

ACCEPTED MANUSCRIPT

Establishing the role and impact of academic librarians in supporting open research: a case study at Leeds Beckett University, UK

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Abstract

This practical paper presents findings of a small scale study undertaken at a large UK University. The purpose of the study was to encourage academic engagement with Open Access (OA) and the Higher Education Funding Council for England (HEFCE) mandate with the measurable impact being increased engagement with the Repository and dissemination of research whilst circulating information to the wider community. In order to promote research, a series of ‘Focus on’ webpages were created aligned to a particular theme, and were then disseminated via social media. It was anticipated that by potentially increasing access to research outputs, academic staff would be motivated to make their work available following OA models and use the institutional repository (IR) as a means to achieve this. The main drivers for the study were the Finch Report (2012), the HEFCE Policy for open access in the post-2014 Research Excellence Framework (2014) and the institutional strategy for research. Data was collected through a statistical analysis

of both the 'Focus on' pages and journal article downloads via the IR, with results indicating increased engagement with the IR making research openly accessible.

Keywords

Hefce, Research engagement, Research impact, Institutional Repositories, Open Access, Focus on

Background

Modern communication technology might be expected to result in efficient dissemination of the scholarly record. Historically there are two distinct models of Open Access, commonly referred to as ‘gold’ and ‘green’. Respectively these are publishing in an OA journal whereby the version of record is openly available from the publisher’s website and publishing in a ‘traditional’ subscription based journal and ‘self-archiving’ an author-produced version of a published paper in a repository.

In 2011 the UK Government set up a Working Group on Expanding Access to Published Research Findings, chaired by Dame Janet Finch. The so called “Finch report” was published in 2012 which emphasised the ‘gold’ route to open access arguing that publishing costs should be transferred to the author, their funder or institution via article processing charges (APCs) whereby articles are typically made available under a Creative Commons licence. Finch was criticised by OA advocates in that it did not solve the fundamental problem and would enable commercial publishers to simply convert their business models from subscription to charging for ‘gold’ OA via APCs.

Partly in response to Finch, the Higher Education Funding Council for England (HEFCE) policy on OA came into effect in April 2016 and placed the emphasis back on ‘green’ OA by mandating that authors’ outputs must have been deposited in a subject or institutional repository to be eligible for submission to the post-2014 REF (HEFCE 2014).

Although the HEFCE requirement has increased deposits across the sector, typically rates of deposit are still well below 100% and the present study presents results from a project that aimed

to encourage participation with an OA IR and increase dissemination of research outputs. It was conducted at Leeds Beckett University, a large post-1992 university comprising 26,000 students and 2,900 staff and with a growing research profile across academic areas including health and wellbeing, sustainability and retail as well as established excellence in sport, physical activity and leisure. In common with many other universities, Leeds Beckett established a repository in 2007-2009 under the JISC Repositories Start-up and Enhancement tranche of funding. The purpose can be defined as

“.....a set of systems and services that facilitates the ingest, storage, management, retrieval, display, and reuse of digital objects. Repositories may be set up by institutions, subject communities, research funders, or other groups. They may provide access to a variety of digital objects, including peer-reviewed journal articles, book chapters, theses, datasets, learning objects, or rich media files.” (Pinfield, 2009, p. 165).

Since its inception the Leeds Beckett Repository¹ aims to capture and ensure ease of accessibility to the research outputs of its academic staff, primarily under the ‘green’ route to open access, encouraging authors to ‘self-archive’ their accepted manuscript as permitted by the majority of academic publishers. This role has become increasingly important due to seismic changes across the HE sector as a whole, with the Government’s endorsement of the key findings of the Finch Report (2012) which advocated wider dissemination and the removal of cost barriers for the

¹ Originally the repository was developed using the intraLibrary platform from Intrallect but was migrated to the popular open source repository software EPrints in January 2015

population as a whole to publicly funded research. Thus repositories were seen as an aggregator and distributor of all institutional research outputs.

In 2012 the University introduced the Symplectic Elements publication management system which helps to automate the aggregation of the institutional research corpus and integrates with the repository to make it easier for authors to deposit their manuscripts. In addition to transferring metadata and files to a repository, the Elements API enables bibliographic records to be exposed by author, school or keyword and displayed via a content management system (CMS). Authors can manage lists of selected publications on their web profile, including links to files archived in the Institutional Repository (IR).

