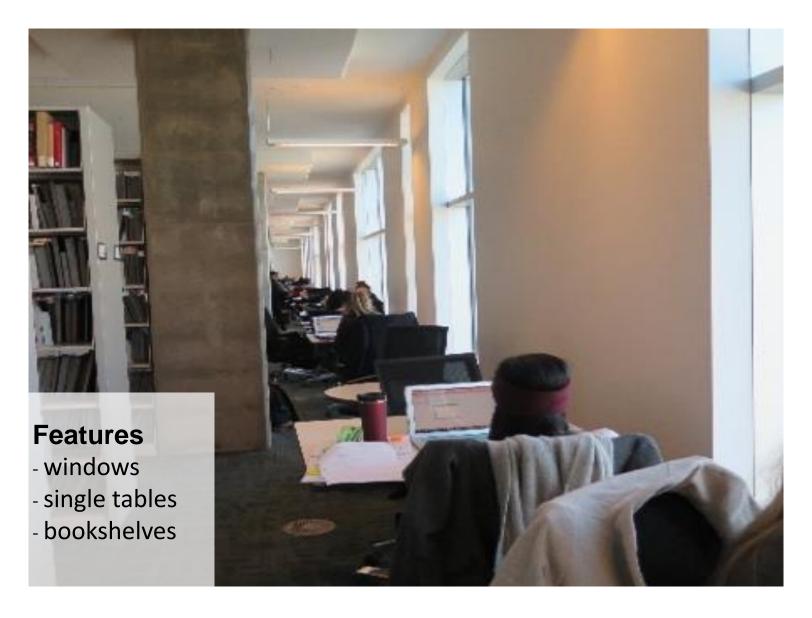
Open workstations: Reaction to accessible, busy

"you just run up the stairs, print it, and head out, you know, if you're in a hurry."

"So distracting, because everyone keeps walking around. And [...] I'm like, "Oh, do I know this person?"

"It just feels too busy to really sit down and focus on anything."

Open workstations



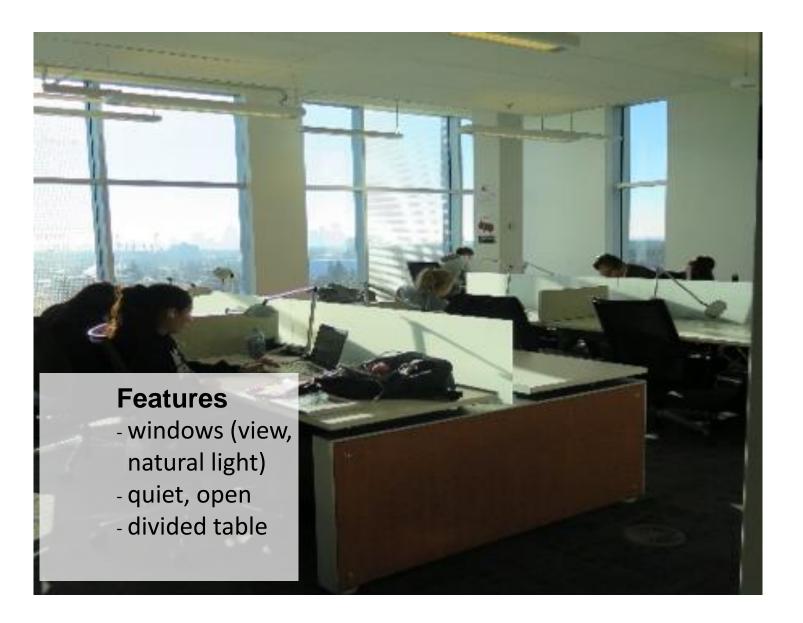
Single seating, reaction to secluded with view

It gives you a **view**... It's also close to the wall so it's **less open**, it gives you a feeling of ... **focus**.."

".. we're all there, doing our own thing, but we're **together**."

"I've tried actually sitting there but I found it **distracting**.

Single seating area



Open seating reaction to quiet with people near

"You see everyone around you engrossed in what they're doing. You feel the sense of **learning** community."

"With everyone being very **quiet**, or into their own thing, I find it very easy to **focus**."

"You might have **people** right in front of you ...That's a little bit **distracting**

Quiet Open Seating

Library Values: from reflective conversations

- Multi-Functionality (goals): time, organize self, goals for the day
- Learning Atmosphere (mood) The learning activities of your peers influences and supports your choice of activities and the achievement of your goals. It is often described as a "learning community" even if you are learning on your own
- Ownership (organize) for students as self-regulated learners, they must also be able to regulate/organize their environment in order to support their learning and keep it regulated without disruption. The library offers the flexibility and variety of spaces for this to happen for all types of learners.
- Academic symbol (belonging) Students are aware that their academic learning and education is something special. They see the library as part of their experience and speak of the library as an integral part of their academic experience

Thoughts...

