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Communicating New Library Roles to Enable Digital Scholarship: a review article

Abstract

Academic libraries enable a wide range of digital scholarship activities, increasingly as a partner rather than as a service provider. Communicating that shift in role is challenging, not least as digital scholarship is a new field with many players whose activities on campus can be disjointed. The library's actual and potential contributions need to be broadcast to a diverse range of internal and external constituencies, primarily academic staff, university management, library colleagues and related project teams, often with different perspectives. Libraries have significant contributions to offer and a focused communications strategy is needed to embed libraries in digital scholarship and to create new perceptions of their role as enabling partners.

Introduction

Digital scholarship has generated new roles for libraries in recent years. It spans all disciplines, ranging in terminology from e-science to the digital humanities. Neat definitions of digital scholarship are elusive, however, and Waters (2013, p. 3) notes hundreds of definitions even of digital humanities on three different websites. Lynch (2014, p. 10) refers to a digital scholarship disconnect, questioning the need to describe scholarship as digital. He does, however, recognise digital scholarship as a term applicable to the transformation of most areas of scholarly work by technologies such as high-performance computing, visualisation and the manipulation of large datasets. Computational, data-intensive science is seen as representing a new paradigm (Lynch, 2014, p. 12; Tenopir, Sandusky, Allard, & Birch, 2014, p. 84).

New methods of enquiry characterise digital scholarship, especially in the humanities. Waters (2013, pp. 4, 6-7) sees the defining feature of digital humanities as the application of digital resources and methods to humanistic enquiry, identifying three broad areas of investigation and tool sets: textual analysis, spatial analysis and media studies. Sinclair (2014) observes that “new hybrid communities of inquiry are increasingly visual, collaborative, and spatial, or simply seek to make new connections possible in a digital world”, thanks to technologies such as data visualisation and mapping applications, to which can be added tools for text and data mining. New approaches to publishing findings and sharing data, often on an open access basis, are very much in scope across all disciplines too.

Digital scholarship relies on collections of information and data, along with a range of tools, infrastructures and, above all, people. Libraries have embraced this opportunity to take on a variety of roles, encapsulated by Calhoun (2014, p. 64), Alexander (2014), Vinopal (2013, pp. 27-28) and Sula (2013, pp. 16-17), and including:

- Digitisation and digital preservation, often of archives and special collections
- Metadata creation and enhancement for linked data, exchange and reuse
- Assignment of identifiers to promote discovery
- Hosting of digital collections in library repositories
- Publishing of faculty-edited journals
- Open access dissemination of research outputs and learning materials
- Management of research data
- Curation of born-digital collections
- Advice on copyright , digital rights management and the application of standards
- Participation in text mining, data analysis and geographic information systems (GIS) projects
- Provision of spaces, tools, equipment and training for digital scholarship

These roles have represented a fundamental shift for libraries towards publishing of digital content and active participation in research projects. They bring with them many communication challenges in terms of the environment of digital scholarship, the diversity of audience interests, important messages to be communicated and the range of channels for doing so.

A Challenging Communications Space

Library roles to enable digital scholarship are multi-stranded, reflecting the field itself. Rockenbach (2013, p. 6) describes digital humanities as “messy”, while she and others (Lippincott, Hemmasi, & Lewis, 2014; Schaffner & Erway, 2014, p. 8; Vandegrift & Varner, 2013, p. 68) emphasise its experimental approach, indicative of a rapidly evolving field without clear boundaries. Establishing and communicating a clear library offering in response is, not surprisingly, often difficult.

An Ithaka study of institutional models of support for digital humanities outputs (Maron & Pickle, 2014, pp. 21-23) identifies some further characteristics, including piecemeal approaches, multiple players on campus and a lack of joined-up campus-wide strategies. The range of stakeholders with whom the library may need to communicate includes university leadership, administration, IT services and the research office, as well as the different academic departments or research centres involved in digital scholarship, among whose ranks may be scholars, doctoral students, interns, web developers and programmers. Achieving effective communication across all of these constituencies is problematic. The Ithaka study (Maron & Pickle, 2014, p. 22), while urging regular communication, noted that dissemination is a function that is not owned by any unit and therefore sporadic, resulting in lack of awareness of projects in the absence, typically, of any directory of campus-wide

projects (p. 56). Schrier (2011) too observes, somewhat depressingly, that digital collections “often remain obscure, unknown, and therefore inaccessible to their intended user populations”.

