

16th Century Technology meets 21st Century Pedagogy: Building a Book Arts Lab establishes the library as an active partner in Experiential Learning

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Abstract

At Carleton University in Ottawa, Ontario, Canada, a new government-funding model requires that all students have at least one experiential learning experience during their degree. This provided an opportunity for the library to take a more central role in teaching and learning by collaborating with the Faculty of Arts and Social Sciences to develop an active learning classroom in the library in the form of a Book Arts Laboratory. A Book Arts Lab is a unique, well-equipped studio for learning typography, letterpress printing, bookbinding, and decorated papers techniques. The lab will support credit based classes and extracurricular workshops in English and History as well as community events.

Printing is a traditional proficiency that is not an emerging technology (those coming into development over the next 5 years) but is more accurately described as a converging technology, making the old new again. This paper will explore the planning that has gone into the development of the Book Arts Laboratory, both the how and the why. The library, will balance teaching and learning in the newly constructed space that will include a variety of printing presses to facilitate course content including medieval to modern, papermaking and marbling, bookbinding, and the history of the book.

The planning of a lab required lengthy research. For the past 2 years, working with faculty and a master printer, the library has systematically developed a successful proposal for this build by engaging with stakeholders across campus and outside the library. The proposal provided an experiential learning opportunity for students in an Industrial Design course, who studied the lab. The students met with focus groups that included community experts, faculty, university members and upper administration they presented their findings and ideas as their final project. This student research subsequently informed the library's planning, and the plan for the lab. The Book Arts Lab will bring together community members, faculty, and librarians to provide and develop expertise and course content and embeds the library in the University's expanding experiential learning activities.

Keywords: printing, experiential learning, building, technology, lab

Paper

Carleton University is located in Ottawa, Ontario, Canada, on a beautiful campus in the south of the capital city bordered on one side by the Rideau Canal and on the other by the Rideau River. The university was originally founded in 1942 by the community to support veterans returning home from the Second World War. A comprehensive university with 30,000 students and close to 1000 faculty, the university is home to four faculties and one school: Arts and Social Sciences, Public Affairs, Graduate and Post-Doctoral Affairs, Science and the Sprott School of Business.

Carleton is supported by one library. The MacOdrum Library is home to 110 staff (25 Librarians and 85 Professional Services Staff) as well as several student service partners, and has been in a constant state of renovation since 2012 to modernize, make space for growing numbers of students, and to incorporate new learning spaces and technologies into the building. Today the MacOdrum Library is a modern building (Figure 1), its glass exterior providing beautiful views and natural light for students and visitors.

Figure 1: The MacOdrum Library



Thirty years ago a Chandler and Price platen press was gifted to the Carleton University Library. It was to be restored, then used as a display in the library as symbol of the start of the mass production of books and the rapid dissemination of knowledge throughout the world. At its time in history, the printing press was a technological breakthrough that facilitated a massive shift in communications. Since 1988 when it was gifted to the library, the Chandler press has remained unchanged, although relocated several times as the library renovated. The press was moved from its location in the entrance when it no longer fit with the modernized exterior and interior of the building. In 2017, the library was once again looking to move the press to recoup the considerable space it was occupying in a heavily used study area, when the press (unexpectedly) became the stimulus for a new venture.

Experiential Learning and Carleton University

With its roots in preparing veterans for the workforce, Carleton University has long been recognized for its leadership in teaching. In 2017, the provincial government of Ontario, and its Ministry of Advanced Education and Skills Development issued guiding principles for experiential learning (EL). Since this arm of the government provides operating and capital funding to the university, a Strategic Mandate Agreement was reached with the ministry that outlines how Carleton will meet these provincial objectives (Ontario Ministry of Advanced Education and Education Skills Development, 2017). As an identified key strategy for Ontario post-secondary institutions, Carleton submitted for approval the following definition and agreement – that students will graduate having the ability to reflect on the link between theoretical knowledge and experiential application in contexts that prepare students for the workplace and civil society. This application will be guaranteed by ensuring that each student at the university has the ability to formally participate in at least one experiential learning opportunity during his or her undergraduate degree, regardless of faculty (Carleton University, Experiential Learning, n.d.).