The recommendations of Finch were criticised due to the potential cost of a fully ‘gold’ OA ecosystem and HEFCE placed the emphasis back on green, and on repositories, by outlining that in order for research to be considered for the Research Excellence Framework (REF), research outputs must be deposited in an institutional or subject repository at the point of acceptance for publication. Coupled with the “serials pricing crisis” (Guedon, 2001) and unsustainable price rises for the majority of academic journal titles, both Finch and HEFCE have served to increase the advocacy role of both the Academic Librarian and Repository teams surrounding OA, benefitting the wider community as well as raising the profile of individual academic staff and the University as a whole. As a consequence of Finch and HEFCE, Academic staff are mandated to deposit any research outputs within the institutional repository and Symplectic Elements and the repository are increasingly used as an administrative tool for the Research Excellence

Framework (REF). The need to increase participation with institutional repositories and open access publishing mechanisms is therefore crucial.

However, the situation is often compounded by a lack of awareness around the depositing or self-archiving processes and open access requirements amongst academic staff, who may lack either the awareness or time to engage with OA and repository systems. In addition, repositories face competition from commercial services such as Researchgate and Academic.edu, and there is often a misapprehension that papers deposited with these services meet HEFCE requirements for submission to REF.

In order to encourage engagement and publicise research at the University, a series of themed webpages, 'Focus on', have been created using the Spingshare Libguides platform to aggregate OA research outputs from the IR into the 'Focus on' webpage. Pages are themed around days of disciplinary or national significance; celebrations, commemorative days and research events or festivals. The webpages are promoted using a variety of social media.

This paper will outline how the creation of themed 'Focus on' pages has increased self-archiving and engagement with the IR and how this has contributed to dissemination of research outputs. Given the current HE climate surrounding sector wide REF requirements, it is anticipated that the findings from this paper will be of value to the wider academic and information professional community.

Literature Review

A brief literature review was conducted to inform the development of the initiative. Shreeves in Cope and Phillips (2014) explores the changing role of an IR in terms of its potential publishing function and charts the development of IRs with the advent of OA. Shreeves outlines the complexities and motivations for authors depositing in an IR, particularly in relation to understanding complex publisher embargo limitations and the lack of incentives for academics to make their work available through such means. The work of Shreeves is also supported by other researchers which also highlight a reluctance to deposit in an IR, with the main barriers being a lack of awareness around the depositing process, concerns over copyright and intellectual property, and the perception of work deposited in the IR being of low quality (Yang and Li, 2015; Davis and Connelly, 2007 in Dubinsky, 2014; Creaser et al., 2014).

Shreeves also highlights a changing role for subject or liaison Librarians, as the new information environment requires Librarians to be knowledgeable around subjects such as copyright and the publishing process. This view was also supported by Emery and Stone (2014) and Richard, Koufogiannakis and Ryan (2009) outlining the need for Librarians to have a more proactive role in repositories and OA advocacy as mandates alone may not be enough to ensure buy in. A key role for the liaison Librarian is therefore not only in the promotion of the IR, but also producing metadata to ensure discoverability of research outputs. Richard, Koufogiannakis and Ryan (2009) support the necessity based upon increasing journal subscription costs.

The benefits of interacting with an IR are highlighted by Konkiel and Scherer (2013) through increased dissemination of research as seen through the measurement tool of journal article

metrics. Yang and Li (2015) advocate encouraging participation through highlighting the citation advantage as a way to encourage engagement. This view is supported by the work of Robinson (2009) which outlines how an IR can be used to increase the visibility of institutional research outputs. Whilst this is a moot point recently disputed by Wray (2016) and Ottaviani (2016), the majority of research supports the view that OA does increase citation advantage (Niyazov, 2016; McCabe, 2014; Sullo, 2016; Wang et al., 2015). Similarly Creaser et al., (2010), also examine the motivation of increased dissemination of research as the key driver for staff depositing in an IR.

The suitability of social media in encouraging engagement with university Library activities has been well documented. Chatten (2016) outlines how social media has been used at the University of Liverpool to connect with users in an environment with which they are already familiar and as a tool for establishing positive relationships. Similarly Young and Rossmann (2015) outline how social media can be used to build a Library community. This paper will build upon the research findings here and apply them with specific reference to engagement with the IR and the dissemination of research outputs.

