Uncovering the relationship between informal spaces and learning in the library

HEC 2019, Oct. 28-29
Amsterdam University of Applied Sciences

Susan Beatty
University of Calgary

"the biggest challenge for learning space design researchers involves the fundamental question…

what is learning? and how is it evaluated?"

Painter, S. , et al. (p. 29)

And I would add, what is the relationship between learning and space?

TFDL Space Design Features

COLLABORATIVE

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

QUIET SPACES

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

Zimmerman: Self-regulated learning
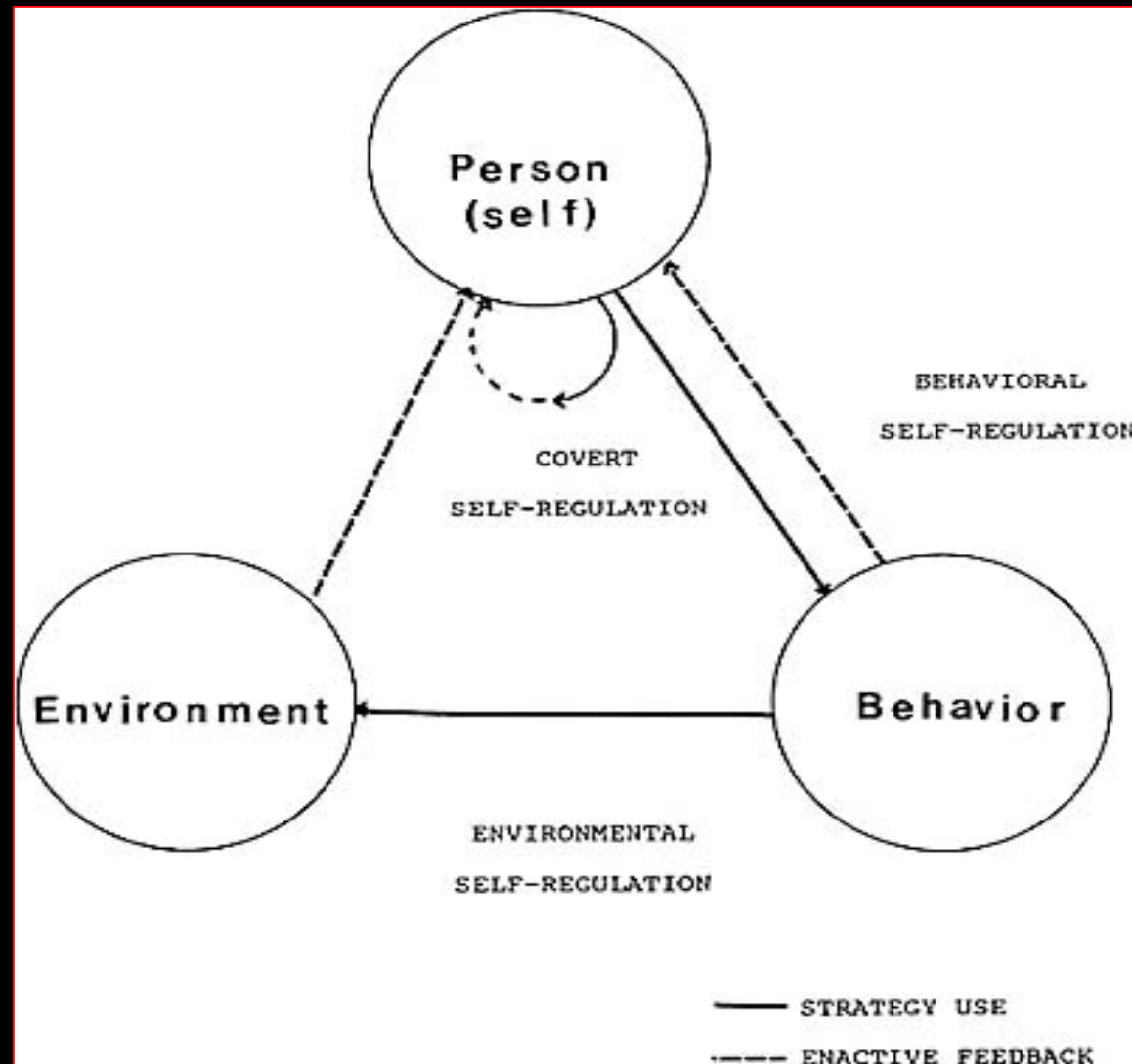
Why do students choose specific spaces in the TFDL as their learning space?

