UKSG

Social engagement and institutional repositories: a case study

This article explores the community reach and societal impact of institutional repositories, in particular Griffith Research Online (GRO), Griffith University's institutional repository. To promote research on GRO, and to encourage people to click through to the repository content, a pilot social media campaign and some subsequent smaller social media activities were undertaken in 2018. After briefly touching on these campaigns, this article provides some reflections from these activities and proposes options for the future direction of social engagement and GRO in particular, and for institutional repositories in general. This undertaking necessitates a shift in focus from repositories as a resource for the scholarly community to a resource for the community at large. The campaign also highlighted the need to look beyond performance metrics to social media metrics as a measure of the social and community impact of a repository.

Whilst the article is written from one Australian university's perspective, the drivers and challenges behind researchers and universities translating their research into economic, social, environmental and cultural impacts are national and international. The primary takeaway message is for libraries to take more of a proactive stance and to kick-start conversations within their institutions and with their clients to actively partner in creating opportunities to share research.

Keywords

Research impact; institutional repositories; social media; academic libraries; research measurement; engagement

SUSAN BOULTON

Senior Librarian
Research Content
and Repositories
Griffith University

Literature review

The primary impetus behind exploring the community reach and societal impact of Griffith Research Online (GRO),[1] and by extension institutional repositories, was the emerging trend across governments, nationally and internationally, to demonstrate the economic and social returns from their investments in research. On 7 December 2015 the Australian Government launched its *National Innovation and Science Agenda Report*.[2] One of the measures under the Agenda was for Australia to introduce a national assessment of the engagement and impact of university research. In 2018 the Australian Research Council published the *Engagement and Impact Assessment 2018–19 National Report*,[3] the results of the inaugural pilot to assess how well researchers were engaging with end-users of research and how universities were translating research into economic, social, environmental, cultural and other impacts. Around the same time similar agendas were being explored internationally: in New Zealand in 2015,[4] the UK in 2015[5] and the USA in 2015.[6]

Results from a literature search around institutional repositories and engagement demonstrated a focus on improving metadata, searchability and discoverability rather than social engagement; a focus confirmed through the guiding principles for repositories published by the Confederation of Open Access Repositories (COAR).[7] Changing direction, the social media practices of other institutional repositories were then examined. Engagement through social media channels such as Facebook and Twitter appears common across institutional repositories, exemplars being *Your Story Matters* at Harvard University[8] and the twitter account @UON_NOVA for The University of Newcastle Research Repository Online.[9]

Griffith University's overarching social media activity aims to support the University's broader marketing and communications goals to build reputation, drive student recruitment and foster community. The Griffith Library[10] independently runs its own accounts on Facebook, Twitter (#GriffithLibrary), Instagram (@griffithlibrary) and YouTube and its own monthly newsletter, *Insight,* circulated via e-mail to all Griffith higher degree by research (HDR) candidates plus over 1,500 subscribers. Given that our objective was to encourage people to engage with our repository and its content, this case study is about our first foray into moving beyond individual social media channels to creating a campaign or event, to trying to understand how best to present information to our social media users and to embedding the institutional repository into the culture of the Library.

Background

Traditionally, institutional repositories in higher education have largely been driven by funding requirements and by conversations focused on metadata and discoverability. National and international trends around research excellence are now challenging this view. The primary driver is how investments in university research translate into tangible benefits beyond academia assessment, into economic, social, environmental and cultural impacts.

'embedding the institutional repository into the culture of the Library'

Griffith University,[11] located in the rapidly growing corridor between Brisbane and the Gold Coast in South East Queensland, Australia, has six physical libraries across five campuses. Within the Library the institutional repository, GRO,[12] contributes to the University's open access compliance, supporting community engagement and collaboration, open scholarship and the FAIR principles (findable, accessible, interoperable and reusable).[13] In 2016–2017 the University invested in a major redevelopment of GRO and, as a result, we have a large, comprehensive and well-used repository supporting over 2.7 million downloads of Griffith research outputs (including 200,000+ thesis downloads) per year. In 2019 two-way integration between GRO and the publications management solution Symplectic Elements[14] was deployed. Our current technical infrastructure provides Griffith with a strong base from which to evolve repository services into the future.

