

Report of the Dinand 2020 Committee

May 1, 2014

Committee Membership

William A. Clark, S.J., Department of Religious Studies

Jennie Germann Molz*, Department of Sociology and Anthropology

Alicia Hansen, Dinand Library

Aaron Seider, Department of Classics

Madeline Vargas, Department of Biology

*Chair

Table of Contents

Dedication	i
Acknowledgements	ii
Executive Summary	iii
Introduction	1
Welcome to Dinand 2020	2
Component Projects	4
Project 1: Entry Pavilion	4
Project 2: Main Reading Room	5
Project 3: Scholar’s Lab/Lyceum	6
Project 4: Group Study Spaces	8
Project 5: Programming	9
Reflections and Findings	11
Individual + Collaborative	11
Spatial + Temporal	15
Physical + Digital	16
Information + Expertise.....	21
Tradition + Flexibility	21
Mind + Body	22
Proposed Next Steps	26
Appendix A: ‘Plan for a Scholar’s Lab in the Dinand Library’....	27
Appendix B: Student Survey Results.....	31
Appendix C: Resources and Links.....	32
Notes	33

Dedication

The work of this committee is dedicated to the memory of Kathleen Carney, Director of Libraries at College of the Holy Cross from June 2010 to March 2014. Kathleen was dedicated to the idea of Dinand Library embracing progress and innovation; she was excited by MakerSpaces and digital video services, outreach events and new branding and engagement efforts. This report reflects her energy and inspiration.

Acknowledgements

The committee owes a debt of gratitude to the many people who generously offered their time, expertise, and insights to help us envision the library of the future. Among these are all of the faculty, staff, and students who attended our breakfast and lunch sessions, responded to the ‘10 Days to Have Your Say’ blog, and shared their thoughts with us in other ways; Chris Gillis ’14, who helped us solicit feedback from students and took us on a tour of students’ study spaces around campus; the administrators, architects, and designers who met with the committee; and the many librarians across the region who hosted us, guided us through their library spaces, and gave us valuable advice about what we should – and should *not* – do when we renovate Dinand Library. We would also like to thank the Dean’s Office for administrative and financial support for our work. Unless otherwise credited, all photographs included in this report were taken by a committee member.

Executive Summary

Although Dinand Library sits at the center of the Holy Cross campus, it is not currently perceived as the intellectual hub of the College. The Dinand 2020 Committee was asked to envision a future Dinand that would not only support current and future pedagogical needs, but that would reaffirm the active and critical role Dinand plays in our pursuit of academic excellence. Based on input gathered from faculty members, students, staff, administrators, architects, designers, librarians at other colleges and universities, and research on innovative library and learning spaces, this report offers a vision of Dinand 2020, outlines a handful of concrete projects, establishes the theoretical and pedagogical rationale for our vision, and recommends the next steps for carrying this work forward.

In our vision of the library of the future, Dinand 2020 will become a coveted destination for students and faculty to engage and acquire knowledge for learning, teaching and research. It will be a dynamic place where all information necessary for these endeavors will be centrally located from anywhere on campus. The library will offer a technology-rich landscape, diverse individual and group study space configurations, access to programs, services and resources designed to support a range of intellectual activities, and a combination of traditional and playful elements that connect us to our history and inspire creativity. Dinand 2020 will become the intellectual nucleus of the college and a vibrant space for research and learning at every level. It will celebrate and highlight academic success, with exciting spaces and technology, expert staff and resources, and a clear dedication to the pedagogy of higher education in the 21st century.

To realize this vision, we have identified five component projects:

- A new glassed-in, light-filled **Entry Pavilion** that offers easy and welcoming access from Hogan to Dinand Library;
- A rearrangement of the **Main Reading Room** to combine small study alcoves around the perimeter of the room with group tables for quiet collaboration in the center;
- The construction of a **Scholar's Lab, or "Lyceum,"** that includes a state-of-the-art seminar room equipped with high-resolution LED screens where we can conduct classes with digital media, showcase digital research, and host lectures, receptions, roundtable discussions or alumni events;
- The addition of more **Group Study Spaces** of varying sizes, with different technological capacities and flexible configurations of furniture and technology;
- The location of complementary **Programs** in the Dinand Library to support a variety of intellectual endeavors.

Our vision of Dinand 2020 and the component projects we describe in this report are shaped by six dualities that emerged in our research:

- **Individual + Collaborative:** Dinand 2020 should include a variety of study spaces ranging from silent individual carrels to quiet spaces for focused collaboration to vibrant "collision spaces" that afford serendipitous encounters.
- **Spatial + Temporal:** Given the daily and seasonal rhythms of the academic calendar, Dinand 2020 will offer a variety of solutions to help students schedule their collaborative work as well as spaces that foster different tempos of learning.

- **Physical + Digital:** The library of the future will blend the physical with the virtual. Dinand 2020 will offer a technology-rich environment that emphasizes flexible connectivity over fixed hardware. Likewise, Dinand 2020 will strike a careful balance in creating a hybrid physical and digital collection that serves the current and future needs of the Holy Cross community.
- **Information + Expertise:** In addition to providing access to information in both physical and digital formats, Dinand 2020 will be supported by a staff of experts providing guidance, technological assistance, tutoring and mentoring, and pedagogical training in order to make best use of the library's innovative spaces and resources.
- **Tradition + Flexibility:** Balancing the historical architectural details of the Dinand Library with state-of-the art additions, Dinand 2020 will celebrate a tradition of academic excellence while encouraging today's and tomorrow's students and faculty to add their own contributions to the intellectual legacy of Holy Cross.
- **Mind + Body:** The physical layout of Dinand 2020 will acknowledge that we inhabit the library in an embodied way. With ergonomic furnishings, thoughtful lighting, climate control, ample facilities, and a café, Dinand Library will be a comfortable and welcoming hub of intellectual activity.

The Dinand 2020 Committee recognizes that this report represents an initial step in what will likely be a lengthy and involved process. There is still much work to be done to solicit meaningful input from the faculty, from students, and from the wider Holy Cross community as we assess needs, weigh priorities, and share our dreams for the future of the Dinand Library. It is our hope that the information, recommendations, and examples of best practice offered in this report will serve as a useful basis for these ongoing conversations.

Introduction

In her Fall 2013 address to the faculty, Dean Margaret Freije noted that technology is changing the role of the library on college campuses. In addition to providing spaces for print materials and quiet study, many libraries now offer group study rooms, movable furniture arranged in flexible configurations, and ubiquitous technology to support collaborative and even noisy learning activities. Recognizing that Dinand is not currently a center of such activity on the Holy Cross campus, Dean Freije convened the Dinand 2020 committee to begin to imagine the future library spaces and services that will support our continued excellence in teaching, learning, and research at Holy Cross.

Given current and likely trends in pedagogy, research, and technology, the committee was asked to consider the kinds of work we expect students and faculty will be doing by 2020, and therefore what resources we will need in order to accomplish this work. In other words, how might we re-imagine Dinand's role as an active and critical part of the academic program? And how can we reinforce the idea that Dinand is the intellectual heart of a campus that values academic excellence? In order to address these questions, the committee gathered input from faculty members, students, and staff, met with architects and designers, and visited library renovations at other colleges and universities.¹ In the report that follows, we outline and expand on the themes and ideas that were generated in these conversations. Based on these themes, we have created a general vision for Dinand 2020 along with specific recommendations to be pursued or used as the basis for ongoing conversations.

The report is structured as follows. We begin with a virtual narrative tour of Dinand 2020, as we have envisioned it. The tour is followed by a section that outlines several component projects and offer more concrete ideas for redesigning Dinand. Next, we marshal examples from our conversations, site visits, and research to explain the themes and dualities that shaped our vision. We conclude with a handful of recommendations regarding the next steps in this process.

Welcome to Dinand 2020: A Vision of the Library of the Future

As part of a post-World War I campus expansion, Dinand Library was originally designed by the Boston architectural firm of Maginnis & Walsh to be a defined space for study on the campus. Named in honor of Bishop Joseph N. Dinand, S.J. who served as President of Holy Cross from 1911-1918 and from 1924-1927, the library was dedicated in 1927 and renovated in 1979 when the Hiatt wings were added. Dinand is a commanding building whose architectural presence, historical significance, and geographical location place it at the center of the campus. However, in the process of our research, we learned that many students and most faculty members do not think of Dinand as the intellectual center of the College. Although the Main Reading Room does resonate emotionally with members of the Holy Cross community, many people find Dinand to be a somewhat unwelcoming space that only partially meets their needs for study, teaching, collaboration, and research. We want Dinand to be a vital space that brings people and ideas to life. What would it look like if Dinand were once again the hub of intellectual life at Holy Cross?

When you think of this new Dinand Library on the campus of College of the Holy Cross, imagine walking out of Hogan Student Center and facing a beautifully landscaped, active and state-of-the-art entrance to a bustling academic hub for our community. When you walk in, you'll be greeted by staff at a grand Commons Desk with several stations of expertise. Here, you can check out a book using the self-checkout station; consult research databases; get help with formatting your bibliography; check out a tablet or other device for some quiet work in the main reading room; sign in to reserve a group study room; get a key to a locker for the day. You can check the digital signage to see which group study room your Chemistry group is using that morning, or see which rooms are open for presentation practice tomorrow. Surrounding the Commons Desk are comfortable seats and desks, equipped with charging stations and plenty of floor outlets for laptops. This bright and attractive spot welcomes you in to discover the rest of what the new Dinand offers.

