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Learning Technologies

The intersection between technology and scholarship is a fascinating one, particularly in the context of digital scholarship. Access to technology is an important pillar of any campus's digital scholarship culture, and along with it comes support for that technology, whether in the form of documentation, trainings, consultations, office hours, or something else entirely. This chapter will outline how my experience as an instructional technologist at the University of Washington (UW) has informed my approach to the culture of digital scholarship and how the UW Libraries and my home department of Learning Technologies have fostered a growing relationship in support of digital scholarship on the UW campus.

BACKGROUND: WHAT IS UW LEARNING TECHNOLOGIES?

UW Learning Technologies (LT) is a centralized campus unit focused on teaching and learning with technology that offers support and training for several centrally supported tools. LT reports to the Provost's Office as part of

From the Culture of Digital Scholarship in Academic Libraries, edited by Robin Chin Roemer and Verletta Kern (Chicago: American Library Association, 2019).

Academic and Student Affairs (ASA) and more specifically as part of Academic Technologies, which also includes Classroom Technology and Events (CTE). This placement prioritizes our focus on teaching and learning instead of solely technology and helps to clarify our priorities to our clients. ASA also includes the UW Center for Teaching and Learning (CTL), of which LT and the Libraries are both partners.[1] The Libraries also reports to the Provost's Office, bringing our units closer together in reporting structure and creating opportunities for future collaborations. LT is collocated with librarians and library staff in UW's Odegaard Undergraduate Library, a conveniently accessible physical location for students and faculty, but we are not otherwise formally integrated into the structure of the UW Libraries.

Learning Technologies' primary services include:

Walk-in software and computer support. The LT department staffs the Computer Vet desk found in Odegaard Undergraduate Library, which provides walk-in, phone, and email support for software issues with computers on a free, best-effort basis.

Computer lab operation and maintenance. The department has a systems team consisting of four student staff and one full-time supervisor to maintain the Student Technology Fee (STF) supported computer labs in Odegaard Library for student and teaching use.[2]

Centralized learning technology support. Our Learning Management System (LMS) and Multimedia teams, which include approximately twenty-five student staff, support our designated centrally supported tools, including Canvas (LMS), Panopto Lecture Capture, Poll Everywhere (classroom response), Zoom web conferencing, and the video and sound studios in Odegaard Library through in-person consultations, phone, and email.

Technology-focused workshops. Finally, we have a team of around five student instructors who teach workshops on audio and video production, use of the Adobe tools, and productivity software.

Most of our teams are staffed by students, approximately fifty throughout the year, who are trained in customer service and support as well as the use of the particular tools that they support. Our full-time team, as of summer 2018, consists of instructional designers, instructional technologists, a training and operations lead, a multimedia consulting lead, the systems team supervisor, and the help desk manager.

As an instructional technologist, I work with LT's student staff to support and troubleshoot the centrally supported teaching and learning resources previously mentioned. I also work on questions of instructional design, teach workshops, and consult with students, staff, and faculty on questions about teaching and learning technologies and questions around digital pedagogy. This role, combined with my MLIS, fits well with digital scholarship support

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as I can leverage my knowledge of central IT resources, libraries, consultation skills, and familiarity with technology used for teaching and learning.

GETTING INVOLVED WITH DIGITAL SCHOLARSHIP

Although my current responsibilities with teaching and learning technologies provide a natural segue into the world of digital scholarship, my relationship with digital scholarship began much earlier, during my time as an MLIS student at the UW iSchool. During that time, not only did I started participating actively in academic digital scholarship conversations, but I also began working for LT as a Graduate Staff Assistant (GSA). These graduate student experiences fundamentally shaped my understanding of the UW community's technology needs, and by extension the services and support that LT offers in relation to digital scholarship and digital humanities (DH). The following examples help illuminate these connections and the lessons learned along the way.

EXAMPLE 1

Demystifying the Digital Humanities

The Demystifying Digital Humanities (DMDH) workshop series, a jointly funded venture of UW's Walter Chapin Simpson Center for the Humanities and the UW Textual Studies program, began in 2012 and ran for three consecutive academic years. It was created by two English Studies doctoral students, Paige Morgan and Sarah Kremen-Hicks, and consisted of a series of six workshops designed to provide curious graduate students with "a guided introduction to the points of intersection between traditional and digital humanities (DH), including how traditional humanities approaches and questions are used or translated in DH studies, and identifying major DH subfields and their goals."[3] The DMDH series provided me with a thoughtful introduction to many DH topics, including the essential fact that many of the tools used in DH work are not centrally supported. For example, alpha (i.e., early) stage software is not usually available for public use when it is proprietary but may be available for open source software. Alpha software releases can also be unstable and buggy, whereas beta-stage software usually has complete features and a smaller set of bugs, either known or unknown. Development stages can also help to indicate the level of support available to users running the software. In contrast to production releases, which are usually stable and supported, alpha and beta releases may have minimal support, which means the performance of the software may change irregularly. It is thus important to understand development stages before selecting a platform to host a DH project.