There are many audiences and many perspectives. University leadership will want the benefits of digital scholarship for the institution’s research profile but may be unwilling to invest in understanding fully the range of activity involved in order to enable a coherent resourcing strategy to emerge. Academic staff may embrace involvement by libraries or may be slow to ask, preferring a self-sufficient, independent and autonomous approach (Schaffner & Erway, 2014, p. 8). Equally, library staff may fail to connect with their diverse audiences. An earlier Ithaka study on the sustainability of digitised special collections (Maron & Pickle, 2013, p. 10) notes that “investments in understanding the needs of the audience are quite low”. This does not bode well for successful audience engagement with libraries’ digital scholarship activities.

Mismatches in perspective are particularly evident in the areas of open access and research data management. Each is a hard sell to academics who may not see the need to engage, especially if they perceive that further work, primarily of an administrative nature, may come their way. Pinfield (2015, pp. 612-613) notes continued “significant levels of disinterest, suspicion and scepticism about OA amongst researchers”. He (p. 613) and Creaser et al. (2010, pp. 158-159) report strong loyalty to the traditional publication system, and in particular to journals. Calhoun (2014, p. 182) cites problems with the way that librarians talk to faculty about open access, often emphasising a subscriptions crisis that academics do not recognise as needing attention. Similarly, librarians’ promotion of their roles in research data management may face barriers in the shape of researcher negativity towards data sharing (Pinfield, Cox, & Smith, 2014, p. 17) .

Convincing library staff that libraries should adopt new roles to enable digital scholarship can also be an issue. The messy, unpredictable nature of digital scholarship asks questions of libraries in terms of

agility and risk taking. Its experimental approach, with projects prone to failure, may not sit well with libraries' tendency towards orderliness and predictable outcomes (Posner, 2013, p. 50). A clash of cultures is evident here. Equally, the culture of easy creation of content and its publication to the social web may clash with librarians' values of authority and authenticity (Calhoun, 2014, p. 213), limiting their full engagement with social media and thereby with new modes of scholarship. Library staff may not recognise the validity of adding a publishing role to existing offerings (Huwe, 2013, p. 51).

Rockenbach (2013, p. 2) identifies tensions between traditional notions of library service and new models of user engagement. This is most manifest in a debate, further discussed later in this article, as to whether librarians should take a supporting role in digital scholarship or should see themselves as active partners. The support model is traditional but there is a strong body of literature which sees it as sub-optimal (Posner, 2013, p. 46) and advocates an equal partnership approach, with some (Vandegrift & Varner, 2013, p. 76) adducing a problem of librarian timidity based on an inferiority complex in relation to academics. Librarians' lack of confidence in their own skills can hold back progress in areas such as research data management (Tenopir, et al., 2014, p. 85). All of this creates a strong imperative for library leaders to communicate very effectively the strategic importance of new digital scholarship roles and initiatives to library staff as well as external audiences.

The preceding paragraphs have focused on challenges, but there are great opportunities for libraries to broadcast a series of very positive messages about their contribution to digital scholarship.

Libraries have some real strengths to communicate and these are the focus of the next section. A recurring theme is the importance of relationships in this space (Lippincott, et al., 2014; Rockenbach, 2013, pp. 2-3; Vandegrift & Varner, 2013) and libraries have a successful tradition of building good relations (Pinfield, et al., 2014, p. 7; Rockenbach, 2013, p. 3). Uncertainties regarding the

sustainability of digital scholarship projects and ongoing responsibility for them (Arms, Calimlim, & Walle, 2009; Kitchin, Collins, & Frost, 2015) can be turned to advantage by libraries through the more stable funding models they typically enjoy. The greatest strength for libraries, however, is that they have shared interests with their constituencies, and particularly with the humanities, in “collecting, organizing and preserving our shared collective memory”, helping to “remember the past, understand the present and build the future” (Vandegrift & Varner, 2013, p. 67). Libraries and digital scholarship are, in fact, a natural fit and this should shape communications around them.

