



Digital Humanities in European Research Libraries: Beyond Offering Digital Collections

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Abstract

Libraries are increasingly becoming involved in digital humanities research beyond the offering of digital collections. This article examines how libraries in Europe deal with this shift in activities and how they compare with libraries in other parts of the world. This article builds on the results of surveys conducted in Australia, New Zealand, Hong Kong, the United States and the United Kingdom, and compares them with a survey conducted in Europe. We found that European libraries are mostly active in research supporting activities, such as digitisation and storage, while US libraries often include analysis in their activities. Funding comes from the library's main budget and non-structural funding in a variety of forms. Staff working in DH roles has a diverse range of titles, with various forms of librarians being the most used. Analytical staff such as GIS specialists are only found in the US survey. All surveyed libraries agree that the biggest skill gap amongst their staff is in technical skills. When looking towards the future, European libraries see the role of digital humanities (or digital scholarship) within the library grow and are making plans to facilitate this change within their organisation by positioning themselves as an attractive research partner, by opening and increasing their digital collections and by improving the internal workings of the library.

Keywords: digital humanities; digital scholarship; library survey; research libraries

1. Introduction

Since the digitisation of primary sources, digital humanities (DH) has become an increasingly relevant topic for libraries as the (large) digital collections offer novel ways of conducting research for humanities scholars. This asks new questions, activities and services of libraries as providers of this data and their role as research partners in digital research. By expanding their activities beyond the traditional library activities (such as the offering of physical collections and support and training in information literacy), libraries are required to act more and more as publishers of their own digital collections and provide the expertise that is needed alongside the publication of that data. This not only changes the inner workings of the library as an organisation, but also the relationship with their research community.

Although much has been published on digital humanities and/in libraries, many publications are focused on libraries in the United States (e.g. Christian-Lamb et al., 2016; Hartsell-Gundy et al., 2015; *Digital humanities in libraries*, 2013; Padilla et al., 2019; White & Gilbert, 2016; Zhang et al., 2015). Little research has been done in Europe on activities, organisation and relationships between digital humanities researchers and the library. In the spring of 2019, the LIBER Working Group Digital Humanities and Digital Cultural Heritage¹ therefore conducted a survey among members to gain knowledge on current practices of digital humanities in Europe's research libraries and to close this gap in research on DH and libraries in Europe. This article describes the development of the LIBER survey and places the outcomes in the context of other surveys on digital humanities/scholarship² in libraries, examining the new roles libraries take within digital research and therefore aims to answer the question "What role do European academic libraries take within the context of digital scholarship and how does that compare to libraries in other parts of the world?"

This paper first describes the development of the LIBER survey, then introduces four similar surveys done in other library communities and subsequently compares the output of those surveys within four themes.

2. LIBER Survey

In the spring of 2018, the Working Group conducted a mini survey of 20 questions amongst members to test questions, answers and question types. This

was then used to produce case studies around digital humanities in libraries (Wilms, 2018). The Working Group organised a workshop at the 2018 LIBER conference collecting input from members on topics and specific questions. After the workshop and the publication of the mini survey report, all feedback was collated and discussed during a meeting of the Working Group's core team together with several members of the digital scholarship team of the British Library in September 2018. The questions were then aligned to the survey and subsequent report by Rikk Mulligan (2016) on Digital Scholarship published by the Association of Research Libraries (ARL), in order to facilitate comparison of results. This resulted in the first draft of the survey covering the following themes:

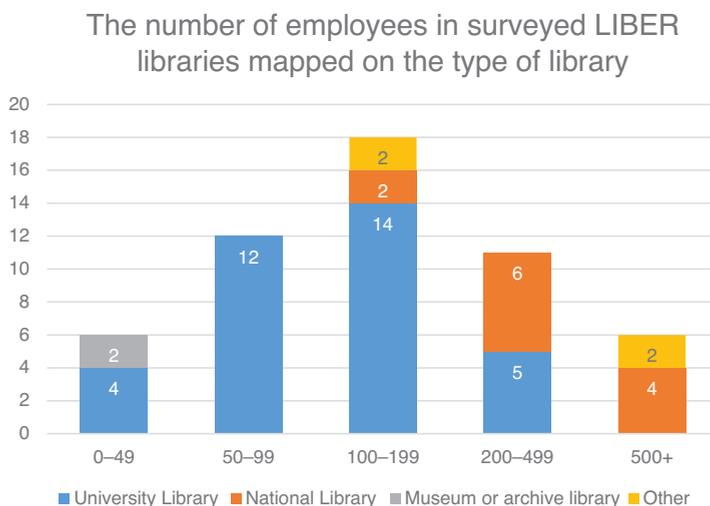
- Awareness of DH
- Collections
- Funding
- Future work
- Impact
- Organisation of DH in library
- Partnerships
- Services/support
- Staffing/skills
- Spaces (physical and digital)

The draft was tested by three members of the group and examined by two social scientists on survey ethics and practices. The final version consisted of 83 questions which were coded into the online survey tool SurveyMonkey. Responses were accepted from February 1 to March 15, 2019. All questions and collated answers of the survey are published in Wilms et al. (2020).

