The Digital Lab as an arena for teaching and outreach activities connected to the Special Collections at the University Library of Bergen

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Abstract
The Digital Lab at the University of Bergen Library was established in 2020 and is set up to be an interdisciplinary hub for researchers, lecturers, and students, both on-site and digitally. The lab provides a space to learn, to discuss, and to apply various digital tools and methods used in research within the Digital Humanities. Each semester the lab sets up different courses, workshops, seminars, and lectures aiming to support and serve the target groups.

This paper presents a case study that investigates how the Digital Lab can provide an arena for DH activities connected to the Special Collections at the library. The aim is to explore how these activities can have a cross-disciplinary and collaborative approach, and to investigate the lab’s potential as a community-building arena and its impact on the involvement of the library and the librarian’s role in DH.

Keywords
Cross-disciplinary, Digital Humanities Lab, Community building, Library, Librarian

1. Introduction
In recent years, as the field of Digital Humanities (DH) has evolved, many libraries have felt the need to explore the role of the library and librarian in relation to DH. Some libraries have responded by establishing initiatives such as labs, hubs, centers, or Maker Spaces, aiming to provide primarily technical, methodological, and infrastructural support for DH scholarship [1]. Another approach adopted by libraries and librarians in relation to DH has been to act as supportive contributors in outreach and teaching activities [2, p. 239]. Additionally, certain libraries have participated in various DH projects, while others have played a central role in community collaboration [2, p. 157]. Regardless of the level of involvement or chosen approach, it can be argued that DH has somewhat challenged the role of both libraries and librarians. However, the library’s involvement in DH research or other collaborative connections to DH are not extensively addressed in DH literature [3, p. 139]. This paper aims to explore how the involvement of libraries and librarians in DH offers both possibilities and challenges that can contribute to reshaping or redefining the librarian’s role.
The aim is to examine how various Digital Humanities (DH) activities in the Digital Lab at the University of Bergen Library, employing a cross-disciplinary and collaborative approach, can contribute to community-building and simultaneously develop the role of the library and librarians in the context of DH. The approach involves using these DH activities as a case study to investigate how the lab can serve as an arena for both teaching and outreach activities involving the Special Collections at the library. The outreach activities primarily consist of seminars associated with the library’s exhibitions, showcasing different components of the University’s Special Collections in both physical and digital formats. On the other hand, the teaching activities encompass courses and workshops conducted in collaboration with the staff responsible for the collections.

The hypothesis is that the Digital Lab can actively participate in existing academic activities within the library and various academic communities, serving as a sustainable cross-disciplinary space for students, researchers, and lecturers. Simultaneously, the lab can play a significant role in facilitating teaching and outreach activities that make the Special Collections accessible to a broader audience and furthermore foster research opportunities. To investigate the lab’s potential as a community-building arena and its impact on the involvement of the library and librarians in DH, the following questions are addressed:

1. What challenges and opportunities do DH activities connected to the Special Collections in the library present to the Digital Lab for community-building?
2. In what ways does the library’s engagement in DH activities challenge the role of librarians?

2. The case study

To address the questions, the following sections will provide an overview of both the Digital Lab and the Special Collections at the University of Bergen Library, along with a detailed description of the outreach and teaching activities associated with them.

2.1. The Digital Lab

The Digital Lab at the University of Bergen Library was established in 2020 and is set up to be an interdisciplinary hub for researchers, lecturers, and students, both on-site and digitally. The lab provides a space to learn, to discuss, and to apply various digital tools and methods. Each semester the Digital Lab hosts different courses, workshops, seminars, and lectures aiming to support and serve the target groups.

A working group consisting of five staff members at the library, with different technical and disciplinary backgrounds, has the operative responsibility for the lab. Other library staff members contribute to the lab’s activities, for example by offering expertise in teaching tools or sharing experience as a supportive partner involved in various collaborative DH projects.

The lab seeks collaboration with different academic communities, and for example coordinates the Digital Humanities Network at the University of Bergen. The Network involves researchers, PhD candidates, postdocs, and staff mainly from the Humanities and Social Science. An advisory board for the network is established with the aim of keeping the lab’s activities relevant to the members.
Another collaborative and cross-disciplinary example is the Collaborative Scientific Software Development Summer School for PhD candidates and postdocs from different disciplines, first time conducted in June 2022 in cooperation with the Department of Informatics at the University of Bergen. In 2023 this collaboration has been extended to include the discipline of Digital Culture at the university, with the aim of increasing engagement from the Humanities and Social Science and fostering even more cross-disciplinary collaboration.