Key Messages to Communicate

Libraries have much to offer to digital scholarship and need to communicate these advantages strongly. Sinclair (2014) argues that libraries are natural incubators for digital scholarship, and others (Alexander, et al., 2014; Rockenbach, 2013, pp. 2-3) make a similar case in relation more specifically to the digital humanities. Positive features include libraries as neutral, interdisciplinary spaces with staff who can bring together the many different and often disparate players on campus, at a minimum enabling dialogue but often also productive partnership between them. Strong relationships with faculty and a habit of collaboration and connecting can be leveraged to the full in this regard. The library as place is a significant asset and there has been a move towards establishing digital scholarship centres in library buildings, with numerous examples in the United States in particular (Sinclair, 2014). A particular advantage the library can offer is to make expensive technologies available for use and experimentation at an accessible and welcoming location by anyone on campus (Lippincott & Goldenberg-Hart, 2014, p. 1).

The traditional skills of librarians and the areas of focus of libraries match well with the needs of digital scholarship. These include cataloguing, curation and sharing of information, translating in

more recent times to metadata, digital preservation and open access. Library collections, notably archives and rare materials, are the backbone of many projects, especially, but not only, in the digital humanities, and their digitisation enables new forms of enquiry (Green & Courtney, 2015). There are therefore vital human and documentary resources to offer and promote. Another essential infrastructure, in which libraries are often lead investors on campus, is the hardware and software environment for digital preservation, publishing and presentation, as well as open access and data curation. Experience and expertise with platforms such as Fedora, Open Journal Systems, Omeka, DSpace and Dataverse places library staff in valued advisory and consultancy roles. Academic staff and other stakeholders, including university leadership, whose perception of libraries can be somewhat dated, may not appreciate the key roles that the library can play in digital scholarship, so communicating them actively and effectively is essential.

The concept of library as equal partner in digital scholarship is key and should be communicated clearly, with positive linkage both to success and sustainability. Such partnership need not be seen as a departure from traditional research library strengths (Vandegrift & Varner, 2013, p. 70). The opportunity to move from established service-based approaches to research collaboration (Brown, Wolski, & Richardson, 2015, p. 236) and co-contribution to the creation of new knowledge (Monastersky, 2013, p. 431) should be embraced. Librarians have clearly asserted this partner role in some areas, notably research data management, as at Griffith University in Australia (Searle, Wolski, Simons, & Richardson, 2015), while digital scholarship centres have enabled engagement with constituents as partners rather than clients (Lippincott & Goldenberg-Hart, 2014, p. 3). Service models are limiting and library roles should more productively be marketed in terms of expertise (Lippincott & Goldenberg-Hart, 2014, p. 2). Posner (2013, p. 46) emphasises the valuable digital humanities work that library professionals have conceived and performed and the importance both of ensuring it is credited and of promoting it as a vital and rare skill, “not a service to be offered in silent support of a scholar’s master plan”. The skills and resources libraries can bring to digital

scholarship will be more effectively harnessed through partnership and this outlook should pervade library communications.

Partnership represents enlightened self-interest for all parties too. Sustainability is a core issue for digital scholarship, often due to its experimental nature, and many projects encounter an uncertain future beyond any initial funding. It is no coincidence that the Ithaka study on sustaining the digital humanities (Maron & Pickle, 2014, p. 50) places knitting deep partnership among campus units, including libraries, at the top of its list of success factors for developing a system to sustain digital humanities resources. The mutual support at the University of Maryland between the Libraries and the Maryland Institute for Technology in the Humanities is provided in the Ithaka study as an example of good practice. The partnership model at digital scholarship centres has also been seen as likely to generate sustainable results and to involve the library in funding proposals and grant applications (Lippincott & Goldenberg-Hart, 2014, p. 4). Faculty partnerships have proved vital to digitisation projects, as at the University of Nevada, Las Vegas (Lampert & Vaughan, 2009, pp. 122-123). Libraries take a long view of digital resources and have a particular interest in promoting their sustainability and preservation. They can leverage their more stable budget model (Schaffner & Erway, 2014, p. 13) to advantage, both for others on campus and for themselves. In the latter context it is important to make a statement of intent by putting the library's own digital scholarship engagements, staffing and infrastructures on a long-term footing (Posner, 2013, p. 51).

