

8 | Advancing Digital Humanities at CU-Boulder through Evidence-Based Service Design

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INTRODUCTION

In 2012, librarians at the University of Colorado Boulder became increasingly aware that interest in digital humanities was gaining ground on our campus. A growing number of graduate students, new faculty members, and established faculty members had been exposed to digital humanities tools and methodologies at disciplinary conferences and were asking questions about incorporating digital modalities into research, teaching, and learning. A handful of prominent scholars with well-publicized digital humanities-related initiatives had a history of involvement, a good example being Lori Emerson and her Media Archaeology Lab.¹ However, little centralized coordination and support for this work were available to the campus community. A previous campus Digital Humanities Initiative (DHI), which administrators in the University Libraries and Center for Humanities and Arts had spearheaded several years before, had unfortunately failed to take root.² The more recent interest that surfaced on campus had a different character in that it emanated from the grassroots, both from within the Libraries and from campus researchers.

The authors—the History and Germanic Studies librarian, the Digital Initiatives librarian, and the Art and Art History librarian—proposed the creation of a new initiative within the Libraries to develop expertise relevant to digital humanities in the Libraries and on campus and to partner with researchers on digital projects. To inform this initiative, Libraries administration formed the Digital Humanities Task Force in January 2013.

The task force membership was selected from volunteers who responded to an open call sent to faculty and staff in the Libraries. Three librarians and two staff, with expertise in metadata, research services, collection development, and archives and special collections, joined us on the task force. Additionally, we invited two academic technology consultants from the Office of Information Technology (OIT)—one in the humanities and one in the social sciences—and the director of the Visual Resources Center in the Department of Art and Art History to join the task force with the goal of forging partnerships with other campus technology centers from the outset.

The task force was charged with investigating and reporting on digital humanities activities and needs on campus and formulating evidenced-based recommendations for how we might partner with other campus units to support them. The initial phase involved exploratory work to reveal who, beyond the small cadre of prominent digital humanists already known to the task force, had an interest in digital humanities or were already incorporating it in their scholarship or teaching. Identifying these stakeholders was a crucial first step since we planned to take a participatory design approach to fulfilling our charge. We also aimed to evaluate current campus services and resources in order to identify service gaps that the Libraries and its partners might fill. Finally, we researched how other institutions with library-associated digital humanities initiatives structured, staffed, and funded their services to provide potential models for our own.

RESEARCH DESIGN

Taking a Mixed Methods Approach

The task force took a multimodal approach to our work, employing environmental scans, surveys, interviews, and other techniques to gather the richest possible data set on which to base our analysis. Our methodology was in line with mixed methods research (MMR), an approach by which investigators “collect and analyze data, integrate the findings, and draw inferences using both qualitative and quantitative approaches or methods in a single study.”³ MMR is particularly valuable when investigating complex questions similar to those we undertook for this study, because it results in a robust data set that can be triangulated to provide an additional consistency check.⁴ Fidel Raya’s 2008 study found that in a sample of five hundred library and

information science articles, only 5 percent applied mixed methods. Given the significant investment in time, this figure is not surprising; however, the returns are well worth the effort. In our investigation, the multimodal study was planned out in three phases (see Figure 1) and took over nine months of intensive work to complete. Each stage of the investigation synergistically built on previous work. For example, the campus scan uncovered potential participants for the interviews and symposium that occurred in later phases.

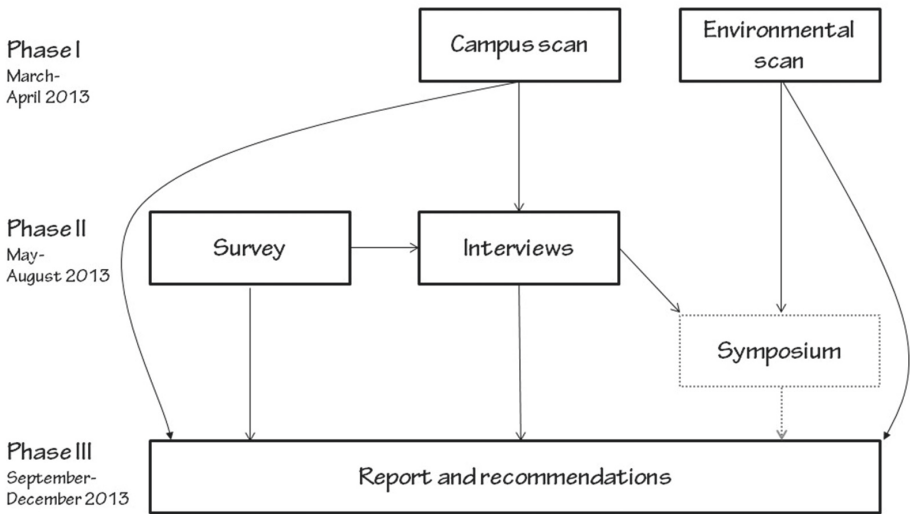


Figure 1. Phased activity of the task force as well as representations of the flow of the research studies.

