



Citation for published version:

Kelly, B 2012, *Evidence, Impact, Metrics: Final Report*. UKOLN.

Publication date:

2012

Document Version

Early version, also known as pre-print

[Link to publication](#)

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Evidence, Impact, Metrics: Final Report

The final report for UKOLN's Evidence, Impact, Metrics project which took place from August 2010 to July 2011.

Document details

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Date:	13 December 2012
Version:	1.0
Notes:	This document brings together a series of reports which were published on UKOLN's Web site.

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Acknowledgements

UKOLN is funded by the Joint Information Systems Committee (JISC) of the Higher and Further Education Funding Councils, as well as by project funding from the JISC and the European Union. UKOLN also receives support from the University of Bath where it is based.

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1 About This Document

Background

UKOLN's Evidence, Impacts, Metrics activity ran from August 2010-July 2011. Three workshops were organised at the University of Glasgow, Birkbeck, University of London and the Open University. In addition a number of talks were given and a series of blog posts published.

This document brings together the various reports on this work which have been published on the UKOLN Web site.

The individual documents are listed below:

- Why the Need for this Work?
- Summary of Events
- Summary of Blog Posts
- Feedback from the Second Workshop
- Summary of the Final Workshop
- A Framework For Metrics
- Metrics FAQ
- Evidence, Impact Metrics: Doing It For Yourself

The documents are available from the URL <http://blogs.ukoln.ac.uk/evidence-impact-metrics/final-report/> in MS Word and HTML formats.

Who Did The Work?

The Evidence, Impact, Metrics activity was led by Brian Kelly, UKOLN.

Key Resources

The key resources for this work were:

- The Evidence, Impact, Metrics blog: see <http://blogs.ukoln.ac.uk/evidence-impact-metrics/>
- The UK Web Focus blog: see <http://ukwebfopus.wordpress.com/>

In order to avoid risks of loss of these resources, this final report has been produced which aggregates the key documents into a single resource.

2 Why the Need for This Work?

About This Section

This section gives a background to work on identifying best practices for gathering evidence of the impact of networked services and how the development of metrics can be valuable in ensuring there is a consistent approach developed across the sector.

The Need For Evidence

There is a need for publicly-funded organisations, such as higher education institutions, to provide evidence of the value of the services they provide. Such accountability has always been required, but at a time of economic concerns the need to gather, analyse and publicise evidence of such value is even more pressing.

Unlike commercial organisations it is not normally possible to make use of financial evidence (e.g. profits, turnover, etc) in public sector organisations. There is therefore a need to develop other approaches which can support evidence-based accounts of the value of our services.

UKOLN's Evidence, Impact, Metrics work developed a methodology which can be used within the sector to demonstrate the value and impact of a variety of online services. Regular blog posts have been published on the UK Web Focus blog [1].

Metrics for Measuring, Monitoring and Maximising Impact

Evidence can take the form of anecdotes and case studies. However, whilst such qualitative approaches are a valuable approach, there is also a need to complement such approaches with quantitative measures.

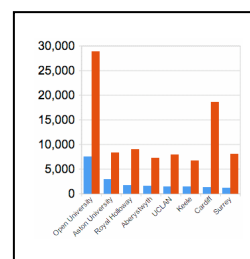
Institutions will need to have processes in place to measure, for example, usage of their services for capacity planning purposes (will new hardware or bandwidth be required to cope with growth) and to identify both successful services and those for which usage may be dropping in order to decide on the best ways of allocating scarce resources.

Carrying out such measurements over time can help to identify trends, which can help in long term planning. The analysis of such trends across a sector, such as higher education institutions, can be valuable in helping to detect 'weak signals' which may not be easily spotted from trends within an individual institution.

As an example the image below compares the number of 'fans' for popular UK University Facebook pages in 2008 and 2010 [2]. This survey work began in 2007 following suggestions that "*Something is going on with Facebook*" [3] which led to capturing evidence of initial usage patterns in order to benchmark future trends.

Institutions should benefit from knowledge of early indications of such trends as this can help to inform policy decisions within the institution.

Note that snapshots of use of iTunes U [4], YouTube Edu [5] and institutional use of Twitter [6] have been published recently in order to provide a benchmark and to help inform institutional policy-making decisions on use of such services.



Need For Flexibility

There are dangers that such evidence-gathering approaches will fail to reflect the diversity to be found across UK HEIs, which are very different in size, levels of funding, institutional priorities, organisation culture, etc. Although such diversity should not be of a concern in depicting trends across the sector there is a danger that numerical evidence of institutional activities will be reduced to league tables.