Articulating to funders and stakeholders the benefits of digital scholarship, associated projects and the library's involvement is key to the sustainability agenda. Surprisingly, deficits have been noted in terms of dissemination of information about projects and resources (Maron & Pickle, 2014, p. 22), and the literature on marketing of digital collections is thin (Schrier, 2011). Failure to communicate the value of digital scholarship initiatives is likely to have negative implications in terms of funding

and long-term sustainability. Those benefits will vary from institution to institution but some are common enough and are well presented in a report on the impact of UK investment in digitised resources (Tanner & Deegan, 2011). This report outlines benefits for research, such as enabling new areas of enquiry and allowing scholars to concentrate on analysis instead of data collation, and for teaching through access to a more varied and rich range of materials (pp. 10-19).

Other benefits to be promoted locally may include text and data mining opportunities, wider access to the institution's research, stronger interdisciplinary collaboration and partnerships with other institutions. Communicating a clear value proposition is vital to sustainability (Calhoun, 2014, p. 182; Maron, Smith, & Loy, 2009, pp. 14-17). This could focus on the unique features of a digital resource and the scholarship it enables or the time a new platform saves. Equally, alignment with the institutional mission may be emphasised, for example higher rates of citation for open access publications or the institutional credit bestowed by the publication of high-quality digital resources such as the University of Virginia's Valley of the Shadow (<http://valley.lib.virginia.edu/>) project.

Communication strategies also need to look beyond emphasising immediate and local benefits. Libraries have rightly begun to move away from a collection-centric focus (Calhoun, 2014, p. 212) to a broader view of the positive social influence of digital initiatives, recognising that the collection is only a means to an end (Schrier, 2011). Wider, often global, benefits to promote include the advancement of knowledge, more equitable sharing of research outputs through open access, cultural engagement, economic benefits, bringing communities together and achieving long-term preservation (Calhoun, 2014, pp. 145-147; Tanner & Deegan, 2011, pp. 20-23, 27-33). The DELOS Digital Library Manifesto captures well the social and intellectual function of digital libraries, emphasising their facilitation of communication, collaboration and other forms of interaction and placing them at the centre of intellectual activity (Candela et al., 2007).

Returning to a local focus, a further area for communication is the library's capacity to enable digital scholarship and how this will be managed relative to demand and expectation. As mentioned earlier, capacity can take the form of space (sometimes incorporating digital scholarship centres), equipment, storage, and hardware and software platforms. People, however, represent the most valuable resource the library can offer. Telling the story of previous or current involvements and initiatives is a good indicator of success and potential for future engagement. Identifying and promoting the teams, roles, skills and individuals available to participate in digital scholarship is important. Job titles and team nomenclature can convey a lot. New library job titles have emerged, such as Digital Humanities Librarian and Digital Humanities Design Consultant (Rockenbach, 2013, p. 1), as have new teams, examples being the Scholarly Communications Team at the University of Edinburgh and the Open Access and Data Curation Team at the University of Exeter (Corrall, 2014, p. 34). Brown University (<http://library.brown.edu/cds/>) is interesting in that its Center for Digital Scholarship represents a cross-departmental library team, led by a Digital Scholarship Services Manager and incorporating posts such as Scientific Data Management Specialist, Manager of Imaging and Metadata Services and Data Visualization Coordinator, with other new posts on the horizon, including Digital Scholarship Editor and Information Designer for Digital Scholarly Publications, enabling partnership through all steps of the research cycle (Maron, 2015, p. 34).

Managing the library's involvement in digital scholarship is challenging and there needs to be clarity around what can and cannot be done within finite resources in a climate of high expectation and demand. Digitisation, in particular, has created unrealistic expectations that any collection can be made accessible in digital format without consideration of cost, complexity or copyright, and librarians have to explain the need for selectivity (Mills, 2015, p. 162). It is interesting to note the inclusion of a sub-section on managing expectation in an earlier version of the digitisation strategy of the University of Manchester Library (2009, p. 5). The management of expectations is a recurrent

theme in the literature (Maron & Pickle, 2014, p. 51; Schaffner & Erway, 2014, p. 14; Vinopal & McCormick, 2013, pp. 34-35). Strategies include publishing criteria for project selection, developing service level agreements, using scale solutions, implementing project and portfolio management, and cost recovery. Some of these measures, especially when they involve saying no or levying costs, are unpopular. Standing firm and communicating a clear position calls in particular on library leaders to take a strong and active role and to be decisive with regard to prioritisation (Vinopal & McCormick, 2013, pp. 37-40). Without clear communication strategies, resources will be spread too thinly, or invested inappropriately, and the library's reputation as a key player in digital scholarship will be compromised.