Environmental Scan

In March and April 2013, one subgroup of the task force conducted an environmental scan of library-based digital humanities initiatives to draw inspiration and learn from others' approaches. The group considered initiatives worldwide ranging in scale from full-fledged digital humanities centers to more modest collaboratories. Potential sites were culled from publications and websites such as the Association of Research Libraries' (ARL) SPEC Kit 326: *Digital Humanities* and the Alliance of Digital Humanities Organizations' centerNet as well as our own knowledge.⁵ We focused on digital humanities centers and services that were affiliated with libraries, since they would have the greatest affinity, and thus applicability, to any initiative we

started. This criterion shortened the list considerably to thirty-eight institutions. The group reviewed these initiatives' websites and supplemented this information with statistics from sources such as ARL and LibQual+ to collect data on their services, staffing models, and representative projects, as well as staffing, budgetary figures, and collection size for the parent libraries.⁶ The group identified a broad range of relatively standard services offered by library-based digital humanities initiatives, with the most common being lecture series and training. Other frequently offered services include, in order of prevalence, collaborative working space, digital collection services, project management support, consultations, equipment, web publishing, and professional networking.

Data on staffing models were not readily available on most of the websites consulted, but we were able to infer from "About" and "Contact" pages that most digital humanities centers were staffed by a mix of librarians, faculty, technologists, and students. Furthermore, a faculty advisory board guided many initiatives. Analysis of institutional statistics highlighted the fact that the CU-Boulder Libraries is below average in terms of staffing and funding, but supports a larger population and manages a larger collection compared to its peers. While this is important to take into consideration when planning services, the potential problems implied by these statistics are not insurmountable since two other institutions with similar statistical profiles offer robust digital humanities services.

Campus Scan

Working in parallel with the external scan subgroup, a second subgroup of the task force undertook an internal scan of activity at CU-Boulder, with the goal of identifying people and projects associated with the digital humanities, as well as campus resources that are currently available for digital work. We searched campus faculty profiles (powered by *VIVO* open-source software) using a variety of keywords to find individuals involved or potentially involved in digital humanities.⁷ The subgroup also investigated the websites of likely departments for projects or resources of interest. We analyzed campus-wide services, such as those OIT offered, to identify which would be of potential use to digital scholars. The information we gathered was intended to serve as the foundation of a centralized knowledge base of resources and services that could later be expanded on and made available to the campus community.

Survey

After the internal and external scans were completed at the end of April 2013, we went about directly querying our study populations through a campus-wide survey and in-depth individual interviews. The survey subgroup created an instrument in *Qualtrics* that the task force distributed in June 2013 to CU-Boulder faculty, graduate students, and other researchers regarding their interest and involvement in digital humanities. In keeping with the broad swath of activities that we had set out to capture, we invited them to respond regardless of departmental or disciplinary affiliation. The survey went out to approximately eight thousand affiliates, and we received 345 responses from participants in programs, schools, institutes, departments, schools, and colleges across campus. We encountered a few challenges with the survey that should be mentioned. The first is that, due to unanticipated delays, it was not administered until June, when many faculty and particularly graduate students are not regularly monitoring campus communications. The second is that because the survey was billed as a digital humanities survey, many in the social sciences and sciences may have assumed that it did not apply to them. The last is that other campus units sent out surveys at around the same time, so survey fatigue was almost certainly a factor. Despite these challenges, the survey responses proved an extremely rich and broad data source to inform our report and recommendations.

Using the survey method, we collected a broad array of easily collatable and analyzable data directly from users, who fell into three major categories:

1. Those who were already involved in digital humanities;
2. Those who were interested but not yet involved in digital humanities; and
3. Those who were not interested in digital humanities.

The survey data showed us, among other things, in which campus departments and colleges respondents were rostered; in which digital scholarship methods they were interested; what existing internal and external services and resources they use; and which they wished were available.⁸ The survey reached a key group that other methods did not—those who were interested but not yet involved in digital humanities, the largest respondent group. It also enabled us to collect data from those who said they were not interested in digital humanities. The survey proved a useful source for identifying interviewees, as the respondents had the option to volunteer at the end of the survey.

Interviews

Concurrently, a task force subgroup interviewed seventeen faculty and three graduate students who were already incorporating digital humanities in their teaching or research. We asked interviewees about the services, resources, and methodologies they have utilized. We wanted to discover their desired services and any barriers they had encountered in their digital humanities work. We also asked about how they keep up with developments in digital scholarship and about their cross and intra-institutional collaborations. Besides learning about digital scholars' habits, we enlisted their help in designing a support infrastructure by employing participatory design techniques. For example, we asked questions about the single biggest problem that they would choose to solve and what their ideal support network would look like. Interviewees completed a drawing exercise that graphically represented a recent digital project; we asked them to mark areas where support would have been useful. These participatory methods elicited more reflective responses than straightforward questions alone. Finally, to facilitate identification of themes and trends in the data, we coded and analyzed notes and audio files from the interviews in *NVIVO* qualitative data analysis software.

Symposium

In August 2013, the task force organized the “dh+CU Symposium on Future Directions,” a daylong symposium for campus graduate students, faculty, librarians, information technology professionals, and other administrative and support staff interested in digital humanities. The initial goal of the symposium was to generate momentum for digital humanities by raising the profile of transformative and cross-disciplinary digital research on campus. The symposium also proved a source of anecdotal and informal focus group information about digital humanities activities, resources, and needs on campus to supplement that gathered through other methods.

The symposium featured three experts from outside institutions who delivered keynote addresses on the future of digital humanities in higher education, followed by CU-Boulder presenters showcasing their own projects.⁹ Ample opportunity was built in for discussion, particularly during the birds-of-a-feather sessions at the end of the day. After the symposium, the task force held a half-day workshop that included the outside experts and a small group of administrators from campus units potentially interested in

partnering in a digital humanities initiative. During the workshop, potential campus partners discussed the local context, and experts shared their candid assessment of the needs of campus researchers and suggested various models for how the Libraries and campus could support and participate in existing and future digital humanities efforts. These conversations were influential in the task force's report and recommendations.