'how investments in university research translate … into economic, social, environmental and cultural impacts'

Research impact: the campaigns and GRO

Sharing the stories or narratives behind research, as well as the research outputs themselves, was the inspiration behind our initial social media campaign to promote Griffith's malaria researchers and research for World Malaria Day.[15] This internationally recognized day, 25 April, provided an opportunity to promote the work being done by Griffith researchers in combatting this worldwide disease and to highlight the role our institutional repository plays in increasing the discoverability and accessibility of Griffith research.

It is the first time the Griffith University Library deliberately utilized open access (OA) content in GRO to support a small social media campaign. Two blog posts were written; one highlighting 15 recent and influential articles in GRO[16] and one profiling two of our malaria researchers and their most cited articles.[17] The Library Twitter account (@GriffithLibrary) linked to these blog posts. To collate content and allow users to join in on a global debate, prominent hashtags for Malaria Day (#ReadytoBeatMalaria, #WorldMalariaDay, #EndMalaria) were included, as well as the Twitter handles for the Griffith Institute for Drug Discovery (GRIDD) and the Institute of Glycomics (see Figure 1).[18]

Figure 1. Griffith University Library tweet promoting Griffith research for World Malaria Day 2018

As a result of this pilot campaign, during March and April 2018:

- the 15 featured articles were accessed close to 500 times, this being approximately 60% of their combined total for the previous six months (see Figure 2)

- the most popular article *Drug repurposing and human parasitic protozoan diseases* co-authored by Dr Gillian Fisher, one of the profiled malaria researchers, was accessed 112 times, this being approximately 45% of its total for the year prior to the campaign (see Figure 3)

- the most popular tweet from @GriffithLibrary account posted on 24 April 2018 received 16.8k 'impressions'.
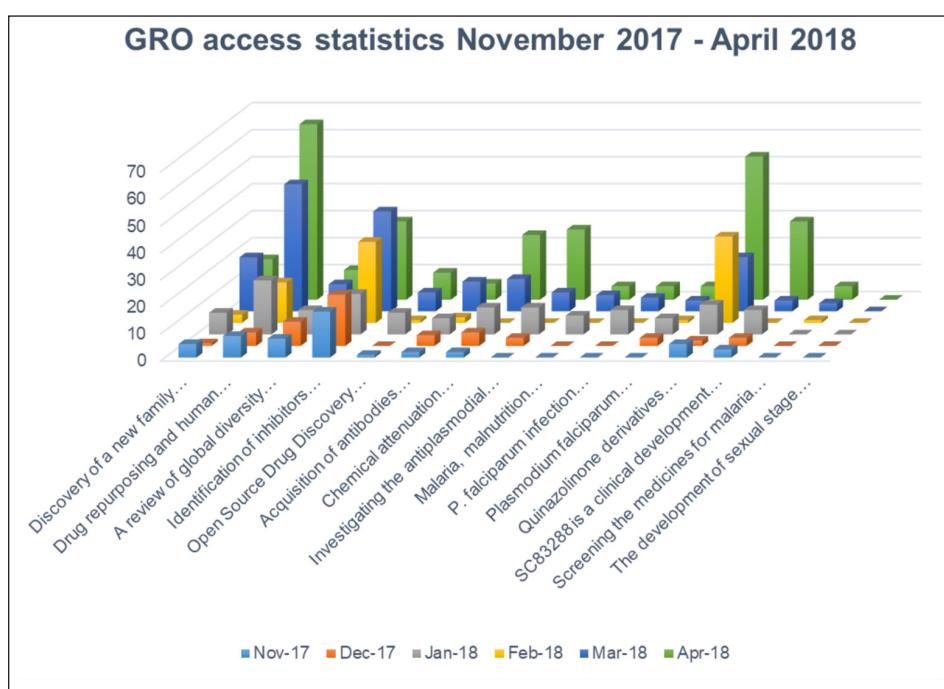