Communication Strategies

Promotional campaigns could be regarded as the most likely way to broadcast the library's capacity to deliver new value and new services, but communicating new library roles to enable digital scholarship poses different challenges. There is a stronger emphasis on understanding, having a facilitative mindset, being "of" the relevant communities, actively delivering, advocating effectively and using social media to build community

Delivering on digital scholarship projects and infrastructures is probably the best advertisement for what the library can do. Resources and communication effort can, however, be misdirected without a full appreciation first of the local landscape. Investment is vital in understanding the priorities of the range of audiences involved and recognising their diverse skills, culture, needs and challenges (Lewis, Spiro, Wang, & Cawthorne, 2015). Calhoun (2014) rightly emphasises this point and it is no coincidence that in her table (p. 197) of barriers to institutional repositories and possible responses the most common action recommended is conducting audience needs assessments. Surveys have also proved to be valuable tools in understanding perspectives on open access (Moore, 2011),

including different disciplinary attitudes (Creaser, 2010). They can helpfully inform the creation of digital collections (Green & Courtney, 2015) by elucidating the complex requirements of users and creating an understanding of how such collections are integrated into humanities scholarship. Consultation engages users with the selection of digitisation projects (Mills, 2015) and is essential to the development of policies for research data management (Digital Curation Centre, 2014; Pinfield, et al., 2014, pp. 9, 21). Observation is also recommended in assessing the library's level of engagement with digital humanities and noting gaps to fill (Schaffner & Erway, 2014, p. 5), while there is value in online forms of listening by following social media to learn of developments and to understand language and cultural norms (Schrier, 2011).

The mentality that libraries bring to digital scholarship underpins how they communicate their roles. It has already been noted that this field is multi-stranded, experimental and lacking clear boundaries. This calls for an agile outlook from libraries, characterised by “flexibility, inquisitive practices, collaboration, starting with “yes,” and being courageous” (Alexander, et al., 2014). A level of confidence, positivity and openness is implied, as is curiosity, which can manifest itself in a willingness to learn and to explore possibilities. It has been noted that the traditional reference interview offers an ideal foundation in this regard (Vinopal & McCormick, 2013, p. 35). What is needed is to orient it in the direction of open-ended exploration instead of guidance towards specifics (Vandegrift & Varner, 2013, p. 72).

A good understanding of user needs can generate a solutions-focused approach. Libraries' digital scholarship websites may communicate this “can-do” approach effectively. The Emory Center for Digital Scholarship website bills the Center as providing “a one-stop shop for anyone at Emory interested in incorporating digital technology into teaching, research, publishing, and exhibiting scholarly work” (<http://digitalscholarship.emory.edu/>). The website of the Center for Digital

Scholarship (CDS) at Brown University has a section titled “How Can I Work With CDS?” which shows what the Center can do for users by translating its activities into typical actions for users, followed by photos of staff who can help, creating a very confident offering and a highly positive impression (<http://library.brown.edu/cds/>). There is no shortage of problems to solve, or user needs to be addressed, and libraries can productively focus their efforts and communications accordingly. For example, discoverability of their digital projects and publications is known to be a concern for scholars (Calhoun, 2014, p. 183; Schaffner & Erway, 2014, pp. 7, 11). Libraries have always been committed to discovery and have taken on new roles in minting Digital Object Identifiers (DOIs) and promoting the use of author identifiers such as ORCID to associate authors unambiguously with their content. These roles should be positively communicated as value-added solutions from the library.

A participative mentality is also needed, and immersion into the digital scholarship community is an effective way of promoting the contributions of librarians. This happens readily when digital scholarship centres are based in libraries, encouraging also a social dimension (Lippincott & Goldenberg-Hart, 2014, pp. 4-5). Any form of proximity certainly helps and co-location at National University of Ireland (NUI), Galway, of the library’s archives and special collections with two major humanities and social sciences research institutes in a new research building has opened up new digital project collaborations (Cox, 2014). Going out of the library and having conversations with a range of stakeholders makes a statement of engagement and builds trust. This may involve attending digital scholarship events in academic departments or presenting papers at seminars and conferences outside the institution (Vandegrift & Varner, 2013, p. 73).