It would be dangerous if such concerns resulted in a failure to provide such evidence; there is an expectation that universities should be transparent in how their funding is being used and in any case, FOI requests are being used to obtain such evidence [7].

UKOLN work across the sector seeks to gather feedback on best practices for collecting and using evidence which will ensure that benefits of such approaches are gained whilst associated risks are minimised.

References

- 1 *Evidence category*, UK Web Focus Blog, <<http://ukwebfocus.wordpress.com/category/evidence/>>
- 2 *Planet Facebook Becomes Less of a Walled Garden*, UK Web Focus blog, 8 October 2010, <<http://ukwebfocus.wordpress.com/2010/10/08/planet-facebook-becomes-less-of-a-walled-garden/>>
- 3 *Something IS going on with Facebook*, UK Web Focus blog, 29 May 2007, <<http://ukwebfocus.wordpress.com/2007/05/29/something-is-going-on-with-facebook/>>
- 4 *What Are UK Universities Doing With iTunesU?*, UK Web Focus blog, 11 October 2010, <<http://ukwebfocus.wordpress.com/2010/10/11/what-are-uk-universities-doing-with-itunesu/>>
- 5 *How is the UK HE Sector Using YouTube?*, UK Web Focus blog, 18 October 2010, <<http://ukwebfocus.wordpress.com/2010/10/18/how-is-the-uk-he-sector-using-youtube/>>
- 6 *Social Analytics for Russell Group University Twitter Accounts*, UK Web Focus blog, 6 June 2011, <<http://ukwebfocus.wordpress.com/2011/06/28/social-analytics-for-russell-group-university-twitter-accounts/>>
- 7 *University Web Sites Cost Money!*, UK Web Focus blog, 16 November 2010, <<http://ukwebfocus.wordpress.com/2010/11/16/university-web-sites-cost-money/>>

3 Summary of Events

Events about Evidence, Impact and Metrics

Key Workshops

Three one-day workshops were delivered as a key part of UKOLN's Evidence, Impact, Metrics forum activity which took place during 2010/11. Details of the workshops are given below. Note that the event web sites provide access to the materials used during the events - see <<http://www.ukoln.ac.uk/web-focus/presentations.html>>.

Institutional Web Services: Evidence for Their Value

The first one-day workshop on "*Institutional Web Services: Evidence for Their Value*" was held at the University of Strathclyde, Glasgow on 12th November 2010.

Institutional and Social Web Services: Evidence for Their Value

The second one-day workshop on "*Institutional and Social Web Services: Evidence for Their Value*" was held at Birkbeck, University of London, London on 7th December 2010.

Metrics and Social Web Services: Quantitative Evidence for their Use and Impact

The third one-day workshop on "*Metrics and Social Web Services: Quantitative Evidence for their Use and Impact*" was held at the Open University on 11th July 2011.

The three workshops had a progression in the areas that were addressed. The first workshop addressed ways in which one could gather evidence of the value and impact of institutional Web services. The second workshop provided some further examples of ways of identifying the value of institutional services but also considered ways of comparing value in out-sourcing services and in using Cloud services. The final workshop explored metrics associated with use of Social Web services by both individuals and institutions.

Additional Events and Presentations

In addition to the three formal workshops, growing interest across the sector resulted in several additional presentations being delivered.

Measuring and Maximising Impact Using the Social Web.

A 90 minute workshop session on "*Measuring and Maximising Impact Using the Social Web*" was given at UKOLN's IWMW 2010 event held at the University of Sheffield, Sheffield on 13th July 2010.

Promotional Strategies for Your Service.

A workshop session on "Promotional Strategies for Your Service" which formed part of a 2-day workshop on *Maximising the Effectiveness of Your Online Resources* held at Brettenham House, London on 13th October 2010.

Monitoring and Maximising Organisational Impact.

A talk on "*Monitoring and Maximising Organisational Impact*" was given at the Internet Librarian International 2010 conference held at Novotel London West, London on 14th October 2010.

"Sixty Minutes To Save Libraries": Gathering Evidence to Demonstrate Library Services' Impact and Value.

A workshop session on "*"Sixty Minutes To Save Libraries": Gathering Evidence to Demonstrate Library Services' Impact and Value*" was given at the Mashspa event held in Bath on 29th October 2010.

Evidence, Impact, Value: Metrics for Understanding Personal and Institutional Use of the Social Web.

A talk on "*Evidence, Impact, Value: Metrics for Understanding Personal and Institutional Use of the Social Web*" was given at a workshop on Digital Impacts: How to Measure and Understand the Usage and Impact of Digital Content held at the University of Oxford, Oxford on 20th May 2011.