The Main Reading Room will be free of printers; instead, you'll hear the hum of active learners moving from table to table, discussing assignments and student club news. This is the intellectual hub for critical thinkers: a place where students convene to compare notes, decide how to proceed with group work, and socialize over academic matters. Between the pillars and the walls, you'll find little living rooms: comfy chairs around a coffee table, with a lamp at each cluster. You can get in the action in the main area, or move to the quieter edges of the room, where it's intimate but still intellectually stimulating. For true quiet space you'll want to venture out to the wings, where a variety of carrels and long tables provide ample study areas for intense academic work.

Also on the first floor you'll find a café with coffee, tea, bagels, and muffins to keep you going. Its seating area blends with the main Commons space, so that foot traffic combines the food area with the Commons Desk area; you can satisfy coffee-shop and information needs in one smooth entrance. Grab a coffee and the latest issue of *Time* or *Popular Science* or the *New York Times*, or browse the DVD collection for a movie night with friends.

Upstairs in the Carney Corridor for Teaching & Learning you'll find our programs and centers: glassed offices and workspaces designed for collaborations from all over campus. It will be easy to see staff and students working together on all sorts of academic endeavors: Center for

Teaching, Academic Services, a dramatically expanded Writing Center including a Quantitative Reasoning Center, Educational Technology, and a Faculty Lounge complete with desks, shelves, comfortable seating, and all the latest publications on teaching and learning. Writable walls and moveable white boards and chalkboards will be available to support visual learning styles. Also on this floor, at the end of the hall, through grand double doors, will be The Scholar's Lab, or The Lyceum, an expansive space with state-of-the-art projection and monitors, banquettes, seating for 30, and teaching technology on mobile carts; we host lectures here, receptions and roundtable discussions, movie screenings, alumni events. Here, too, is working space for 15, a 3D printer and laser cutter, software for A/V editing, even a turntable for digitizing albums. This floor will be a true teaching and learning corridor.

The lowest level of Dinand will house the Tech B@r – take your damaged laptop in for a diagnosis; get help using Prezi or data analysis apps on your tablet; find out how to record a podcast for your class; record an interview for a project. Diner-style seating will have a monitor at each booth for group work; an ITS student help desk will be staffed day and evening; bright, modern colors and furnishings will complement the tech-savvy service you'll receive. After receiving the tech tutoring you need, settle down at a table/desk, or club seat with lap desk, or one of the booths for solo or group work. Or move into one of the smaller rooms that can be reserved electronically. Adjacent to the Tech B@r is our stacks area, boasting an electronic compact shelving system that tracks usage of each section as well as motion-sensor lighting and safety mechanisms. Most of our print collection will sit here, and a few select collections will remain one floor up.

As students travel from station to station within the library, they'll meet up with friends and professors, tutors and advisors. The centers, rooms, study spaces, tech help areas, and tutoring areas all serve as collision spaces: "informal physical gathering places, corridors, and hubs on campus where people collide and interact."ⁱⁱ The architectural design embracing openness, evident in the very entrance to this new Dinand, invites social gathering and academic conversation; past that first invitation for "collision," you'll have the opportunity to book a group study room, sit next to other students at the Tech B@r, or just scan the work areas for a study group from your class. We envision the vibrancy of this space as a catalyst for serendipitous meetings among students or between students and professors. The rooms and spaces will encourage this, but beyond the individual spaces, the overall aesthetics will say clearly: "Come in, do good work, nurture your intellect, and share with others – we are here to accomplish great things together!"

All in all, Dinand *needs* to serve as the academic center of campus, bringing elements of intellectual inquiry and practice into the same building. Librarian and blogger Brian Mathews, also known as the "Ubiquitous Librarian", speaks of the concept of change literacy, which involves pedagogy, technology, learning spaces, and all media of information.ⁱⁱⁱ He asserts that the library, traditionally a "keeper of information" is now a "collaborator in knowledge production." And he quotes Alvin Toffler: "...the illiterate of the 21st century will not be those who cannot read and write, but those who cannot learn, unlearn, and relearn." We in higher education want our students to have "the aptitude to monitor information, mine data for strategic insights, and apply and adapt ideas accordingly." Critical thinking is the goal, and Dinand and its partners will provide the tools and expertise for students to achieve it.

Component Projects

Now that we have provided a vision of what the future of Dinand Library might be, in this section, we identify several component projects that could be pursued as phased projects that would together comprise a more extensive renovation of Dinand Library. This aligns with our finding that, for the most part, other institutions have implemented their library renovations in several phases. These projects focus on five key areas: 1) the entry areas; 2) the Main Reading Room; 3) the construction of a Scholar's Lab/Lyceum; 4) the addition of group study spaces; and 5) the composition of programming housed in the library.

Entry Pavilion

“When we enter a space of and for learning – whether it is a physical or virtual space or a combination of both – we receive strong messages about what our experience of learning is likely to be. If the messages we receive tell us that “something interesting might happen here,” that “people seem to enjoy being here,” or that “there is something special going on here,” then we are much more likely to engage with the experiences that such an environment affords.”^{iv}

We envision a major renovation of the current side entrance to Dinand Library coming off of the oval green space (the “Hoval”) in front of Hogan. This renovation would have an inviting and engaging design, reflecting the spirit and goals of the Dinand renovation. We would envision a large, glassed-in construction, covering what is currently now an outdoor space between the Hoval and the small side entrance to Dinand. Standing as a complement to the current main entrance to the library off of Linden Lane, this entrance would contain a café and an information desk. Serving as a conduit into the main part of the library, this area would offer a helpful and intellectually stimulating area for students, faculty, and staff to either begin their work and research or to take a break from their studying.

Much of the impetus to renovate this entrance comes from the current use and configuration of the library entrances. With recent renovations to the landscape and buildings at Holy Cross, many people now enter Dinand from this side entrance instead of from the front steps. Yet this side entrance is awkward, uninviting, and difficult to find, and it does not provide a pleasant or stimulating entrance into the library. By transforming an uninspiring outdoor area into an indoor space that, through its glass walls, invites people to enter, this new entryway would be a significant and welcome addition to the cluster of pathways and buildings surrounding the Hoval.

It would be important that the architecture of the entryway be open, inviting, and stimulating. Glass ceilings and walls would not only let in light, which would filter down to the floors below, but would also invite people inside. At the same time, the innovative use of electronic media could project quotations on the glass walls, in much the same way that an inscription already stands above the main entrance to Dinand. Intended to complement the main entrance, this new entrance could display rotating inscriptions submitted by the Holy Cross community. By allowing

students, faculty, and staff to submit ideas for the quotations to be displayed, the entryway itself to the library could become a more interactive place.

A central information desk in this entryway would be of enormous assistance in helping patrons make the best use of the library. Serving as a central hub of information and expertise, the staff at this desk could help to answer questions, set up research consultations, and direct patrons toward the most useful library resources. Also, the placement of such a desk in this area of the library would free up space within the main body of Dinand for other functions.

Lastly, a café in this entry pavilion would provide a unique and much needed space for study-breaks and coffee at the library. This café would have its own unique atmosphere, differentiating itself from other campus coffee shops through its furniture, décor, and availability of current periodicals and books. The café could have a variety of furniture that people could use to have meetings, to work on their laptops, or to sit on their own to read a book.

Main Reading Room

The Reading Room is at once the most iconic, the most visited, and the most challenging space in the library. Because it embodies so much of what Dinand Library *has* been so effectively for nearly a century, and will inevitably (for sheer size if for no other reason) continue to shape the perception and use of the library in very significant ways, its arrangement and furnishing is crucial to any long-term plan for Dinand.

The fundamental purpose of the room is so thoroughly embedded in its architecture and tradition that no complete redesign of the space could be contemplated. We have adopted, instead, a sense of the Reading Room as a symbol of the continuity between the original Dinand and the Dinand of 2020 (see pp. 21-22). Its vastness, solidity, classical design, and ubiquitous cultural references are important parts of the “sacred” feel, the atmosphere of a “temple of learning,” that is created by the whole design of the original entrance and main floor of the building. We propose that many of the components of this design should be retained, so that this sense of learning as *rooted* in human historical, cultural and spiritual experience is not lost, even as more contemporary understandings of the *networks* of creativity that learning can create are reflected in the design of newer library components (such as the proposed additional entrance on the Hogan-facing side of the building).

At the same time as it presents significant features of the original vision of the building, the Reading Room has continued to be one of the most-used spaces in Dinand, as reported by both students and library staff, and this functionality has caused a variety of adaptations of the space over time. Reports and observations of the current patterns of use, however, suggest a number of ways in which this room could be better utilized with relatively minor changes to its layout, furnishings, and regulation.