Libraries can host their own events with positive impact. Examples of such events include a programme of digitisation workshops at University College Dublin (2015), and a seminar on Creating and Exploiting Digital Collections at NUI Galway (2014) which brought together a number of players

across the campus and promoted engagement with the Library's digital scholarship enablement strategy. Actively participating in conversations is important and can advance the library role in research data management policy (Erway, 2013) or prove the value of digital collections (Schrier, 2011). Relationships are of particular importance in digital scholarship (Lippincott, et al., 2014, pp. 1, 13; Rockenbach, 2013, p. 2), need investment by libraries (Posner, 2013, p. 49) and can be mutually supportive (Vandegrift & Varner, 2013). Ultimately, participation is communication.

A track record of delivery on digital scholarship projects and infrastructures is the best credential for library capability. Libraries commonly use their websites to advertise successful project involvements, examples being the Digital Humanities Center at the University of Rochester (<http://humanities.lib.rochester.edu/>) and the Digital Scholarship Lab at the University of Richmond (<http://dsl.richmond.edu/>). Staff expertise is a vital strength and is prominently featured by, among others, the Center for Digital Scholarship at Brown University Library (<http://library.brown.edu/cds/>). Documenting progress and achievement through publications can be effective, as experienced at NUI Galway which has issued annual reports (<http://tinyurl.com/legpsxk>) of its project to digitise the archive of the Abbey Theatre (Bradley & Keane, 2015), focusing strongly on scholarly engagement with the digital archive. A compelling approach to communicating the library's role is to link its contributions to all stages of the research lifecycle. Good examples of this can be seen at King's College London, (<http://www.kcl.ac.uk/library/researchsupport/index.aspx>) and the University of California Irvine (<http://www.lib.uci.edu/dss/>). The library can be a leader as well as a partner. Librarians develop and lead their own digital humanities projects (Posner, 2013, pp. 46-47) and these need to be promoted. Librarians have exercised leadership on campus in open access and, more recently, research data management. Each of these areas is complex and in need of people who can advise knowledgeably on policy formulation, interpretation and implementation (Briney, Goben, & Zilinski,

2015). Librarians have established and communicated strong credibility, often as “resident experts in campus discussions” (Fruin & Sutton, 2016, p. 13).

Advocacy forms part of the communications strategy across all areas of digital scholarship. This is especially the case for open access and research data management the benefits of which, as already noted, may not be understood or embraced by faculty. Promoting each successfully requires an appreciation of campus politics and cultivation of good relations with senior personnel such as research or IT directors (Pinfield, et al., 2014, p. 20), or respected academics who can partner in developing policy and be effective champions in selling it (Fruin & Sutton, 2016, pp. 12-13). Keeping documentation concise, clear and benefits-focused is important. An example of how this approach works was in the drafting of a two-page open access policy at NUI Galway (<http://tinyurl.com/pfpslqd>). Language is significant too, and a very helpful guide to open access policies (Harvard University) includes a section on “Talking about a policy” which notes terminology to promote or avoid. The word “mandate”, for example, may prove problematic in creating a perception of institutional coercion. Empathy with academic concerns and articulation of differentiated audience-specific benefits (Calhoun, 2014, p. 183) will enhance communication and successful implementation.

Marketing techniques come into play too and branding can communicate important messages. NUI Galway’s Library has published a Digital Scholarship Enablement Strategy (<http://tinyurl.com/next8cw>), deliberately choosing the word “enablement” rather than “service” or “support”. Succinct branding is evident in “Collaborate → Iterate → Discuss” for the University of Virginia Library’s Scholars’ Lab (<http://scholarslab.org/>), or “Partnering to Advance Scholarship” at the Digital Scholarship Lab in the J. Murrey Atkins Library, University of Carolina at Charlotte (<http://dsl.uncc.edu/>). The latter institution also offers an example of the successful use of “joined-

up” marketing campaigns to promote the Library’s publishing services through a variety of channels, including campus conversations, newsletters, guides and a launch party to mark the publication of its first journal issue (Wu & McCullough, 2015, pp. 81-83). Multi-faceted campaigns can be built around events such as International Open Access Week (<http://www.openaccessweek.org/>) every October, the publication of a digital collection at Harvard University (Madsen, 2009, pp. 3-6), or the establishment of a new research storage service at Griffith University (Searle, 2014).