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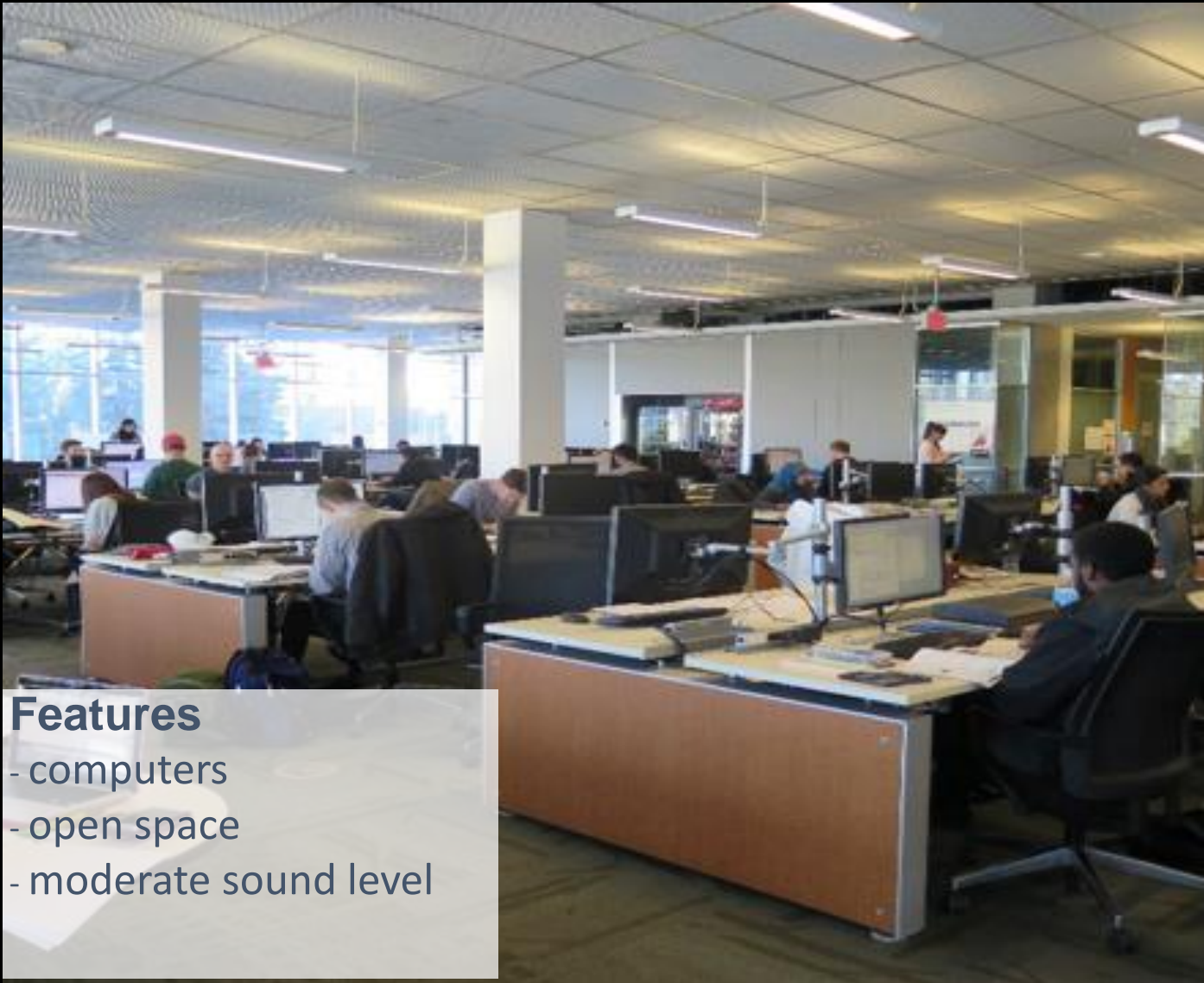
Demographics

