It's All About the Learning: What Students Say About Their Learning in Informal Learning Spaces in the Library

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Abstract

Most learning occurs outside the classroom, yet research on the relationship of learning to informal learning space is in its beginning phases in higher education. Temple notes the dearth of research on learning space in higher education.[1] He comments that teaching and learning in the university includes the need to understand the impact of university space. Academic libraries are being renewed and designed for learning. However, little is known about what sort of learning goes on in the informal library spaces. A study undertaken in winter 2016 asked students to consider the relationship of informal library spaces to their learning choices. In a recent multi-site observational study of students in libraries, May and Swabey concluded that there is a need for more research and a method to clearly demonstrate the link between libraries and learning.[2] This paper focuses on students' perception of library spaces and their learning activities by focusing on their approaches to self-regulated learning and environmental self-regulation.[3] It also discusses key learnings, which serve to provide some understanding of the relationship between libraries, space, and informal learning behaviors in an academic library, which may be applied to future informal learning space development in libraries.

Background

While the visit data validates the success of the Taylor Family Digital Library (TFDL), and student commentary on the facility has been generally positive, there has not been any assessment of the effectiveness of the open learning spaces from the combined view of design and learning. Acknowledging that libraries know little about intentional learning and how spaces would better support learning, Bennett comments on the need for libraries to move beyond the planning of things in spaces to the planning for learning in spaces.[4]

Over the past 10 years, learning space design has caught the attention of a number of architects, designers, academics, and librarians. Design researchers have emphasized the need to investigate the design of higher education learning spaces to understand the learning environment as it relates to the emphasis on new types of learning in higher education.[5] Keppell and Riddle note that students need to recognize and perceive what the space has to offer in order for the space to be fully utilized.[6] As Boys states, "we need a better understanding of what matters about space for learning and the development of more diverse range of actual spaces in higher education... across... informal requirements..."[7] This study attempts to find out what students think about our learning spaces.

Self-regulated learning

Students who are successful learners tend to establish a learning process that works for them. This process has been called self-regulation or intentional learning. Zimmerman notes in his self-regulation model that the student's environmental arrangements are positively related to achieving learning goals.[8] This study explored students' self-regulated learning through their perception of the environmental assets in the TFDL and their learning behaviours in the TFDL environment.

Taylor Family Digital Library

The Taylor Family Digital Library opened in September 2011. While many academic libraries have a defined space for informal learning, the TFDL features well-designed informal learning spaces deliberately located throughout the six floors of the building. The result is the distribution of a variety of learning spaces well used by students. Students come to the library to socialize, relax, work in groups, complete their assignments, study, and learn. The spaces are occupied by students working alone, beside others, or in groups of varying sizes, at tables (small or large, square or round, isolated or clumped); study carrels; quiet reading rooms or lounge-like open spaces; workstations or workrooms, to list but a few of the variety of spaces and features.

Research study

An earlier unobtrusive study of student learning behaviors in the TFDL highlighted the diversity of learning activities students undertake in the library and concluded that students intentionally choose to conduct their learning in the library and also appear to deliberately choose specific spaces in the library to do so.[9] The question became, then, does the space design in the library make a difference to their choice of space to learn? And, is it possible to determine which elements of the informal space appeal to the students, and why? One way to find out what students think of the learning spaces is to ask them. A study based on interviewing students about their activities and perceptions of learning spaces in the TFDL was undertaken in winter 2016.

Methodology

Twenty-one students were recruited using social media and digital and print posters in the library. The students were screened to ensure that they studied regularly in the library and that they were registered at the University of Calgary. Each volunteer was given a $25 gift card at the end of each interview. The semi-structured interview asked students to describe where, how, and why they choose to learn in the library. They also reviewed 15 photos of various informal learning spaces in the library and talked about their impressions of the spaces as they relate to potential learning activities in general, as well as their learning preferences and behaviours. Students were prompted to consider how the various affordances in the design might affect their choice of a learning space. Students were also asked how they learned and to consider generally how the library spaces assisted them in their learning activities in the library.