Figure 2. GRO access statistics for 15 featured articles during campaign for World Malaria Day 2018
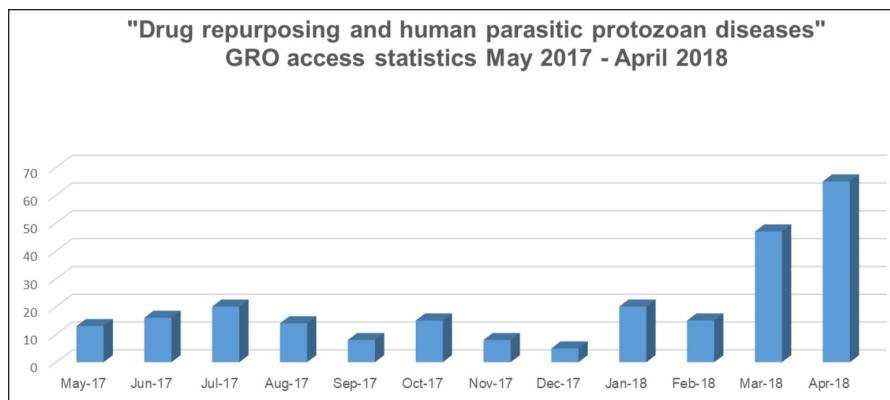
Figure 3. GRO access statistics for most popular article during campaign for World Malaria Day 2018

The success of this pilot campaign highlighted that social media and blog posts could be used by the Library to increase engagement with an external audience and to drive traffic to the repository.

In August 2018, the Griffith Library entered into partnership with *Griffith Review*,[19] a leading literary magazine produced by Griffith University to foster and inform public debate around current issues. Primarily, this partnership involves the hosting of lightning talks to complement the themes and release dates for each quarterly issue. In September the Library hosted a lightning talk for public and staff themed around sustainability, complementing *Griffith Review*'s issue on climate change.[20] Following on from the success of our initial campaign, the Library Twitter account profiled each of the Griffith academic presenters with links to their research in GRO[21] and, for the first time, the talks were livestreamed via Facebook.[22] The Library blog profiled highly influential Griffith research and Higher Degree by Research (PhD, Masters by Research) theses in the area of sustainability.[23]

September also was Dementia Awareness Month. To support dementia initiatives of the Menzies Health Institute Queensland,[24] the Library blog featured OA research into dementia and dementia care and research around the month's theme of families and carers.[25]

'blogs that were connected to, and cross-promoted through other activities … had a much higher audience reach and impact'

The three campaigns reflected different approaches to social engagement and the repository's role: the malaria campaign was a joint initiative based purely around an online social presence; the sustainability campaign was a joint initiative based around physical lightning talks, supported by an online social presence; and the dementia campaign was a proactive GRO initiative based solely around a blog. Anecdotally, it was felt that the blogs that were connected to, and cross-promoted through other activities, such as talks and interviews, had a much higher audience reach and impact than the singular promotion of the OA dementia research in GRO. As we improve our understanding of measuring benefits this is something to evaluate further in future campaigns.

Reflections
Resourcing
One of the most important reflections from these activities is around the resourcing requirements to create such campaigns, especially around time. Defining the campaign was the simple part of the process; surprisingly time consuming were the conversations around identifying the research and the researchers to be highlighted through the campaigns. Not being subject experts, we needed to determine how to identify and compare research so as to determine its value within its field and to the campaign.

We initially decided that if the research was of value, it would have 'malaria' in the title (noting that GRO does not have a populated keyword metadata field) and as the aim was not only to promote but to provide access, that the results would be limited to GRO records with OA files. It soon became apparent that a more sophisticated search was needed to

capture important research and significant authors so we approached researchers from GRIDD for expert advice on terminology. We then expanded the search terms to include 'antimalaria', 'malarial', 'Plasmodium falciparum', etc., which resulted in a much richer pool of research outputs.

As this broader pool of research could not be narrowed down using GRO (due to limitations in the statistical reporting functionality of the DSpace platform behind GRO), we altered our approach to selection. We narrowed this latest pool of research outputs by using citation data extracted from Clarivate's *Web of Science* and *Essential Science Indicators* and key authors as identified by GRIDD staff. With this selection process, targeted e-mails requesting OA access files needed to be sent to 22 key authors with corresponding articles in the top 50 most cited malaria-related articles (2003–2018).