Metrics for the Social Web

A talk on "*Metrics for the Social Web*" was given at UKOLN's DevCSI event held at the University of Reading on 25th July 2011.

4 Summary of Blog Posts

Blogs Posts about Evidence of Impact

A series of evidence-based blog posts have been published on the UK Web Focus blog in order to support UKOLN's Impact, Evidence, metrics work. A summary of the posts is given below. Note that the URL for the posts can be obtained using the publication date. For example the first post, published on 13 July 2008 can be accessed at <http://ukwebfocus.wordpress.com/2008/07/13/>

- **Nudge: Improving Decisions About RSS Usage**, 13 Jul 2008. This post described how the 'nudge' principle of using evidence of failures to implement best practices can be used as an approach to encourage, rather than mandate, implementation of best practices. This approach was applied in the context of a survey of RSS usage across Scottish university home pages. This post has had 1,387 views and has attracted 8 comments to date.
- **The Decline in JISC Mail Use Across the Web Management Community**, 4 Jun 2010. This post depicts the sharp decline in use of JISC Mail by the Web management community over the past 5 years and suggests that this evidence indicates the need to understand changing patterns in use of communication channels. This post has had 817 views and has attracted 14 comments to date.
- **Planet Facebook Becomes Less of a Walled Garden**, 8 Oct 2010. This post was published shortly after Facebook announced that users could download their data from the service and, in light of this news, document growth in Facebook usage by early institutional adopters of the service. This post has had 704 views and has attracted 7 comments to date.
- **How is the UK HE Sector Using YouTube?**, 18 Oct 2010. This survey provided a snapshot of usage figures for 15 UK institutions which have YouTube Edu accounts. This post provides a documented benchmark which can be used to compare with future developments. This post has had 1,211 views and has attracted 11 comments to date.
- **What are UK Universities doing with iTunes U?**, 25 Oct 2010. This survey provided a snapshot of usage figures for 10 UK institutions which have official iTunesU accounts. This post provides a documented benchmark which can be used to compare with future developments. This post has had 852 views and has attracted 5 comments to date.
- **Gathering and Using Evidence of the Value of Libraries**, 5 Nov 2010. This post reported on a workshop session on ways in which evidence could be gathered to support advocacy work. This post has had 645 views and has attracted 15 comments to date.
- **HTML and RDFa Analysis of Welsh University Home Pages**, 17 Nov 2010. This survey provided a snapshot of usage of HTML and RDFa usage on 11 Welsh institutional home pages. This post provides a documented benchmark which can be used to compare with future developments and may be relevant in providing supporting evidence of the effectiveness of JISC-funded work to encourage take-up of RDFa. This post has had 476 views and has attracted 3 comments to date.
- **Trends For University Web Site Search Engines**, 15 Dec 2010. This post reviews surveys of search engine usage carried out in 1999 and makes comparisons with a survey of the 20 Russell Group Universities today. This shows a move from a diversity of solutions to majority use of a Google product. This post has had 789 views and has attracted 12 comments to date.
- **Evidence of Personal Usage Of Social Web Services**, 12 Jan 2011. This post illustrates how trend analyses across personal use of services can help to provide new personal insights and also understand drivers which can help take-up of services beyond early adopters (including deployment of better clients, uses which demonstrate value such as use at events and achieving a critical size for a community). This post has had 572 views and has attracted 8 comments to date.
- **Institutional Use of Twitter by Russell Group Universities**, 14 Jan 2011. This survey provided a snapshot of institutional use of Twitter across the 20 Russell Group Universities. This post provides a documented benchmark which can be used to compare with future developments. This post has had 3,473 views and has attracted 10 comments to date.
- **Use of Facebook by Russell Group Universities**, 18 Jan 2011. This survey provided a snapshot of institutional use of Facebook across 20 Russell Group Universities. This post provides a documented benchmark which can be used to compare with future developments. This post has had 1,651 views and has attracted 9 comments to date.
- **Assessing the Value of a Tweet**, 1 Feb 2011. This post provides an example of the impact which a single tweet can have and documents methods for ensuring that such use can be monitored and recorded. This post has had 466 views to date and has attracted 1 comment to date.