- 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, Social Sciences

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

Features
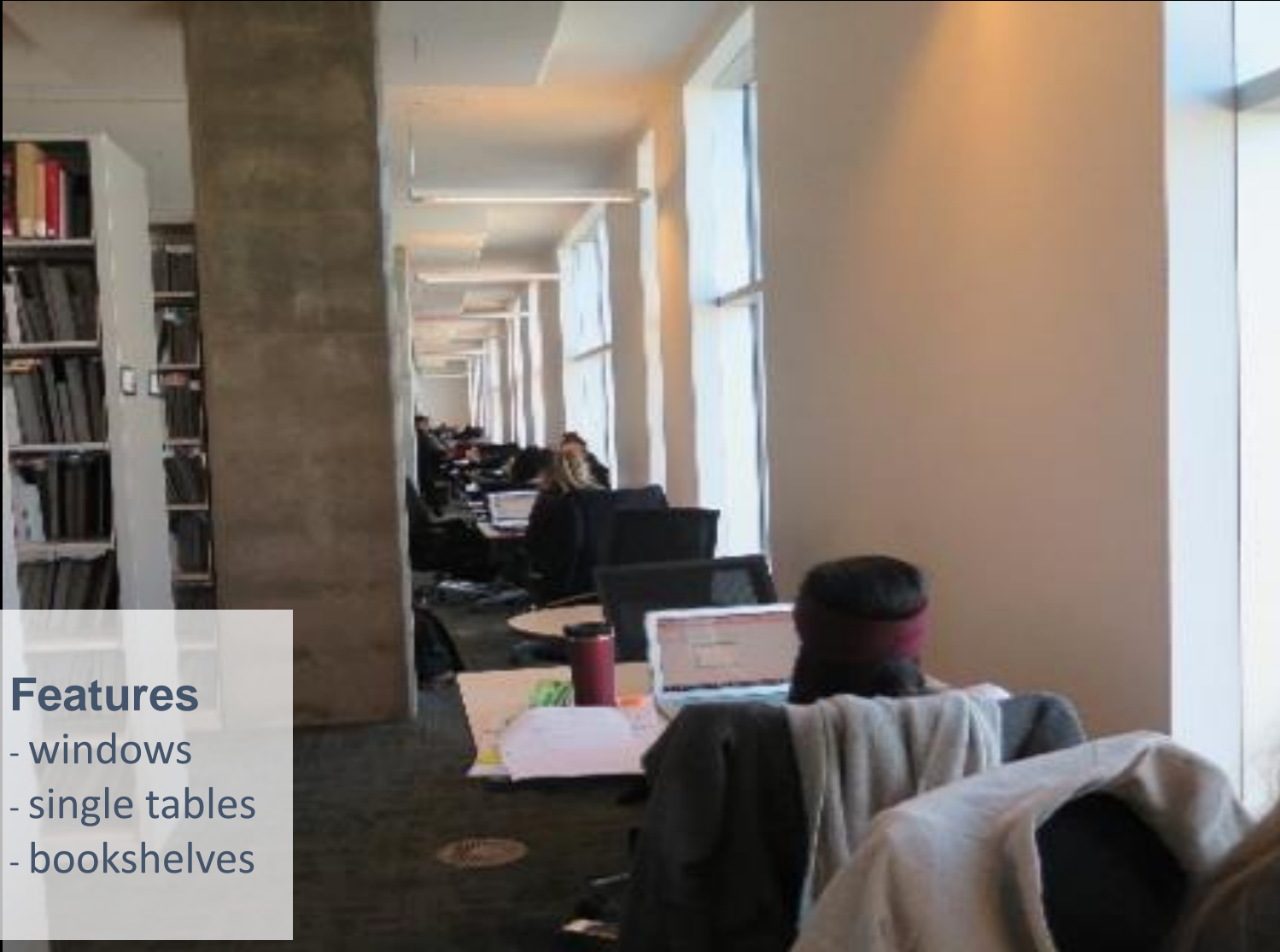- computers
- open space
- moderate sound level