FINDINGS AND ANALYSIS

After gathering the data, we began the task of integration and analysis. We held several meetings where we discussed the data and used these co-viewings to divide our results into six main themes:

- Current resources, services, and demographics,
- Teaching and student interest,
- Methodologies,
- Collaborations,
- Barriers, and
- Potential support networks.

Within each of the themes, we integrated the data from our various studies. In each section, we presented a synthesis of our scan, interview, and survey findings. Each data stream was able to provide information that filled in gaps in the others. The survey gave us a broad base of standardized responses. The details and nuances lacking in the survey could then be filled in by directed interview questions and follow-ups. For each theme, we were then able to present a holistic overview of the state of digital humanities at CU-Boulder.

Demographics and Interest

The task force's research suggested that there was notable interest in digital humanities on campus. The survey indicated that a significant minority of respondents, 12.5 percent (43), most of whom were faculty, were already active in digital humanities. The majority of respondents, 54.5 percent (188), were interested in digital humanities but not yet involved. One-third (114) were not interested, either because digital humanities required too much time or was not applicable to their research.

Multidisciplinary interest in digital humanities on campus came across strongly in our survey data. Figure 2 shows the number of respondents who

were interested in or already involved in digital humanities across schools and colleges at CU-Boulder. While the College of Arts and Sciences, as might be expected, housed the largest number in these categories, a significant number also self-identified in the College of Engineering, College of Music, and School of Education as either involved in digital humanities or interested but not yet involved. The greatest percentages of affirmative faculty responses were in the Libraries (16.3 percent), Journalism (11.5 percent), Music (10.3 percent), and Education (9.8 percent). Among graduate students, Journalism garnered the highest percentage (12.1 percent).

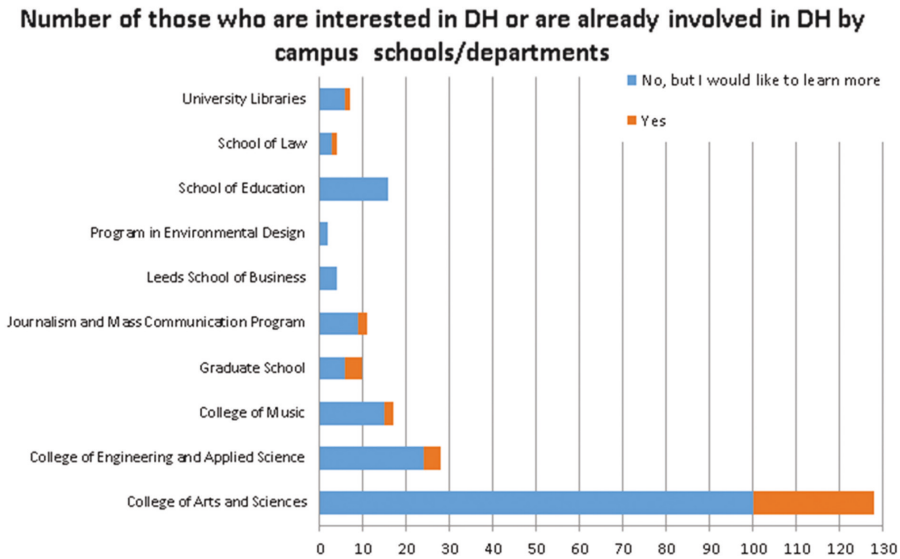


Figure 2. Number of respondents who were interested or already involved in digital humanities across schools and colleges at CU-Boulder.

Figure 3 shows that among divisions in the College of Arts and Sciences, involvement and interest in digital humanities was strongest in the division of Arts and Humanities, where 16.7 percent of faculty replied affirmatively. The greatest numbers were in the departments of History (32.4 percent), French and Italian (26.7 percent), Philosophy (24.1 percent), Asian Languages and Civilizations (19 percent), English (18.4 percent), and Germanic and Slavic Languages and Literatures (17.6 percent). However, departments across the divisions of Social Sciences and Natural Sciences were also involved or interested in investigating humanities-related

digital modalities. Among faculty in the Social Sciences, the departments of Linguistics (33.3 percent) and Sociology (7.7 percent) showed notable interest. We were also pleasantly surprised by the response from faculty in the Natural Sciences, particularly in the departments of Psychology and Neurosciences (4.3 percent) and Geography (4.3 percent). Interestingly, the graduate student response was strongest in the division of Social Sciences (5 percent). Graduate student response percentages were as follows in the departments of French & Italian (13.6 percent), History (7.7 percent), Philosophy and Classics (6.3 percent), Linguistics (5.6 percent), Geography (5.2 percent), and Sociology and Psychology (4.7 percent). Disciplines that stood out overall for both faculty and students, therefore, were History, Philosophy, English and foreign languages and literatures, and Linguistics.