- **Institutional Use of Twitter by the 1994 Group of UK Universities**, 22 Feb 2011. This survey provided a snapshot of institutional use of Twitter across the 18 1994 Group Universities. This post provides a documented benchmark which can be used to compare with future developments. This post has had 983 views and has attracted 10 comments to date.
- **How Do We Measure the Effectiveness of Institutional Repositories?**, 24 Feb 2011. This post described how metrics could be used to provide a partial answer to the question "*how do we measure the effectiveness of an institutional repository?*" posed on the JISC-Repositories list. The post highlighted UKOLN's RepUK work which has harvested metadata records which can help provide answers to this question. This post has had 1,501 views and has attracted 9 comments to date.
- **Are Russell Group Universities Ready for the Mobile Web?**, Apr 2011. This post analyses Russell Group University home pages for conformance with best practices for mobile access. This post has had 695 views and has attracted 2 comments to date.
- **Using Slideshare as a Tool to Help Identify Impact**, 6 May 2011. This post documented how UKOLN responded to a request to "*provide evidence of the impact of the JISC PoWR project*" and illustrated how usage statistics could provide useful indicators, especially if complemented by anecdotal evidence which may be provided on Web 2.0 repository services such as Slideshare which permit comments and the content to be embedded elsewhere. This post has had 433 views and has attracted 7 comments to date.
- **Privacy Settings For UK Russell Group University Home Pages**, 24 May 2011. This survey provided a snapshot of cookie use across the 20 Russell Group Universities. This post provides a documented benchmark which can be used to compare with future developments. This post has had 709 views and has attracted 11 comments to date.
- **Evidence of Slideshare's Impact**, 31 May 2011. This post provided evidence of access to presentations delivered at IWMW events for slides hosted on Slideshare. The evidence shows that there have been over 238,000 views of the slides. The post suggested reasons for the popularity of the most widely-viewed slides and suggested that there is a need for data-mining of usage stats for slide repositories across a wider range of events. Note that this post has had 466 views and has attracted 2 comments to date.
- **A Pilot Survey of the Numbers of Full-Text Items in Institutional Repositories**, 6 June 2011. This survey sought to provide a snapshot of the numbers of full-text items available provided in Russell Group University repositories. However it was found that only a very small number of repositories provided the capabilities for such analysis. Note that this post has had 807 views and has attracted 13 comments to date.
- **Numbers Matter: Let's Provide Open Access to Usage Data and Not Just Research Papers**, 9 June 2011. This post pointed out the irony that statistics for institutional use of social web services were freely available but were more limited in the case of institutional repositories. Note that this post has had 503 views and has attracted 11 comments to date.
- **Evidence For The #UniWeek Campaign**, 19 June 2011. This post described ways of gathering evidence and measuring effectiveness of advocacy campaigns. This post has had 336 views and has attracted 2 comments to date.
- **Social Analytics for Russell Group University Twitter Accounts**, 28 June 2011. This survey provided a snapshot of institutional use of Twitter across the 20 Russell Group Universities using several social analytics tools in order to gain a better understanding of the strengths and weakness of such tools. This post provides a documented benchmark which can be used to compare with future developments. This post has had 1,008 views and has attracted 4 comments to date.
- **What Can We Learn From Download Statistics for Institutional Repositories?**, 6 July 2011. This post provided a brief analysis of download statistics for the University of Bath institutional repository and discussed whether local cultural factors may be responsible for unexpected findings (e.g. the most downloaded contributors were based along the same corridor). This post has had 583 views and has attracted 6 comments to date.
- **Event Report: Metrics and Social Web Services Workshop**, 18 July 2011. This post provided a comprehensive summary of the final Evidence, Impact, Metrics workshop. This post has had 625 views and has attracted 3 comments to date.
- **Recognising, Appreciating, Measuring and Evaluating the Impact of Open Science**, 6 Sept 2011. This post provides a report on a session on Social Media Analytics given at the Science Online London 2011 conference. This post has had 457 and has attracted 1 comment to date.
- **Bath is the University of the Year! But What if Online Metrics Were Included?**, 14 Sept 2011. This post describes how metrics are used to provide University league tables and discusses the implications if those compiling such league tables were to include online activities in future national surveys. This post has had 678 views and has attracted 7 comments to date.