3. Respondents

A total of 56 colleagues from 54 institutions in 20 countries completed the survey, mainly from Western Europe (71% of respondents). This represents 12% of all LIBER members and 50% of LIBER member countries (LIBER Network, n.d.). The respondents work in different types of libraries, ranging from small museum libraries to large national libraries, as can be seen in Figure 1. A more elaborate description of the respondents and all detailed findings can be found in Wilms et al. (2019).

Fig. 1: The number of employees in surveyed libraries mapped on type of library.



Before presenting further results, I trace the history of similar surveys conducted in other parts of the world.

4. Surveys³ on Digital Humanities and Digital Scholarship in Libraries

Over the past decade, multiple surveys have been conducted in library communities. In November 2011 the Association of Research Libraries (ARL) in the United States published a report titled 'Digital Humanities' (Bryson et al., 2011) Following this research, a survey was done amongst eight libraries in Hong Kong (Wong & Li, 2015). This 20 question-survey conducted in 2014 asked similar questions as the 2011 ARL survey related to – the then relatively new practice of – digital humanities in libraries.

Following the 2011 publication of ARL, in 2016 the Association funded new research into digital scholarship in libraries. Rikk Mulligan conducted a survey under 73 ARL members in February 2016 resulting in the report 'Supporting Digital Scholarship' (Mulligan, 2016). The survey consisted of 31

questions and also collected job descriptions, project websites, organisation charts, project planning documents and service descriptions. A response rate of 59% was achieved among ARL members. This report and survey outcomes are used in this article as it is the most up-to-date research conducted in the United States on digital scholarship in libraries.

In June 2017 Clare McKenzie and Kerry Ross conducted research among the member libraries of CAUL and CONZUL, the university library associations in Australia and New Zealand. They too were inspired by the 2011 report of the ARL, thus focusing on digital humanities. The survey consisted of 18 questions and was filled out by 17 libraries; a response rate of 36% of all CAUL and CONZUL associated libraries. The report and data were published in February 2018 (McKenzie & Ross, 2018).

The Irish Consortium of National and University Libraries (CONUL) also sought to investigate the activities their libraries undertook within digital scholarship. Modelling their survey on the 2016 ARL-report of Mulligan, they focused on digital scholarship, using the activities Mulligan used in his research as a basis. In February 2018 the 15-question survey was filled out by 85% of CONUL members, which are 11 libraries. The report by Joy et al. (2019) was published in February 2019, along with the survey data.

The association of Research Libraries UK (RLUK) was again inspired by Mulligan's report and following the establishment of their Digital Scholarship Network conducted a survey under their members between January and April 2019. Again, this survey was closely based on the 2016 ARL survey, working from the same activities and adding RLUK-specific questions. The 42-question survey consisted of multiple sections, which could be filled out separately, but in total they received 38 responses from 30 member libraries, representing 81% of all members. The report compares the outcomes of their survey to those of CONUL and ARL (Greenhall, 2019).

Four of the Irish libraries that took part in the CONUL survey have also taken the LIBER survey, as have six of the RLUK libraries. Where needed, these libraries have been excluded from the LIBER dataset for the comparison in the remainder of this article in order to avoid any overlap.

The various surveys described above and discussed in this article were conducted at different times (ranging from 2015 to 2019) and focus on different regions, ranging from a community of eight libraries to a national network of

73 libraries. These differences should be taken into account when reading the comparisons in this article. Each survey posed questions and answer options slightly differently. Nonetheless it is possible to identify four themes which were covered in all surveys. These are: Activities, Funding and organisation, Staff and skills, and Future. Each theme is discussed below.

5. Activities

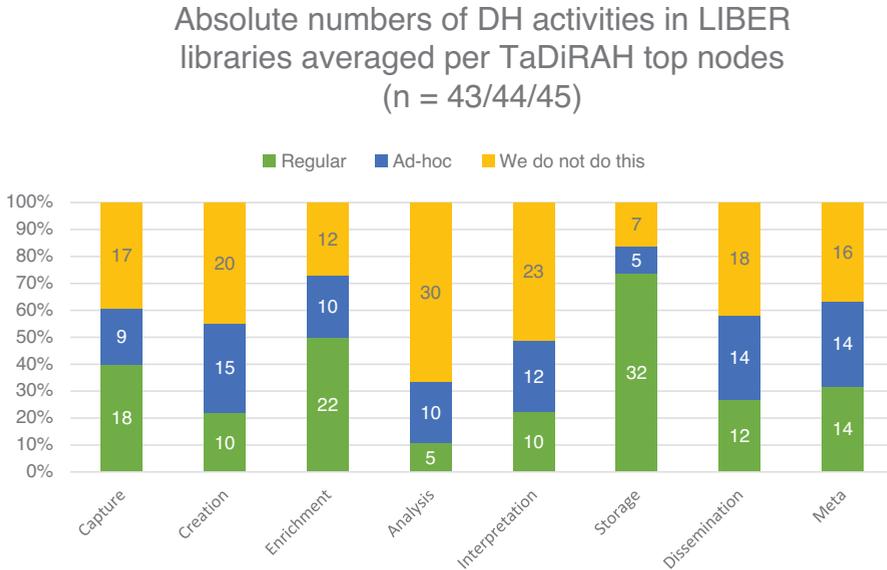
Digital scholarship encompasses a wide range of activities, which makes it difficult to create a complete list of all possibilities within libraries. The LIBER survey uses the TaDiRAH research taxonomy of digital research (Borek et al., 2016). This taxonomy lists eight activity nodes: 'Capture,' 'Creation,' 'Enrichment,' 'Analysis,' 'Interpretation,' 'Storage,' 'Dissemination' and 'Meta-activities'. These are subdivided into more specific activities, such as imaging, visualisation and project management. Each surveyed library was asked whether they do a sub-activity as a regular activity, an ad-hoc activity or not at all. For the purposes of comparison in this article the LIBER results⁴ have been compressed into the eight main activity nodes with all absolute answers averaged per activity node and displayed in a 100% stacked bar, as can be seen in Figure 2.