The DMDH series also highlighted that software support can take many forms. For DH tools that are supported centrally on a campus, for instance,

there is often a help desk offering some combination of phone, email, and in-person support. For individually licensed software, however, support may depend on your plan and how much you are paying. There may be a user community where users can consult with one another about issues that are occurring with a tool, as is the case with most free open source software. Before signing up for a tool, it is critical to ask questions about what support is available, especially if you are paying for a particular plan. Which issues will the vendor help address, and which are the user's presumed responsibility? It is also good to clarify whether this support will be available via email, chat, phone, or documentation. Today, as an instructional technologist, I carry on the tradition of DMDH in trying to make these issues more transparent and accessible to those interested in the digital humanities.[4]

EXAMPLE 2

Digital Humanities Coursework

In 2014, while attending the DMDH workshop series, I enrolled in a humanities reference course that included a focus on DH. The course appealed to my main interests in how DH work is hosted in libraries, and how librarians can support scholars using DH methods in their research and teaching. For instance, as part of one assignment, students created their own DH projects in teams. Although virtually all of these projects have since been taken down due to lack of maintenance (a common issue with DH projects), the assignment yielded valuable knowledge around how to collaborate on a digital project—and in my case, around how to apply some of the principles I gleaned from the DMDH workshops. Indeed, later that same year, the organizers of the DMDH series hosted a DH showcase at which my collaborator and I presented our project and reviewed projects others had been working on across campus. In LT, we continue to see demand from DH researchers for opportunities to foster these sorts of collaborations and to build additional DH skills.

EXAMPLE 3

Digital Humanities Summer Institute

During the summer of 2017, I was part of a group that was awarded a local grant to attend the Digital Humanities Summer Institute (DHSI), a popular professional development experience hosted annually by the University of Victoria in British Columbia. Our group's goal was to gain familiarity with key DH topics from a practitioner perspective in order to better support DH/DS needs on the UW campus. I selected the DHSI course Critical Pedagogy and Digital Praxis in the Humanities, taught by Robin DeRosa,

director of Interdisciplinary Studies at Plymouth State University, and Chris Friend, assistant professor of English at Saint Leo University. The course was described as "an exploration of pedagogy," and challenged attendees to rethink their approaches to teaching by discussing how students can "define, control, and take responsibility for, their learning environment."[5] The course tied in nicely with many aspects of my work with LT, including how to teach technical programs to others, and how to integrate technology into pedagogy. However, it also forced me to think in new ways about how pedagogy can be constrained by the types of technology I work with daily. The instructors and participants in my session were very direct in discussing the failings of the educational technologies available to them, such as Learning Management Systems, and their views of the role instructional technologists should play when working with faculty.

Overall, the workshop provided me with valuable insight into the types of tools digital scholars are looking for and the types of projects they are envisioning. It also jump-started my interest in student-directed content and learning, which allows members of a class to work with the instructor to find areas within the class topic that they are interested in focusing on. It is a concept that offers many potential learning benefits, but is also challenging from an assessment perspective, which is part of my work as an instructional technologist. For example, how do you evaluate students who have met their learning goals for a course and improved their knowledge of the subject material during a term but may or may not have learned enough to succeed in the next course in a sequence? The question of how to assess the knowledge contained within a project as opposed to the technical skills that went into building a project is one that appears regularly in discussions of digital scholarship projects, both in the classroom and in more complex tenure and promotion cases. Suffice to say, there is no single recommendation or criteria for DS project evaluation, although there are a number of guides from the Modern Language Association, the University of Nebraska Center for Digital Research in the Humanities, the Middle East Studies Association, and professor Todd Presner's article in the *Journal of Digital Humanities*.[6]

My experiences as a graduate student have thus deeply shaped my understanding of the needs, opportunities, and learning processes of researchers who are new to digital scholarship, as well as those who are experienced digital scholars. In the rest of this chapter, I will discuss the current services that Learning Technologies offers, many of which I believe can be used as a model for other universities' technology-focused units in terms of how to support digital scholarship work in partnership with campus libraries and librarians.