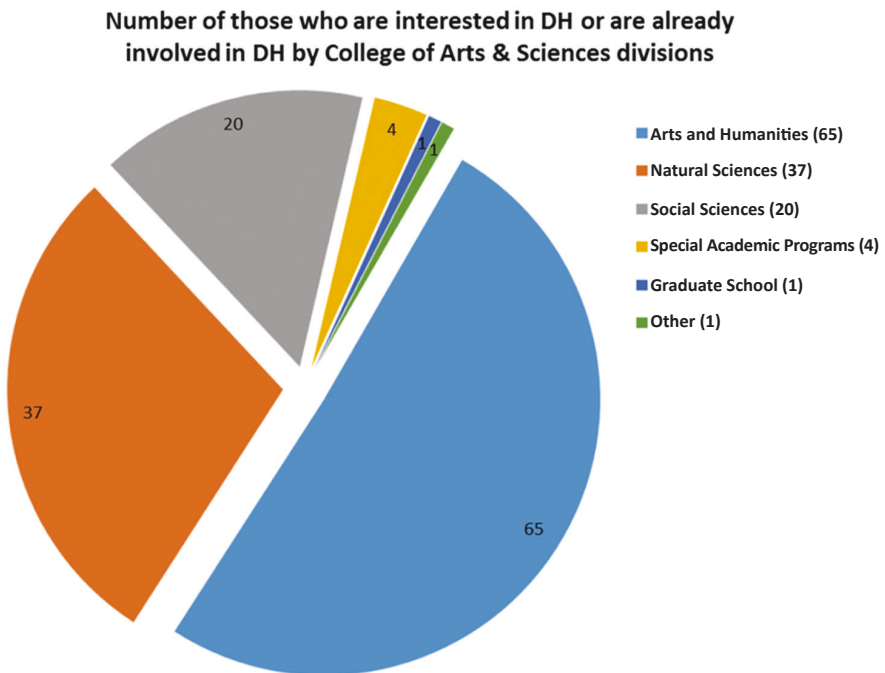


Figure 3. Number of respondents who were interested or already involved in digital humanities in the College of Arts and Sciences divisions.

The demographics of the survey and interview data suggest that partnerships to support digital humanities across campus departments are needed

and that the siloing of support networks are likely inhibiting interdisciplinary collaboration. Community is especially vital to connect digital scholars who are rostered in disparate departments and colleges. Additionally, though interest on campus is substantial, more support and collaboration is needed to enable interested faculty and graduate students to become active digital scholars. The need is especially great among graduate students, who may need these skills as they enter challenging job markets. We are regularly contacted by graduate students to provide experiential learning opportunities in this area.

Digital Humanities Methodologies Employed in Research

Survey and interview data indicated interest or activity in a broad range of methodologies. Digital publication (66 percent) and multimedia editing (53 percent) garnered the largest percentage of responses. Respondents also noted a strong interest or activity in text mining and analysis (43 percent). The remaining top methodologies ranged from geospatial analysis to gaming to computational linguistics. Digital humanities embraces a broad range of methodologies that presents both opportunities and challenges for service design. The more methods that an initiative can support, the larger its potential user base; on the flipside, more services require more resources. Given this reality, the task force was eager to learn which methodologies were most prevalent on campus so it could make targeted recommendations that would support the areas of greatest activity.

Information on faculty research projects gathered during the interviews and internal environmental scan demonstrates the disparate nature of digital humanities research activities taking place on campus. For example, English professor Lori Emerson created the Media Archeology Lab in 2009 as “a place for cross-disciplinary experimental research and teaching using obsolete tools, hardware, software and platforms, from the past.”¹⁰ The project aims to preserve obsolete technologies and promote the creation of new products using older technology. Professor Ken Foote, formerly of the CU-Boulder Geography Department, was working on a research project to use narrative cartography techniques to map trends in racial violence across nineteenth and early twentieth-century America. In *Remix the Book*, Art and Art History professor Mark Amerika created an online platform for scholars and artists working in the realm of remix art. These initiatives illustrate the broad interest in digital humanities across disciplines as well as the many manifestations that they can take.

Digital Humanities in Teaching

Interview data suggests that faculty are interested in the potential pedagogical applications of digital humanities. Sixteen of the twenty interview respondents stated that they use these methods in the classroom. Though some respondents conflated digital humanities with educational technologies more generally (discussing, for example, clickers, Google apps, or MOOCs), there were several examples of truly transformative uses of technology in the classroom setting. One English PhD candidate interviewed incorporated the text analysis tool *Voyant* into her course discussions and assignments. Additionally, a professor of Classics and Archaeology developed an educational video game called *Project Osiris* in which students play the role of an archaeological dig director for a site in Amarna, Egypt.

Graduate students expressed strong support for digital humanities and would like to see it more fully integrated into all aspects of academics, including the classroom. Faculty perceptions of undergraduate interest in digital humanities, however, were mixed and evenly distributed between “very interested,” “interested,” and “not interested.” Faculty also observed that new technologies require significant scaffolding to effectively incorporate into instruction and that undergraduates can be ambivalent about expending the effort to learn them. In multiple contexts, faculty and graduate students remarked that undergraduates are less likely to draw a distinction between digital humanities and traditional methods, which opens the door to incorporating digital methods into the classroom.

Needs and Barriers

One of the task force’s main goals was to better understand current digital scholars’ desired resources and services, as well as the barriers that they encounter in their work. For those researchers who were interested, we also wanted to discover what perceived needs were preventing them from becoming involved in digital humanities. Figures 1, 4, 5, and 6 represent the barriers as well as the desired services and resources. The aim was to formulate recommendations that would provide these desired services and mitigate or eliminate obstacles. Thus, both the interviews and survey asked respondents questions about desires and barriers.

Once the task force coded the interviews, we found 224 different instances of comments that were coded with a specific need or barrier. The

most frequently cited are illustrated in Figure 4. The survey asked digital humanities-involved respondents to select from a predefined list of barriers with “lack of other resources” as a write-in option. The results are illustrated in Figure 5. Survey respondents who were interested but yet not involved with digital humanities were asked what desired services would make them more likely to begin work in the field. The most commonly requested services are represented in Figure 6. As the task force interpreted the interview and survey data, we saw that the services desired by those not yet involved correspond to the barriers faced by scholars who were already involved. These two concepts are complementary and indeed were two sides of the same coin, as illustrated in Figure 7.