Students who regularly use the Reading Room value it as a quiet (not “silent”) and somewhat flexible collaborative space. In contrast to other areas to which they go to be alone and undisturbed, in the Reading Room they are happy to see and confer with other students, without being disruptive of the overall atmosphere of study. It is our recommendation that this use of the room be

confirmed and enhanced in a variety of ways. The large reading tables already in use are very popular because they allow students to spread out a variety of items they may need simultaneously (a laptop, a textbook, and a notebook, for example), while still accommodating several students. Individual work spaces at these tables could perhaps be somewhat more clearly defined (for example, by the addition of reading lamps), but the general openness of the space, which encourages informal “conferencing” and interaction among the students, should not be disrupted. The worktable area could be maximized by the removal of the current reference desk (which would be replaced by a multipurpose desk in the new entry pavilion). The relocation of computer terminals and printers (which, in any event, are likely to be less and less necessary) would make further space available, while also removing a current source of distracting noise. (The deliberate introduction of some steady “white noise,” on the other hand, might facilitate the quiet collaborative use of the space while still allowing for individual concentration.)

A new feature that could be added to the Reading Room easily and would respond to a perceived need across campus would be a series of comfortable study alcoves. These would be created by the replacement or repurposing of the currently underutilized reference stacks along the sides of the reading room, so that the spaces between the pillars on both sides could become semi-secluded alcoves similar to the very popular ones in the Rehm Library. These spaces could be variously furnished with comfortable living-room style chairs, couches, and coffee tables, or with additional reading tables and chairs, or with round worktables. Some type of sound-dampening dividers between the pillars and the outer walls (provided in part, perhaps, by the bookshelves themselves) would be necessary to create the effect of being in a separately-defined space.

Overall, the Reading Room, while perhaps a bit more active than would have been the norm in past decades, would continue to be a center for quiet study in a traditional library atmosphere, while at the same time embodying some of the variety, flexibility, and collaborative ideal that would characterize Dinand 2020 as a whole.

Scholar's Lab/Lyceum

The Scholar's Lab, or “Lyceum,” is envisioned as a multipurpose facility incorporating some of the most innovative ideas we encountered in our discussions with faculty and staff and our visits to other institutions (see p. 18). Lyceum, a term associated with the gymnasium near Athens where Aristotle taught, denotes a hall or commons for public lectures, entertainment, or discussions. We see this space precisely as such a commons for shared intellectual activity.

The concept of the Scholar's Lab was discussed and developed in some detail, as well, by the library's “Teaching & Learning Team,” some of whose ideas are incorporated here (see appendix A for plan and description). Ideally the Scholar's Lab would be located in close proximity to other Dinand-housed programming (such as the Writing Center, Quantitative Reasoning Center, Center for Teaching, etc.), and would include the technology, teaching space, lounge and group work furniture, and high and low-tech tools to support seminar teaching, presentations, lectures and events, group study, and overall scholarly experimentation. The components might include: a digital classroom, writeable walls, lounge seating, excellent presentation equipment, diner-style booths for

small group projection and study, coffee, 3D printer, laser cutter, and any software requested by users for a "technology sandbox".

The digital classroom will be a partitioned and sound-proofed area within the larger Scholar's Lab, with space for about twenty-five. The Teaching & Learning Team envisioned it in the center of the larger space, with at least one glass wall, two walls comprised of whiteboards, and the fourth wall containing an array of high-resolution flat screen LED monitors that could be configured and used in a variety of ways. Furniture in the room will be easily moveable, and any electronic equipment that might be made available, other than the wall-mounted screens, would also be portable and stored when not in use (for example, laptop computers or tablets). The room would thus be highly flexible, available for use as a digital laboratory, a seminar room or more traditional classroom, and even a space for media-enhanced lecture presentations to small groups by faculty or visiting scholars (similar to the current use of the Rehm Library, but for smaller audiences).

The combination of the flexible classroom described above and the outside configuration of lounge/work furniture and equipment will define the Lyceum as a workspace solution, meeting the needs of many teaching and collaboration styles. The plan suggested by the Teaching & Learning Team shows seating in clusters, and three out of four corners hosting a corner booth and wall-mounted monitor for laptop plug-in. The printers, scanners, paper cutters, and other tools are attached to the outside of the classroom, and a welcome desk facing the entrance will seat the student staff on hand to offer technical help.

Both the Dinand 2020 Committee and the Teaching & Learning Team have been impressed by other institutions' inclusion of IT and media consulting points in their libraries. The Scholar's Lab will provide drop-in help for programs such as iMovie, Final Cut Pro, Photoshop, and video production. With technology and media tutoring supplementing the other tutoring in adjacent areas (research, writing, quantitative reasoning), students would have all the support they would need for any kind of assignment, and hopefully, having access to such expertise would spark more creative work in general.

As the Teaching & Learning Team pointed out in their description of the Scholar's Lab, marketing is key for any new space or service in the library. Heavy use would be the most valuable assessment of success, so promoting not only the existence of the lab but also the various potential uses for the software and hardware would be crucial. Developing an online interactive map for all our spaces could be a start, and then showcasing successful uses of the room would be another key function of the marketing effort.

The Dinand 2020 Committee sees the Scholar's Lab/Lyceum as a foundation for innovative scholarship at College of the Holy Cross. It can be the mechanism for students and faculty alike to embrace new ideas in higher education and pedagogy, and to have the space and equipment available to explore and implement those ideas.

Group Study Spaces

Drawing upon the input from the Holy Cross campus community as well as our visits to other institutions, we believe that Dinand should have a large number of vibrant and intellectually stimulating group study spaces of varying sizes and with different technological capacities. While there are currently a few spaces in Dinand where students may study together, these spaces are not well suited to collaborative work and there are simply not enough of them. Due to the lack of current spaces in Dinand for group study, students often are forced to repurpose other rooms and faculty are reluctant to assign group work out of concern that students may not have the time or space to meet with their colleagues. As a result, students often spend their time in an inefficient manner, as they must search around campus for a room to use, and faculty feel constrained in the sorts of assignments they can give students.

In our conversations on campus and visits to other institutions (see pp. 11-15), several aspects of group study rooms stood out as particularly desirable and conducive to productive creative and engaged collaborative work:

- Group study rooms should be adequately soundproofed. Too often students, thinking that they are in a soundproof room, will have conversations that disturb others. Or students, being wary of speaking too loudly, will hesitate to converse about their work. Some institutions constructed group study rooms with walls that did not extend all the way to the ceiling or that have openings due to HVAC issues. We would recommend that care be taken to ensure that at least some group study rooms in Dinand offer a soundproof environment. With adequate soundproofing students would be able to practice presentations, have conversations with each other, and also schedule meetings with library staff for research questions and consultation.
- Group study rooms should be furnished in a way that allows students to fully engage with the material they're studying. In many of the most useful rooms for group work at other institutions, every piece of furniture in a room is on wheels, which allows for groups of different sizes to use the room in a variety of ways. Also, there is a strong interest in having writeable walls (although there is concern that these would not be sound dampening). Writeable walls allow students, for instance, to put all their notes for a semester or an entire outline on the walls, or to work through problems together. Writeable glass walls also allow more light into the room, thus allowing the group study room to not feel claustrophobic even if it has no windows. At the same time, they let others walking down the hall see that the group is studying in the room, which adds an ambience of intellectual vigor to the library. Lastly, with so many students using electronic devices, these spaces should have multiple electric outlets set into the floor itself, so that students would not have to be tethered to the wall while they work.

- Group study should take full advantage of technology to make collaborate work productive and creative. Within the rooms, there should be equipment for students to use in terms of practicing presentations, projecting their own work, or looking at a colleague's work. For instance, one room could have large LCD screens on the wall with a single computer that controls the screen; students could then plug their own devices into this computer so as to project their work. Technology could also be useful for reserving the room and letting others know who is working where. With an electronic reservation system, students would not have to wander the library looking for an open room, but they could reserve a particular room even before arriving at Dinand. Moreover, Dinand could design a way for students to know who is studying in each room and what they are working on, if the students in the study room volunteer such information. If, when people reserved a room, they not only entered their names but the topics which they will be studying, that information could then be displayed on a large and centrally-located LCD screen near the entrance to Dinand. Thus, students who enter Dinand and are looking for people in their classes could find them. The hope would be that this would encourage new connections in collaborative work.

Programming

We envision Dinand as a productive and energetic hub for several of Holy Cross' independent academic support centers. The inclusion of campus centers such as a Writing Center, a Quantitative Reasoning Center, Academic and Learning Resources, and the Center for Teaching in a single location should allow for these resources to be more easily and productively utilized by students and it should also help to make Dinand the hub of campus intellectual activity. There would be the potential for other programs, such as branches of Educational Technology, Media Resources, and IT to also be located in the library. The composition of programming in Dinand 2020 could take a variety of forms, and deciding which programs or departments to include in the library will require careful planning and input from various stakeholders. We also would note that administrative responsibilities will need to be clearly defined so as to avoid overburdening library staff.

Currently, these programs are housed independently in various locations around campus. This can be potentially disruptive to students' study and work, as they have to go to different places on campus to get help with different aspects of the same assignment. If a student working on a response paper to a film, for instance, needed both to pick up a DVD and to discuss strategies for working on the assignment, he or she would have to go two separate places. By including several or all of the centers mentioned above within Dinand, students could easily move from a study space within Dinand to a center where they can get any assistance they need with their work. Ideally, students would be able to more effectively use the resources available at these different centers within one location.