The key components of EL are experience, the application of knowledge and reflection. Within these elements there is an opportunity for the library to take a lead role. One of the major challenges of EL is the overwhelming commitment required by course instructors (Carleton University, Challenges, n.d.). Arranging logistics for speakers, visits, supplies are all time consuming and can pose difficulty to arrange. Classes in the Science, Technology, Engineering, and Medicine (STEM) subjects have a built in lab system, a structure built into the university which is already supported by space, staff and supplies. Thus, there is already a tradition and pedagogical need built into these classes for EL. Arts and humanities on the other hand, are underrepresented in the area of EL. In 2018, 45% of Carleton University, Arts and Social Sciences undergraduate programs and 30% of graduate courses had a required EL element (Carleton University, 2019).

The library has embraced this new educational mandate and was contemplating how to be a more active participant in creating EL experiences at the same time the library was undergoing some renovations that would necessitate moving the press. Out of a conversation with the English Department on the future of the press in library, arose an opportunity for the library to actively participate in the University meeting its requirement in the Strategic Mandate Agreement with the government. Rather than simply moving the press, the library decided to partner with the Faculty of Arts and Social Sciences, in particular the Department of English, to create a laboratory around the press to actively participate in facilitating, collaborating, and developing experiential learning opportunities in a unique way.

The press became the inspiration for the creation of a Book Arts Laboratory. The focus of the Books Arts Laboratory will be to teach the history of the printed book and the art and craft of printing techniques. The Carleton Library Book Arts Lab will transform an old technology in a modern educational pedagogy, in essence, creating converging technology. The Book Arts Lab will build into the physical structure of the library, a lab program similar to those experiences in the STEM areas of study.

Currently the Library has a growing collection of emerging technology (see: <https://library.carleton.ca/research/collection/emerging-technology-collection>), hardware and peripherals that support students and faculty work. Emerging technology are technologies that are currently developing or will be developed over the next five to ten years, and which will substantially alter the business and social environment (Yang & Lee, 2015, p. 2). However in an educational setting are defined as “tools, concepts, innovations, and advancements utilized in diverse educational settings to serve varied education-related purposes (e.g., instructional, social, and organizational goals) (Veletsianos, 2010, p. 17). The library is also home to Carleton University’s Discovery Centre. An immersive learning space that supports undergraduate research and experiential learning with access to technologies like 3D printing and a gaming lab.

With a focus on emerging technologies and teaching with technology, we nearly overlooked the opportunity that our printing press represented. Printing presses from more than a hundred years ago are obviously not an emerging technology; however as a converging technology a printing press remains relevant to 21st century teaching and research. Definitions of converging technology detail how it is two technologies that become one - an example being the smartphone, combining a telephone with a camera and email (BTT Comms, n.d.). However, it is possible to interpret the Book Arts Lab as a place where old technology and applications (printing presses) is merged with modern pedagogy and experience to transform from obsolete to newly applicable.

Planning for the Laboratory

The library is now in the process of building the space that will house the Book Arts Lab. Two years of planning has gone into the research as to what the lab will support. The pillars of the Book Arts Lab will include; printing on presses to replicate medieval to modern printing methods, laying type, book binding, paper making, engraving, and calligraphy. Rare books support the lab and print samples for examples of book history and printing as well as a growing archives.

A committee of invested individuals did this planning from both the library and the Department of English. Led by the Chair of English, Robin Norris and the Head of Research Support Services (Library), Patti Harper and Master Printer, Larry Thompson of Greyweather Studios, the committee discussed the support the lab would provide to faculty wishing to include print technology into their class methodologies. The lab proceeded beyond the wish phase to progress due to the support and vision of library management – University Librarian Wayne Jones and Associate University Librarian Amber Lannon. There were many questions that needed to be answered in the planning process, what does a book arts lab look like in the library? What components beyond presses are required? Would it be financially feasible to create the lab and where would it be located?

The planning for the lab began as an experiential learning opportunity. In the winter term of 2018, professor Çağla Doğan, in her master's level Industrial Design Class accepted the challenge. In her studio-based class entitled Interdisciplinary Design and Development, three groups of students were instructed in methods in achieving a common design objective – the book arts lab. Prof. Doğan's (2018) syllabus (<https://carleton.ca/id/wp-content/uploads/IDES-5103-Course-Outline-Winter-2018.pdf>) for the course explains that the student objective was to acquire a deep understanding of user needs through empathy and apply a pragmatic, user-centred problem-solving process to design products, systems, services and experiences. Using the print lab as a study, the students interviewed faculty, library staff, book arts community members, risk managers, and health and safety staff. Collaborating with the library throughout the process, the students the committee were also able to conduct a field-visit to the Library at Massey College Bibliography Room in the University of Toronto. The Massey College Bibliography Room houses a teaching collection of 19th century iron hand presses and type.