Methods

Libguides from Springshare is a flexible CMS that facilitates the development of bespoke informational resources. Academic Librarians have liaised with their academic communities and with the Research Services team to implement a dedicated series of web pages around selected themes, branded as 'Focus on...' and disseminated on Twitter using the hashtag #focuson. These comprise a range of relevant information and institutional research outputs surfaced from

Symplectic Elements alongside relevant content from Twitter and YouTube, which can also be easily displayed in Libguides using embed code provided by these services. For World Diabetes Day in 2014, for example, a collection of research outputs was curated in Symplectic Elements and displayed as a date ordered list of citations including links to author manuscripts, self-archived and openly accessible in the IR alongside an embedded Twitter feed from @WDD, the Official Twitter account of the campaign from the International Diabetes Federation.

The process that ultimately led to the dedicated ‘Focus on...’ tab developed iteratively over time with early guides being stand alone. This meant they were not linked from within the Library website and were therefore disseminated only via direct link, primarily via Twitter from both the Library and Research Twitter accounts (fig 1), including ‘at’ mentions to specific academic staff (fig 2).

Suitable national events were identified on an ad hoc basis with the main criterion being whether there was a corpus of related institutional research with early examples including the ‘General Election 2015’² comprising politics research and resources, and ‘Men’s Health Week 2015’³ featuring research from the Centre for Men’s Health. Requests were also received directly from faculty and research groups for bespoke resources associated with their work resulting in collections for the Festival of Politics & Global Ethics’⁴ and the ‘Prison Research Network’⁵.

It soon became clear that there was a demand for this type of informational resource and dissemination so the decision was made to collect them on the research support website to

² http://libguides.leedsbeckett.ac.uk/research/focus_on/generalelection2015

³ http://libguides.leedsbeckett.ac.uk/research/focus_on/menshealthweek2015

⁴ http://libguides.leedsbeckett.ac.uk/research/focus_on/PAGE2015

⁵ http://libguides.leedsbeckett.ac.uk/research/focus_on/prisonresearchnetwork

provide both an archive of previous guides that would be more easily discoverable, and a dynamic home to promote new guides as they were implemented, with the current topic highlighted on the page with suitable text and images. This approach also enabled the Library to more effectively promote the availability of the service to academic stakeholders and use it as an advocacy tool for the Leeds Beckett Repository and OA generally, both via social media and when delivering training sessions. At the same time the practical approach was shared with the wider community and was presented at several high profile conferences including Internet Librarian International (London, 2015)⁶ and Open Repositories (Dublin, 2016)⁷.

In terms of engagement with the ‘Focus on’ resources and with the associated repository content, quality controlled usage data is collected from several complementary sources, specifically Google Analytics, IRUS-UK and altmetric.com.

Springshare provide their own analytics tools for Libguides, however Google Analytics is used across all Library services to ensure consistency and is used to report numbers of unique visitors and individual page views for both the ‘Focus on’ pages and for the Leeds Beckett Repository. For technical reasons Google Analytics is not necessarily suitable for reporting on individual file downloads (i.e. access to full-text from the repository via green OA) and for this usage data the Jisc supported IRUS-UK service⁸ has been implemented. IRUS-UK follows the COUNTER Code of practice to “facilitate the recording, exchange and interpretation of online usage data [...] that are consistent, credible and compatible.” (COUNTER, n.d.). Data including total

⁶ <http://eprints.leedsbeckett.ac.uk/1812/>

⁷ <http://eprints.leedsbeckett.ac.uk/2764/>

⁸ <http://irus.mimas.ac.uk/>

downloads each month and the top ten articles by month is collated from IRUS-UK and made publicly available, also via Libguides⁹, updated manually at the beginning of each month.

Another increasingly important data source is ‘alternative metrics’ or ‘altmetrics’. Historically the reach and impact of research has been measured through traditional citation metrics but as scholarly communication moves increasingly online, more indicators have become available: how many times an article has been bookmarked, blogged about, cited in Wikipedia and so on. These metrics can be considered altmetrics -- alternative metrics of impact. (Piwowar 2013).

Altmetrics come in several variations, for example Plum analytics, previously owned by EBSCO Information Services but recently acquired by Elsevier, and altmetric.com which is part of the Digital Science portfolio and Kudos. Altmetric.com is probably the most popular ‘altmetric’ platform and is incorporated in Symplectic Elements (which is also a Digital Science portfolio company) and also offer a number of free tools. There is a free plugin for the EPrints IR platform for example which displays article level altmetrics and code readily available to embed data into a webpage. Altmetric.com offer a paid service, ‘Altmetric for Institutions’ to enable greater insight into altmetric data across an institution but it is also possible to interrogate the API with free tools¹⁰ to establish the top 10 altmetric scores by faculty.