2.2. The Special Collections and the exhibitions

The Special Collections at the University of Bergen Library consist of the Language Collections, the Picture Collection, the Manuscripts and Rare Books Collection, and the Queer Archive. These collections held both digital and digitized material as well as physical artifacts.

The first exhibition associated with the Special Collections was established in the autumn of 2021 within the Arts and Humanities library at the University of Bergen. This exhibition space was created through library renovations and updates specifically designed to accommodate exhibitions. The exhibitions showcase primary sources, digital materials, and digitized items from various archives within the Special Collections. Typically, the exhibitions run for approximately four to six months. Some exhibitions also have a digital format, and the project group responsible for the library exhibitions collaborates with different academic communities at the university.

2.3. The outreach activities in connection with the exhibitions

The Digital Lab, in collaboration with the Special Collections, has developed a concept where contributors who have been involved in the library exhibitions, such as curators or professional advisors, as well as researchers working on topics related to the exhibition theme, are invited to the lab for seminars. The purpose of these seminars is to provide the audience with insights into how the contributors have engaged with primary sources, digital materials, and digitized items in relation to the exhibition and their own research. Additionally, the seminars serve as a platform for discussing critical questions raised in the exhibition.

The first seminar, held in November 2021, was a brief and general introduction to the different parts of the Special Collections, with the intention to continue with a seminar series focusing on each of the collections separately. This developed into the breakfast seminar series in connection to the exhibitions in the library, and the first breakfast seminar was held in August 2022. After that, one seminar was held in December of the same year, and two in the first quarter of 2023.

The target groups for these seminars, including students, academic staff, and researchers, have been partially reached based on the participants who registered for the seminars. On average, around 20 participants attended each seminar, representing a diverse range of faculties and fields of study.

2.4. Teaching activities in connection with the Special Collections

The Digital Lab has been an arena for developing various activities, including workshops and courses in which the Special Collections at the library are involved to some extent. The main part of these activities is developed in collaboration with the Language Collections. An example here
is “The introductory course to the use of the language data infrastructure CLARIN”. CLARIN is a digital infrastructure offering data, tools and services to support research based on language resources [4], and the course targets both students and researchers. It has a research support approach including sections about, for example, depositing data sets and the FAIR principles [5]. The course primarily attracts students studying language, linguistics, or related fields, limiting its potential for cross-disciplinary engagement.

Another example is “The Corpus Workshop”, which explores corpus tools and resources provided by the Language Collections in the language research infrastructure CLARINO [6]. The workshop provides examples of data extraction suitable for research and assignments, comprising introductory lectures and hands-on exercises. The instructors involved include both library staff and staff from the Department of Linguistic, Literary and Aesthetic Studies at the University of Bergen.

The Digital Lab also organizes workshops and courses with a more cross-disciplinary approach with the use of familiar DH tools, such as the Geographic Information System (GIS), which is a tool that creates, manages, analyzes, and maps all types of data. The GIS workshops are held regularly, and have attracted both students, young researchers, and staff from different fields within the university. Lastly, there is “The Course in Copyright for Photographs,” involving an instructor from the Picture Collection. This course addresses common issues encountered in image research and the daily usage of images.

3. Discussion

The raised questions in the introduction pertain to the challenges and possibilities presented by DH activities related to the Special Collections in the library for community-building. Additionally, they explore how these activities can potentially challenge the roles of the library and librarians in the context of DH. The subsequent sections will delve into these aspects from various perspectives.