All of this resulted in a marked increase in workload for Library staff. With subsequent campaigns, we therefore streamlined the research identification stages, but the impact on workload still is significant as it includes:

- identifying search terms, conducting searches and formatting results

- sourcing and uploading OA files obtained either online or by sending targeted e-mails to obtain accepted author manuscripts

- writing articles and having those articles reviewed, edited and approved by the GRIDD and social media teams

- preparing post-campaign statistical reports.

A comparison of staff time against the value of obtaining OA files through targeted e-mails needs to be evaluated further.

Purpose

Coinciding with our first campaign for World Malaria Day, the Library introduced an event proposal form as a way of managing events (and resources) across the Library and determining the feasibility and value of events to the Library. The form is most useful in ensuring that the purpose, target audiences and rationale for the event are defined and that the risks and commitment are articulated, be they financial, staff time, channels or technology. Afterwards this information provides the basis for the evaluation of events.

The value of having created a formal event proposal became evident as we progressed, particularly in managing the size of the event and revisiting the purpose during planning. Having a clear purpose meant we could build collaborations and common understanding around the outcomes of the event, mitigating the risk of it becoming unwieldly, missing the mark or having a diluted message; especially important for our pilot campaign.

'the Library introduced an event proposal form as a way of managing events (and resources) …and determining the feasibility and value of events to the Library'

Research presentation

Given that our objective was to encourage people to click through to the repository content, we needed to consider how best to present this information to social media users. Some points of consideration:

- our repository is not set up to display feature articles or research

- our statistics indicate most users access GRO through Google Scholar and not the repository homepage

- sharing a list of PDFs or a link to a document on Google drive with the wider community is unengaging and involves issues with discoverability and long-term maintenance

- creating a dedicated web page would result in ongoing maintenance

- providing a fixed search URL to GRO for 'malaria' meant the results could not be sorted and ranked; certainly not engaging.

Considering the options, we felt that a listing of linked titles in a blog page would increase discoverability and provide ease of access. The blog would then be supported by directional tweets and posts. Useful hashtags would be sourced to increase reach and create community and some call to action could be included. Unlike malaria and dementia, where clearly recognizable hashtags were identifiable and used, a lesson learnt from the sustainability Twitter campaign was that the hashtags used were too narrow, resulting in limited reach.

Researcher profiles proved very popular with both the participants and our social media audience. Whilst helping to identify key malaria research and researchers, GRIDD also nominated two researchers to be featured in a 'Q&A' piece.[26] These researchers were provided with a selection of questions, ranging from 'What did you want to be when you were growing up?' to 'Best resources and research tips for researchers?'. The answers then provided the 'story' behind the research and the researchers.

'a listing of linked titles in a blog page would increase discoverability and provide ease of access'

Measuring benefits

Whilst access statistics (page views and download metrics) for featured research and tweet impressions have been mentioned, it is important to realize that success can be measured not only through statistics but through the development of relationships. One of the greatest outcomes was our ability to establish or deepen relationships with the discipline librarians, the communications team, the centres, schools and research institutes and with the academics and researchers.

Rather than trying to establish new relationships from the ground up, the discipline librarian for science used her relationships with the GRIDD researchers to brainstorm research around malaria; to identify articles which were particularly important/highly cited, etc.

'Researcher profiles proved very popular'

The lightning talks need close co-ordination across the Library: discipline librarians to contact and organize the speakers; librarians and campus co-ordinators to manage the event; repository staff to identify and disseminate research. It provides an opportunity for repository staff and discipline librarians to work together as 'one Library' and an opportunity to highlight the role the Library plays in connecting researchers to the broader community.

The academics and researchers in the schools saw that we were actively partnering with them to create opportunities to share their research, to increase their reach beyond the classroom and academia and to increase their engagement and impact. This helps to build stronger connections between the Library, its clients and the issues that matter to them.

'an opportunity to highlight the role the Library plays in connecting researchers to the broader community'

Making these connections and starting conversations has set us on the path of embedding the repository into the Library culture. Research outputs in GRO are now routinely integrated into Library conversations around social events, be they physical or online, large or small. With each issue of *Griffith Review*, we promote research in GRO that complements the published essays and stories. Themes have included Crimes and Punishments[27] and All Being Equal.[28]

The other way to measure the success of such programmes is through statistical evaluation and our efforts to collect data around our campaigns highlighted the need to understand the reporting capability of Dspace and Google. We quickly discovered that DSpace's existing statistical reporting interfaces are rudimentary and do not provide targeted reports around the underlying captured data. We embedded Google Analytics into the repository site so the correct tracking code and domain were being used. However, we could only obtain statistics for actions on our pages and for the referral sites/pages. As Google does not connect to WordPress, the tool used to create and manage our blogs, we could not tell from

Google Analytics how many people came through to GRO from the blogs; though WordPress does have its own tracking capability. We did not have a tool to easily aggregate results of individual tweets and posts. With this new understanding, our methodology around tracking and recording statistics will be examined further in future campaigns.