LEARNING TECHNOLOGIES AND DIGITAL SCHOLARSHIP PROJECT OFFICE HOURS

Digital Scholarship Project Office Hours originally started as a collaboration between the DMDH graduate student coordinators and a colleague in LT. Together, these parties offered weekly drop-in office hours to anyone on campus seeking assistance with a digital humanities project, until the DMDH workshops ended in 2015. However, in 2016, the new digital scholarship librarian approached me about resuming these office hours offerings. Ever since, the two of us have worked collaboratively to offer help for students and faculty across campus who are working on digital projects. As part of these new Digital Scholarship Project Help Office Hours, we are available for walk-in help for 1.5 hours once a week during academic terms (figure 7.1), although we schedule consultations outside of that time as needed. Through these consultations, we have expanded our knowledge around the challenges of DS/DH work at UW, have developed an understanding of the types of projects that are being accomplished and envisioned, and learned about the software that scholars would like to use. This information has allowed us to improve our efforts to further the culture of DS at UW, and to help other DH advocates on campus as well. For instance, we recently collaborated with other UW librarians to create a Digital Scholarship Research Guide aimed at providing first-line support to researchers who are getting started on digital projects, or who are looking for software that will help them with specific projects, such as story mapping or time line building.[7]

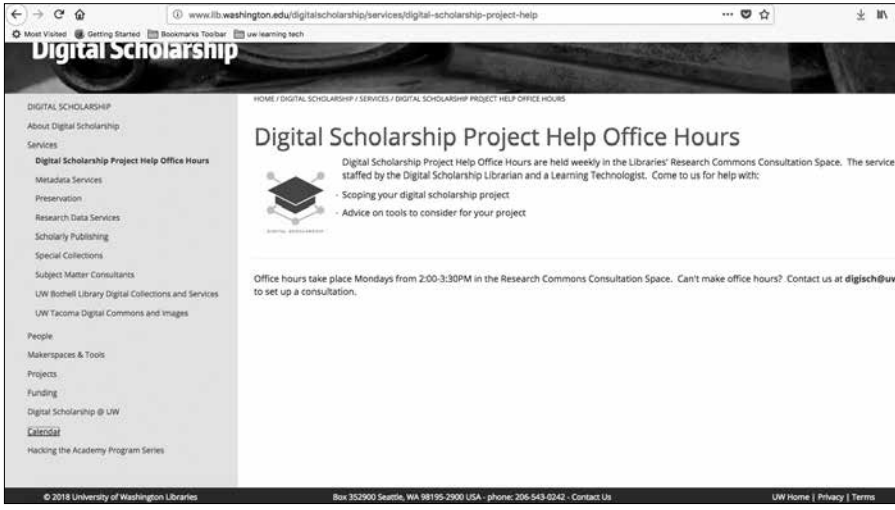

FIGURE 7.1
Screenshot of DS Project Help Office Hours Page

Performing the Digital Scholarship Consultation

Consultations can be challenging as faculty and students come to them with projects in every possible state and stage imaginable. Some are still trying to scope out their projects; often they are coming from a workshop or intensive training and are trying to translate what they have just learned to UW's infrastructure and resources. Others have had a grant proposal approved and need to determine the available campus resources. At UW, we frequently see students working on independent research or course projects with innovative ideas but struggle to scope their projects to the time available. There are also cases of established digital projects that need to be moved from their original location to a new location for a variety of reasons, or authors who would like to incorporate media resources into traditional text-based publications. Whatever their level or question, the important thing to keep in mind when approaching a consultation is that there is no one-size-fits-all answer, and that each consultation will therefore inevitably involve creative thinking about how to get a client from point A to a relative point B.

Thus, as varied as digital scholarship projects can be, all of our consultations start in essentially the same place. We begin by having the client describe their project, the inspirations behind it (this could be a research question, a particular resource, or another DH/DS project), and their vision for what the final product may be, or whether they are experimenting. Think of this as a sort of reference interview but for a digital project rather than a straight-up research project. It is also helpful to inquire toward the start about any available resources, which could be anything from grants to partnerships with other organizations to proposed and current collaborators. Establishing a client's intended audience early is likewise extremely helpful when assisting with project development. Although the explicit question of audience can be challenging for scholars, encouraging them to consider it ultimately helps to make better design and marketing choices. For the same reason, initial conversations about digital projects are a good time to inquire about any other constraints that clients may have, such as grant requirements, data sharing permissions, course project guidelines, or guidelines from a sponsor.

Once we have an idea of the desired scope and available resources, our next step is to discuss the project's time frame, which is often one of the most restrictive constraints for digital projects. When the client is in a time crunch, we tend to recommend an iterative design approach, and encourage the concept of a minimum viable product (MVP). The idea is that you do not have to be perfect on the first attempt and create a completed full-scale digital project. Iterative design can also be beneficial as scholars and researchers can also try things out and see if they work for their intended audience without having to design and build something that would be a massive undertaking. It serves as a reminder that much can be learned from things that do not go as planned

during a first run of a project. Such an approach lines up well with the idea of a first draft and gives busy scholars the necessary data to improve later sections of the project. Having an MVP and a better sense of the amount of time and money involved in a full-scale project could also help when applying for grant funding for later stages of the project.