The use of social media has become a vital component of libraries’ communication strategies, enabling them not just to promote digital scholarship roles and resources but to engage users and build communities. Usage of channels such as blogs and Twitter is common enough but libraries’ exploitation of the full potential of social media has been limited by a collection-centric rather than people-centric worldview (Calhoun, 2014, p. 212), with a tendency to promote collections rather than engage users (Schrier, 2011). There has, however, been a definite shift in perspective in recent times from collections to networked communities, from repositories to social platforms and from content consumers to content creators and contributors, creating new roles for libraries on the social web and impacting scholarship more widely as well (Calhoun, 2014, pp. 214-217). Researchers have embraced scholarly social networks such as ResearchGate, Academia and Mendeley as they enable sharing, discovery and new contacts. Similar benefits are expected of digital scholarship platforms and institutional repositories have integrated RSS feeds, altmetrics and social media functionality (Marsh, 2015, p. 184).

Libraries have used social media optimisation strategies to make it easy to share, bookmark and comment on digital content (Calhoun, 2014, pp. 244-245). Crowdsourcing approaches such as transcription, supplementing metadata and the identification and provenance of materials (Peaker, 2015) have also actively engaged audiences and built communities around projects. Examples

include DIY History (<http://diyhistory.lib.uiowa.edu/>) at the Iowa Digital Library, which has engaged participation in the transcription of over 63,000 pages of handwritten archival material to date, and the University of Pennsylvania Libraries' Provenance Online Project (<https://provenanceonlineproject.wordpress.com/>) which sources information on the provenance of rare books. Value-added participation by librarians in social media conversations around digital collections, and posting of contributions targeted at known areas of interest to a community, are also seen as ways of enhancing credibility, developing trust, building relationships and engaging support (Schrier, 2011).

Finally, as noted earlier, library managers in particular need to communicate effectively with their own staff. Library staff with traditional views of service boundaries may be sceptical about engagement with digital scholarship and the investment of resources in that direction, especially when this represents the replacement of positions formerly assigned to more established, possibly legacy, functions. A clear and ongoing articulation by library leadership of the strategic importance of new digital scholarship roles is needed (Vinopal & McCormick, 2013, pp. 33,38,40), incorporating messages around vision, rationale, expectations, priorities and challenges. Ensuring connectivity between digital scholarship staff and the rest of the library is important too. Briefing sessions to all library staff about activities and initiatives are valuable. They have, in the author's experience, proved effective at NUI Galway, enabling face-to-face communication and discussion. Linkage with established areas like archives or research services is needed and can be cultivated.

The number of library staff involved in digital scholarship is typically small relative to the whole library team and this creates its own pressure. Such staff may be overextended, in need of guidance or direction, challenged by the evolving skillset required or frustrated by slow progress. They too need particular communication from library leadership to support, guide, reassure and encourage,

as well as to commit the necessary resources, including training or development opportunities and even the permission to fail (Posner, 2013, p. 51). Effective communication structures within a digital scholarship team, including regular meetings, will ensure awareness of activities as well as sharing of, and learning from, experience.

Conclusion

Digital scholarship is a relatively new field of activity and is presenting both opportunities and challenges for libraries. The field is multi-stranded and the library response has mirrored this, with a wide range of initiatives and innovations in evidence. There are many communities involved in digital scholarship and a distinctive, experimental culture has developed, often resulting in a somewhat disjointed approach across the campus. Libraries need to make their contribution and to communicate their roles in this environment, recognising and overcoming potential mismatches in culture and perspective. Some big positives are the strong relationships that libraries have typically built with their academic communities, the natural fit between digital scholarship and the library mission, and the need for library contributions, both of themselves and to deliver sustainability.

Communication on campus and beyond about digital scholarship projects, by libraries and others, has not always been a strength. Library roles may not be recognised and it is vital to get out important messages about people, skills, capabilities, collections, spaces and infrastructures, as well as the benefits delivered. These are valued, as is the move towards a partnership approach which can also be promoted in new job titles and team names.

A specific communications strategy is needed, one that focuses on inserting the library into digital scholarship communities, mirroring their experimental mindset, and projecting a confident, “can-do”

outlook. Librarians need to participate, attend, present and converse, in general by being “out there”, communicating by doing and by sharing expertise. All of this must, however, be based on understanding the nature and needs of those involved in digital scholarship and their range of activities in order to communicate added value and to advocate effectively and sensitively. Online communications are important, especially the strategic use of social media to build trust and community. Engaging all library staff also needs effort so that they understand and can promote the library’s new roles as an enabling partner in digital scholarship.

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