3.1. The library and librarian’s role in Digital Humanities

The library has for a long time been concerned with facilitating, organizing, providing access, and sustainable preservation for both primary sources in traditional forms, and materials in digital or digitized formats. Here, the library and Digital Humanities share interest when it comes to collection, organization, preservation, and use of digital materials [3, p. 137]. However, the focus often is on whether the library has a role in DH. It can therefore be proposed to shift this focus and instead ask how the library can contribute to DH, because it is pertinent for the library to engage with the field when it comes to achieving the goal of providing accessibility of information. Both the library and DH aim to increase the digital accessibility and research potential of cultural materials [7]. As the university library has an initial function as an interdisciplinary agent for the different faculties at the university, the library is overall in many ways obliged to respond to the different needs of all of them. The support given by the library is therefore comprehensive, and regarding DH support it is argued that librarians should be encouraged to investigate their role in DH more widely [7].
Sula [8, p. 24] asserts that libraries are well positioned to meet complex needs in relation to DH scholarship. However, studies show that librarians experience that their expertise is undervalued or instrumentalized as a part of a service model that altogether separates the librarians from an academic level of inference in the DH field [9]. Librarians may be claimed to be generalists in DH, as they consult on a range of methods across disciplines. At the same time, it is argued that librarians face a diversity of challenges in connection to DH and that it must be ensured that they learn the requisite skills and have the essential knowledge and experience to meet the needs [10, p. 135]; [11]; [1, p. 365]. This can be challenging for librarians working in connection to or directly in the DH-field, as it is a constantly evolving field. In other words, this raises some crucial questions about the challenges the staff in the library, who are involved in DH, meet regarding user needs and how these can be addressed.

The DH support provided by staff at the library has for some time primarily been technical services and the fostering of collection accessibility and visibility. Burns [2, p. 239], on the other hand, points out that a part of the librarian’s role has developed more into connecting students, researchers and teachers to relevant information and to be a collaborator in the activities connected with research and educational environments. Universities providing exclusive study programs or introductory courses in DH are becoming more common at many universities [12]. At the same time, an established practice of bringing libraries directly into DH courses provided by universities is still somewhat unusual [12, p. 331]. The connection between DH, libraries and librarians can therefore be described as topical, and the absence of librarians in the classroom where DH is taught is to some extent deficient [12, p. 343].

On the other hand, the development for some libraries has been heading in a direction that has solidified their position and role in the field of DH [13, p. 5]. In connection with this, there has been a growing emphasis on the development of training tools and teaching methods to support software development and infrastructure requirements [14, p. 159]; [1]. Gooding [3, p. 143] states that this has made scholars more avidly interested in the support and contribution that libraries can give regarding DH, and he argues that the link between libraries and DH can be understood as convergence points between different disciplines [3]. During the past two decades it has also become more common to place physical DH centers, hubs or labs in university libraries, and this points out the library as a provider of DH support both related to research and teaching [15]; [3, p. 138]. Initiatives like these can therefore be considered as an answer to the rapid growth of the DH field.

Furthermore, the role the library may have in DH projects depends on a range of factors. For some research libraries the role as a project owner is obvious, while there are strings attached to the involvement for other libraries that limit the role to being a partner, contributor or collaborator. How the library and librarians engage with the field of DH also differs to some extent, depending on how well the engagement is supported both by library leaders and the leaders of the faculties and the university (see e.g., [16]). Some libraries and librarians also experience challenges connected to new forms for collaboration between faculties and the library concerning the switch from the library being first and foremost considered as a service provider to the development of being a collaborator or partner in DH [10].

For the University of Bergen Library, the DH involvement of the library staff has differed. As mentioned, many of the staff members, both academic librarians, senior advisors and developers, are involved in the activities in the Digital Lab, as instructors or contributors of DH support.
in other ways. Before the lab was established, however, the engagement in DH was as a project partner or collaborator in DH projects owned by different faculties, and for the library staff this mainly concerned technical contributions such as developing and building technical infrastructure and giving sustainable long-term preservation. This involvement therefore primarily included the staff working as developers at the library and did not engage the librarians to a particularly large extent.

It is therefore thinkable that the establishment of the Digital Lab has been a contributor to extend the librarians' involvement in different outreach and teaching activities in connection to DH. As the establishment of the lab is a direct answer to the need of technical and scholarly support outlined in the Humanities Strategy for the University of Bergen, this also underlines the importance of the library’s adaptation to changes in needs from the different academic communities. The rapid changes both for the library and the staff at the library unarguably also bring both challenges and possibilities regarding for example taking part in community-building with the Digital Lab as an arena.