Future direction

Whilst engagement narratives and impact case studies for funding submissions are clearly understood, defining the future of social engagement and impact, what it looks like, how it is assessed, its effect on policies and new initiatives, is still in its infancy. The next step for the GRO team is to formalize and refine its approach; to obtain a balance between a reactive approach, where we respond to event requests, and a proactive approach, where we highlight research that aligns with the strategic directions of the University, current social conversations and national and international events/observations. Parallel to discussion around approach is the need to investigate channel options, including the value of GRO having its own and/or in using different channels (such as podcasts and YouTube).

Our future direction within the Library is two-pronged as we collaborate with staff to actively promote the repository through campaign events and to embed the repository into the services and training provided by the Library. We also want to reframe our thinking. For these campaigns, GRO and an event were at the centre of our approach. However, by establishing connections across the faculties, our future aim is to frame our engagement around what is valued in their research fields and in the community around their research. We also plan to expand our engagement beyond science and humanities to include non-traditional outputs such as creative works.

> 'by establishing connections across the faculties, our future aim is to frame our engagement around what is valued in their research fields'

Conclusion

Whilst this paper does not provide a definitive roadmap or template for repositories, it does highlight the need to divert from our traditional path, focused on metadata, discoverability and reporting, to proactively find opportunities to demonstrate the important role our repositories play in research dissemination and community reach. A change is necessary to not only assist researchers with broadening their definition of community and open access but to align institutional repositories with the national and international trend towards making research public and ensuring that publicly funded research benefits the community.

This case study focused on a pilot social media campaign held to promote malaria research discoverable on GRO. In this campaign OA content was promoted through two blogs and through featured articles on two of Griffith's malaria researchers. The positive results show that there is value for both researchers and the repository, and ultimately the University, in such engagement activities. However, repository teams will need to balance these benefits against the required investment of resources.

> 'the need to divert from our traditional path … to demonstrate the important role our repositories play in research dissemination and community reach'

The primary takeaway message from this case study for institutions and their repositories is to start conversations within the Library and with its clients to actively partner in creating opportunities to share research; to increase its reach beyond the university classroom and academia; to broaden its engagement and impact. Making these connections, beginning these conversations, has started us on the path of embedding the repository into the Library culture and of demonstrating the broader value of the repository within our institution.

References

1. "Griffith Research Online (GRO)," Griffith University,
    https://research-repository.griffith.edu.au/ (accessed 12 February 2020).

2. *National Innovation and Science Agenda Report*, Australian Government, Department of Industry, Science, Energy and Resources (November 2015),
    https://www.industry.gov.au/data-and-publications/national-innovation-and-science-agenda-report (accessed 10 February 2020).

3. *Engagement and Impact Assessment 2018 Outcomes, National Report,* Australian Government, Australian Research Council,
    https://www.arc.gov.au/engagement-and-impact-assessment/engagement-and-impact-assessment-2018-outcomes (accessed 13 February 2020).

4. "National Statement of Science Investment 2015–2025," *Ministry of Business, Innovation & Employment*, New Zealand,
    https://www.mbie.govt.nz/science-and-technology/science-and-innovation/funding-information-and-opportunities/national-statement-of-science-investment/ (accessed 10 February 2020).

5. "2010 to 2015 government policy: research and development," *Department for Business, Innovation & Skills*, UK,
    https://www.gov.uk/government/publications/2010-to-2015-government-policy-research-and-development/2010-to-2015-government-policy-research-and-development (accessed 12 February 2020).

6. "A Strategy for American Innovation," *National Economic Council and Office of Science and Technology Policy*, October 2015,
    The White House, Washington,
    https://obamawhitehouse.archives.gov/sites/default/files/strategy_for_american_innovation_october_2015.pdf (accessed 12 February 2020).