After the basic description and time frame, we ask about the components of a client's digital project. Components are hard to generalize, but could include someone's wish to have a stable archive that is not publicly accessible, or a public-facing searchable website. Scholars could also have different types of content ranging from text to multimedia. Whenever discussing content, it is important to bring up the topic of copyright. Have clients secured the rights to use the content in their project and in the specific ways that they are considering? Are they required to use a repository to store their data, and are they required to make the data or project available for reuse? If they wish to store these materials in a repository, have they met any requirements that the repository may have for accepting materials?

Reproducibility and making data available to other scholars for reuse are an important part of a highly collaborative field. This may differ from traditional humanities methods and draw more from the scientific tradition, which has much to offer but may feel unsettling for those who are new to these methodologies. Nonetheless, reproducibility can offer other researchers needed insight into project construction that will affect their own work. Data retention requirements, which can include questions of how long the data must remain available, as well as when it must be discarded, if required, may be a requirement for research grants. Happily, the UW Libraries offers assistance with resources for data management—but not necessarily at the level that researchers desire. Additionally, clients may face licensing questions. During consultations, we tend to ask whether clients want or need to consider a Creative Commons license. Creative Commons licenses help users clearly state how they are sharing their data, and what others may do with it.[8]

Once we have broached the issue of content, the consultation often turns toward more detailed project issues, such as metadata and storage. For instance, when working with clients interested in metadata, we recommend identifying up front whether they are using a standard file format, such as an open nonproprietary format, a format commonly used in the discipline, and one that is not encrypted or compressed.[9] It is also worth encouraging scholars to consider whether that is a format that is amenable to preservation, such as one on the ResearchWorks Archive List of Preferred File Formats.[10] We cover the value of naming conventions, which are important to standardize at the beginning of a project, especially for projects that will be long-running or involve a large number of collaborators. As for storage, we recommend that clients keep multiple (usually three) copies of their data in different places, one of which is in a different geographic area. We also recommend including a master and working copies. Storage is an especially complex issue to discuss

with clients, as it can mean so many different things and is open to interpretation. For example, there is the question of where things are stored while being worked on, where content will be stored long-term, and, in the end, how much space is needed for project storage. The file types employed in the project also make a difference, as text files do not take large amounts of storage, but audio and video do. Any time a client expresses long-term storage plans, the digital scholarship librarian and I must ask these type of preservation questions and evaluate whether to refer them to documentation or UW subject area experts for further assistance.

Another common entry point for the DS/DH work that we see in Office Hours is specific platforms and tools. Virtually any consultation session that involves digital scholarship will include some discussion of the pros and cons of the platforms or tools that are being considered or are familiar to the user for various reasons, as well as whether their initial solution is the platform or tool that will work best for them in the long run. As consultants, it is important to remember that scholars' needs change over the course of their projects, and that these fluctuations may shift the value of a specific tool or platform. We always suggest that scholars check to see how easy or challenging it will be to get their content and metadata out of their chosen digital project platform should they need to migrate platforms in the future; after all, platforms and programs do not last forever. If it is not possible to export their content from a platform, clients are advised to approach it with extreme caution and utilize it only for experimentation.

For those clients who are still in the process of selecting a platform, there are several other items that are important to review during the selection and evaluation process. As discussed in the DMDH workshop, the first is determining which stage of development the platform is in (e.g., alpha, beta, or production), and what each of these stages means for them as users. Knowing whether a platform is new and shiny or older and reliable will help clients decide how much of their time they are willing to dedicate to any troubleshooting and development that may come up when using a newer platform. Overall, we try and counsel the clients we meet with to consider flexibility, visibility, and portability when choosing their tools and platform, and when dealing with related issues, such as data. The result is the following key points, which we address through careful questions and follow-up inquiries.

Data export. Can you export and extract your data? If data can be exported, is it in a proprietary file format (a file type that requires a specific program to read it) or a format that will allow you to use your data in another platform?[11]

Platform. Does the platform allow you to prepare their data elsewhere and import it? Is the platform open source? If you have selected a platform that you are paying for, is this a one-time payment or an annual fee? If there is an annual fee, do you get a reminder to renew?

How much storage space is offered as part of the fee and how do fees change if more storage is needed? What other file storage options are available to users at free or low cost, such as institutional Google Drive and Microsoft OneDrive accounts or Critical Commons?

License agreement. What is in the license agreement that you are agreeing to in order to use the tool? Are there any deal breakers in the license agreement?