Findings and Results

The Leeds Beckett Repository includes full text versions of research outputs by members of staff and research students at the University. The aim of the Repository is to provide access to

⁹ <http://libguides.leedsbeckett.ac.uk/research/statistics>

¹⁰ <http://ukcorr.org/2015/06/12/ranking-altmetrics-diy/>

research, as required by funder policies and permitted by publishers and copyright law. When a researcher's work is available to download from the Repository, it can be found through search engines and accessed by anyone, increasing the views and possibly the impact of their research.

The 'Request a Copy' feature in the Repository is extremely valuable as it provides a way for researchers to disseminate their work even when it is under embargo. A copy of any publication can be requested through this feature, and the author is legally able to provide the copy directly to the person requesting access on a one-to-one basis.

The number of downloads has generally increased monthly (allowing for a slight drop during the summer) and the most recent numbers show that in November 2015 there were 5,896 unique downloads whilst in November 2016 there were 18,336, a 311% increase within twelve months.

The increase in downloads cannot be attributed solely to the creation of the 'Focus on' pages, and is more likely to be attributable to the University wide mandate on OA publishing.

The top level research guide currently comprises a total of 16 sub-pages which have been iterated over the past 3 years and made live at different times during that period. The branded 'Focus on' tab was made live on 10th December 2015, though several of the individual guides existed before that date.

By using Google Analytics to filter page-views for the entire library website from 10th December 2015 we can establish that the /research/focus_on guide has been the fourth most viewed page since that date with 720 unique views behind /research/next_ref (879 unique views), /research/staff_profile (1003 unique views) and the top level /research guide with 3957 unique views. As this is the 'Welcome' landing tab for the guide as a whole this is to be expected.

Further examination of individual ‘Focus on’ pages (Figure 2) illustrates the Prison Research Network, a University wide research collaboration, received the most views (546), followed by LGBT History (250) and the Rio Olympics (208). In total, the ‘Focus on’ webpages received 2,383 views.

Discussion & Implications

As illustrated through the analysis of usage statistics, the creation of ‘Focus on’ webpages have led to an increase in dissemination and awareness of research outputs for the University. It could be argued this has also led to an increase in both the number of deposits and the breadth of content in the repository from across the University. However, it must be noted that it is impossible to isolate the ‘Focus on’ webpages as a sole causal factor for increased engagement, given the University mandate on REF submission came into effect in April 1st 2015.

Nevertheless, the initiative has facilitated discussions with academic staff and researchers around open access and the broader scholarly communication environment as well as the putative benefits associated with self-archiving and social media such as increased citation, public impact and collaboration opportunities. As well as increased engagement with the repository and dissemination of research, academic staff are now actively suggesting potential themes, such as Body Image and Eating Disorders Awareness. ‘Focus on’ webpages have proven particularly successful when allied to a specific research group such as the University’s Prison Research Network.

Moving forward, findings from the statistical analysis could further be verified through gathering qualitative information from staff around the perceived benefits of engagement with the

repository and with the open access agenda. In terms of verifying the link between ‘Focus on’ pages and research visibility, a closer investigation of the connection between ‘Focus on’ article downloads and altmetrics may also be useful. However, a preliminary investigation from the UK Council of Research Repositories (UKCoRR) suggests there is no clear correlation between OA and altmetric scores (2015). Nevertheless, the ‘Focus on’ webpages provide both the Repository and Library teams with evidence of the benefits of engagement with the repository, social media, OA awareness and associated technologies including article level metrics.

Conclusion

In recent years, open access has contributed to the erosion of the ivory tower through a greater transparency of the research process and also empowers universities and their libraries, as well as academics themselves, to disseminate their own research outputs. This initiative has demonstrated one method of promoting engagement amongst academics while disseminating open research to a wide range of stakeholders through social media.

Such open dissemination strategies might even help the sector to kick its addiction to the impact factor (Tennant 2016) and contribute to robust article level metrics and to the broader research environment as discussed in Wilsdon et.al. (2015), which found that while it is not currently feasible to assess research outputs or impacts using quantitative indicators alone there is nevertheless scope to enhance the use of data. Wilsdon was specifically interested in the use of metrics for assessment in the context of the REF but is more broadly relevant to the development of responsible metrics across the sector.