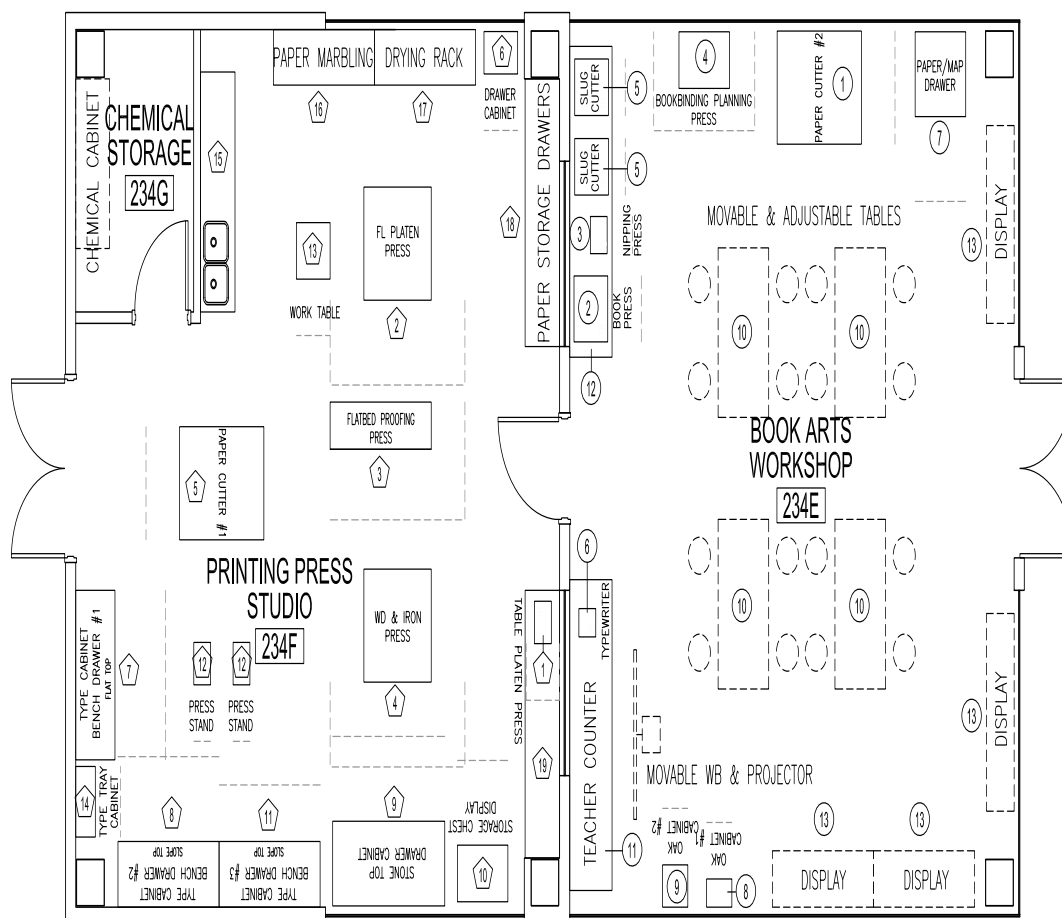
The result of the studio class was a presentation of three different yet similar designs for the book lab. The students were given free rein to select a location within the library for the lab based on the requirements they identified through their research. Two of the three groups chose the main level of the library towards the back of the floor. It provided site lines from the front entrance, good lighting, and adequate space. All three designs suggested glass walls so that work in the lab could be viewed from passing individuals and those working at desks near the lab. Similarly they all suggested a dual space be created – a working area with the presses and an instruction section that would be flexible. This flexible space was to have mobile tables to be used as “wet” space (outfitted with a sink) for papermaking, bookbinding, engraving and activities utilizing the collections from Archives and Research Collections. Although their layouts were slightly different from each other, these similarities provided excellent direction for our planning purposes.

The data from this class acquired was critical for the library for moving the project forward. It allowed the library to meet with an architect with the majority of required questions answered. It also provided important visualizations of a Book Arts Laboratory for those who were not familiar with the idea. One of the architects from the library's 2013 major renovation, Edward J. Cuhaci and Associates, knew our building, well and could offer advice for the best location for the lab build based on infrastructure (e.g. power, water source).