What becomes clear is that the more traditional activities of libraries appear most often as a regular or ad-hoc activity. More than 60% of the surveyed libraries mention 'Capture' (27), 'Enrichment' (32), 'Storage' (38) and 'Meta-activities' (28) as a regular or ad-hoc activity. 'Capture' includes activities such as the digitisation of text and images; 'Enrichment' includes producing metadata and data cleaning; and 'Storage' includes metadata creation and preservation. We would expect to see these activities appear regularly in the questionnaire responses as this is what libraries are most familiar with. Activities related to the analysis and interpretation of data, such as modelling, visualisations or network analysis — which are core elements of digital humanities — are mentioned less often as being part of regular or ad-hoc library activities in LIBER libraries.

6. Activities in Other Surveys

The surveys from the UK, Ireland and the US have not opted for the same taxonomy, but chose to use a list of activities, created by the author of the ARL

Fig. 2: Absolute numbers of DH activities in LIBER libraries averaged per TaDiRAH top nodes (n = 43/44/45).



survey, Rikk Mulligan. This list consists of 19 activities and an ‘Other’ option. Where the RLUK use the whole list, the CONUL survey chose to bar the activity ‘Technical upkeep’. The CAUL/CONZUL survey defines activities by referencing specific tools, hardware and platforms, while the Hong Kong survey summarises activities within seven themes and an ‘Other’ option.

To facilitate the comparison of the surveys, all activities and themes are categorised using the top nodes of TaDiRAH with the mapping that can be seen in Table 1.

The ARL survey asked if an activity was done in the library, outside of the library but in the same institution, or outside of the institution. CONUL added the option ‘Not currently supported’ to this list and RLUK again added ‘Unknown’. All three surveys also had the option ‘Other’. It has to be noted here that the options about activities existing outside of the library, but in the same institution are most likely not applicable to the national libraries, that usually operate as independent organisations.

Table 1: The different activities mentioned in each survey mapped on the TaDiRAH taxonomy

TaDiRAH	ARL/CONUL/RLUK	CAUL & CONZUL	Hong Kong
Capture	Digitisation	Scanners	Creates access to digital collections
Creation	Making Digital Collections	3D rendering platform	Creates or provides tools
	3D modeling and printing		
Enrichment	Developing digital scholarship software		
	Interface design / UX		
Analysis	Encoding content	Image editing tools	Conducts research in DH or DS
	Data curation and management	Audio editing stations	
		Video editing stations	
Interpretation	Statistical analysis	Data analysis tools	
	Visualisation	Data visualisation tools	
	Computational text analysis / support	GIS	
Storage	GIS and digital mapping		
	Database development		
Dissemination	Digital preservation	Server space	Offers DH training
	Technical upkeep	Institutional repository	
Dissemination	Metadata creation		Offers programs, conferences or seminars
	Digital publishing	Github	
	Digital exhibits	Figshare	
		Web publishing tools	
		Bibliographic management tools	
		Omeka	

Table 1: (continued)