Web hosting. Where is the project being built? Who owns the space where it is being built? If this is institutional space, what happens to it when you are no longer affiliated with that institution? Is the content of the project easily exportable?

Preservation. How long do you expect the project to last? This could include time while a graduate student, use in a career portfolio, and pieces that are companions to published print works.

Projects We See

We see a wide range of digital scholarship projects during our Office Hours, from student efforts to faculty research to course-integrated projects. Some walk-in clients are instructors teaching about digital scholarship or digital humanities with concerns about student research projects. Others are independent scholars exploring the field in response to job postings or larger trends in digital humanities.

During Office Hours consultations, we try to identify needs related to scholars' projects and assess what resources clients have tried to access. Not surprisingly, given the diversity of our clientele, we see a wide range of needs, from simple to complex. However, one recurring need that both students and faculty express is for help with website creation and design, particularly because there are very few central resources for digital scholarship, and most resources that do exist are static websites rather than robust consulting services. Depending on needs, some support may be provided by the UW Libraries' Design Help Desk, also located in the Research Commons, which offers free help to students, staff, and faculty with a focus on visuals for presentations or publications.[12] There is also some limited help available to UW community members who are looking for User Experience (UX) help—via a mailing list, a community of practice, and limited UW consulting, in addition to some static online UX information.[13] We frequently see people who are interested in learning more about both website and UX design (although they usually do not ask for or know to ask for UX help specifically), as well as people hoping to hire students with UX expertise. Often these requests come in the form of asking how to design for a specific audience such as K–12. Other regular requests include help identifying grant opportunities and assistance

constructing and applying metadata to the various objects that arise in digital projects, including images and video. Unfortunately, there are limited resources available in this area, because there few metadata specialists in the Libraries. Although they can be scheduled to consult with individuals on projects, they do not currently have the capacity to support classroom instruction on metadata integration into student projects.

Coding help represents another area of growing demand from Office Hours clients. This help can include anything from wanting to learn how to do basic work with R or Python, to specific troubleshooting on existing code. Learning to code within the walls of the UW presents its own set of challenges to students, because the computer science department at UW is highly competitive and its resources are not readily accessible to students who are not in the department. Software Carpentry workshops designed to teach researchers the computing skills that they need to do their research are a good alternative but are offered infrequently, fill up quickly, do not support on-demand learning, and don't always meet individuals' needs in part due to differing definitions of "no prior experience necessary" and the ways in which humanities participants' needs differ from science users or social scientists.[14] Usually, Software Carpentry is offered as a two-day intensive workshop where participants sign up to focus on either Python or R. The eScience Institute offers instructor training once a year and workshops on a quarterly basis throughout the academic year, with the limitation that these workshops are run by volunteers and require an instructor and several assistants to run the sessions.[15] We have begun conversations with eScience to see if there is potential in the future for their Office Hours to offer some troubleshooting help with coding questions. We are also exploring whether eScience would be able to help digital scholars determine the costs associated with coding projects for grants. This potential collaboration is still in the early stages of discussion. As is the case with UX expertise, faculty and graduate students who have grant funds often come to Office Hours wanting to hire students with expertise in coding or website design. This is something that we are not currently able to assist with, but we hope there will be an opportunity to partner with eScience to support.

A third area of high demand is storage for multimedia projects. This area is complicated by issues such as volume of material, types of access desired, and the estimated length of project life. For example, many clients would like to be able to publish media to accompany a physical text, but few publishers have the ability or interest in publishing multimedia companions to traditional academic texts. Storing this content therefore takes extra space, which costs money and requires decisions about how long such a resource can continue to be available.

Finally, there is the area of web hosting, which brings unique challenges to clients engaged in digital scholarship. We see a consistent need for

opportunities to experiment with different digital publishing platforms, particularly Scalar and Omeka, despite the fact that UW does not currently support these hosting platforms. Free versions of such third-party tools do not offer enough storage space for experimentation, or the full set of features that clients need. UW users get 1 GB of free web hosting space from UW-IT, but often this does not meet the needs of scholars with large video collections or long-running projects.[16] Consequently, UW digital scholars frequently have many questions specifically about installing or using Omeka, a popular open source web-publishing platform. Whereas outside services such as Reclaim Hosting offer one-click installs of Omeka, it is more complicated to install Omeka on a UW-provided web space. Installing Omeka on an individual's personal Shared Web Hosting at UW means activating web hosting, installing MySQL, downloading and installing Omeka, and configuring Omeka as well as any plug-ins. Maintaining Omeka individually requires running regular updates and ensuring that any infrastructure updates from UW-IT do not conflict with the installation. Practically speaking, many clients are not interested in investing the time to learn how to do this sort of manual install and upkeep, or do not have the funding to pay for a separate service such as Reclaim Hosting.