Results

Demographic data

A total of 21 participants were interviewed (11 female). Eleven participants were students in science and engineering disciplines, and 10 participants were students in arts, humanities, and social sciences disciplines. Participants were mostly from undergraduate programs (N=20) with 11 participants in second year or below, and 9 participants in third year or above. One participant was in a graduate program, and three had completed a previous degree. The majority of the students (N=18) reported coming to the library between three and five times per week.

Rationale for choosing a space

Students often agreed on the affordances in spaces that support learning, even if they would not use a particular space themselves. They would comment on which types of activities might occur in each space. Different spaces could be used for the same type of learning activity depending on the type of learner. While they could see the opportunities for learning that each space afforded, the students also had a preference for a particular space determined by the type of work they were doing and they type of learner they were. Below are the key affordances the students commented on:

- **Sound and lighting**: Environmental variables were mentioned most often; specifically, sound level received about 2.5 times more comments than lighting. Students mostly prefer quieter spaces, but there were some who thought some spaces would be too quiet and would prefer a space with noise, or who would bring music to listen to while they were studying, regardless of whether they were in a quiet or noisy space. Natural lighting was preferred over artificial or desk lighting. While hard to control, ambient factors can contribute or take away from an atmosphere conducive to learning.

- **Distraction:** Students report that potential for distraction is an element in their decision making. Some wish to avoid distraction, while others report a need for distraction to either encourage concentration or serve as a mini-break while studying. Some students would comment on distractions such as too many people, too much noise, or too much traffic as a space that would not be a good place for them to learn, while others would say it was the perfect spot for them.

- **Openness**: Several students (N=10) also commented on the feeling of openness. Some students seemed to prefer open areas, which were defined as areas where there might be high ceilings with natural light, or not isolated or confined, while others would comment that a space was too open, with too many distractions. The same factor can be a pro or con depending on the learner.

- **Comfortable**: By choosing the right space for their learning, many students would describe it as being comfortable. The notion of comfort and being relaxed and therefore being in the right mood for learning is a key element for their learning. Some noted that a space would be too comfortable and therefore not conducive

to studying. Students recognize what works for them, and also what does not work for them.

- **Outlets**: While not all students reported this need, for those who needed an outlet, the location of the outlet would determine whether a table, carrel, or other workspace would be considered a best spot. However, for those who did use a laptop and the outlet was not working in their favored spot, they would still choose the spot by virtue of the other elements that they favored.

- **People versus isolation:** The advantage of having other learners around was noted by most, with a few, however, preferring isolation. They commented that they could interact with friends to help with the learning or to have a mini-break, or be motivated by other people working and feel part of a learning community. They were aware once again of the atmosphere that supported their learning and provided motivation to learn.

- **Furniture and space definition**: Students commented quite frequently on the need for enough desk space. Tables with dividers, workstations with dual monitors and large desk spaces, study carrels, or single tables with an obvious seating for one were remarked

upon as being big enough for all their "stuff." If there was not enough space, e.g., a smaller workstation with no dividers, they were aware of it, and kept their stuff in their backpack until needed. Working in a smaller space, while seen as necessary in order to share common desktop spaces, was not preferred. They preferred spaces where "their space" was defined, either by dividers, low barriers, or single seating tables.

What is most apparent from the students' comments is that their best choice of flat workspace had to be the right combination of elements (lighting, sound, distractions, people, openness, seating, outlets) in order for them to achieve their goals.

Examples of spaces

The three figures below illustrate some of the informal learning spaces in the TFDL. Each of these spaces offers a variety of features that some find appealing and others do not. Figure 1 is an area of the top floor of the TFDL in a secluded corner, with little traffic, a great view, and separated desk spaces. Students generally commented positively on the view and windows, but gave mixed opinions on the value of the presence of others.

Figure 1: TFDL 6th floor

"You feel the sense of learning community."

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

In Figure 2 below, an area with single tables situated between windows/walls and book shelves, most students found the view appealing, and the wall as a motivator for focus, but some others found it too cramped, hot, and distracting.

Figure 2: TFDL 5ᵗʰ floor

"It gives you a view... it's also close to the wall... it gives you a feeling of focus."

"I'd be too busy trying to figure out what the people ahead of me are doing."

Figure 3 below, on the second floor, is typical of the computer workstations. Students generally recognize what they can and cannot do there. While some will choose this space because it is obviously an open, social space, allowing for conversation and general group work, others recognized it might not provide the best environment for them primarily because of potential distractions within the space.