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Table 1 illustrates views per individual page as a percentage of the total views received.

Focus On Page	Page Views (Since 01/01/2016)
Prison Research Network	546
LGBT History	250
Rio Olympics	208
Men's Health Week 2016	167
Body Image and Eating Disorder Awareness	127
Dementia Awareness Week	122
Black History Month	108
International Women's Day 2016	101
Childhood Obesity	85
UMHAD	82
Total	2,383

Table 2 indicates high levels of downloads of individual journal articles featured in Focuson libguides.

Rank	Article	Downloads
1	Casey, DC and Clark, L (2011) Roles and responsibilities of the student nurse mentor: an update. <i>British journal of nursing</i> (Mark Allen Publishing), 20 (15). 933 - 937. ISSN 0966-0461	8,705
2	Spracklen, K (2015) "To Holmgard... and Beyond": Folk Metal Fantasies and Hegemonic White Masculinities. <i>Metal Music Studies</i> , 1 (3). 354 - 377. ISSN 2052-3998	2,042
3	Smith, N and Nguyen, MH and Hoang, D and Nguyen, TS and Baulch, B and Nguyen, TLT (2009) Coconut in the Mekong Delta: An Assessment of Competitiveness and Industry Potential. Other. Prosperity Initiative.	1,466
4	WOODALL, J and RAINE, G and SOUTH, J and WARWICK-BOOTH, L (2010) Empowerment & health and well-being: evidence review. Project Report. Centre for Health Promotion Research, Leeds Metropolitan University.	1,302
5	Sagar, SS and Stoeber, J (2009) Perfectionism, fear of failure, and affective responses to success and failure: the central role of fear of experiencing shame and embarrassment. <i>Journal of sport & exercise psychology</i> , 31 (5). 602 - 627. ISSN 0895-2779	1,182
6	Font, X and Walmsley, A and Cogotti, S and McCombes, L and Häusler, N (2012) Corporate social responsibility: The disclosure-performance gap. <i>Tourism Management</i> , 33 (6). 1544 - 1553. ISSN 0261-5177	1,008
7	Flintoff, A (2003) The School Sport Co-ordinator Programme: Changing the Role of the Physical Education Teacher? <i>Sport, Education and Society</i> , 8 (2). 231 - 250. ISSN 1357-3322	1,005
8	Robertson, S and White, A and Gough, B and Robinson, R and Seims, A and Raine, G and Hanna, E (2015) Promoting Mental Health and Wellbeing with Men and Boys: What Works? Project Report. Centre for Men's Health, Leeds Beckett University, Leeds.	982
9	Samy, M and Odemilin, G and Bampton, R (2010) Corporate social responsibility: A strategy for sustainable business success. An analysis of 20 selected British companies. <i>Corporate Governance</i> , 10 (2). 203 - 217. ISSN 1472-0701	948