The shared objectives of programs such as the Writing Center, Quantitative Reasoning Center, Academic Services and Learning Resources, and Center for Teaching, as well as the likelihood of similar technology, space, and support needs among them, make them suitable

neighbors in the library. Branches of Educational Technology, the Media Resource Center, and IT (in the form of a help desk) could be located in the library. This sort of arrangement may even function as something of a collision space for these different centers, ideally giving rise to new collaborative efforts promoted by the different centers. For instance, it is possible that the Writing Center and Educational Technology might offer a joint presentation on using the iPad for creative writing assignments, where representatives from each of the centers could discuss the technical and literary aspects of such work together.

There are several productive and exciting possibilities for the actual layout and form of these centers within the library. One possibility would be for a central desk in the library to have representatives from each of these centers available to answer quick questions and to direct students to appropriate resources. Then, if students needed more extensive consultation, they could go to dedicated rooms for the appropriate center. These rooms and the centers themselves could potentially be located on a single corridor or floor of the library, in order to make multiple consultations and collaboration quicker, easier, and more effective.

Reflections and Findings

Reflected in our opening portrait of a future Dinand and in the component projects described above are many of the ideas, desires, solutions, and hard-won lessons that we discovered while talking with our colleagues here at Holy Cross and at other institutions. What emerged during this research were several dualities that need to be held in balance: 1) individual + collaborative; 2) spatial + temporal; 3) digital + physical; 4) information + expertise; 5) tradition + flexibility; and 6) mind + body. In this section, we provide examples from our research to explain why these dualities are significant and how they can guide our ongoing plans for redesigning Dinand Library.

Individual + Collaborative

The way study space is configured in a library reveals much about an institution's pedagogical philosophy. Silent spaces and cloistered carrels may suggest that learning is an individual process, while noisy open spaces that allow food, drink, and conversation suggest that learning is a communal endeavor embedded in other kinds of social activities. The recent trend in higher education is to emphasize the latter. Inspired by constructivist theories of learning and a desire to prepare students with the teamwork and technology skills they are likely to need in their future careers, many college and university libraries are now providing more open, social, and technology-rich spaces in order to support collaborative, project-based, and multimedia learning experiences.^v

In our conversations with Holy Cross faculty and students, we discovered that, while many faculty do incorporate group work in their courses, Holy Cross pedagogy is more accurately characterized by a wide variety of learning philosophies and styles ranging from intensely focused individual study to collaborative projects. One size does not fit all, and in fact one size does not fit the same person all of the time. Sometimes students need to sequester themselves in a silent space, sometimes they need to be “alone together” in a sociable setting, sometimes they need to interact noisily with group mates, and sometimes they need to have a 2-minute dance party to let off some steam.

Our findings align with Charles Crook and Gemma Mitchell's recent assessment of a social learning commons at a university in the UK.^{vi} In addition to affirming the continued need for quiet spaces for individual study, the researchers call for a more finely articulated sense of what we mean by collaborative study. They observed four different kinds of collaborative study, all of which require specific spatial configurations: 1) focused collaboration; 2) intermittent exchange; 3) social ambience; and 4) serendipitous encounter (which we also refer to below as “collision space”). Taking seriously the researchers' encouragement that institutions “design for a mixed economy of student choice over learning spaces and ... encourag[e] diversity in their use,”^{vii} we recommend that Dinand 2020 incorporate the following variety of flexible study space configurations:

- *Individual Study*: Many students and faculty noted the need for quiet, distraction-free spaces for intensely focused individual study. Although the library currently accommodates individual study in carrels or at tables and armchairs in silent spaces, students commented

that these arrangements are not well designed for their needs. To begin with, students asked for larger work surfaces, at least large enough to accommodate a laptop, a textbook, and a notebook. The need to “spread out” was an often repeated theme. Students would also prefer that some individual carrels have higher partitions and be located away from foot traffic. As one student noted, the possibility of someone walking by is almost as distracting as an actual interruption. Libraries at some institutions, such as Bryn Mawr and Mount Holyoke, allow fourth-year students, especially those working on research projects or honors theses, to reserve a carrel for the entire year. Furthermore, we should consider including dedicated carrel space to accommodate emeritus faculty, many of whom remain active in research, and whose presence would be a welcome addition to the social configuration of the library. In addition to improving carrel space for individual study, we also recommend incorporating enclaves and cozy nooks designed for single study use (see Images 1-4).

Image 1: Individual carrels at Mount Holyoke

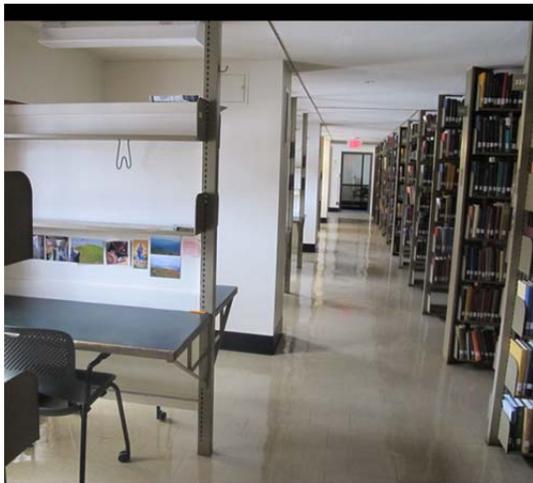


Image 2: Athenaeum, Providence, RI

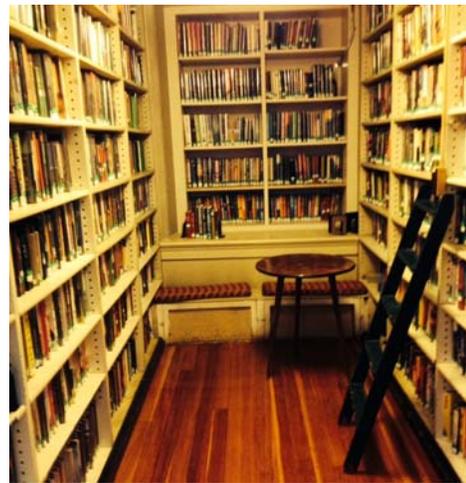


Image 3: Carrels for senior thesis writers at Mount Holyoke

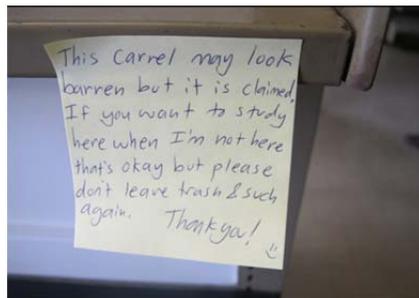


Image 4: A nook at Mount Holyoke



- *Focused Collaboration*: Focused collaboration involves “relatively intense joint problem solving” conducted in small groups that “are likely to be planned and strongly outcome-oriented.”^{viii} This kind of collaboration requires dedicated group study rooms. The library does not currently provide sufficient group study space, and we have outlined our suggestions for including such spaces in the Component Projects section above.

- *Intermittent Exchange*: We found that Holy Cross students often engage in “parallel study” that involves two, three, or four friends appropriating a space where they can study alongside one another, even though they are not working on the same task. This kind of parallel study includes intermittent exchange, “whereby students convene for independent study that permits an occasional and improvised to-and-from of questioning or commentary.”^{xix} For this kind of collaborative study, students would need tables large enough to accommodate three or four people and their laptops, books, and notebooks. They also need to be able to talk occasionally at conversational levels. Ideally, students would be able to leave some belongings as they come and go over a several-hours-long study period. Although some students use space in Dinand for this purposes, they prefer to find open department seminar rooms where they can spread out, close the door, and not worry about bothering other people with their conversations. Group study rooms could be used for both focused collaboration and intermittent exchange.
- *Social ambience*: While some students need silent and sequestered individual study space, others desire ambient sociality while they are studying. They want to be “alone together” with other members of an intellectual community (see Image 5). Not unlike members at a gym, students “gain inspiration or reassurance from merely being among others they knew were in a shared predicament: that is, one of intentional and systematic learning (i.e. ‘study’)”.^x One student told us that she uses her earbuds to listen to a soundtrack of ambient café noise while she studies with her friends. In this case, students wish to have social activity serve as a backdrop, but without the risk of interruptions. This may be one of the more challenging design requirements for study space in Dinand 2020 – to create spaces where students can be part of the social buzz while remaining ensconced in their individual work. The use of headphones to create personalized soundscapes may offer one solution. Another solution we observed at some libraries was to place individual study spaces on mezzanine levels overlooking public spaces. In these cases, individual space is marked out by varied levels rather than opaque partitions (see Images 6). Shelving can also be used, as it is in Rehm Library, to create individual nooks that look out over a more overtly social space.

Image 5: UMass Amherst Learning Commons



Image 6: RISD, Providence, RI



- Collision space:* Collision spaces afford serendipitous encounters among students, staff, and faculty where chance meetings with peers allow for brief, improvisational discussions about research or study-related matters. Collision spaces are noisy, multipurpose areas often located near cafés. The social aspect of commensality draws people in and makes it more likely that when a student or faculty member shows up at Dinand, there will be other people available for conversations and chance encounters. Currently, the closest thing Dinand has to a collision space is the Main Reading Room. When asked to describe the reading room, students used words like “conversational” or “social”, even while acknowledging that they were not supposed to be talking or socializing in this space. In the section on Component Projects above, we elaborated on ideas for embracing the sociable connotations of the Reading Room and perhaps imagining it more as a collision space. Dinand 2020 will likely have several such “collision spaces”, such as the café, the Main Reading Room, and the Carney Corridor for Teaching & Learning envisioned earlier. These spaces might include some of the elements we’ve seen at other libraries, with a flexible environment that can be rearranged on the fly or adapted to accommodate more people (Image 7); open areas where people can talk with others (Image 8); visibility so that we can see and be inspired by intellectual activity (Images 9 & 10); places for relaxation or reflection (Image 11); and easy access to assistance and expertise (Image 12).