Figure 3: TFDL 2ⁿᵈ floor
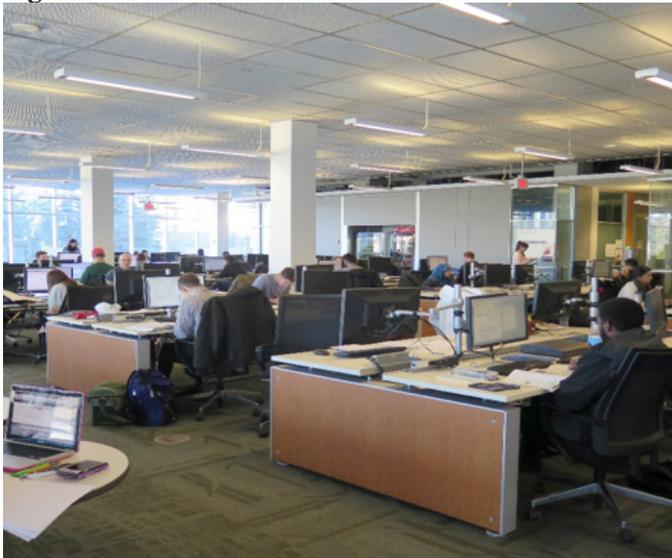
"You just run up the stairs, print it and head out."

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

Value of library space

While not a focus of the study, it became clear that students understood the value of library space and its relationship to their academic career. The following

four elements describe the values the library has to them as a learning place:

- **Functionality**: It is a place where you can accomplish many of your goals for the day, e.g., printing, reading, writing, social meet-ups, relaxation, mental breaks, without leaving the building. Students have a plan when they come to campus. Those who are coming to the library generally map out their activities and then take advantage of the spaces and services offered in the library to achieve their goals. This holds true for all kinds of learners, from first year undergraduate to graduate.
- **Learning atmosphere**: The library is a place where you are surrounded by your peers. The learning activities of your peers influence and support your choice of activities and the achievement of your goals. The students often described it as a "learning community" even if they were learning on their own.
- **Student space ownership**: The potential for ownership is meaningful for students. As self-regulated learners, they must 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.
- **Library as academic symbol**: Students have awareness that their academic learning and education is something special. They see the library as a symbol of their experience and speak of the library as an integral part of their academic experience.

The ah-ha moment: open to learning

The value of library learning spaces is that, with their preferred environmental elements in place as noted above in combination with their perceived values of library space, the students can achieve what they seek, which is comfort and motivation. Students often spoke of being comfortable, and when asked what they meant it became clear that they were talking about the mental and emotional comfort that "their" learning space would afford them. When pressed to discuss what is it about their environment that makes them comfortable and how it was related to learning, they described the need to create a feeling of openness to learning and a motivation and perhaps energization that, when they felt it, affected them and supported their learning. In summary, students know how and where they learn best and they choose their surroundings in order to be successful.

Environmental self-regulation and learning behaviours

The purpose of this study was to find what relationships might exist between students' self-regulation of their environment in the TFDL and their learning. The various representational spaces that were shown to the students elicited a variety of responses from "that is my spot" to "I would never work there." Students were able to identify the elements of the spaces and were then able to indicate whether it would be a space to their liking, and what they would do there.

Students are aware of their goals. Based on what works for them, they then make choices generally proscribed by time, priorities, and their preferences for spaces. The positive correlation of type of space, type of activity, and way of learning enable them to be comfortable and open to learning. Referring to self-regulation, then, it appears that the learning environment may be key to encouraging and motivating students to keep on learning.

Conclusion

Students choose library spaces that support their learning preferences. They are aware of how the need for their learning environment influences their space choices. There is, therefore, a relationship between environmental self-regulation, learning behaviours, and learning space design. The key is not whether students like a space but rather it is how they see it relating to their successful achievement of their goals. In order to make our library spaces more effective for students, our informal learning space design choices for libraries should be intentional, based on an understanding of how students learn and regulate their learning environment. We need to talk more with students to find out how the design of informal library learning spaces can support their learning. In that way, our decisions will be more informed and our spaces more effective as learning spaces.

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