Overall, respondents cited an opportunity to build relevant skills as the most important desire and need for undertaking digital humanities work. Technology training was the most desired service named in the interviews and by digital humanities-interested survey respondents. A high percentage of survey respondents, 72.9 percent (137), expressed a desire for trainings and workshops. The interview format allowed us to ask follow-up questions regarding the types of training interviewees would find useful. They asked for training on specific software and technology skills like programming. Several mentioned current technology workshops that are offered at CU-Boulder as a very useful forum for exchanging ideas with other peers.

The needs for improved technology support and infrastructure were also highly ranked issues. Fully 64.9 percent (122) of survey respondents who were interested in digital humanities expressed a desire for improved campus technology infrastructure. Most interview comments on this subject related to database design, as well as web hosting and design. We heard accounts of websites developed by students or consultants that were lost or taken down once developers were no longer available to support and maintain the sites. Interviewees also desired better software and hardware. Some of them requested more infrastructure in the form of smart classrooms and laptop carts for digital humanities-related pedagogy, while others found reliance on the campus-approved suite of tools to be limiting and preferred the latitude to use more open-source and third-party, cloud-based applications.

Unsurprisingly, digital scholars who responded to the survey identified lack of time as a significant barrier. Interviewees pointed out that becoming involved with digital scholarship requires a significant investment of

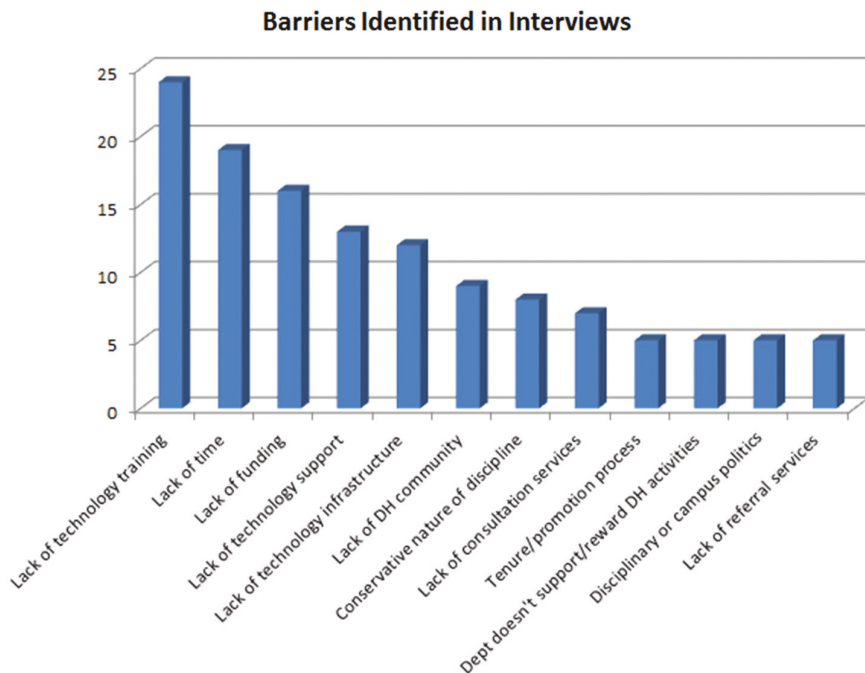


Figure 4. After coding, we found that the interviews contained 224 different instances of “gaps and barriers”-related comments. This figure illustrates the most common categories.

time to become competent in the methodologies, and then either do the research or integrate them into the classroom. Finding the time to explore digital modes of scholarship alongside traditional ones is difficult. Further, narrow expectations about what types of research outputs count in hiring, tenure, and promotion processes keep them on the back burner for many researchers. Our research suggested that scholars highly desired a framework for evaluating digital humanities activities for promotion and tenure. Indeed, of the 43 survey respondents already involved in digital humanities, 11 (26 percent) cited not knowing how digital outputs would be evaluated in the tenure and promotion process as a barrier to engaging with digital humanities in their work. A substantial minority, 37.8 percent (71), of survey respondents who were interested in digital humanities expressed a desire for institutional recognition before they were willing to dedicate the necessary time. The interviews brought nuance to these

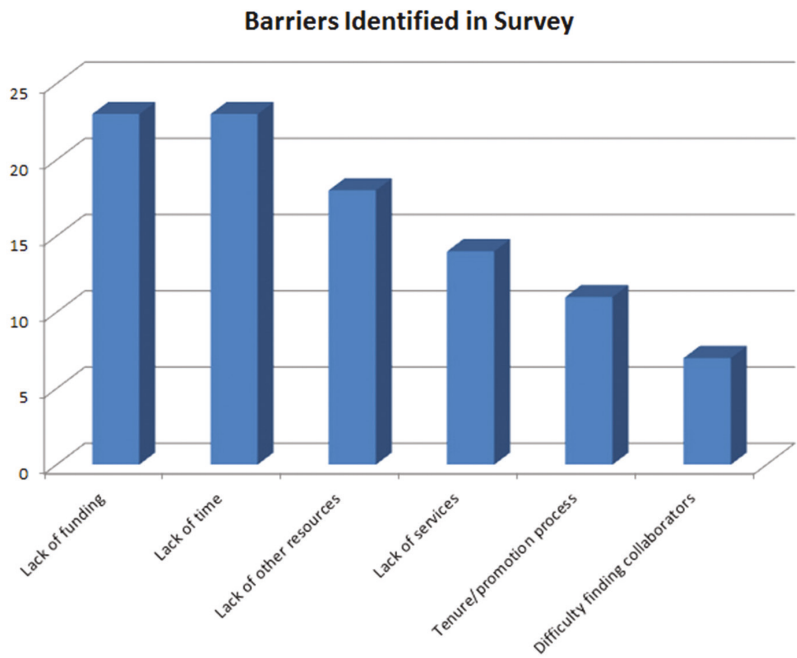


Figure 5. The survey asked participants to select from a list of potential barriers with a write-in option for “lack of other resources.”