Image 7: UMass Amherst’s Digital Media Lab



Image 8: Bentley College



Image 9: Bentley College



Image 10: Bentley College



Image 11: Bentley College



Image 12: Mount Holyoke, Learning Commons Help Desk



Note lap desks for use with club chairs.

- *Soundscapes*: Evident in our descriptions of these various spatial configurations is a need to calibrate different noise levels for different spaces. We have already mentioned that many students use headphones to personalize their own soundscapes and we suggest that some group study rooms need to be soundproofed. In our conversations with students, we learned that they are more concerned with inadvertently bothering others than they are with being disturbed. Therefore, we recommend that students be involved in determining the appropriate volume ranges for various spaces throughout the library, and that the spaces should then be clearly signed to indicate the agreed-upon volume (see Images 13 & 14).

Images 13 & 14: Brown Science Library, Providence, RI



Temporal + Spatial

It is worth noting that the life of the library entails daily and seasonal rhythms, and that study needs may require temporal as well as spatial solutions. One of the barriers to group work is not necessarily finding a place to study together, but finding a time when everyone in the group can meet. The move to a 24/5 schedule seems to have helped in this regard. Students also expressed a desire to be able to reserve rooms or group study spaces. At the Cambridge Innovation Center, for example, conference rooms can be booked in one-hour increments, and bookings are displayed on a

tablet mounted outside the door (see additional examples in Images 15-17). Along these lines, we could also use technology to help ‘engineer serendipity’. This may sound like a contradiction in terms, but take for example the system at the Harvard Innovation Lab. When researchers or students check in, they can choose to display their whereabouts (which table or group room they are in) and what they are working on so that others can join them. At Dinand 2020, a monitor might display where a faculty member is holding office hours or where a study group has formed to work through problems for a class. A student arriving at the library could then join those groups.

Images 15, 16 & 17: Bentley College, room reservation displays



In addition to providing a variety of study spaces, we may also consider incorporating a variety of tempos in the library through the use of furniture, lighting, or wall decorations in different parts of Dinand. The collision space and focused group study rooms might have a fast-paced, vibrant feel to them, but other spaces should afford a slower pace for marathon study sessions or lengthy periods of deep contemplation. Jennifer L. Roberts, professor of the humanities at Harvard, writes that ‘Deceleration is a productive process, a form of skilled apprehension that can orient students in critical ways to the contemporary world.’^{xi} To foster this deceleration, we might designate technology-free areas of the library where students are given permission to disconnect and slow down.

Physical + Digital

Today’s libraries are already hybrid entities, a trend we foresee continuing in the future. We are as likely to browse online as in the stacks, and even when we are physically in the library our experience is often mediated by mobile apps or digital databases. Because our use of the library blurs the line between the physical and the virtual, plans for Dinand 2020’s technology landscape must pay careful attention to the library’s online presence, the digitization of the collection, and the presence of technology within the building itself. In conducting the research for this report, we have focused on the latter, however we would like to include a brief note about the hybridization of the collection.

The Dinand Library currently holds 637,559 volumes of print monographs; 957 print journal subscriptions; and 3,200 audio and visual materials. The library subscribes to 5,476 separate electronic journals, plus there is access to 61,429 separate titles in the A-Z database list; 198

databases; 90,830 e-books. Libraries in general are decreasing the size of their print collections. This is a natural shift in the face of electronic publishing, and the Holy Cross Libraries have a hybrid collection of print and electronic. For overall collection development, the hybrid approach is a reasonable one, but when a user requests the print copy of an item, the library buys it. We have an open purchasing system – we encourage requests and we fill them without question. E-books are popular to a certain extent, but by far students around the country are not yet content with books in solely electronic format. So, the Dinand Library will continue to add to its books and journals with the philosophy of maintaining a relevant hybrid collection.

However, to add materials means we must manage our existing materials, and that means weeding unused items, duplicate items, and especially bound periodicals of which we subscribe to the electronic copy. In the coming months the library will use software called Sustainable Collections to reduce the overall holdings by about 15-20%. This will take place slowly and methodically, involving faculty on decisions to keep or discard items, and will leave the library with a more practical approach to space. We need to plan accurately for growth, and for a healthy collection that reflects the mission of the College. For example, in our visit to Bentley College, we were impressed with their compact shelving solution (see Images 18-20).

Images 18, 19 & 20: Bentley College



We now return to discuss the presence of technology within Dinand. As technological advances transform the way we create, store, discover, and access information, it is tempting to imagine the library of the future as a space saturated with technology. Until recently, the image of a cutting edge library was one full of computer monitors. Based on our research and visits to other libraries, however, we have found that the trend toward banks and banks of computers is coming to an end. Instead of investing in fixed hardware, we suggest investing in flexible, scalable connectivity so that students, staff, and faculty can use their own laptops, tablets, or mobile devices anywhere in the library. The recent provision of wireless printing in Dinand is already diminishing the demand for fixed computers.

Students or faculty who do not bring their own devices should be able to borrow computers and tablets from the help desk, as we saw at many other libraries. As well, power outlets and charging stations with a variety of charger configurations should be dispersed generously through the library (see Images 21 & 22), and the future ability to run power anywhere in the building should be a key part of the design.

Images 21: Mount Holyoke, charging station



Image 22: Mount Holyoke, power outlets



That said, we must stress that this does not mean that Dinand 2020 will be free of fixed computers. On the contrary, computers and other technological devices should be incorporated into the design of Dinand 2020, with investments in technological equipment focused on four areas:

- 1) *To support group work* in spaces dedicated to focused collaboration and intermittent exchange. Group study spaces will require appropriate collaborative technologies, such as monitors for groups to display their shared work.
- 2) *To create a multipurpose digital media room.* As described in the Component Projects above, we recommend creating a Scholar's Lab, or Lyceum, similar to Brown's Digital Scholarship Lab (see Images 24 & 25), to experiment with media-rich teaching, to showcase digital research, or to host lectures and events.

Images 24 & 25: Brown's Digital Scholarship Lab

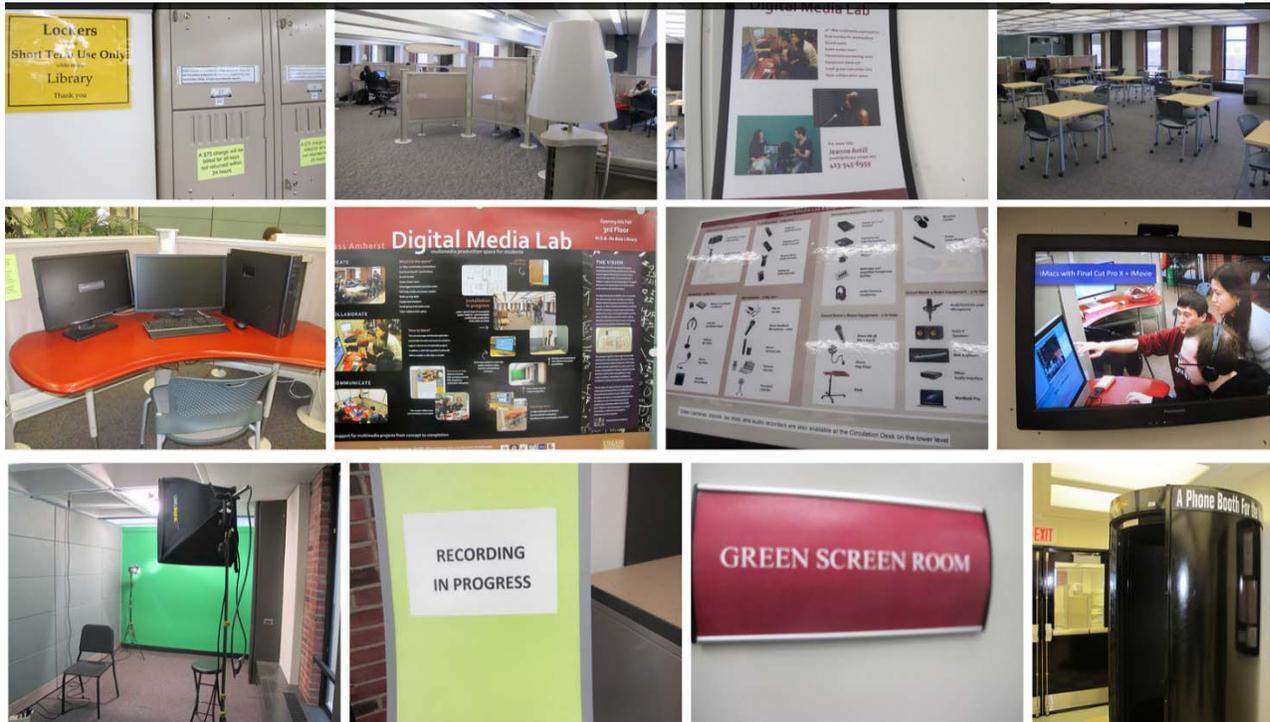


Source of photos: <http://www.brown.edu/academics/public-humanities/blog/2013-03/digital-storytelling-digital-scholarship-lab>

- 3) *To support programming needs.* The Writing Center, the Quantitative Reasoning Center, the Center for Teaching, Educational Technology, and other programs and departments housed in Dinand would provide flexible-layout computer labs, experimental technologies,

equipment for practicing presentations, technology for creating or editing multimedia content, lecture capture tools, and specialized equipment such as laser cutters, a 3D printer, and poster printers. See, for example, the collage of images below (Image 23) showing some of the equipment available in UMass Amherst’s Digital Media Lab to enable students to create and edit multimedia content. In particular, we support the idea of a “technology sandbox” or an “incubator classroom” where faculty can experiment with new educational technologies, and we would rely on the expertise of our Center for Teaching and our Ed Tech department to continue to suggest what these spaces should include.