### 3.2. The library and librarians' role in community-building

As to community-building, there are some challenges that can be addressed. It can, to begin with, be time demanding and require commitment [17, p. 26]. Therefore, it is essential to put in an effort and to have a structure around community building and committed collaboration that can benefit from involving the library, for example through the initiative of a lab. As mentioned, The Digital Lab coordinates the DH Network at the University of Bergen. This network is to some extent an established DH community, but it could in many ways benefit from a more interdisciplinary compound with more members from other faculties than the Humanities and Social Sciences. To accomplish that other disciplines find it relevant to be a part of the community, it is relevant to enable several regular and various activities in the lab. A range of activities such as project meetings, lectures, seminars, training sessions, or informal get-togethers, may all together turn out to create a sense of community [13, p. 17]. In addition, much learning is done when members of a DH community share their work, expertise and experience [13, p. 35].

However, it can also be perceived as a challenge to build and maintain a community of practitioners with diverse backgrounds and skills, to meet the different needs and to be relevant for all in the community. It can therefore be crucial to invest more in building and maintaining relationships with DH practitioners in order to support the growth and sustainability of the field. To meet the different needs of the researchers in the DH Network, it is of course important to ensure that the DH activities in the lab are varying and of academic relevance. One way is to improve the engagement in the network in terms of participation in the activities hosted by the lab as well as the collaboration around these activities. Furthermore, this can be an argument regarding the librarians’ involvement in DH scholarship.

Another challenge regarding community-building has to do with the researchers’ own identity as a DH scholar, and many scholars would not label themselves as such [15, p. 13, 33]. Someone’s engagement in DH should not, however, be determined based on if the person in question identifies as a digital humanist. This is relevant to be aware of when it comes to DH being a field for interdisciplinary research, or as Svensson [15] states: “what is important is that
scholars and experts across a range of disciplines and specialties come together and contribute to humanities-driven exploration of digitally inflected research and education”. At the same time, an awareness of what Bell and Kennan [18, p. 166] point out should not be forgotten: “to gain equal recognition as digital humanists, librarians must step outside the library and embrace being digital humanists themselves”. In other words, the exploration of collaboration in connection with community-building also depends on the approach of the librarians wanting to engage with DH. And furthermore, how this involvement is supported by the library leaders.

A relevant question is also how familiar DH as a field is for students. Outreach activities, like the breakfast seminars tried out in the Digital Lab, are one way to make DH methods, tools and research more visible for students from different disciplines as well as position the library as a suitable arena for DH activities. However, the success of these outreach activities somewhat depends on the actual participants in the seminars and if one has reached out to the target groups aimed for. It can also be significant, in an extension of these seminars, to explore how the activities can be followed up by other events like workshops or courses, where students and researchers can come together and explore the possibilities for research based on sources from the Special Collections.

Another way to build a community for DH scholars is to ensure that the library is involved in developing more DH projects, and furthermore to ensure that at least some of these projects involve the Special Collections at the library. The Digital Lab could potentially use DH projects as an opportunity to engage with the public through different outreach activities and in this way, both promote the value and impact of DH research and expose different parts of the collections. At the same time, this underlines the need for institutional support for libraries seeking to establish a role and presence in DH [17, p. 26]. The dialogue between the library and the faculties regarding the library’s role in DH projects can benefit from an established framework that outlines the different parts of both the library and librarian’s involvement.

### 3.3. Challenges and possibilities for a sustainable involvement in DH

Recent Library and Information Science (LIS) literature shows skepticism towards the traditional service models for libraries and librarians, and many suggest a turn away from mainly support and service, and instead towards librarians being collaborative partners [18, p. 164]; [16]. In an extension of this, a relevant question for many libraries is if the service and support provided solely supports DH scholarship or if the library and librarians also are co-producers of the DH research.

The University of Bergen Library’s role in DH projects is to some extent limited when it comes to being a project owner, so for now the possibility for involvement is mainly by ensuring that one seeks partnership with, for example, faculties or other institutions in DH projects. Over the last decade the number of research projects involving the library as a collaborative partner has in fact increased and, as pointed out earlier, the involvement of the library has so far mainly been technically related to infrastructural support or taking part as project coordinator. In other words, there is a potential to explore what the library’s role can develop into. One turn, that at the same time can promote sustainable operation for the Digital Lab, is to take an extensive role in both outreach and educational activities as a part of the DH projects. It is therefore crucial that the lab is considered as a suitable arena for these activities and that one ensures
that necessary resources at the library have available capacity to enable the involvement of the library staff.