Reverse Engineering DH Projects

One final topic that arises often during digital scholarship consultations is that of reverse engineering existing digital projects. Often, we see individuals inspired by other DH/DS projects that they have seen determined to replicate that project's setup within the bounds of their personal research topic. The problem with these requests is that there is a wide variety of experience and funding behind some digital projects, but the details of this variance are not often clear to casual observers of their results. Miriam Posner, assistant professor for Information Studies and Digital Studies at UCLA, gives an illustrative overview of the technical skills needed to recreate the selected projects on her blog and also described the process of deconstructing projects as looking for the sources, examining how they have been processed, and determining how they are presented.[17] She includes a description of each project, and reviews the accompanying skills needed to build it. Miriam's transparency is the exception to the rule for digital scholarship even though this is encouraged, particularly from a reproducibility standpoint. It is not usually easy to deconstruct a project, and not even all of her projects have easily accessible overviews of their process and tools. Thus, for those who come in to our Office Hours with "inspiration projects," we usually start by walking through the original project site with them and asking them a gentle series of questions. These questions include:

- Can you tell how many people were involved in this project and what roles they played in project construction?

- How much time did it take to build the project?
- Is the project still a work in progress?
- When was it last updated?
- Is this project affiliated with any institutions?
- Is it receiving support (financial, technical, etc.) from anywhere?
- What software is being used?
- Is this custom-built project (e.g., specifically designed to meet a predefined set of criteria by a specific company rather than utilizing a common platform)?

Another good resource for these cases is the recently published worksheet from the ACRL Digital Scholarship Section's "Deconstructing Digital Scholarship Consultations in the Library."[18] In it, the authors suggest several other points to consider in deconstructing projects. Some of these questions focus on the purpose of the project or draw parallels between similar academic or research projects. Other questions are related to audience, methods, standards, data sets, methodology, and documentation. Creating documentation is not everyone's idea of fun, but it can make a good project even better, and also serves an important function by explaining rationales and processes for later viewers of the project—including those who might wish to reconstruct the project for their own research purposes.

Marketing Office Hours

One of the biggest challenges in offering Digital Scholarship Project Help Office Hours has been marketing. Earlier iterations of Office Hours were offered in combination with the DMDH workshop series, which increased their visibility. By contrast, our current Office Hours are listed generally as part of the consultation offerings in the UW Libraries' Research Commons unit, along with the Graduate Funding Information Service (GFIS), Writing Help Desk, and Design Help Desk. The Office Hours take place in a consultation room just off the main Research Commons space, which is itself located in one of the UW Libraries' main branches. Information about the Office Hours, along with all the other Research Commons consultation services, is sent out regularly via the UW Graduate School's general mailing list, the Research Commons online newsletter, and the Walter Chapin Simpson Center for the Humanities list. Although our Research Commons partnership has been excellent in terms of placing Office Hours in a central campus location, we have realized over time that the Research Commons' general marketing tactics may not be ideal for reaching our target audience of digital scholars. It has been challenging to figure out where, when, and how to publicize our Digital Scholarship service without pairing it with other services or including it as part of special workshops or other one-off event series.

Special Considerations: Consulting with Graduate Students

Although all digital scholars have unique and valuable needs when it comes to support for their projects, graduate students arguably face additional challenges when it comes to entering the world of DS/DH. A 2014 blog post by Paige Morgan, one of the creators of the DMDH workshops, touches on how to get started with digital humanities projects as a graduate student based on her experience as a UW grad student.[19] We have incorporated many of these ideas into our digital scholarship consultations.

First, and most importantly, Morgan points out that doctoral-seeking graduate students may not want to make their DH project part of their dissertation. In fact, it may be better for graduate students not to make completion of their degrees dependent on successfully acquiring new skills. By keeping their digital projects "unofficial," graduate students can have more fun, while at the same time learning lessons that will supplement their degree. Morgan also highlights that the sooner students can learn about legal, copyright, and IP issues, the better for their careers. She adds that these topics can shift during the course of a digital project.

Morgan also highlights the importance of background research. Graduate students must make sure that they are not pursuing a project that someone else has already done. This can be challenging to determine because there is not a standard repository or location of all DS projects. Her advice is to "scour the internet" for anything related to the chosen research area or topic. Of course, as with other academic work, students could choose to build on the work of other scholars who have already tackled part of a topic, or who have approached the same topic with different methods or based on different data. Although many solutions exist, the takeaway for students is that they may discover a need to rethink their approach to a given digital project in the same ways they would for non-digital projects where there is prior work. This is a good reminder to everyone involved in DS/DH work that, at the most basic level, digital projects are still scholarly projects, and function just like any other research project—but with the addition of new tools for analysis, or methods, or both.