- **Is It Now Time to Embed Use of Google+?**, 21 Sept 2011. This post drew parallels of the slow growth in usage of Google+ and similar usage patterns with Twitter. This post has had 508 views and has attracted 9 comments to date.
- **Is It Time To Ditch Facebook, When There's Half a Million Fans Across Russell Group Universities?**, 23 Sept 2011. This post described growth in use of Facebook across Russell Group Universities in the last 9 months. This post has had 551 views and has attracted 25 comments to date.
- **When Trends Can Mislead: The Rise, Fall and Rise of Apache**, 11 Oct 2011. This post described how analysis of trends can be misleading. This post has had 276 views and has attracted 1 comment to date.
- **Are University Web Sites in Decline?**, 20 Oct 2011. The post described use of two trend analysis services which suggested that traffic to Russell Group University Web sites may be in decline. This post has had 890 views and has attracted 14 comments to date.
- **How People Find This Blog, Five Years On**, 1 Nov 2011. This post documented the referrer traffic to the UK Web Focus blog over five years which highlighted the increasing importance of Twitter. This post has had 408 views and has attracted 13 comments to date.
- **To What Extent Do Multiple Copies of Papers Affect Download Statistics?**, 14 Nov 2011. This post provided a survey on ways in which research papers may be hosted on multiple services and the implications this has on download statistics. This post has had 414 views and has attracted 3 comments to date.
- **Thoughts on Google Scholar Citations**, 22 Nov 2011. This post provided comparison between the Google Scholar Citations and Microsoft Academic Search services for analysing citations. This post has had 884 views and has attracted 6 comments to date.
- **Surveying Russell Group University Use of Google Scholar Citations**, 24 Nov 2011. This survey provided a snapshot of the numbers of researchers who have claimed their Google Scholar profile in Russell Group Universities. This post has 1,016 views and has attracted 12 comments to date.
- **Google Scholar Citations and Metadata Quality**, 28 Nov 2011. This survey described how visualisation tools for citation services can help to spot errors in the metadata. This post has had 348 views and has attracted 1 comment to date.
- **Paradata for Online Surveys**, 29 Nov 2011. This post described how quantitative evidence gathered for recent surveys of use Google Scholar Citations could be affected by the how searches were carried out. The need to document the survey *paradata* was highlighted. This post has had 244 views to date.
- **Paper on Metrics Accepted**, 5 Dec 2011. This post announced that a paper of Web accessibility metrics had been accepted for publication. The paper drew parallels with metrics for research citations, online reputation and Web accessibility and argued that whilst all approaches have limitations, there are also advantages in gathering and using metrics in these areas, provided their limitations are understood. This post has had 224 views to date.

Summary

Details of 35 posts are listed which were published on the UK Web Focus blog between 4 June 2010 and 14 December 2011 plus an additional post published in July 2008. These posts are available in the Evidence category of the UK Web Focus blog at the URL <http://ukwebfocus.wordpress.com/category/evidence/>.

Note that by 13 December 2011 there had been 28,5907 views of these posts. In addition there had been 275 comments. Note, however, that the numbers for the comments include trackbacks and may also contain automatically-generated links from other WordPress blogs which may subsequently be deleted.

5 Feedback from Second Workshop

About This Document

A workshop on “*Institutional and Social Web Services: Evidence for Their Value*” was held in Birkbeck, University of London on 7 December 2010. This workshop was the second in a series of three which were organised as part of UKOLN’s Evidence, Impact, Metrics activity.

The workshop Web site is available at <http://blogs.ukoln.ac.uk/evidence-impact-metrics/events/workshop-on-institutional-web-sites-evidence-for-their-value/>.

Workshop Abstract

A recent Cabinet Office press release announced a “Clamp down on Government websites to save millions”. This described how “As part of the Government’s efficiency drive, all of the existing 820 government funded websites will be subject to a review looking at cost, usage and whether they could share resources better”. The expectation is that up to 75% of existing Web sites will be shut down and the remaining sites would be expected to cut their costs by up to 50% and move onto common infrastructures.

This decision was based on a report published by the Central Office for Information (COI) which found that “across government £94 million has been spent on the construction and set up and running costs of just 46 websites and £32 million on staff costs for those sites in 2009-10”. The most expensive Web sites were uktradeinvest.gov.uk (which costs £11.78 per visit) and businesslink.gov.uk (which costs £2.15 per visit).

Are University Web sites next in line? How can we provide evidence of the value of institutional Web sites? How can we demonstrate that the investment in providing Web sites delivers value and a positive ROI? And can we develop a methodology and an appropriate set of metrics which can validate such claims?

This workshop session will address these issues. The workshop will provide participants with an opportunity to describe current activities in these areas and listen to a number of case studies. During the workshop participants will hear about a methodology which relates the evidence of usage of services to the value provided by the services and explore how this methodology can be used to reflect institutional needs and priorities. The implementation of this methodology in an institutional dashboard will be described. The workshop will conclude by exploring ways in which such approaches can be embedded within an institution and the benefits which can be gained from using shared approaches across the sector.

User Feedback

A total of 14 evaluation forms were returned which asked participants to summarise the action plans they intended to take when they returned to work and recommendations to be made to colleagues. A summary of the responses is given below.