10	Martindale, RJJ and Collins, D and Abraham, A (2007) Effective talent development: The elite coach perspective in UK sport. JOURNAL OF APPLIED SPORT PSYCHOLOGY, 19 (2). 187 - 206. ISSN 1041-3200	853
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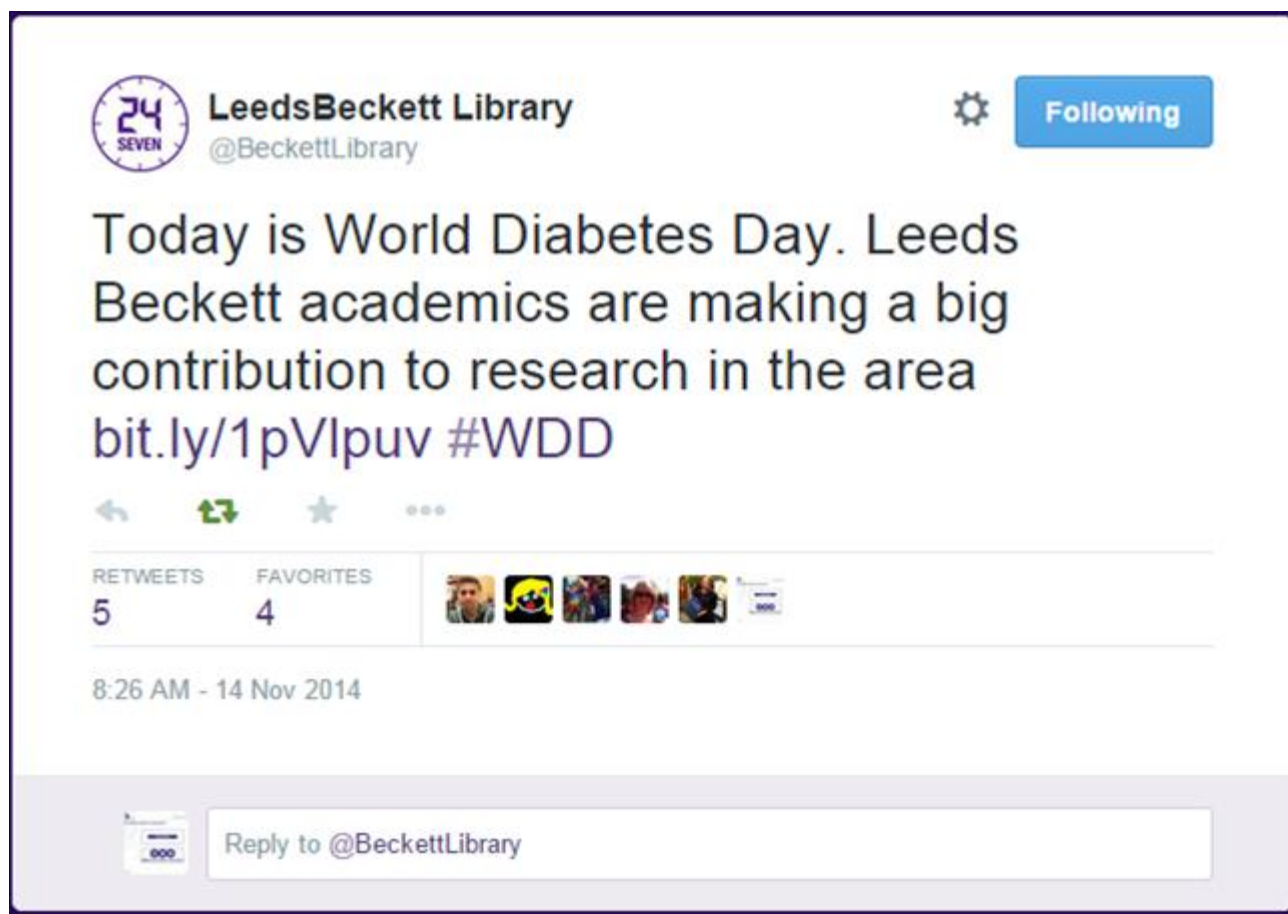
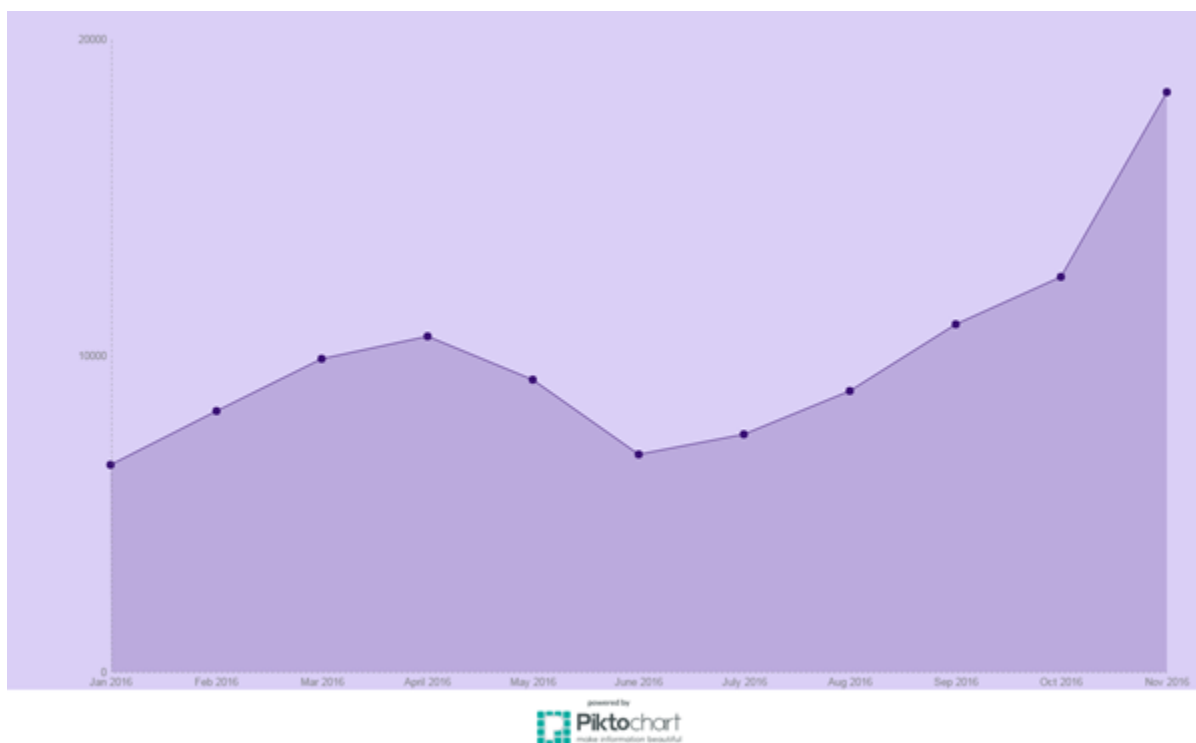