One of Morgan's final points is that experimentation is a core part of many digital projects. As I mentioned earlier, the humanities do not have the same tradition of experimentation as the sciences do, but this is a major part of DS work. One of the ways to approach experimentation is through documentation. Track and record all discussions about the work, things that succeeded and things that failed, and the reasons why decisions were made. This will help in documenting a project for the future, for other scholars, for tenure committees, and for grant applications. Finding a good way to convey this to students without sounding negative is critical for successful consulting.

Our experiences working with students and faculty during digital scholarship consultations led us to explore additional options to meet some of the recurring needs that we see. To address faculty and graduate student concerns, we have experimented with developing workshops and program opportunities in hopes of expanding the culture of digital scholarship at UW.

LIBRARIES AND LEARNING TECHNOLOGIES DIGITAL SCHOLARSHIP WORKSHOPS

Some of the questions that have come up during Digital Scholarship Project Help Office Hours have encouraged LT and the Libraries to develop digital scholarship friendly workshops and events. For the past two years, the UW Libraries has hosted one such event, Going Public, which was designed to connect individuals who are already doing community-involved research as well as to offer workshops to expand skills for those who are interested in public and community scholarship but are not sure where to start.[20] It is a half-day symposium that addresses topics relating to communicating research and public scholarship to a wide audience, and includes workshops on data visualization, digital storytelling, and altmetrics.

When fostering digital scholarship culture, the importance of events should not be underestimated. Indeed, many Office Hours clients wish to learn more about what DS/DH work is happening on campus. Another complication is the lack of opportunities to see what people outside of specific disciplines are doing. This lack of awareness impacts the formation of cross-disciplinary collaborations. It is not uncommon to hear from digital scholars who would like to form collaborative project groups but struggle with finding others to work with, or who run into difficulties transitioning from the role of solo researcher to member of a team. To address some of these needs, select members of the Libraries and Learning Technologies teamed up to offer "Hacking the Academy," a program series based on Daniel J. Cohen and Tom Scheinfeldt's open access book by the same title. Together, we designed Hacking the Academy to be a multidisciplinary exploration of the ways in which scholarship is changing into a more open, collaborative, and iterative process.[21] Another event inspired by the Digital Scholarship Project Help Office Hours was the Digital Scholarship: Planning for Success workshop, first offered in spring 2017. When planning for Office Hours, the digital scholarship librarian and I noticed an increase in the number of academic job postings for faculty and staff that mentioned desired knowledge of DS/DH. Students told us that introductions to digital scholarship and to people or projects would help them gain what they saw as the required experience necessary to be competitive on the job market. To meet this need, a group of UW librarians and instructional technologists developed Digital Scholarship: Planning for Success as an

introductory graduate workshop with the following goals: have participants understand the basics of digital project management, understand considerations for working with digital objects, learn how to collaborate and share work, and identify guidelines and considerations for choosing tools. We covered topics ranging from copyright and metadata basics, including a brief overview of Creative Commons licenses. We also touched on digital preservation and storage and presented case studies that allowed participants to dig in to some basic digital project deconstruction. This was an ambitious set of goals and consequently a large amount of information for one ninety-minute workshop!

In the end, there were several challenges in offering the Planning for Success workshop. First, although all the content we covered was crucial to the execution of a successful digital project, we realized after the fact it was too much information to cover in the time allotted, and that the result was not necessarily the introduction to DH that many participants had been expecting. Rather, through our workshop assessment, we discovered that much of the information presented was overwhelming for people new to the field, particularly graduate students who were just trying to expand their knowledge in order to be competitive in the academic job market. The second challenge we ran into was the scope of the information presented in the workshop. We chose to cover a collection of the issues that would help make a digital project successful in the long run (e.g., questions of storage and platform transitions), but not issues that tend to arise early in a digital project's time line, such as selection of tools, or fun ways to engage with digital projects. As we later learned, tools are one of the main ways that new scholars approach the fields of DH and DS. It is more approachable to consider learning a platform that does something specifically useful than to have to reimagine an entire research process to account for technology and data management. It is also more exciting to consider a new project without being constrained to the parameters of digital infrastructure. Learning how to balance the long-term necessities of project maintenance with ways of thinking about and engaging with digital projects has been a challenge we have encountered when offering consulting and instructional services to support UW's digital scholars.