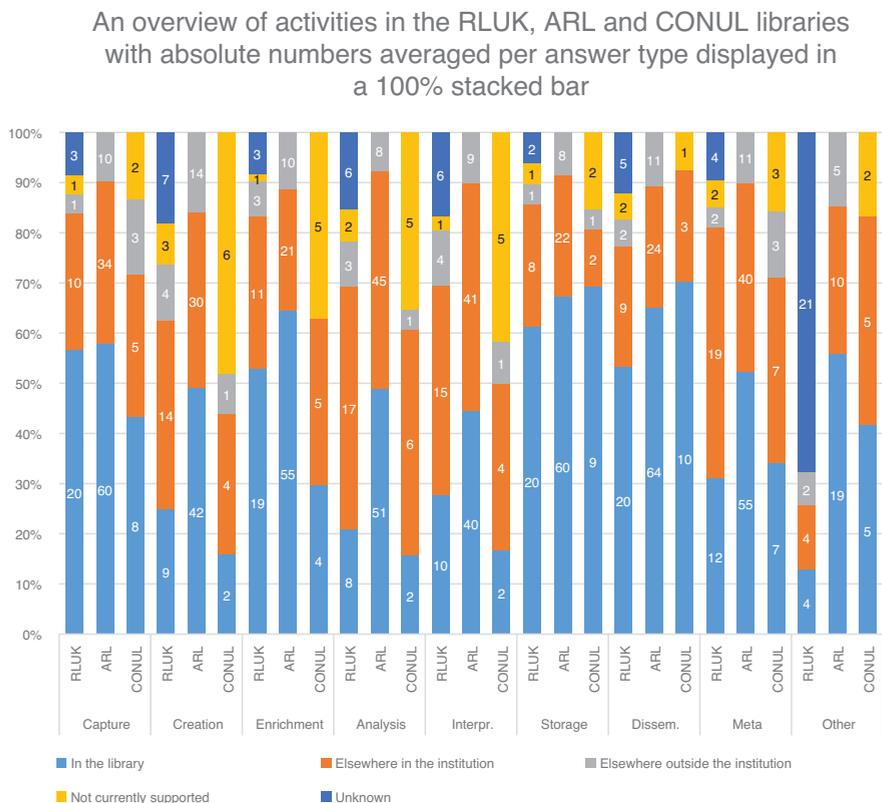
TaDiRAH	ARL/CONUL/RLUK	CAUL & CONZUL	Hong Kong
Meta-Activities	Project management	Gaming consoles	Provides a designated space
	Project planning	Large scale monitors	Supports grant applications for DH
Other	Other Digital Scholarship activity	VR headsets	Other
		Other software	
		Other hardware	

For the ARL, RLUK and CONUL surveys, the absolute answers to the types and locations of activities are categorised using the table above and then averages are calculated per category. This is plotted into a 100% stacked bar graph per category as can be seen in Figure 3.

When looking at activities that happen in the library (the light blue bars in Figure 3), RLUK and CONUL show similar results to those of the LIBER survey. The more traditional library activities included in ‘Capture,’ ‘Enrichment’ and ‘Storage’ occur most often. The ARL survey shows a different view of library activities around digital collections, as they also have a large number of respondents describing activities around ‘Creation’ – which in this case means software creation and/or interface design. This corresponds to the finding that the ARL libraries are also quite active in the analysis and interpretation of data, and meta-activities such as project organisation.

The CAUL/CONZUL survey is rather difficult to compare to the other surveys as it revolves not around activities but asked input on software and hardware. However, when using the mapping in Table 1, a similar image to that of the European libraries appears. The more traditional categories mentioned earlier of ‘Storage’ and ‘Capture’ are mentioned more often than the more DH-specific roles around analysis. Over half of the surveyed libraries offer an institutional repository (8), server space (5) and access to scanning (8) and 3D modelling equipment (2). A remarkable effort is also seen in the ‘Dissemination’ category since bibliographic management tools are supported by 13 libraries and web publishing tools by 5 libraries.

Fig. 3: An overview of activities in the RLUK, ARL and CONUL libraries with absolute numbers averaged per answer type displayed in a 100% stacked bar.



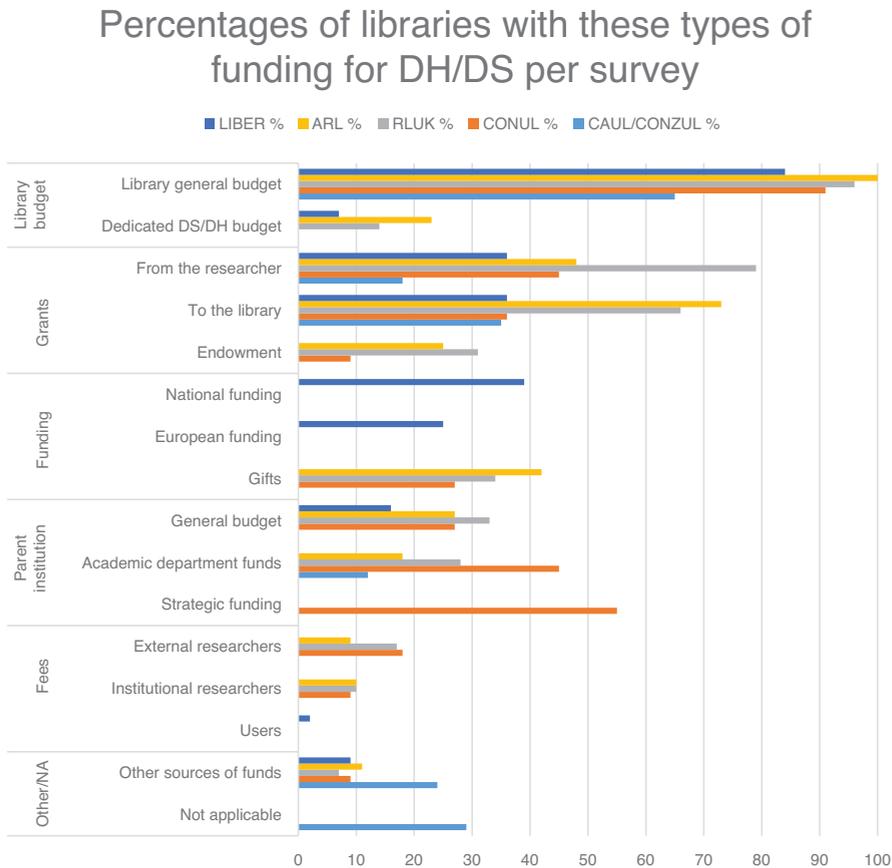
The Hong Kong-survey does not map conclusively to all categories used within TaDiRAH. However, it is interesting to note that almost all libraries (86%) offer digital collections and almost half (46%) provide or build tools for the use of those collections, again showing the categories ‘Capture’ and ‘Creation’ to be more natural to the library than ‘Analysis’ (14%).