As already mentioned, DH courses and educational activities for students are increasing at many universities [12]. This provides an opportunity for involvement in DH as an increasing DH support regards teaching and student learning. The library can contribute by offering training and support in tools and exploring ways to use technology more creatively both in teaching and research. It therefore is crucial that librarians seek collaboration and partnership to gain the potential for learning outcomes across disciplines at campus [1, p. 372]. Furthermore, initiatives like labs, centers, hubs or similar might be a beneficial approach for the library to create a suitable environment for DH activities at the university. These initiatives serve as attractive arenas for scholars from diverse disciplines to engage in DH scholarship. The possibility to create a sense of DH community might also be easier when the library is involved by providing a suitable meeting place for community activities. Here, the link between libraries and DH can be understood as convergence points between different disciplines, which makes the library a prominent space for cross-disciplinary collaborations.

The University of Bergen does not offer a study program in Digital Humanities, but currently offers two MA level courses on specific methods in the digital humanities in the disciplines of Digital Culture and Archeology. However, an increasing number of disciplines are engaging with either DH tools or methods, or both, and therefore it is a need for DH educational activities at the university. This should therefore be an argument of relevance for the library regarding even more engagement in DH activities because the gap to fill can be solved by involving both the librarians and the lab to a greater extent. In advance, this may turn out to be a way for both the library and librarians to establish a role in relation to DH. In this regard, involving librarians who serve as Subject Specialists in teaching activities within the lab could offer a sustainable solution. These librarians often have direct connections with academic communities and possess extensive experience in teaching various library courses. Many are also involved in other academic activities and therefore have established contact with academic communities and an insight into the specific needs for DH support.

Svensson [15, p. 17] argues that it is necessary that scholar work has an awareness of the need of infrastructure and methodological competence, but also that infrastructure works lack something important if they are not connected to exciting scholarly and archival challenges. He exemplifies that different disciplines and scholarly traditions have different ways of engaging with the digital. Therefore, it can be crucial that the Digital Lab continues in using teaching and outreach activities to demonstrate the value and impact of digital technologies for both students and researchers. Furthermore, the resources in form of both tools and databases as well as the primary sources and digital or digitized sources from the Special Collections should be made more accessible for students and researchers to generate more research based on these sources. The breakfast seminar series in connection with the exhibitions may be seen as a first step, but these activities are surely not enough if they do not result in more scholarly-based activities. To gain full success with this type of activity, it might be necessary to follow up with other DH activities for students and researchers that result in dissertations and research.
3.4. Common DH values as a guideline

Both shared values and spaces can have an impact on building partnerships between academics and librarians, and in advance also make DH and the librarian’s role in the field more visible [18]. Openness, collaboration, collegiality and connectedness, diversity, and experimentation are common DH values [19] that the library and librarians wanting to get involved with DH can promote. Even though these values cannot be expected to gain full consensus [19, p. 19], they may have a significant role for the library wanting to establish a suitable space for facilitating cross-disciplinary methods. Or as Vandegrift [7] puts it: “The library must function as a place where scholars can try new things, explore new methodologies and generally experiment with new ways of doing scholarship”.

To enable the potential of interdisciplinary research within DH, an explorative approach can be crucial. At the same time, one should ensure that there is an arena for this exploration. To create a culture of openness and inclusivity in initiatives like labs, hubs, centers and Maker Spaces, it is important that both students, researchers and staff from diverse disciplines feel welcomed and valued. This can also contribute to creating a sense of community and encourage cross-disciplinary collaboration. Furthermore, a mixture of different DH activities might be the way of embracing diversity in the community. The library can also benefit from a deeper involvement in academic activities related to DH and make sure that librarians and other staff members at the library with connections to different disciplines are involved. This can help to encourage researchers to collaborate across disciplines and to see the value of working together and sharing their knowledge and expertise.