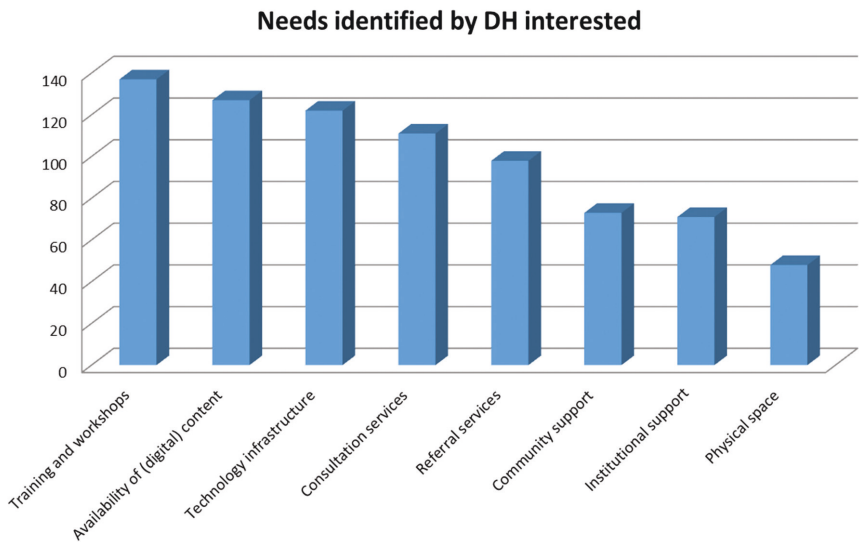


Figure 6. Survey respondents who were interested but not yet involved in digital humanities were asked about what resources and services would make them more likely to begin work in the field.



Figure 7. Barriers, desired services, and resources.

desires—interviewees cited the conservative nature of their disciplines, uncertainty about credit for digital humanities in the tenure process, and lack of support or rewards from their department for digital scholarly outputs. Given the pervasiveness of this concern, we recognized that any significant effort to promote digital humanities at CU-Boulder should also address its role in tenure and promotion.

Survey respondents pinpointed lack of funding as their major concern with 53.4 percent (23) of digital humanities-involved respondents selecting it as a barrier. The more in-depth comments from interviewees about funding proved useful for delving deeper into the issue. The most frequently mentioned theme was that they did not have access to adequate funds to initiate the many interesting ideas they had for digital research projects. Secondly, for those initiatives fortunate enough to acquire grant funding, interview respondents noted that reliance on soft money is not sustainable. Finally, many faculty expressed a desire for funding to secure more student assistants and staff support. Many initiatives are run entirely by

volunteers—a model that is not particularly sustainable or equitable for students. Our research suggested that offerings such as fellowships, technology infrastructure, and other funding sources are in high demand.

One of the barriers to a full-fledged digital scholarship ecosystem at CU-Boulder is the lack of a coherent community of practitioners. In the survey, difficulty finding collaborators was cited by 16 percent of the digital humanities-involved respondents and 38.8 percent of digital humanities-interested respondents. Most digital scholars are involved in some kind of collaboration with external partners, and our interviewees desired a local community to link digital humanities researchers, especially matching those with subject knowledge to those with technological expertise. The overwhelmingly positive response to the symposium as a networking event further underscored the desire for community.

While the lack of resources and support discussed so far is certainly a valid issue, the task force noted that in many cases respondents were not aware of existing resources and services on campus that might be helpful in their work. Thus, we believe that new referral services will be a vital component of any digital humanities initiative for our campus.

RECOMMENDATIONS

After a nine-month investigation, the task force had gathered an immense amount of data on which to base our recommendations. A clear and nuanced picture of user needs and service gaps emerged from the combined findings, pointing to five high-level goals for a digital humanities initiative: foster community, develop strategic partnerships, build technical infrastructure, create support services, and develop mechanisms to evaluate alternative scholarly outputs. We came to consensus on these broad objectives relatively quickly and focused most of our discussions on which specific recommendations and strategies would best achieve them. We organized the recommendations into three phases according to what we believed could be achieved over the short, medium, and long term. Phase I represented recommended immediate actions. Phase II recommendations would create a base level of support for digital humanities, and phase III goals would result in establishment of a campus-wide center for digital humanities research. Finally, these recommendations were situated in the context of the university's strategic plan, *Flagship 2030*, to demonstrate how the proposed digital humanities initiative would further CU-Boulder's core mission.

Based on feedback from external experts and interviewees who believed that many resources and services on campus are siloed in individual schools, colleges, and departments, we concluded that the Libraries is a natural entity to lead these efforts and to provide a focus for digital humanities on campus. The Libraries' mission to remain a vital part of the research process motivates us to find new resources and innovative ways to support scholars and teachers in their digital endeavors. The Libraries also offers neutral space in the heart of the campus that is both welcoming and easily accessible to users in all disciplines.