In conclusion, the various types of activities listed by the surveyed libraries show that US libraries play a different role in digital scholarship at the time of the surveys than the other surveyed libraries, who seem to be more active in research support, while the ARL libraries appear to be engaging more in the research itself.

7. Funding & Organisation

The surveyed libraries range from having fully implemented digital humanities centres to those that had “not developed an awareness of the trend of digital humanities” (Wong & Li, 2015). It is therefore to be expected that the funding of the various libraries differs a lot. However, when combining the figures around funding from the different surveys⁵ many similarities are seen between the surveys. As with the previous questions, not all surveys had the same answer options, but similar categories can be seen. Figure 4 depicts the

Fig. 4: Percentages of libraries with various types of funding for DH/DS per survey.



percentage of libraries that use the various types of funding mentioned in the surveys, collated into categories.

7.1. Funding in LIBER Libraries

When looking at the LIBER survey results it shows that almost all libraries use the general budget for DH/DS activities, with just a small percentage (7) having a specific budget aimed at digital scholarship. Next to that, almost half of the libraries work with external funding, such as grants and/or (inter) national funding schemes, either to the library directly or from a researcher who involves the library in their project. Hardly any library asks for user fees for their activities and just a few libraries use budget from their parent institution.

7.2. Funding in Other Surveyed Libraries

Almost all libraries work on digital scholarship activities using the general budget of the library and very few have a dedicated DH/DS-budget. Similar to the LIBER libraries, as can be seen in Figure 4, when combining the options for grants, grant funds, endowments, European and national funding, it becomes apparent that non-structural funding is the second most often used funding within libraries for digital scholarship activities whereas few work with user fees in its various types.

Of course, this does not make clear the size of funding available within libraries, but merely the source. The LIBER survey did attempt to ascertain how much of the library's core budget was spent on digital humanities. Of the 47 answers received, most estimate it to be between 1% and 10%, with two outliers at 25% and 50%.

7.3. Organisation of DH Activities in LIBER Libraries

While just a few LIBER libraries indicate they have a specific budget for digital scholarship, 25% indicate they have a specific DH unit in the library. Ten out of 52 libraries (20%) indicated they also had a dedicated DH space used

for activities such as training, teaching and as a workspace, showing varying levels of maturity in digital scholarship activities. It is to be noted though that most respondents (71%) in the LIBER survey come from Western and Northern Europe and this should also be seen as a relevant finding, as DH/DS activities in other regions of Europe might not have progressed enough for them to undertake participation in this survey even though there was an active effort in asking for input from underrepresented countries. Those libraries from Eastern and Southern Europe that did respond often indicate that they are still setting up DH activities.

7.4. Organisation in Other Surveyed Libraries

When looking at the organisation of digital scholarship within the other libraries a diverse picture emerges. DS centres or units occur in about 50% of the surveyed libraries in Ireland and the UK, while the ARL survey mentions that 59% of surveyed libraries had a department or unit aimed to support digital scholarship, with an additional 11% planning to do so. Again, this shows that digital scholarship embedded in the library was already more established in 2016 in the United States than currently in Europe.

7.5. Conclusions

No specific question was posed in the ARL and RLUK surveys on the availability of a DH/DS space, but 73% of libraries in Ireland indicated they did not have a specific space for DS, although general spaces are used for DS training. The data from Hong Kong shows that DH was still a relatively new topic at the time of the research since only one library (out of eight) was said to have a unit to support digital scholarship. None of the libraries indicated that they provide a designated space for specific digital humanities activities. Although no question around the organisation of DH activities was specifically part of the Australasian survey, results on the library's involvement in DH indicate that out of the 16 surveyed libraries almost all work together with faculty on DH projects and 25% provide a physical space within the library for DH activities.

To conclude, similar pictures appear when comparing the different forms of funding for digital scholarship activities throughout all surveyed libraries:

most libraries use the general budget of the library, and non-structural funding such as grants is the second most often used type of funding. Again here, a difference can be seen between LIBER libraries and ARL libraries, as just 7% of LIBER's organisations have a dedicated budget for (the development of) DH work, whereas almost a quarter of the ARL libraries show a more structural dedication to digital scholarship that is underpinned with a defined budget. This finding is also reflected in the presence of DH/DS centres or units which are mentioned more often in the US-based libraries as opposed to the European ones and which can again be seen as a sign of structural commitment by the organisation towards DH.