Image 23: UMass Amherst’s Digital Media Lab



- 4) *To provide ad hoc technical support.* In several of our site visits, we saw something similar to the University of Chicago’s “TechB@r”, usually a branch of the institution’s IT department, offering students, staff, and faculty on-the-spot consultations or trouble shooting. This is also where people can borrow laptops, tablets, headphones, and other devices for use inside the library (see Images 26-28).

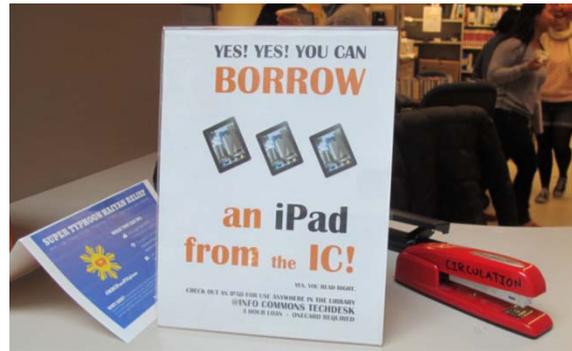
Image 26: TechB@r, University of Chicago's library



Image 27: Computing Services at Bentley



Image 28: Mount Holyoke, Learning Commons Help Desk



Finally, we would like to reiterate the importance of also incorporating low-tech tools for collaborative work., such as lap desks (see p. 15), bulletin boards, whiteboards, and writeable walls (see Images 29 & 30).

Image 29: Brown University Science Library



Image 30: Writeable walls and whiteboards at Harvard Innovation lab



source of photo: <http://youngtri.com/2013/12/page/3/>

Information + Expertise

The library must bring together in one place all of the information resources faculty and students need to accomplish their intellectual projects. Spatial design and technology initiatives will be crucial in making Dinand 2020 the intellectual hub of the campus, but these solutions must be supported by a staff of experts providing outstanding service and excellent programming. It is our great fortune that Holy Cross already employs an incredibly talented staff and that many of our efforts to increase and improve programming in teaching and learning are already underway.

Dinand 2020 will be the go-to place for expert guidance on everything from writing and quantitative reasoning to producing digital media to sourcing and evaluating library materials to the latest trends in pedagogy. First, technological initiatives in Dinand, such as a digital scholarship lab, must be supported by instructional design and pedagogical training. Research on innovative learning spaces in higher education suggests that merely creating technology-enabled spaces that support collaborative work is not sufficient. Faculty must be trained to use these collaborative technologies, but they must also be trained in the pedagogical foundations of constructivist or project-based learning. Some schools enforce policies that limit the use of incubator classrooms to faculty who have specific training in using the space to meet pedagogical needs.^{xii} For example, the Digital Scholarship Lab at Brown University is supported by staff members who facilitate the use of the space and train faculty to make best use of the room's capabilities in their teaching and research.

As a hub of expertise, Dinand 2020 should house academic and instructional programming initiatives, especially those with evident intersections. For example, Mount Holyoke's Speaking, Arguing and Writing (SAW) Center (which supports writing- and speaking-intensive courses) is located adjacent to the Mediated Educational Work Spaces (MEWS) so that students can access mentoring on a range of assignments from writing to public speaking to multimedia projects. We should also mention here a point that was raised by several faculty members regarding the increasing number of students who require accommodations such as extended time on exams. There is a growing need for staffed space where these exams can be administered and proctored, whether such a space is included in Dinand or elsewhere on campus.

Tradition + Flexibility

At the start of this report, we welcomed you into Dinand 2020 through the new glass atrium facing Hogan. However, the original entrance will remain, and will deliver us into a more traditional area of the library. Here, the soaring atrium, stained-glass windows, and intricate architectural details that guide us toward the Main Reading Room transport us into a more sacred space. We want to maintain that sense of being transported; of being part of something bigger than ourselves.

There are two stories about Dinand's history that the architecture can tell: one is "Welcome to the past. Not much has changed"; the other says, "Yes, you are part of a long tradition of intellectual life at this college and within the broader academic community. Now it is time to add your chapter to this story." It is this second story that Dinand 2020 should elicit – a deep respect for and recognition of the history of intellectual activity that characterizes the College's Jesuit tradition,

but also a sense that students and faculty are moving that story forward. What new discoveries, insights, and works of art will our students and faculty add to the intellectual legacy of Holy Cross and beyond?

We recommend retaining and highlighting the already existing architectural features and visual cues that make Dinand feel like an important space. As an example, we would suggest re-opening the beautiful staircases (which are currently restricted for staff use) to provide access to the second floor. We are inspired by the way RISD incorporated contemporary features while preserving the historical features of its libraries main reading room (see Images 31 & 32).

Images 31 & 32: RISD Library



While Dinand's historical features will provide a touchstone to the past, we must also redesign parts of the library to gesture toward the future. Along these lines, we applaud initiatives to display current students' artwork and faculty publications in Dinand. After all, ours is a story in process and Dinand 2020 should be designed with tradition, but also flexibility and change, in mind.

Mind + Body

When we visited other institutions, we asked the librarians what they had learned from their mistakes. Almost invariably, their comments alluded to the most practical of matters: furniture, bathrooms, climate control, and lighting. It is important to remember that, while we may be pursuing intellectual endeavors in the library, we inhabit these buildings as embodied humans. Holy Cross faculty members and students strongly reiterated the need to make Dinand a more welcoming and comfortable place to be. In fact, in a survey that asked Holy Cross students what they would most like to see in the library, 10 of the 36 key suggestions were related to precisely these physical

aspects (suggestions included: a coffee shop – this was given top priority by students; improved temperature control; more hydration stations; more bathrooms; better lighting; and comfortable furniture). Therefore, we strongly recommend investing in the physical amenities of Dinand 2020.

Holy Cross students often spend hours upon hours studying at Dinand, which makes ergonomic seating, appropriate lighting, the provision of food and drink, access to facilities, and proper temperature all the more important. Faculty and students alike lamented the unbearably hot temperatures in certain parts of the library. We discovered in our site visits that Dinand is not the only library in the state to suffer from HVAC issues. Enclosed group study rooms pose a particular design challenge in terms of climate control and ventilation, but also in terms of soundproofing, and these issues will have to be taken into careful considerations as we decide how many and what kind of group study rooms to install. Many people noted the need to install more bathrooms and to make them more visible and accessible; based on our site visits elsewhere, we concur that Dinand's bathroom facilities are insufficient.

Faculty members and students also voiced a desire for a food and coffee venue in Dinand. Although we have coffee shops and food in Hogan and the Science complex, including a café in Dinand is important for several reasons. First, food and drink are signs of welcome. Having a coffee shop in Dinand will invite people into the building and make it more likely that they will bump into one another. Second, if students are spending hours and hours studying, they should be able to leave their books at their table or carrel and grab a coffee or snack without leaving the building. We also recommend having hybrid eating/study spaces where food and drink are allowed, but where there are outlets for computers and space to spread out. This will promote more social but work-focused interaction. We also recommend installing additional hydration stations throughout Dinand. We were dismayed to hear from one first year student who, during a late-night study session, was unable to locate a hydration station in Dinand and had to walk up to Hogan to get a drink of water.

While visiting other libraries and poring through photos of other library renovations, we found ourselves drawn to the use of lighting not just for the sake of light, but also to demarcate certain spaces. Light and lighting fixtures can be used in a myriad of creative ways to foster a particular ambience, or to cue whether a space is for individual or group study. We recommend maximizing natural light into the building, an effort that can already be seen in the skylights and windows in the Hiatt wings. We recommend supplementing natural light with multiple light sources, avoiding high fixtures or fluorescent lights in areas where people will be working, collaborating, and studying. In individual work spaces or living room-style clusters, we should install low, individual lamps or floor lamps that create a cozy reading space and can be turned off and on as needed.

In group study and collision spaces, we would recommend lighting that can be dimmed when students need to use a shared monitor or practice presentations. If the long tables remain in the main reading room, table lamps can be used to demarcate individual study space so that students will be more likely to share the tables. Image 33 from the Wisconsin Historical Society's renovated reading room shows the use of traditional library lamps; Image 34 from the Aalvar Aalto-designed public library in Rovaniemi, Finland is a more contemporary solution in which table shape and lamps are used to create a sense of individual space within shared space.