Form No.	Responses
Personal Action Plans	
1	Check out some of the outsourced services LSE are using. Check out Ranjit’s dashboard offering. Get proper Twitter stats. More iTunes detail.
2	Review use of metrics, particularly looking at how to measure success against benchmarks & goals. Will probably talk to SiD once I’ve identified these in order to access outsourcing vs. doing it in-house. Need to work more closely at social media metrics.
3	Follow up on iTunes U talk. Investigate Mediacall. Continue down dashboard route.
4	Review our plans for sharing / publishing Google Analytics reports with the institution. Take on board Ranjit’s recommendation for how often to report and when. Investigate Mediacall.

	Continue down dashboard route. Look at costing some of our web services.
5	Meet with other web-related staff to discuss our strategy in light of the issues raised at this event. In particular explore the “dashboard for senior management” idea (of course!)
6	Consider developing a strategy for media service. Would like to re-visit blog posts. Will contribute to UK Web Focus blog.
7	Discussions about Dashboard with the team. Clarify how FOI requests are satisfied.
8	Little specific at present time. However likely to spend some time reflecting on contents of the day and in discussion with immediate colleagues.
9	Look into SiD’s dashboard. Work more closely with our Digital Marketing people who look at GA & SEO, etc. Try & gather some data + metrics about our sites & social media usage.
10	Audit of resources / expenditure. Map this to outcomes. Map outcomes to benefits.
11	Talk to our media service managers about some issues arising from talks. Look into international Web pages and institutional strategy.
12	Write up the main points of the workshop and upload them in my team internal blog.
13	Thinking very carefully about proving evidence of any promotional work (e.g. campaign monitoring). Considering issues of cloud vs hosting (e.g. for blogs/documents).

Action Plans For Colleagues

Form No.	Responses
1	More emphasis on value in working methods
4	Feed back to colleagues on other institution’s experience of iTunesU.
5	Ask questions about the kinds of data that we can be gathering now & going forward - and actually identify it + start gathering it! Do some (simple) calculations to prove the cost effectiveness of some online services vs offline.
6	Visit UKOLN/UK Web Focus blog.
7	Consider how we react to social media + the values involved.
9	Dashboard. Digital marketing should be part of pour team (contentious). Use metrics gathered to try and save out IYS (?).
11	Consider again setting up institutional blogging site.
12	More debate about cloud provision and metrics.
13	More strategic consideration of gathering evidence) both for our own purposes and those of projects we work with/evaluate).

Views on the Evidence, Impact and Metrics Work

Form No.	Responses
1	Useful – but I still think we don’t fully understand it all!
2	Would be great to establish benchmarks, good practice, etc both for internal use but also across the sector.
3	Would be good to see/analyse how businesses do this.
5	Glad you’re doing this!
6	Really important that JISC is doing this; hope the findings are well disseminated & publicised across the sector.
9	Good idea – would be interested in final reports, useful to us in the current situation to think about our value.

12	Very useful work
13	Very relevant in current environment, useful to think of ROI and value for money.
14	Good to see that JISC is being pro-active in this area.

Conclusions

The responses were pleasing in that they demonstrated that participants at the workshop were willing to take actions based in the talks and discussions once they return to work.

Some particularly noteworthy actions are given below:

- Review use of metrics, particularly looking at how to measure success against benchmarks & goals.
- Need to work more closely at social media metrics.
- Review our plans for sharing / publishing Google Analytics reports with the institution.
- Meet with other web-related staff to discuss our strategy in light of the issues raised at this event.
- Consider developing a strategy for media service.

It should also be noted that several people commented that they intend to investigate deploying a dashboard which will provide evidence of activity.

6 Summary of Final Workshop

Background

UKOLN organised a series of workshops on Evidence, Impact and Metrics during 2010/11. A report on the final workshop, written by Kirsty Pitkin, is given below. The report is available at <http://ukwebfocus.wordpress.com/2011/07/18/event-report-metrics-and-social-web-services-workshop/>.

Introduction

In introducing the final workshop event, Brian Kelly, UKOLN, emphasised that the aims were to explore ways of gathering evidence that can demonstrate the impact of services and to devise appropriate metrics to support the needs of the higher and further education sector.

Many people argue that you cannot reduce education to mere numbers, as it is really about the quality of the experience. However, Kelly argued that numbers do matter, citing the recent JISC-funded Impact Report, which found that the public and the media are influenced by metrics. As we have to engage with this wider community, metrics are going to become more relevant.