8. Staff & Skills

Staff and skill-building is a common theme throughout the surveys, as what is possible in terms of activities within the organisation relies heavily on the people working in the libraries and the position they have. When looking at the roles and skills for DH/DS in the library two main categories are found in the surveys. First, questions around roles and position within the library, and second, questions around skills and skill-building. These will therefore be discussed separately.

8.1. Staff

When comparing the various questions around the roles in the library it becomes clear there is a wide variety of terms, roles, and interpretation as to what a DH/DS role in the library is. LIBER collected 145 job titles from colleagues of which 120 mentioned job titles are unique (83%). Within the LIBER collection the most mentioned terms are; 'Digital' (32), 'Manager' (30) and 'Librarian' (26).

Comparing the function titles mentioned in the ARL, LIBER and Australasian survey (as the other surveys did not ask specifically for these job titles) makes this diversity even clearer, as can be seen in Table 2.

ARL received information on 230 job titles, of which 186 are unique (81%). Table 2 depicts the most mentioned titles in both surveys and, as can be seen,

Table 2: Job titles per survey and their frequency

LIBER		ARL	
Job title	Frequency	Job title	Frequency
Librarian	8	Digital Humanities Librarian	6
Digital Scholarship Librarian	3	GIS Librarian	5
Curator	3	Digital Initiatives Librarian	4
Collection Manager	2	Digital Scholarship Librarian	4
Project Leader	2	GIS Specialist	3
Project Manager	2	Research Data Librarian	3
Subject Librarian	2	Digital Archivist	3
		Data Librarian	3

the frequencies of the most often used titles are rather low (8 for LIBER and 6 for ARL). However, when comparing the positions on a word-by-word basis instead of on the full title, more similarities occur. ARL term lists show a more diverse landscape of titles within the surveyed libraries. ‘Digital’ and ‘Librarian’ stand out with respectively 105 and 90 mentions, with the term ‘data’ following far behind with a mere 31 mentions.

The fact that ‘manager’ (30) is such a prominent title in the LIBER survey might be related to the fact that this term is often used in connection to data or content (e.g. Operations Manager, Collections Manager). These might be tasks allocated to the most often mentioned position in the ARL survey ‘Digital Humanities/Scholarship Librarian,’ but further research is needed here.

As managerial positions (head/director/dean) occur relatively often in both lists (15 times in LIBER and 41 times in ARL) this might indicate DH and digital scholarship within libraries are part of policy-making levels within the organisation. Similarly, Mulligan remarked that “[t]he number of senior positions also indicates that DS support has become a core part of the research process and is no longer a niche service” (Mulligan, 2016, p. 7).

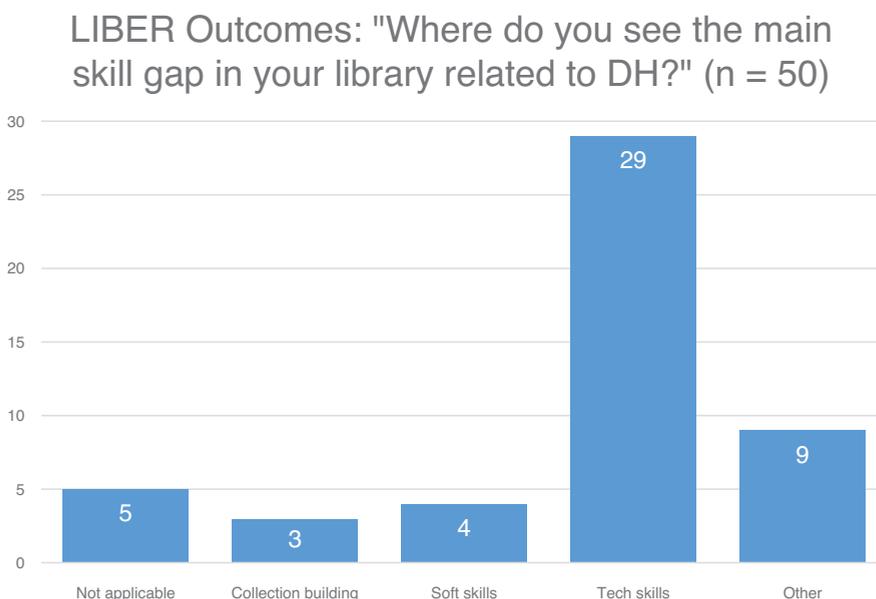
It is also interesting to note the twenty positions related to GIS research in the ARL survey, which do not appear at all in the LIBER survey. This corresponds to the finding that European libraries are less active in the analysis of content as US libraries.

The Australasian survey saw a very diverse set of positions working in DH, but also noted that 'librarian' and "business as usual roles within the library" (McKenzie & Ross, 2018, p. 3) were mentioned often, preceding the findings of LIBER and ARL.