7. "Vision and Objectives," *Confederation of Open Access Repositories (COAR)*,
    http://ngr.coar-repositories.org/ (accessed 12 February 2020).

8. "Your Story Matters," *Digital Access to Scholarship at Harvard, Harvard Library*,
    https://dash.harvard.edu/stories (accessed 12 February 2020).

9. "NOVA: The University of Newcastle Research Repository Online," University of Newcastle, (@UON_NOVA).

10. "Library," Griffith University,
    https://www.griffith.edu.au/library (accessed 12 February 2020).

11. Griffith University,
    https://www.griffith.edu.au/ (accessed 12 February 2020).

12. "Griffith Research Online (GRO)," Griffith University.

13. "FAIR principles," *Australian Research Data Commons*,
    https://ardc.edu.au/collaborations/fair-principles/ (accessed 12 February 2020).

14. "Symplectic Elements Support," Griffith University,
    https://www.griffith.edu.au/research/research-services/research-policy-performance/publications-outputs/elements (accessed 12 February 2020).

15. "World Malaria Day," *World Health Organisation*,
    https://www.who.int/news-room/campaigns/world-malaria-day (accessed 12 February 2020).

16. DS Communications and Events, "Access Griffith's world-class malaria research via Griffith Research Online," *Insight* (March 29, 2018),
    https://griffithinsight.wordpress.com/2018/03/29/access-griffiths-world-class-malaria-research-via-griffith-research-online/ (accessed 12 February 2020).

17. Library Communications and Events, "Malaria researcher profiles," *Insight* (April 17, 2018),
    https://griffithinsight.wordpress.com/2018/04/17/malaria-researcher-profiles/ (accessed 12 February 2020).

18. Griffith University tweet (@GriffithLibrary) promoting Griffith research for World Malaria Day, April 24, 2018,
    https://twitter.com/GriffithLibrary/status/988550618557140993?s=20 (accessed 12 February 2020).

19. "About Griffith Review," *Griffith Review*,
    https://www.griffithreview.com/about-griffith-review/ (accessed 12 February 2020).

20. "Writing the Country," *Griffith Review*, 63,
    https://www.griffithreview.com/editions/writing-the-country/ (accessed 12 February 2020).

21. Griffith University tweet (@GriffithLibrary) promoting Professor Frederic Leusch's research on sustainability, September 14, 2018,
    https://twitter.com/GriffithLibrary/status/1040365791454089218?s=20 (accessed 12 February 2020).

22. "Griffith University Lightning Talks," *UStream TV*,
    https://www.ustream.tv/recorded/123612311 (accessed 12 February 2020).

23. Library Communications and Events, "Access Griffith's world-class sustainability research via Griffith Research Online," *Insight* (September 3, 2018),
    https://griffithinsight.wordpress.com/2018/09/03/access-griffiths-world-class-sustainability-research-via-griffith-research-online/
    (accessed 12 February 2020).

24. "Menzies Health Institute Queensland," Griffith University,
    https://www.griffith.edu.au/menzies-health-institute-queensland (accessed 12 February 2020).

25. Library Communications and Events, "It's Dementia Awareness Month," *Insight* (September 1, 2018),
    https://griffithinsight.wordpress.com/2018/09/01/its-dementia-awareness-month/ DOI:
    https://doi.org/10.4324/9781315382074-1 (accessed 12 February 2020).

26. Library Communications and Events, "Malaria researcher profiles".

27. Library Communications and Events, "Lightning Talks: Crimes and Punishments," *The Library Blog*, August 18, 2019,
    https://griffithlibrary.wordpress.com/2019/08/18/lightning-talks-crimes-and-punishments/ (accessed 12 February 2020).

28. Library Communications and Events, "The road to marriage equality," *The Library Blog*, December 5, 2018,
    https://griffithlibrary.wordpress.com/2018/12/05/the-road-to-marriage-equality/ (accessed 12 February 2020).

Susan Boulton
Senior Librarian Research Content and Repositories
Griffith University
Queensland, AU
E-mail: s.boulton@griffith.edu.au
ORCID ID: https://orcid.org/0000-0003-4713-1908