Furthermore, in order to facilitate cross-disciplinary collaboration, it is important to encourage researchers to work together and share their knowledge and expertise. This can be done through regular meetings, workshops, and other opportunities for researchers to come together and present or discuss their work. In connection with this, it can be underlined that librarians may be seen as “interdisciplinary mediators” suitable for meeting needs in any discipline [18, p. 167]. Once more it can be underlined that the connection between librarians and other academic staff is necessary and should be ensured through different activities where the lab provides a suitable arena or meeting point.

It is crucial, however, to be aware that researchers from different disciplines may find it challenging to work together, especially if they are not familiar with each other’s methods and approaches [3, p. 149]. Providing training and support for cross-disciplinary research can help to bridge these gaps and facilitate collaboration and connectedness. The library with a lab or a similar initiative can provide the eminent space whereas the staff at the library can take part in offering the training and support needed. As to teaching activities, these may promote the use of digital technologies in research and can accentuate the potential of these technologies for advancing knowledge and understanding.

The relevance of highlighting the value of cross-disciplinary research and its potential to generate new insights and understanding through experimentation is necessary in this context. To enable this, it is important to have a space aimed for exploration and embrace the diversity of the different research fields. This can help to encourage researchers to collaborate across disciplines and to see the benefits of working together. The library with the Digital Lab can serve as a provider of a physical and digital space, where scholars from different fields can connect,
experiment and get involved with DH. In an extension, the lab may explore new models for sustainable operation, such as partnerships with other organizations or collaborations where the development of digital platforms and tools can be explored and hopefully used by a wide range of researchers and scholars. The value of collaboration also concerns building relationships with other DH labs and hubs, as this can help to facilitate cross-disciplinary collaboration and provide opportunities for researchers to work with colleagues from other institutions. This can for example be done through exchanges, joint projects, and other forms of collaborations where also the library with its staff is involved.

4. Conclusion

The library and librarians’ involvement in DH challenges to some extent the role of both. For the library it can be challenging to response to and meet the different needs of a diversity of academic communities and to make a turn from a service provider for the faculties to a contributor in DH research and educational activities [10]. For librarians, on the other hand, it can be challenging to ensure that one has the requisite skills and the essential knowledge and experience to meet the needs in DH as it is a field in constant development [10, p. 135].

For some libraries the engagement in DH has encouraged an explorative approach with a result of involvement both in DH projects as well as different DH activities such as teaching, training and research. For many, the establishment of initiatives like labs, hubs, Maker Space and centers has been a way of engaging with DH and ensuring that the library provides an eminent space for research, outreach and teaching activities.

However, the connection between DH, libraries and librarians is still to some extent topical, and the lack of involvement in teaching activities is deficient. Hence, it is crucial not to underestimate the significance of adopting a perspective where the library considers its involvement in DH as inherent. To effectively engage in DH endeavors, it can be beneficial for the library to embrace key values commonly associated with DH, such as openness, collaboration, collegiality, connectedness, diversity, and experimentation. By embracing these values, the library can foster an environment conducive to DH scholarship and effectively contribute to the advancement of the field [19].

At the same time, one crucial factor that might need to be established to enable cross-disciplinary collaboration that involves the library and librarians is the sense of a DH community. A successful and operative DH community, however, might require a better understanding of the role of both the librarian as a digital humanist and the researcher as a DH scholar. Furthermore, one should not underestimate the value of a suitable space for different activities that can contribute to building a community of DH scholars. Here, the DH values may promote a more coherent identity for the DH community and its members [19, p. 30].

As this case study shows, the different DH activities in connection with the Special Collections has been a way for the Digital Lab in the library to reach out both to researchers and students from across disciplines. The teaching activities in collaboration with the Special Collections may play a significant role in enabling exploration of both technologies and methodologies, while the outreach activities are a way to encourage exploration regarding ways to use sources from the collections as subject for research. These DH activities in the lab encourage cross-
disciplinary collaborations but have not yet resulted in any concrete DH project or research that involves the library. Therefore, it can be argued that the actual interdisciplinarity also depends on the approach of the scholars from the different disciplines and to what extent disciplinary boundaries possibly can prevent interdisciplinary collaborations and research [3, p. 149]. In other words, the DH activities in the library may be a vital facilitative factor, but the outcome of these activities and the actual possibility of interaction between different fields or disciplines also depends on each scholar engaging in the activities.

References