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."

Features
- windows
- single tables
- bookshelves

**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**.

Commentary example: quiet open seating

Features
- windows (view, natural light)
- quiet, open
- divided table

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**

Initial impressions: Same spaces, different uses

- Students often agreed on spaces and how they could see them as supporting learning, even if they would not use the space themselves. This is mindful **spatial awareness**

Library Learning spaces – design considerations

- **Sound**: most frequently mentioned, but space could be either too loud or too quiet
- **Distraction**: either need it or avoid it
- **Openness** – high ceilings with natural light or not isolated or confined, but could be too open
- **Comfortable** – definition varied
- **Outlets** needed but not a deal breaker
- **Activity : People** near vs isolation, what works for them
- **Furniture**: varied, no real preference except for "enough desk space"
- Preference for spaces where **"their space"** was physically defined

Learning spaces: conclusions

- Space design influences students choice of learning space

- Students seek design features that relate positively to their learning goals

- There appears to be a positive relationship between choice of environment and successfully achieving learning goals

- Environmental self-regulation is more than just making things comfortable, **it is about creating a frame of mind**

Phase 2 : Digging deeper
Learning about the library from students

- **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… from the students

- 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"

Individual Learning Matrix : Space Variables and Library Values

Space Variables: Physical preferences

- **Sound**
- **Distraction**
- **Openness**
- **Level of activity**
- **Furniture**
- **Space definition opportunity**

Library related values: head, heart, body

- **Multi-Functionality (goals)** mental
- **Learning Atmosphere (mood)** emotional
- **Ownership (organize)** mental/physical
- **Academic symbol (belonging),** heart

Comfortable = the ultimate result of the learning matrix

- 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: mental, emotional and physical

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

Observations

- Learning markers
- Learning mood
- Learning space

Learning markers

- 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.

Marker: Seeks motivation

- Around others; motivation without engaging

- Space is calming

- But some 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

Marker: 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
  - "If 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…"

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)"

Conclusions and Recommendations

- 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 how they 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

- Bennett, S. (2015). Putting learning into library planning. Portal: Libraries and the Academy, 15 (2), 215-231.

- Beatty, S. (2015) New spaces, new learning behaviors: Results of an unobtrusive study (poster). ALA 2015 Annual conference, San Francisco.

- Boys, J. (2011). Towards creative learning spaces: Re-thinking the architecture of post-compulsory education. Abingdon, England: Routledge.

- Entwistle, N.J. & Peterson, E.R. (2004). Conceptions of learning and knowledge in higher education: Relationships with study behavior and influences of learning environments. International Journal of Educational Research, 41 (6) , 407-428.

- Keppell, M. & Riddle, M. (2013). Principles for design and evaluation of learning spaces. In R. Luckin et al (Eds.), Handbook of design in educational technology, Abingdon, England: Routledge.

- Painter, S., et al. (2013). Research on learning space design: present state, future directions. Society of College and University Planning.

- Zimmerman, B.J. (1989). A social cognitive view of self-regulated academic learning. Journal of Educational Psychology, 81 (3) 329-339.

Questions? Contact sdbeatty@ucalgary.ca

"You don't want to separate your life from your learning. .. You want to study because .. It's 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. "