Based on the assessment of the architect and the research of the student projects, it was agreed that the main level was not only ideal for visibility and lighting but accessibility to required infrastructure. The new build would be walled in with glass and included the two spaces (flexible classroom and lab) suggested by the students. The following (Figure 2) is the approved plan. The overall look and feel of the lab, in keeping with the rest of the library will be modern and bright. The idea of merging old technology with modern pedagogy will not only happen in how the space is used, but will also be emphasized within the design of the lab which incorporates the presses with modern furniture, equipment, and design elements.

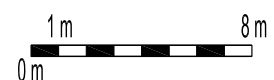
Figure 2: Proposed layout for the Carleton Library Book Arts Laboratory

(Edward Cuhaci & Associates)



CARLETON MACODRUM LIBRARY NEW BOOK ARTS LAB

EJC, 2018 - 12 - 28



A Challenge: Finding space for the lab

When renovating and adding new spaces to an existing library building, there are things to take into consideration beyond infrastructure, layout, and the ideal location. In order to repurpose a space within a library, something first must be given up.

When enrollment and gate counts are increasing, student seating space, must be carefully considered. In November 2018, the Library sent a survey to 5,000 randomly selected students, and one-half of faculty, staff and contract instructors. The main purpose of the survey was learn how the Library performs in relation to what our users feel is important. From this survey we learned that our students want more space – group study, silent study, seats in general. In this survey, the library scored 6.5/10 on student seating and 7.3 on the satisfaction of student space. The Office of Institutional and Research Planning have communicated that 8/10 and above is a “good” grade. Thus, attention to loss of student seating is very important to the library when students indicate that it already less than ideal. The intended location of the lab will displace current seating. Although the seats can be made up with more modern furniture that more efficiently uses the remaining space, it adds to the overall cost of the lab build. The library will also mitigate this by adding seats to underutilized spaces on other floors of the library.

Another consideration is collections. Fortunately the proposed space is home only to some microform cabinets. These will require relocation and offers an opportunity to review for duplication in our electronic holdings. Renovations always impact something within your space and it is important that the outcome is more positive than the disruption and cost.

Budget, Training, Funding & Fundraising

Participating actively in EL at the University is an opportunity to showcase how the library can be a partner in teaching and learning; however, it comes at a cost. During the planning phase, a start-up fund of \$20,000 was required for training, visits to existing book labs, and the purchase of an additional press.

Various book arts labs offer workshops. The Texas A&M (TAMU) Book History Workshop (<http://library.tamu.edu/book-history>) is a highly regarded workshop that is offered annually. The basic cost for the workshop is \$1100 USD; however, there is also travel and housing costs to consider. Locally we were able to find some training to augment this workshop at a lower cost because of the strong book arts community in Ottawa.

In addition to the construction, a book arts lab will require the purchase of large equipment such as (additional) printing presses, tools, furniture, and cabinetry. It will also require consumables that are an ongoing cost such as paper, ink, book binding supplies, and cleaning products that require a resource commitment from the library budget. The lab will also require staffing to facilitate the experience part of classroom pedagogy and methodology required to be experiential learning. These costs will vary depending on your particular situation however some budget details for our project are detailed in Figure 3.

Figure 3: Carleton Library’s Book Arts Lab budget details (CDN dollars)

One-time	
Construction	\$300,000
Furniture	\$5000
Printing Equipment (most has been donated)	\$40,000
Ongoing/year	
Consumables	\$10,000
Staffing (part-time printer)	\$40,000

Part of the book arts lab activities has also been fundraising and community building. Ottawa has a large book binding and press community. Visiting these guilds and organizations, promoting the book arts lab generated lots of excitement and we look forward to future collaboration. These experts will be utilized to demonstrate, instruct, host exhibits and potentially contribute to the growth of our archives and special collections. The mutual love and promotion of book arts to a new generation will provide opportunity and ability to work together on many projects.

Fundraising has also commenced. Reaching out to others about the convergence of traditional printing technology and practice in an academic application is an exceptional pathway to locating individuals with a common passion. Additionally, an added benefit to collecting presses, type and equipment that is decades old and takes up a large footprint is that organizations and persons may desire to unburden themselves from upkeep and storage. We have been fortunate to have made progress in this area and are actively working on acquiring such items. The downside is that as the pieces age and become more rare, the availability and price increases. Carleton University Library was fortunate to receive a donation from the Alumni Association in 2017. A portion of this generous donation will be applied to the cost of the lab construction and furnishings. The equipping of the lab – presses and their restoration and maintenance, and consumable supplies are solely reliant on reaching out to potential donors. The build is proceeding and acquiring funding is proactively taking place with several positive prospects.