The recommendations for actions by the Libraries formed a base on which our further recommendations could be accomplished by the groups and people and in the spaces recommended. They included most importantly the hiring of a digital humanities librarian in phase I who would dedicate his or her time to the work outlined in the further recommendations, and a digital humanities center, which would be planned in phase II and implemented in phase III. This center would be where the resources and support services recommended would be located. Such a center would anchor the growing digital humanities community and offer workshops and training. It would also house hires that the task force recommended: the digital humanities librarian, a programmer, and graduate assistants.

Given our users' desire for the facilitation of collaborations and intellectual exchange, the first objective the task force set from our multimodal inquiry was strengthening community. Until a more formalized infrastructure can be built, developing a community of scholars with interests in digital humanities is crucial to supporting existing practitioners in their work. Thinking further ahead, continued engagement with the digital humanities community on campus is key to building a base of support for continued investment in the digital humanities, as well as to the ongoing assessment of needs and priorities.

Another objective we identified was forging partnerships on campus and beyond. Both librarians in the early stages of establishing digital humanities centers who we interviewed and the external experts emphasized the importance of establishing strategic partnerships outside of the library. Given the sizable resources required to launch an initiative and the collaborative nature of digital humanities work itself, garnering external support is essential for success. Thus, in phase I, the task force recommended

forging campus partnerships with the College of Arts and Sciences, Center for Humanities and Arts (CHA), Graduate School, OIT, and United Government of Graduate Students, among others, in order to build support for the initiative, raise its visibility, and pool partner resources for an initiative using a “stone-soup” model.¹¹ In phase II, the task force recommended pursuing partnerships with Boulder’s thriving technology sector to forge public-private scholarly collaborations and provide students with valuable experiential learning opportunities. Furthermore, this partnership could result in injections of much-needed private funding. Since phase III of the plan focused on establishing a campus-wide center, partnership-building activities during this phase would concentrate on forming a high-level advisory committee with representatives from interested units to provide strategic direction.

The third objective focuses on building more robust technical infrastructure to support the more comprehensive digital humanities initiative the task force envisions. Furthermore, we discovered that the campus community is not sufficiently aware of existing technology services, which as a result are underutilized. To address these issues, we made several recommendations. In phase I, we suggested expanding the website for CU’s digital humanities community to become the virtual nexus for the initiative during its early stages. It could serve several functions including highlighting campus digital humanities projects, a registry for campus resources, and referral services. The task force also recommended collaborating with OIT to increase awareness of existing technology services, developing new infrastructure where needed, and acquiring hardware and software for the center. Since experimentation and creation of new technologies often go hand-in-hand with digital humanities, in phases II and III our recommendations include fostering greater participation in the open-source software community and providing sandbox environments to explore new tools.

The fourth broad objective the task force identified was development of a suite of services in response to specific needs that are tailored to targeted audiences on campus. The task force made four recommendations and phased them based on ease of implementation. In phase I, we suggested promoting the Libraries’ digital content, both digitized in-house and licensed, as source material for digital humanities projects. To facilitate

use of licensed resources for activities such as text mining, the task force proposed negotiating for expanded licensing terms for vendor-supplied content. In phase II, the Libraries would offer consultation services on areas such as digital humanities tools and project management. In phase III, the group recommended developing a workshop series that would both empower novices to join CU's digital humanities community as well as broaden the skill sets of more advanced practitioners.

Evaluating digital humanities projects for the purposes of tenure and promotion was a key concern and therefore was the fifth objective to come out of our study. Our research indicated that a lack of recognition of alternative scholarly outputs plays a key role in inhibiting digital humanities work, which applies to faculty within as well as outside of the Libraries. We recommended that the Libraries' tenure committee develop its own standard for evaluating the digital humanities work of faculty librarians. We also recommended further conversations with appropriate campus stakeholders to start creating broader guidelines; if necessary, the Libraries' standards could serve as a model. These broader guidelines could then be promoted to encourage adoption by campus departments.

The creation of a campus center for digital humanities that would build on the partnerships and trust established with other campus units in the preceding phases was the ultimate objective that the task force highlighted. A portion of the infrastructure and personnel would already be in place in the Libraries as a result of the hiring of a digital humanities librarian and creation of a digital humanities lab and would serve as a core of critical support for the center. The task force recommended a collaborative leadership model for the center similar to that of the Maryland Institute for Technology in the Humanities at the University of Maryland and the Center for Digital Research in the Humanities at the University of Nebraska–Lincoln, which are codirected by one library and one nonlibrary faculty member.¹² The center would provide funding, assistance, training, and other opportunities for graduate students, faculty, and researchers interested in digital humanities and would integrate with the campus curriculum through seminars and credit courses. We also envisioned it as a locus for grant writing and fund-raising. Our recommendation for a center supports two goals in our current university strategic plan, namely, #5, "Transcending Traditional Academic Boundaries," in its promotion of

interdisciplinary teaching, learning, research, creative work, and scholarship, and #6, “Investing in the Tools for Success,” in its physical space in the Libraries that would encourage individual and collaborative learning, research, and creative work.”¹³

Outcomes

The task force report laid out the research behind the recommendations in substantial detail, and our next step was to communicate the findings and recommendations to our colleagues in the Libraries and to the interested campus community to solicit feedback.¹⁴ We shared the executive summary with links to the full report with all faculty and staff in the Libraries and asked particular colleagues with an interest in digital scholarship on our cross-functional Scholarly Communications Working Group for input. Additionally, we did a public presentation to our colleagues and to the Libraries’ management team, received their feedback, and fielded their questions. Further, we shared this material with potential partner units on campus that had expressed interest in our investigations, and whose faculty and graduate students showed particular interest in digital work in the survey and interviews. In some cases, we created tailored reports, for example, on interest among graduate students for the dean of the Graduate School, among Arts and Humanities departments for the associate dean of that division and for the director of the CHA, and in particular departments like History and English for their chairs.