Why Impact, ROI and Marketing are No Longer Dirty Words

Amber Thomas, JISC, mapped out the current landscape, drawing on her own experiences and those of colleagues working in other areas at JISC. She observed a dominant culture of resistance to measurement within education for a number of reasons, including the concern that caring about metrics will mean that only highly cited people or resources will be valued. She noted that the search for an effective impact model is taking place on shifting sands, as issues associated with the value, ownership and control of media channels are being contested, as is the fundamental role of the university within British society.



In discussing impact, Thomas noted that it would be tempting to use the language of markets – with education as a “product” – but stressed that this not how we see ourselves in the education sector. One of the challenges we face is how to represent the accepted narrative of the sector as a nurturer and broker of knowledge, through the use of metrics.

Thomas went on to describe some of the dirty words in this space and the measurements that are associated with them. However, she noted that these measurements can be used for good, as they can help to instigate change. To support this, she provided a model for the role of metrics in decision making, with metrics being one form of evidence, and evidence being only one form of influence on the decision maker.

She concluded by outlining our options for responding to the impact debate: we could deny the impact agenda is important, or we could deepen our understanding and improve our metrics so they work for us and are fit for purpose. The possible directions we could take include developing business intelligence approaches, improving data visualisation techniques and looking for better tools to give us deeper understanding of the metrics. She also stressed that we need to look more closely at the use and expectations of social media in the commercial sector, as we might find we are expecting too much of ourselves.

“I don’t think we can ignore the debate on impact and metrics... what we need to do is engage with the impact debate and use the sort of language that is expected of us to defend the values of the sector a we wish to defend them.”

Surveying our Landscape from Top to Bottom

Brian Kelly provided an overview of the surveys he has been carrying out using a variety of analytics tools.

He began with a personal view: discussing the picture of his own Twitter usage provided by the Tweetstats tool, and how this differs from his own memory. He noted that the data did not always correspond with other evidence, emphasising that we cannot always trust the data associated with such tools.



“You need to be a bit skeptical when looking at this data... you can’t always

trust all the data that you have.”

From an institutional perspective, he asked: “*What can commercial analytics tools tell us about institutional use of Twitter?*” He compared the Klout scores of Oxford and Cambridge Universities’ Twitter accounts, showing how visualisations of the numbers can give a much better understanding of what those numbers really mean than the numbers themselves do in isolation.

He continued in this vein by demonstrating Peer Index, which he used to analyse participants of the workshop. He noted that the top seven people are all people he knows and has had a drink with, so asked whether this shows that the gathering is really a self-referential circle? Kelly also noted how easy it can be to gain extra points and questioned whether it is ethical to boost your score in this way. However, he observed that research funding is determined by flawed metrics and gaming the system is nothing new. So will universities head hunt researchers with valuable social media scores?

Next he looked at Slideshare statistics, using a presentation by Steve Wheeler as a case study. Wheeler made a presentation to 15 people, but his slides were viewed by over 15,000 people on Slideshare. Kelly asked us to consider the relationship between the number of views and the value of this resource. He also examined statistics from the collection of IWMW slides, observing that the commercial speakers had higher view rates, and that the most popular slides were not in corporate look and feel. This evidence could be used to challenge standard marketing perspectives.

Finally, Kelly compared Technorati and Wikio results to demonstrate that four people in the room were in the top 67 English language technology blogs. He pondered whether they should they share their success strategies, or how we could tell the story of this data in different ways.

To conclude, Brian emphasised that he believes this kind of analysis can inform decision making, so it is important to gather the data. However, the data can be flawed, so it is important to question it thoroughly.

Learning From Institutional Approaches

Ranjit Sidhu, Statistics into Decison, focussed primarily on the role of pound signs in communicating particular messages and connecting social media metrics to reality in a powerful way.



He began by observing that the data is often vague. The analytics institutions receive look exactly the same as the analytics used by commercial organisations, despite the fact that their needs and objectives differ widely. He attributed this to the dominance of the technology, which has taken control over the information that gets delivered, thus ensuring everyone gets data that is easy to deliver, rather than data that is meaningful to them. Sidhu also observed that universities often fail to break down their data into relevant slices, instead viewing it at such a high level that it cannot usefully be interpreted in financial terms.

In a self-confessed rant, Sidhu emphasised that you have a chance to tell the narrative of your data. Most social media data is openly available, so if you don’t, someone else will and you will no longer have control over that narrative.

“You need to be proactive with your data. If you’re proactive, people don’t sack you.”