Image 33: Wisconsin Historical Society



Image 34: Public library in Rovaniemi, Finland



Source of photos: <http://photos.uc.wisc.edu/photos/11823/view>; <http://www.panoramio.com/photo/32239206>

Librarians at other institutions told us again and again that top-quality furniture is an essential investment. Some made specific recommendations (such as Aeron chairs), but they all emphasized the importance of investing in flexible, moveable (tables and chairs on wheels), durable, washable furniture. Given that students regularly spend as much as six hours sitting at the library, we would recommend testing chairs thoroughly before settling on a particular brand or model.

We were also advised to invest in good design, since the furniture is a tangible symbol of the message we want to portray about the library. Along these lines, we will likely outfit different spaces with the furniture that matches the ambience for that space. For example, state-of-the-art modular furniture in the collision spaces; traditional, wooden desks in the main reading room; bean bags, comfortable couches, and armchairs in the more social and playful spaces of the library.

One very simple furniture solution that we saw in a few libraries was the use of lap desks, long boards that can be laid across an armchair or a student's lap (see Images 11 & 12 above). Instead of investing in more armchairs with built-in swinging side tables, we recommend making these lap desks available. We might even consider dedicating a larger living room-style space (that could accommodate ~16 students) for seminars or discussion sections that want to meet in a more informal space. Given that New England weather doesn't allow for us to meet with our classes outside very often, a space in Dinand could offer a similar break from the regular classroom.

Speaking of the weather, several faculty members and students emphasized the need to create some kind of connection with the outdoors. The light-filled, glassed-in atrium that we envision as the Hoval-facing entrance for Dinand would be one move in this direction. Maximizing the windows that Dinand does have would be another. Currently, many of Dinand's windows are behind individual office partitions. Opening up the staff areas on the first and second floors and using more glass instead of opaque partitions will also bring in more natural light and provide access to outdoor views. As well, the rooftop patio needs a more welcoming access than the current spiral staircase provides. Many people do not even know the patio exists, but this is another place where classes could meet (weather permitting).

Finally, we encourage the addition of more playful places in the library. According to Einstein's famous phrase, genius may be 99% perspiration and only 1% inspiration, but that 1% is

crucial to the equation! Dinand 2020 should not only provide faculty and students with the resources they need to work hard; it should also provide a bit of whimsy and fun to get our creativity flowing. Several of the libraries we visited had spaces for individual or communal play. At UMass Amherst, we were greeted in the lobby with flyers announcing a weekly game night (see Image 35); at RISD and Clark, large half-completed jigsaw puzzles invite passersby to stop and fit a piece; at Mount Holyoke, a sun-drenched room full of easy chairs and low tables is filled with puzzles, board games, and decks of cards (see Image 36). Also at Mount Holyoke, we visited a room – not unlike Dinand’s Debate Room – where students can play with bunnies during the finals study period. We won’t go so far as to suggest bringing bunnies or puppies to Dinand, but we do recommend that Dinand 2020 incorporate playful elements that remind us all to take a break and breathe every once in a while.

Image 35: UMass Amherst



Image 36: Mount Holyoke



This point about playfulness calls to mind Paulo Freire’s concept of ‘unfinishedness’.^{xiii} Freire, an educator, philosopher, and advocate of critical pedagogy, argued that learning is a function of the essentially unfinished nature of being human in the world. It is our fundamental unfinishedness that propels us to always keep thinking, doing, and learning. Dinand 2020 should be an unfinished space – a space whose potential uses are hinted at but not determined; a space where half-finished puzzles, experimental technologies, moveable furniture, and programs become ingredients in the creation of ever-new arrangements and possibilities that we have not yet even begun to imagine.

PROPOSED NEXT STEPS

The work that the 2013-14 Dinand 2020 Committee has undertaken is an initial step in a long and exciting process of understanding our current and future needs, determining priorities, mobilizing resources, implementing projects, and imagining the kinds of library spaces that will best support our ongoing pursuit of excellence in teaching, research, and learning. Based on what we have done – and what we were unable to accomplish – in the past few months, the committee makes several recommendations for the next steps in this process.

- 1) We recommend that another iteration of the Dinand 2020 Committee be convened starting in the fall of 2014. This committee should include faculty members, librarians, and student representatives, as well as stakeholders from various parts of the Holy Cross community. For the sake of continuity, some members from the current committee should be invited to serve again next year and members of the 2013-14 committee should meet with the 2014-15 committee early in the fall semester.
- 2) We recommend that the 2014-15 Dinand 2020 Committee establish close ties with the hiring committee for the new Director of Library Services so that the two groups can communicate effectively and work together toward a shared vision.
- 3) We recommend that the 2014-15 Dinand 2020 Committee continue and refine some of the activities that this year's committee initiated. In terms of site visits, the committee members and student representatives should accept the invitation from Dave Pilachowski, Head Librarian at Williams College, to visit the newly renovated Sawyer Library in the fall. The new committee should also consider using this report as a basis for generating and directing ongoing conversation among faculty members, students, staff, and administrators. We recommend holding one-on-one conversations in addition to group sessions to elicit additional focused input.
- 4) We recommend that the Dean's Office identify an internal or external point person to coordinate and facilitate priority-setting and visioning workshops, to synthesize conversations or work that may be going on in different parts of the campus, and to guide the overall process. We also recommend that the College retain an architectural firm to offer guidance on practical and structural matters, to consult with the new committee to shape a more concrete vision for Dinand 2020, to begin to develop a budget, and to solidify plans for implementing this vision.

Appendix A: ‘Plan for a Scholar’s Lab in the Dinand Library’

The idea of the Scholar's Lab was created by the Teaching & Learning Team of the Dinand Library. Members include Laura Hibbler (team leader), Alan Karass, and Janis DesMarais. The plan was commissioned by Alicia Hansen, Head of Research & Instruction Services, with the intention of retaining a theoretical plan for an innovative space in the Dinand Library. The plan was completed and presented in early March 2014.

Scholar’s Lab

As the Teaching and Learning team discussed ideas for components of a Scholar's Lab, we looked to other colleges and universities with innovative learning spaces:

- Tufts University’s Digital Design Studio
- University of Illinois’ Media Commons @ the Undergraduate Library and Scholarly Commons
- Hunt Library at North Carolina State University
- Northeastern University’s Digital Media Commons
- Brown University’s Digital Scholarship lab
- University of Washington’s Research Commons

While looking at these spaces, we considered elements such as software, equipment for multimedia projects, furniture, layout of the spaces, types of space (spaces for groups, classes, individuals), and services provided. We were inspired by many of these spaces at these, but we also considered what resources and services would be most likely to meet the needs of students and faculty at the College of the Holy Cross.

We appreciated the University of Washington’s [“Explore the Commons” webpage](#) which allows visitors to the site view a floor plan of the Commons and then click on different types of spaces in the Commons to learn more information. For example, if a person selects the space for one of the booths, he would see a photo of the space and a description similar to this “Booth D facilitates small group projects or meetings with an LG 52" Plasma HDTV ... Group members can collaborate through a shared desktop display by using a provided VGA cable to connect their laptops to the screen and share documents, images, videos, etc. ... Ideal for consultations, small workshops, and/or office hours.” ([Booth D](#)) As we considered ideas for a Scholar’s Lab at Holy Cross, we felt that it would be helpful to create our own floor plan so that it might help people envision what spaces the Scholar’s Lab would offer and how this spaces might be used.

Please see attached “Plan for a Scholar’s Lab in the Dinand Library.”

After looking at the spaces from other schools, we felt that the Scholar’s Lab at Holy Cross should include flexible work spaces for collaboration and content creation. These spaces are described below.

- In the center of the space is a classroom. This room has a glass wall along one side to help enhance the visibility of the activities taking place here. Along other walls are several flat screen displays, whiteboard, and a projection screen that could be pulled down as needed. The classroom seats 25. The room could be reserved for classes and presentations. When it is not reserved, the room will be available for students to use.

To ensure the this room has the flexibility to meet a variety of teaching and learning needs, the classroom will have modular tables and moveable chairs. Rather than desktop computers, the Scholar's Lab has laptops stored in a closet behind the Scholar's Lab Welcome Desk. These laptops could be checked out to whole class or to individual students using the Scholar's Lab.

The laptops will have a variety of types of software for content creation (multimedia, audio, imaging, data analysis, visualization, design software such as CAD, etc.).

Outside of the classroom are a variety of comfortable and welcoming spaces that can be used by groups for multimedia projects and other types of collaborative work. In different pockets around the room are:

- Low round tables with comfortable chairs. We envision this as a Scholar's Lounge within the Scholar's Lab. This work area would provide a different vibe from other labs on campus. *Father McFarland used to talk about the move in higher ed to make spaces like a second living room; with comfy furniture and artsy style, the Scholar's Lounge could fall into this type of space.*
- Modular tables with swivel seating. This area would provide a flexible space for group work. The exterior walls along these areas would be whiteboard walls. Librarians at other colleges have noted how popular whiteboard walls are with students in groups.
- Booth style seating with a flat screen display. Groups can connect laptops to the screen to display work.
- High task tables with swivel seating. This provides another type of space for group work.
- Table with high quality coffee maker. *Collaborative spaces need coffee.*
- Table with specialized equipment, such as a 3D printer and laser cutter.