8.2. Skills

When facilitating DH research as a library, it is important that staff have the necessary skills to collaborate with researchers. These are not always present in the library. The LIBER survey therefore asked their respondents where the greatest skill gap was present within their organisation in relation to the goals set by their library. As can be seen in Figure 5, the LIBER surveyed libraries clearly see that technical skills have the greatest gap between what is present in the library and what the library would like to be doing. This could also be connected to the lack of analytical activities in European libraries, as they simply not yet have the skills in place to work on such projects.

Fig. 5: LIBER Outcomes "Where do you see the main skill gap in your library related to DH?".



Unfortunately, LIBER asked libraries to select a single category, while the RLUK, CONUL and ARL surveys asked libraries to tick as many boxes as they deemed necessary, making the outcomes not comparable as such. However, when looking at the described results in the reports, the common ground becomes clear. In the ARL survey respondents were asked to not only indicate three options in which they saw the greatest skill gap, but also which of those were the most critical to improve. Given that both the CONUL and RLUK surveys follow this question model, their answers give a better insight into the skill gaps and development needs in European research libraries than LIBER's single choice question, as can be seen in Tables 3 and 4.

All surveyed libraries indicated mostly technical skills to be lacking in their organisations, similar to LIBER's outcomes. The fact that the CONUL libraries indicated a gap around digital preservation is interesting. Although this did not emerge as a priority in the ARL and RLUK libraries, the RLUK

Table 3: Top 3 greatest skills gaps perceived by surveyed libraries

	ARL (n=70)	CONUL (n=11)	RLUK (n=27)
1.	Visualisation (65%)	Digital preservation (82%)	Visualisation (88%)
2.	Computational text analysis and support (64%)	Data curation and management (64%)	Computational text analysis and support (85%)
3.	Statistical analysis support (60%)	Text analysis/support (73%)	GIS and digital mapping (81%)

Table 4: Top 3 most critical to improve skills in surveyed libraries

	ARL (n=70)	CONUL (n=11)	RLUK (n=27)
1.	Visualisation (35%)	Digital preservation (73%)	– Computational text analysis and support (37%) – Digital preservation (37%)
2.	Data curation and management (35%)	Data curation and management (55%)	– Visualisation (22%) – Statistical Analysis/support (22%) – Data curation and management (22%)
3.	Computational text analysis and support (28%)	Computational text analysis/support (27%)	– Digital publishing (15%) – Encoding content (15%)

respondents indicated that digital preservation is a skill which needs to be improved upon, as can be seen in Table 4, which shows the priorities of libraries where skill building is most needed.

While the ARL and RLUK libraries focused more on the needed development of analytical and service-oriented activities, the CONUL libraries see more need to close the gap around activities such as data curation and preservation.

8.3. Conclusions

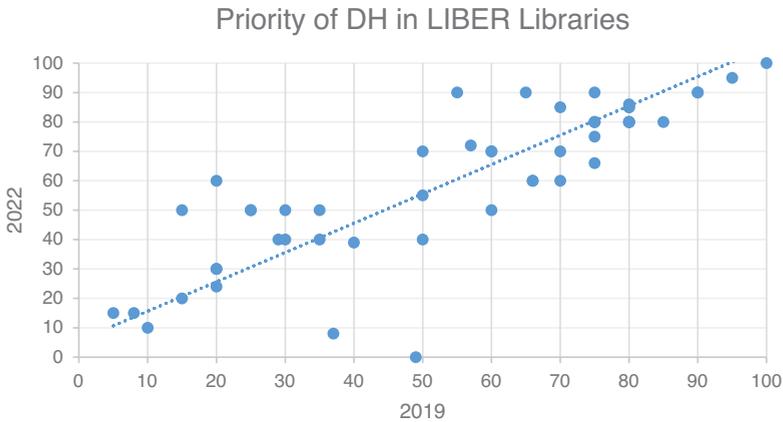
Comparing the various surveys is complicated due to the differences in answer types. However, the finding that in LIBER libraries technical skills are most lacking corresponds to the types of activities RLUK, CONUL and ARL libraries indicate as their greatest skill gaps. It indicates that most libraries are indeed very comfortable with tasks around collection building, storage and soft skills, such as providing advice and guidance in information collection. These are the skills their staff have and need not to be developed further. This again reflects the types of activities currently undertaken by the surveyed libraries as described earlier in the article. The variety of job titles is also noteworthy and might indicate a lack of stability or role clarity for DH work from within the library as the activities are spread out over a large number of roles. It might also be a sign that DH work is embedded throughout the library, but more research is needed here.

9. Future

LIBER asked libraries to indicate how much of a priority digital humanities currently is in their library on a scale from 0 to 100 and what they thought the priority would be in 2022 (Figure 6).

Figure 6 shows that most libraries do not see a major rise in prioritisation in the next four years after the survey with an average increase of 5,45 points. Just eight libraries see a potential rise of 20 or more points and 10 libraries indicate the priority to decrease (slightly), generally with around 10 points. However, most libraries who indicate the priority to be high (80 or more) see that being similar in four years.