CONCLUSION

Digital Scholarship consultations live at the intersection of pedagogy and technology and thus fit well with my job as an instructional technologist. At the same time, it is this intersection that represents one of the challenging aspects of supporting a healthy digital scholarship culture. This is because scholars are still trained only to develop deep knowledge of their specific fields; although they may use technology, they do not usually conceptualize it in the same way that technologists and librarians do. By contrast, we in the

academic information field are used to thinking in terms of project management, documentation, reproducibility, acceptance of failure, and the intricate dance of collaborative work, especially with others who are not in our fields. What's more, as an instructional technologist who has a working partnership with a librarian for DS consultations, I have found that we each know different parts of the University and different types of resources and are able to help direct clients to more resources than either of us would be able to on our own. Personally, I have found collaboration with librarians and other support partners to be one of the most enjoyable and productive parts of working in digital scholarship. In the future, I hope to see more of these types of collaborations, not only at UW but at other universities. By working together across such units, we can expand the resources available to digital scholars, resulting in more innovative teaching and research methods for higher education communities as a whole.

Takeaways

Planning and Experimentation. Planning is critical to a successful project, particularly a successful digital project. Digital project management skills and a willingness to experiment are helpful although can be unfamiliar to digital scholars.

Infrastructure. Digital projects require centralized infrastructure such as web hosting, larger amounts of storage space, and easy access to varied platforms.

Community. People involved in digital projects need a central, nondepartmental space to gather for networking and access centralized resources and consultations.

NOTES

1. The CTL supports the UW teaching community though collaborative, innovative, and research-based consultations and workshops. See "Center for Teaching and Learning," https://www.washington.edu/teaching/.
2. The STF is a student-run committee that accepts proposals for use of the money generated by the Student Technology Fee based upon the needs to students outside of classrooms (https://uwstf.org).
3. Walter Chapin Simpson Center for the Humanities, "Demystifying Digital Humanities Simpson Center for Humanities," https://simpsoncenter.org/programs/initiatives/digital-humanities/demystifying-dh.
4. Ibid.
5. Chris Friend and Robin DeRosa, "Critical Pedagogy and Digital Praxis in the Humanities," *Digital Humanities Summer Institute,* http://

dhsi.org/content/2017Curriculum/10.%20Critical%20Pedagogy%20and%20Digital%20Praxis%20in%20the%20Humanities.pdf.

6. Modern Language Association, "Guidelines for Evaluating Work in Digital Humanities and Digital Media," https://www.mla.org/About-Us/Governance/Committees/Committee-Listings/Professional-Issues/Committee-on-Information-Technology/Guidelines-for-Evaluating-Work-in-Digital-Humanities-and-Digital-Media; Center for Digital Research in the Humanities Nebraska, "Promotion and Tenure Criteria for Assessing Digital Research in the Humanities," https://cdrh.unl.edu/articles/promotion; "Middle East Studies Association," https://mesana.org/resources-and-opportunities/guidelines-for-evaluating-digital-scholarship; Todd Presner, "How to Evaluate Digital Scholarship," *Journal of Digital Humanities,* December 19, 2012, http://journalofdigitalhumanities.org/1–4/how-to-evaluate-digital-scholarship-by-todd-presner/.
7. Verletta Kern, "Digital Scholarship Research Guide," http://guides.lib.uw.edu/research/dstools.
8. For more information about copyright and DS, see chapter 3.
9. These issues are also discussed in other chapters of this book, including chapters 6 and 8.
10. "UW Libraries ResearchWorks Archive," http://digital.lib.washington.edu/preferred-formats.html.
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12. "Design Help," http://depts.washington.edu/deshelp.
13. UW Information Technology, "UX Design Guides," http://uxdesign.uw.edu.
14. "Software Carpentry," https://software-carpentry.org/.
15. "eScience Institute," https://escience.washington.edu/.
16. UW Information Technology, "Activating Shared Web Hosting," *IT Connect,* https://itconnect.uw.edu/connect/web-publishing/shared-hosting/activating-shared-web-hosting/.
17. Miriam Posner, "How Did They Make That," *Miriam Posner's Blog,* August 29, 2013, http://miriamposner.com/blog/how-did-they-make-that/.
18. Andrew Johnson, Alix Keener, Brianna Marshall, Chelcie Juliet Rowell, and Joel B. Thornton, "Activity 1: Worksheet 2 Deconstructing Digital Scholarship Consultations in the Library," https://acrldigschol.github.io/deconstructing-consultations/activity-1/worksheet-2/.
19. Paige Morgan, "How to Get a Digital Humanities Project off the Ground," June 5, 2014, www.paigemorgan.net/how-to-get-a-digital-humanities-project-off-the-ground/#more-158.
20. University of Washington Libraries, "Going Public," www.lib.washington.edu/commons/events/going-public.
21. University of Washington Libraries, "Hacking the Academy Program Series," www.lib.washington.edu/digitalscholarship/hacking-the-academy-programming-series.