- it's very comforting to know that I can just reach out and ask for help
- "we are social human beings. If we're not around other humans...then in my opinion we would go crazy ...Libraries should also be a gathering space... So libraries definitely provide that space."
- so this is our type of office...still shows us that the university cares about our privacy and our integrity to learn."
- "just love the library as a concept of place where you can go and have your learning and second home"
- "...TFDL that it captures a good essence of university life."
- "Just imagining my degree without the TFDL would be very different...it's really enhanced my learning experience"

Learning matrix: Space variables and Library values Space Variables Library values

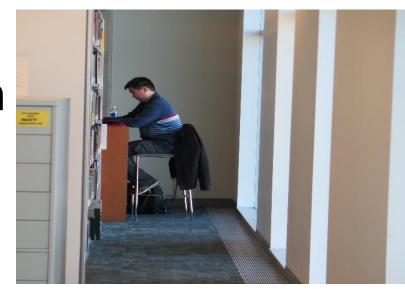
- Sound
- Distraction
- Openness
- People vs isolation
- Furniture
- Space definition opportunity

- Multi-Functionality (goals)
- Learning Atmosphere (mood)
- Ownership (organize)
- Academic symbol (belonging)



Comfortable = Mood and Motivation

- Students choose a space based on knowing how they learn and what works for them
- They then organize their surroundings to be successful
- Success: modified space and behavior = achieved learning goals.
- OPEN to LEARNING



Why does this matter: What are the learners thinking?

- Further examined the comments that students made about their learning activities and how they see themselves
- I think there is something there that needs to be examined
- So here are my observations for you to consider

Best observations about learning and space

- Self-awareness as a learner
 - Strategies
 - Time management
 - Progression as a learner
- Need for motivation
- Goal achievement

Self-awareness as a learner: Strategies that work

- Strategies for learning
 - Review and practice
 - Practice often
 - Refresh, study, repeat
 - Test yourself
 - See and hear and repeat
 - Write, read, synthesize
 - Visual, auditory, verbal, kinesthetic

"1st you need to know everything
2nd you need to know how things are connected
3rd notice when things are going wrong or things
are interacting in a negative way (or don't make
sense) go back to no. 1

I like to move about, not stay in one place

I like to talk so my ears can listen to it. Also helps me stay awake.

Self-awareness: time as limiter and motivator

- I think about how much time I have and what I'm trying to accomplish
- I plan every morning, "okay we're going to work on math during your 7 hour break, I plan every day"
- "I'm going to study in the library for 5 hours and when I get there I make a plan"
- 50 minutes is too long, people only have ..a 20 minute attention span, going at it for hours and hours ,,,it doesn't do anything
- I would start studying at 7:38
- I wake up at 3 or 4 o-clock, I just study like 2-3 hours. Try to get as much done before the little one wakes up.

Self- awareness: progression as a learner

- I think I work a lot more in advance now.. I think I've definitely developed in that way which is nice.
- I used to come to the library to sleep but not now.
- You have to learn how to study in places like that (learning commons)
- You don't get the same social hangout like I did for 1st, 2nd and 3d year, .. Its definitely more solo
- I did nothing and then crammed for midterms. (Q: how did that work for you?) So bad, first midterms like awful
- First time around I wasn't that strategic, I've found that now I need to be more structured.

Self- Awareness: Need for motivation

- Around others; motivation without engaging
- Space is calming
- Keep away from distractions: other students, noise,
- Aware of mood for the day
- "I believe in energy, like energy between people. It keeps me up and it is very hard to stay tired when people are happy around you'
- My spot (in the library) helps in concentration, just assurance and comfort

Self awareness: Goal achievement

- Daily goals are the norm, based on assignments and other deadlines
 - "So normally, on Sunday, even before I leave the house, I look at what's my schedule for the week coming."
- Assess and adjust according to how things go
 - I"f I'm not very successful at accomplishing my goal for a particular day, I just have to switch it up a little bit and try to find a solution"
- Carry out a plan daily linked to space decision
 - "you have a goal in mind, you want to be able to have a space, you want to know if there is a space for you that suits your needs and rather than take your time looking"
- Ultimate goal
 - We all want to get good marks ..., let's just do that and get it done...

Best observation: "Learning is joy"

• What is a learning mood?:

"You don't want to separate your life from your learning. .. You want to study because ,, its something that adds to your life, to you as a person....It's addicting to study. I think it's a way of leaving some pressures...It's a pleasure too. I know not everyone feels the joy of learning but certainly some people do. Learning is joy. So when mood comes in it is very important".

Learning space: what does it feel like?

"It feels like it's a reproduction of my mental space. ...I'm not confined or stressed or trapped. ... I can also be in my creative element when I am studying. So if I need to escape it is right there. I'm around what makes me peaceful. I think it makes what I'm learning more interesting because I'm in an area where I'm inspired already (the library)"

Observations

- The best **space** for students is the one that looks like it offers the opportunity for them to be successful
- Environmental self-regulation is more than just making things comfortable, it is about creating a frame of mind
- Students know how they learn, they recognize that they have different ways of learning and that they regulate their learning behaviors to meet their desired goals.



Learning, space and students

- Our informal learning space design choices should be intentional, based on an understanding of how students learn and regulate their learning environment.
- The key is not whether students like a space but rather it is how do they see it relating to their successful achievement of their goals
- We need to engage in more conversations with learners about learning outside the classroom
- With better understanding we can influence what goes on both outside and inside the classroom.



Further Reading

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