Fig. 6: Overview of priority of DH in LIBER libraries in 2019 and estimated priority in 2022 (n=51).



9.1. Future DH/DS Planning

Most surveys (apart from CAUL/CONZUL) were curious to see where their libraries evolve in terms of DH/DS activities and plans. ARL, RLUK and LIBER all asked libraries to describe their idea of the future role in digital humanities/scholarship, while CONUL asked what the association could do for libraries. Hong Kong asked libraries to indicate the importance of supporting DH in the next three years, but unfortunately outcomes of this question are not clearly expressed in the article.

Four themes emerge from examining responses of open comments in the ARL and LIBER surveys. Many libraries plan to expand activities in one form or another, such as creating a lab, setting up residencies, facilitating data sharing, etc. This can be done in order to become a more attractive partner in research, but also to serve as a hub for digital research within an academic community. The second theme revolves around collections, either expanding on current digital collections, making access easier and/or disseminating the collections more widely. Thirdly, the libraries themselves also see room for improvement in their internal workings. Digital scholarship can act as a catalyst towards self-improvement, which is clearly seen in comments

relating to the improvement of (technical) infrastructures and skill-building of librarians. Lastly, another aim, again closely related to digital scholarship, is the stimulation of open science. The library is in an ideal position to champion open science and is more than happy to take on this role within digital scholarship.

9.2. Conclusions

The future for LIBER libraries is fully aligned with other surveyed library organisations. While DH are presently a high priority, the libraries see this priority remain steady for the next four years. To maintain (or reach) that high priority, LIBER libraries indicate their activities to expand and their roles to grow, similar to the surveyed libraries in the US. All libraries see opportunities in digital scholarship and are keen to further develop this.

10. Overall conclusion

The survey conducted by LIBER's Working Group paints a clear picture of the status of the use of digital collections in digital humanities research. Libraries⁶ are currently most comfortable with activities close to their traditions, such as providing (digital) storage, digitisation and collection building. They are, however, interested in expanding those into the digital realm. Developing the technical skills of staff is needed for this, but in many libraries the plans and budgets seem to be in place to do this. Their role currently revolves around research support, but the intention is there to develop that into research engagement.

The survey conducted within the LIBER community does have its limitations. As LIBER membership is not evenly distributed across Europe it does not show a balanced view of Europe's research libraries. This is again amplified by the fact that respondents from already overrepresented member countries participated a lot in the survey. In future work this might be overcome by using different data collection techniques to ensure libraries that are not yet represented well are included in the results, possibly also by engaging with libraries that are not members of LIBER. Also, a next iteration of the survey should be shortened. The survey (83 questions) was very long, and many respondents dropped out before completion⁷.

The research done in the various other surveys across Europe, Hong Kong, the US, Australia and New Zealand also shows the digital humanities/scholarship library landscape as one of growth. Whereas the US-based libraries are already engaging in the whole research lifecycle, they still see more opportunities to grow their role and responsibilities. The other surveyed libraries are also increasingly getting involved in digital research beyond the offering of digital collections.

All organisations see their limitations and work on improving them. They position their staff with crucial mandates in management teams and incorporate digital scholarship into the workings of the library by using the library's general budget as a funding resource. Although differences exist between activities in the various parts of the world, libraries feel comfortable to choose what works best for them and their research community, but also experiment with new techniques and their implementation in their organisations.

The future is bright for digital scholarship in libraries as many of the themes discussed for the future closely relate to the work libraries have been doing in the past decades. They open collections, facilitate research, never stop improving themselves and work to share research as widely and openly as possible.

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Notes

¹ The Association of European Research Libraries (LIBER - Ligue des Bibliothèques Européennes de Recherche) hosts a Digital Humanities and Digital Cultural Heritage Working Group which aims to bring together those librarians working within the LIBER network with an interest in digital humanities and new uses of digital collections.

² Although the LIBER survey has been conducted by the Working Group on digital humanities, its starting point was the use of digital collections for research and not necessarily focused on humanities. The activities used within the survey also focus on digital research (TaDiRAH – Taxonomy of Digital Research Activities in the Humanities (Borek et al., 2016)) as a whole. This article therefore references both surveys on digital humanities and digital scholarship.

³ Library associations from other parts of the world such as Mexico, South America, South Africa and India were contacted in order to obtain more similar surveys. Unfortunately, no other data was found.

⁴ For the LIBER data all libraries from the UK and Ireland have been excluded to prevent overlap with the RLUK and CONUL surveys.

⁵ This graph does not include the figures from Hong Kong as they are not specified for all answer options in the article. For the LIBER data all libraries from the UK and Ireland have been excluded to prevent overlap with the RLUK and CONUL surveys.

⁶ Given that 71% of the European respondents were from Western Europe (Austria, Belgium, France, Germany, Ireland, Luxembourg, the Netherlands, Switzerland and the United Kingdom), this result reflects mostly that of the Western European situation.

⁷ Only completed survey results are used in this research and in the report by Wilms et al. (2019).