When the Scholar's Lab was discussed with several faculty members, they said that they would love to see this type of space because the campus currently lacks a space with different types of software and equipment that their classes might use. They said they would incorporate use of the Scholar's Lab equipment and software into their classes.

While not as exciting, the Scholar's Lab also provides bathrooms and a printing stations to help ensure that students can work productively in the area without having to walk to another floor of the building for certain necessary tasks.

Other considerations for the Scholar's Lab:

- To assist students from start to finish, the Lab could also have loanable AV technology (for example: video cameras, microphones, cameras, and photography equipment, such as tripod and lighting equipment) that could be stored with the laptops. The AV department currently does loaning for campus media needs, but incorporating this service into the Scholar's Lab would enhance the visibility of these resources to students working on projects and to faculty who might be interested in assigning projects that require audiovisual equipment.
 - If there's interest, a multimedia production studio could be included into the Scholar's Lab. For multimedia editing, this would need to be a sound proof cubicle.
- Technology assistance would also be at the Scholar's Lab. This support could be provided through both a drop-in and appointments-based service.

- Workshops for faculty, staff and students. Topics could include iMovie, Final Cut Pro, Photoshop, and Video production.
- With groups working on projects all around the Lab, we would want to prevent the room from getting too noisy. Sound absorption equipment would be a valuable addition.
- While a space like the Debate Room may work well as a space for Scholar's Lab, we did not focus on a particular room in Dinand as the planned space.
- It would be ideal to locate the Scholar's Lab in close proximity to the Writer's Workshop and other tutoring services.

If we build it, will they come?

Some colleges and universities have built similar spaces and found that the space is used by a core group of faculty and students, but the space is not used as much the library had hoped and/or the space is not used in the ways that they had originally envisioned. We feel strongly that, even with innovative spaces to meet a variety of teaching and learning needs, the success of the Scholar's Lab will also depend on effective marketing. We discussed a number of ways to promote the Lab:

- Establish a program through which faculty could apply to for funding for software and other programs to be installed in the lab for the lab. Faculty who receive funding would then bring their class to the lab for session(s) on using the technology and the students from the class would use the technology outside of class time to work on their projects. The software and equipment would then be available for other classes and individuals on campus to use as well. We hope that a program like this would encourage faculty and students to use the Scholar's Lab, and to use the space creatively. The funding program would also help ensure that the College purchases technology that would end up being used by classes. Additionally, the funding program might help encourage faculty to think about innovative projects for their classes. At the end of each semester or academic year, the Library could showcase the work done by classes who received funding and used the Scholar's Lab.*
- Provide an interactive online map like the University of Washington's "[Explore the Commons](#)" webpage. This map would allow faculty and students to learn about the types of spaces are available and also see a list of ways that the spaces have been used in the past.
- When describing the Lab, include examples of how different types of technology are being used at Holy Cross and at other schools. People may read that the Lab has a 3D printer and they may not be aware of 3D printing's possible applications in education. Promotional materials should include examples, such as photos of students using 3D printing to create models for different types of classes.

* After discussing this idea, we saw that Tufts has a [similar program](#). Tufts' "CourseBased Multimedia Project Proposal" could serve as a model for this type of grant program.

Appendix B: Student Survey Results

Compilation of student feedback collected by SGA in February/March 2014

Concern	Incidence
Coffee Shop	20
Air conditioning	13
Better Temperature Controls	13
More study group rooms	12
More outlets	7
More hydration stations	7
More computers of all platforms	5
More tables	5
Better lighting throughout	4
Bathrooms on main floor	4
More logical volume zones	4
Improved piping system	2
More windows	2
Lockers for thesis students	2
More Whiteboards	2
Textbooks to borrow	2
Aesthetic improvements	2
Replace wooden chairs	2
Comfortable Chairs/Couches/Lounge	2
Assigned cubicles for thesis work	1
Wireless printers	1
Faster computers	1
Library App w/card catalogue, and map to find books	1
More open spaces	1
Utilize rooftop garden	1
Build observatory	1
Bigger Cubicles w/outlets	1
Computers w/statistical software (SAS, Matlab, Stata)	1
iPads/Kindles for Library Use	1
Better parking by Dinand	1
Automatic Log out	1
More scanners	1
Color Printing	1
Extend top floor hours	1
Big recycle bins near printers	1
Nap Room	1

Appendix C: Links and Resources

- Additional photos from our site visits to Bentley, Mount Holyoke, and UMass Amherst are available here: <https://www.flickr.com/photos/118939257@N06/sets/>
- The Carney Library at UMass Dartmouth is highlighted in the [Library Design Showcase Section of American Libraries](#) magazine Sept./Oct. 2013: <http://library.umassd.edu/about/library-building-renovation-and-expansion-program>
- For a thorough list of recent Info Commons renovations and descriptions: <http://infocommonsandbeyond.blogspot.com/>
- Brian Mathews, the Ubiquitous Librarian blog: <http://chronicle.com/blognetwork/theubiquitouslibrarian/>
- ACRLLog (‘Blogging by and for academic and research librarians’): <http://acrlog.org/>
 - This post emphasizes the importance of appealing to the sensory experience for users in addition to fast and convenient digital resources: <http://acrlog.org/2012/10/29/enabling-the-research-flow-and-serendipity-in-todays-digital-library-environment/>
- A Guide Planning for Assessing 21st Century Spaces for 21st Century Learners, edited by Jeanne L. Narum, Learning Spaces Collaboratory (LSC): <http://pkallsc.org/sites/all/modules/ckeditor/ckfinder/userfiles/files/LSC%20Guide-PlanningforAssessing.pdf>

Relevant articles:

- *The Atlantic*, The Library of the Future Is Here, by Brian Resnick, January 24, 2014: <http://www.theatlanticcities.com/design/2014/01/library-future-here/8193/>
- *Harvard Magazine*, Hacking the Stacks: The Library Test Kitchen, by Jonathan Shaw, July-August 2012: <http://harvardmagazine.com/2012/07/library-test-kitchen#article-images>
- *The New York Times*, Breaking Out of the Library Mold, in Boston and Beyond, by Katharine Q. Seelye, March 7, 2014: <http://www.nytimes.com/2014/03/08/us/breaking-out-of-the-library-mold-in-boston-and-beyond.html?emc=eta1&r=1>
- *Slate*, What Will Become of the Library? How it will evolve as the world goes digital, by Michael Agresta, April 22, 2014: www.slate.com/articles/life/design/2014/04/the_future_of_the_library_how_they_ll_evolve_for_the_digital_age.1.html

Notes

ⁱ The committee was convened in October 2013 and began meeting in November 2013. Since then, the committee has met 16 times. Over the past five months, we have coordinated (with Center for Teaching) a lunchtime session attended by ~20 staff, administrators, and faculty members; facilitated two breakfast roundtable sessions with faculty who have expertise in architecture, cognition, libraries, and innovation spaces as well as staff involved in learning and teaching programming at the College; visited library renovations at Brown (Rockefeller and Science Library), Rhode Island School of Design, Bentley, Clark, UMass Amherst, Mount Holyoke, and Providence College; read current literature on library and learning spaces and visited websites showcasing other library renovations; consulted with David Pilachowski, head librarian at Williams College; met with the director of the physical plant, architects, and designers; collected input via an online blog hosted on the Holy Cross Libraries website; and liaised with the SGA to collect input and insights from students, which included an evening tour of their favorite study spaces on campus and feedback from their visit to the library at Tufts University.

ⁱⁱ Smale, M. (2012) 'Collision Spaces', ACRLLog, available online at: <http://acrlog.org/2012/01/24/collision-spaces/>.

ⁱⁱⁱ Mathews blogs as the "Ubiquitous Librarian" at: <http://chronicle.com/blognetwork/theubiquitouslibrarian/>

^{iv} McWilliam, E., Sweet, C., & Blythe, H. (2013) 'Re/membering Pedagogical Spaces', in *Cases on Higher Education Spaces: Innovation, Collaboration, Technology*, ed. by R.G. Carpenter, Hershey, PA: IGI Global, p. 5.

^v Crook, C. & Mitchell, G. (2012) 'Ambience in Social Learning: Student Engagement with New Designs for Learning Spaces', *Cambridge Journal of Education*, 42(2): 121-139; Wenger, E. (1998) *Communities of Practice: Learning, Meaning, and Identity*, Cambridge: Cambridge University Press.

^{vi} Ibid.

^{vii} Ibid., p. 121.

^{viii} Ibid., p. 136.

^{ix} Ibid.

^x Ibid.

^{xi} Roberts, J.L. (2013) 'The Power of Patience: Teaching Students the Value of Deceleration and Immersive Attention', *Harvard Magazine* (November-December): 40-43.

^{xii} Carpenter, R.G. (Ed.) (2013) *Cases on Higher Education Spaces: Innovation, Collaboration, Technology*, Hershey, PA: IGI Global. See especially Chapters 8, 9 and 10.

^{xiii} Freire, Paulo (2000) *Pedagogy of Freedom*, Rowman and Littlefield, NY.