Figure 1: Direct link ‘tweeted’ to an early iteration of a themed information page.



Figure 2: Direct link 'tweeted' 'at' an academic



Month	Downloads
Jan-16	6,545
Feb-16	8,252
Mar-16	9,892
Apr-16	10,613
May-16	9,249
Jun-16	6,883
Jul-16	7,520
Aug-16	8,872
Sep-16	10,986
Oct-16	12,481
Nov-16	18,336
Dec-16	11,536

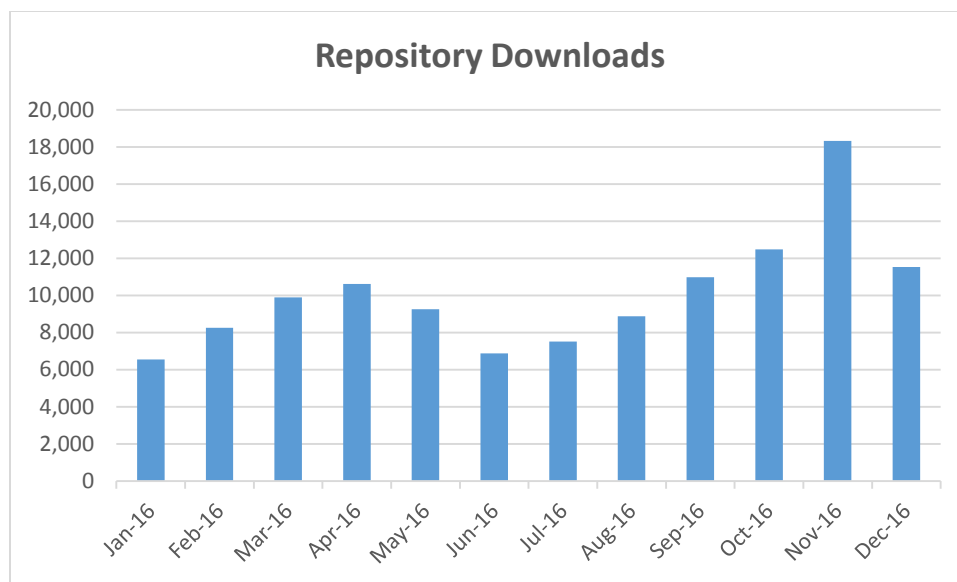


Figure 3. Increasing repository usage.