Our goal is to balance exactly what we need for equipment to have the ability to facilitate as many potential courses as possible. To make available wooden presses, iron press and mechanized presses that will allow coverage from medieval to more modern day history of the book content.

Faculty Engagement with the lab

How exactly can a print lab build influence experiential learning opportunities? Working closely with faculty, promoting what the lab can offer and being flexible will permit the lab to be integrated into the classroom. Faculty create the content, the pedagogy, the methodology and the lab provides the instruction for the experience. The students then return to the instructor to reflect on what they have learned through their hands-on experience in regard to the theory and method. The PhD in the Production of Literature at the Carleton University Department of English is an example of a program that could benefit from the book arts lab. Students discuss and study theories of literary production and in the contemporary marketplace but do not receive training in material history of the book. Undergraduate courses in English, Humanities, Medieval and Early Modern Studies, Art History, and History are all potential users of the book arts lab. The book arts lab will allow for complementary study of how books are made, the considerations of printing and producing a book along with the study of examples from our Archives and Research Collections. The library will participate in transforming knowledge gained in both the classroom and in the book arts lab.

This scale of endeavour cannot rely solely on a “build it and they will come” philosophy. It was important for this project to be successful that an active faculty member champions the book arts lab to fellow faculty members. Understanding how faculty design their courses, interact with resources on campus and develop pedagogy is imperative to the success of the lab. Working together with the Chair of English, Robin Norris was an excellent way to understand the perspective of faculty. Success will ultimately rely on the use the lab. Faculty are experts in their subject areas and the experiential side of printing and the book arts may not be, and likely is not one of their areas of study. Having a comfort level that is strong enough to recognize what experiential opportunities the lab can offer is necessary. The Book Arts Lab Committee began the process early to inform and train faculty. Library staff has also been participating in training from in two departments; Research Support Services and Archives and Research Collections. Participants have travelled to Texas A&M University Rare Book School, finished level 1 book binding certification, paper marbling and type setting workshops. A master printer also held information sessions for the committee where we learned about book arts in general. By including both faculty and library staff in these training opportunities, we have increased the

number of people that can speak to the undertakings that are possible in the book arts lab. It has also provided participants with the terminology, general knowledge of the potential skills acquired by sharing in book arts activities.

The lab will be built the summer of 2019. However, in the fall term of 2018, two courses were proposed and approved by the University. An undergraduate and a master's level course will be offered in the fall term of 2020 on the production of literature that will have lab time built into them. With all departments, especially in Arts and Social Sciences requiring an increase in their EL activities, the timing was right to assist in this strategic mandate of the University. A faculty information session was advertised at the end of the 2019 winter term. With 75 faculty members attending, they received details about the timing of the lab build, how they could use it for EL components in their courses. It was explained what book arts entails and shared ideas about theory, methodology and learning outcomes that the lab could be used. The group heard that they could begin building lab EL as early as winter term 2020. The lab could be used for one-off classes, for full semester projects or throughout the year for full year courses. The session generated excitement.

To keep the momentum of the lab, the intention is to offer more information sessions when the construction is completed in the fall of 2019. Planning has begun for community events to bring guilds, organizations and the general public to the library to see the new lab. Workshops for faculty will be organized to increase their comfort level with the equipment and book arts practice. The plan is to begin with a part-time master printer to assist with the EL component in the lab. Librarians in the Research Support Services will facilitate the organization and projects directly with faculty. Staff in the Archives and Research Collections will be required to confer with faculty the primary sources and examples they require for classes. The lab uptake should be slow and steady. It is important to be flexible, to be responsive to the needs of the instructors pedagogy and learning outcomes. It will be important to keep the lab well scheduled to ensure there is both class time and lab time scheduled so students can complete projects.

Conclusion

The development of a Books Arts Laboratory has allowed the Carleton Library to participate more actively in EL and has presented additional opportunities beyond this initial vision. The lab expands on our current archives and rare book activities and holdings; it creates a more concentrated effort to contribute to the University Strategic Mandate Agreement with the government. It will also assist with providing an additional and a unique opportunity for Carleton students and faculty to incorporate EL, particularly in arts and social sciences. Over two years has gone into the planning of this lab. There is still work to be done as we establish use of the lab but the acceptance of two courses that are purposely built around the lab is a promising start.

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