After publication of the report, the initiative has broadened from being more narrowly focused on digital humanities to encompassing digital scholarship. Much of this move was inspired by the data we gathered for the report, such as the demonstrated interest from many scholars outside of the humanities. This evolution also reflected conversations with our colleagues about the potential of a digital scholarship center to become a hub for the library’s digital services such as data management, scholarly communications, digitization, metadata, and digital archiving. Thus, a focus on digital scholarship had more potential to break down silos and to build partnerships across the university.

The Libraries’ management team was supportive of our recommendations and requested the task force assemble a panel of campus faculty to provide feedback on them for further consideration. The panel’s endorsement, and that of the co-chairs of the campus Research Data Advisory

Committee, lent further weight to the recommendations. Building on the groundwork we laid, the Libraries' recent program review included a strong recommendation to invest in new positions in the area of digital scholarship, and campus partners, including the new College of Media, Communication, and Information, the CHA, the Graduate School, the Center for STEM Learning, and Research Computing in OIT, are stepping up to support the Libraries' bid with campus administration to create a research center for digital scholarship. The center is proving a unique opportunity to bring investment to the library from multiple campus partners, to engage with scholars and work as equal partners on digital projects, and to secure the library's place at the heart of a changing research landscape.

In the meantime, campus partners have not stood still. The History Department, for instance, is offering a graduate-level digital history class, which the History and Germanic Studies librarian co-teaches with a History faculty member. It has also hired an instructor whose job duties include acting as a digital liaison for the department. Together with the incoming director of our Institute for Behavioral Sciences, we organized a grant-funded digital humanities speaker and workshop series in 2015 that was also financially supported by departments, schools, and institutes across the disciplinary spectrum.

Time will tell what the final outcomes of the task force's recommendations are and how the initiative will grow. It is already clear, though, that the task force's data-driven approach to our investigation resulted in a strong foundation for the future of the initiative. Employing a variety of methodologies to collect data created a more complete and nuanced understanding of the current digital humanities landscape and made evidence-based service design possible. In addition to the obvious benefits, involving stakeholders in all aspects of the investigation instilled a shared sense of purpose, and perhaps even co-ownership, in any resulting initiatives that will only serve to strengthen support for our efforts.

NOTES

- 1 See: <http://mediaarchaeologylab.com>.
- 2 DHI members participated in Project Bamboo, which shared a similar fate. See Quinn Dombrowski, "What Ever Happened to Project Bamboo?," *Literary and Linguistic Computing* 29, No. 4 (December 2014): 4014. doi:10.1093/lc/fqu026.

- 3 Abbas Tashakkori and John W. Creswell, "Editorial: The New Era of Mixed Methods," *Journal of Mixed Methods Research* 1, No. 1 (2007): 4.
- 4 Raya Fidel, "Are We There Yet?: Mixed Methods Research in Library and Information Science," *Library & Information Science Research* 30 (2008): 266–67.
- 5 Tim Bryson et al., comps., *Digital Humanities*, SPEC Kit 326 (Washington, DC: Association of Research Libraries, 2011) and Alliance of Digital Humanities Organizations, "centerNet: An International Network of Digital Humanities Centers," www.dhcenternet.org.
- 6 Association of Research Libraries, "ARL Statistics: Annual Library Statistics," www.arlstatistics.org/analytics, and "LibQUAL+: Charting Library Service Quality," www.libqual.org/home.
- 7 See <http://vivo.colorado.edu>.
- 8 The questions regarding needs were phrased differently for the group that was already involved in digital humanities and the group that was interested but not yet involved. The former group's questions were presented in terms of barriers to achieving their digital humanities goals, since they could be expected to have concrete thoughts on the subject, while questions for the latter group were phrased in terms of desires, that is, what they thought might enable them to become involved in the digital humanities community. Despite this disconnect, wants and needs can be viewed as two sides of the same coin, so we were fortunately able to categorize this data to include the feedback of both groups as necessary.
- 9 More information about the presenters and links to their presentations are available at [http://ucblibraries.colorado.edu/research/subjectguides/Digital Humanities/digitalhumanities-symposium-people.htm](http://ucblibraries.colorado.edu/research/subjectguides/Digital%20Humanities/digitalhumanities-symposium-people.htm).
- 10 See: <http://mediaarchaeologylab.com/about/why>.
- 11 This phrase refers to a folk tale in which hungry travelers persuade townspeople to contribute different food items to create a stew.
- 12 See <http://mith.umd.edu> and <http://cdrh.unl.edu>.
- 13 University of Colorado Boulder, "Flagship 2030 Serving Colorado Engaged in the World: A Strategic Plan for the University of Colorado at Boulder."
- 14 The report is openly available at Thea Lindquist, Holley Long, Alexander Watkins, Leo Arellano, Michael Dulock, Eric Harbeson, Erika Kleinova, Viktoriya Oliynynk, Elaine Paul, and Esta Tovstiadi, "dh+CU: Future Directions for Digital Humanities at CU Boulder" (2013), http://scholar.colorado.edu/libr_facpapers/32.