Page	Page Views	Unique Page Views	Avg. Time on Page	Entrances	Bounce Rate	% Exit	Page Value
	19,628 % of Total: 1.59% (1,233,837)	15,614 % of Total: 1.58% (989,993)	00:02:15 Avg for View: 00:01:43 (31.04%)	5,815 % of Total: 1.18% (494,743)	62.29% Avg for View: 49.97% (24.65%)	36.32% Avg for View: 40.10% (-9.42%)	US\$0.00 % of Total: 0.00% (US\$0.00)
1. /research	5,037 (25.66%)	3,957 (25.34%)	00:01:12	1,402 (24.11%)	41.01%	21.20%	US\$0.00 (0.00%)
2. /research/staff_profile	1,255 (6.39%)	1,003 (6.42%)	00:03:42	372 (6.40%)	65.32%	46.06%	US\$0.00 (0.00%)
3. /research/next_ref	1,083 (5.52%)	879 (5.63%)	00:03:29	428 (7.36%)	71.73%	52.08%	US\$0.00 (0.00%)
4. /research/focus_on	1,003 (5.11%)	720 (4.61%)	00:02:11	156 (2.68%)	46.79%	24.23%	US\$0.00 (0.00%)
5. /research/research_management	987 (5.03%)	810 (5.19%)	00:03:10	183 (3.15%)	63.39%	37.28%	US\$0.00 (0.00%)
6. /subject_support/law/referencing_and_legal_research_skills	956 (4.87%)	792 (5.07%)	00:03:49	244 (4.20%)	69.26%	55.23%	US\$0.00 (0.00%)
7. /research/managing_information	841 (4.28%)	693 (4.44%)	00:02:43	175 (3.01%)	64.00%	32.34%	US\$0.00 (0.00%)
8. /research/open_access	800 (4.08%)	651 (4.17%)	00:01:55	179 (3.08%)	65.36%	34.88%	US\$0.00 (0.00%)
9. /research/statistics	748 (3.81%)	543 (3.48%)	00:03:09	212 (3.65%)	66.04%	43.45%	US\$0.00 (0.00%)
10. /research/focus_on/prisonresearchnetwork	536 (2.73%)	464 (2.97%)	00:05:51	449 (7.72%)	84.63%	83.02%	US\$0.00 (0.00%)

Figure 4. Overall library webpage views.

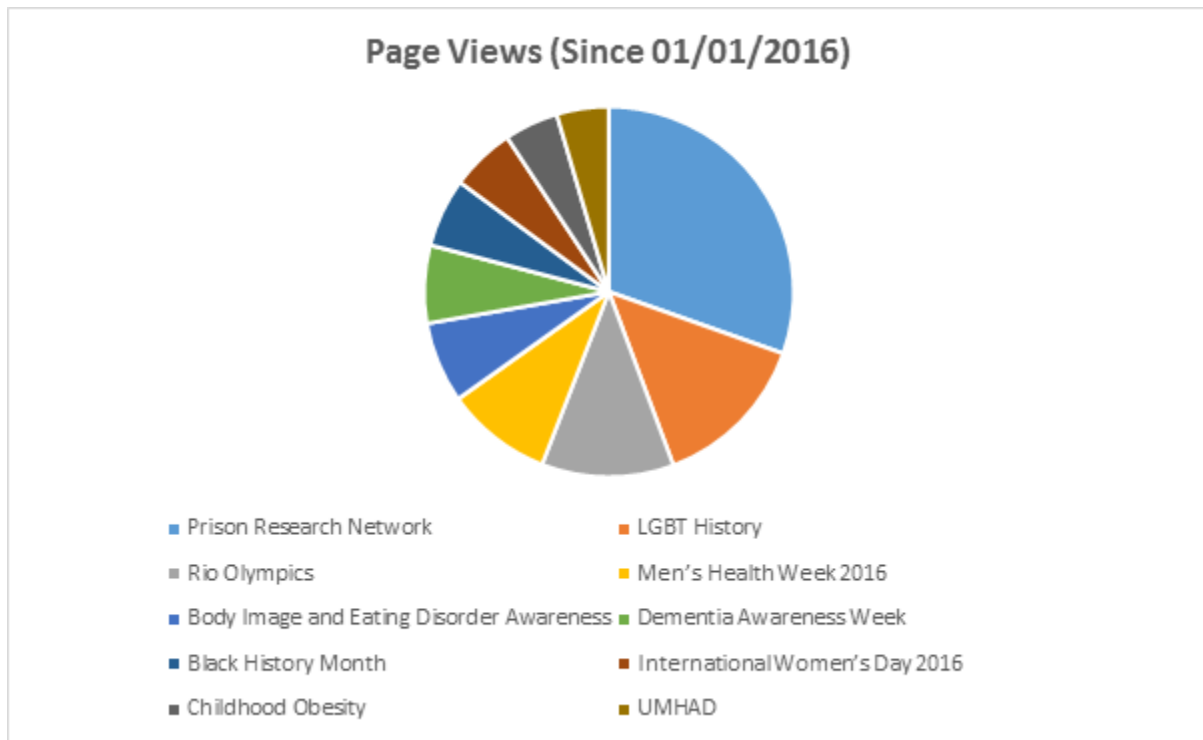


Figure 5. Views per individual page as a percentage of total views.