Sidhu went on to demonstrate the type of analytics dashboard he creates for universities, discussing the importance design as well as the analysis itself. His dashboard features nine groups of data and only three key themes, which fit onto one A4 sheet and are arranged in an attractive way. He also discussed his methodology when creating these dashboards, which involves finding out what people want to know first, then finding the data to match those requirements. This is the reverse of common practice, where people take the data that is readily available and try to fit that to their requirements.

He explained the need to match up offline experience with online experience to help to generate projections and quantify the savings produced by online tools and social media. He exemplified this by talking us through one of the most powerful statistics he creates: a calculation demonstrating the amount saved by online downloads of prospectuses compared to sending printed versions. This is usually around £500 per month. This takes the online data, combines it with existing data from the comparable offline process and creates a tangible value.

He extended this to show other types of story we could tell with such data, including the potential value of a website visit from a specific country. Once you have this, you can more effectively demonstrate the monetary value of social media by using referrer strings to show how a visitor from that country reached your site, and therefore make better decisions about how you attract those visitors.

“You have to justify your spend. Your justification has to be based on what you are trying to do at that particular time.”

Identity, Scholarship and Metrics

Martin Weller, Open University, posed many questions and points to ponder, focussing on how academic identity is changing now we are online.

He observed that identity is now distributed across different tools, with a greater tendency to intersect with the personal. There are more layers to consider: where once you had your discipline norms and your institutional norms, now there are more social media norms to observe to create cultural stickiness. You end up with a set of alternative representations of yourself, so your business card is now a much messier thing.



Weller went on to define impact as a change in behaviour, but emphasised that telling the story of impact online is actually very difficult. Your impact may be more about long term presence than an individual post. The metrics we currently use do not necessarily correspond to our traditional notions of academic impact: after all, what do views mean? What do links mean? What do embeds mean? How do they compare to citations?

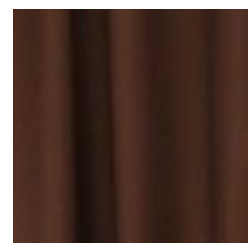
He put forward the accepted view that blogging and tweeting provide you with an online identity, which drives attention to more traditional outputs. He placed this in the context of a digital academic footprint, which helps tell the story of the impact you are having within your community. Whilst metrics can be useful for this, he warned that they could also be dangerous, with official recognition leading to a gameable system.

He concluded by illustrating a sandwich model explaining why metrics will be increasingly important to what academics do: with top-down pressure from above to demonstrate impact when applying for funding, and bottom-up pressure from individuals asking why their impact via social media doesn't count. Once you've got those two pressures, you have an inevitable situation.

Impact of Open Media at the OU

Andrew Law, Open University, discussed the activities of the Open University when monitoring the various media channels used to disseminate content and how these metrics have led to real, significant funding decisions.

He observed that several of their online media channels did not necessarily have a very clear strategic remit. However, they found that the data was increasingly asking the question: *“What is the purpose of all this activity?”* Deeper analysis of this data led to the development of clearer strategies for these channels, based on their core institutional aims.



Law emphasised the importance of having all of the information about the different channels in one place to help dispel the myths that can grow up around particular tools. He used the example of iTunes U, which gets huge amounts of internal PR on campus, whilst channels like OpenLearn and YouTube sit very quietly in the background. However, the reality is very different and he observed that one of the challenges they face is ensuring that the broad story about the performance of all of these channels is well understood by the main stakeholders.

Law expanded on this, noting that whilst the iTunes U download statistics provide a positive story, it does not actually perform well against their KPIs compared to other channels, despite little or no investment in those other channels. He observed that their pedagogical approach to iTunes U – which includes offering multiple, small downloads, with transcripts and audio downloaded separately – can inflate the numbers. He compared this to their YouTube channel, which has received very little investment, but is performing very effectively. He also discussed the OpenLearn story, which has been quietly outstripping other channels against their KPIs – particularly in terms of conversions, because it has a lot of discoverable content. He emphasised that this is a very positive story for the university, which needs to be told and built upon.

By demonstrating these realities, the data has demanded of management a much clearer sense of purpose and strategy. This has led to real investment. The OU has massively increased the amount of money spent on YouTube and OpenLearn, representing a significant change in strategy.

In conclusion, Law did note that, so far, the data has only helped the university, not the end user, so their next steps include mapping journeys between these channels to identify the traffic blockages and better tune the service delivered across the board.

The Script Kiddie's Perspective

Tony Hirst, Open University, provided a set of observations and reflections, which ranged from ethical issues about the use of statistics through to practical demonstrations of visualised data.

He began by observing that social media are co-opting channels that were private and making them public, so there is nothing inherently new going on. He quoted Goodhart's Law, emphasising that, whilst measuring things can be good, once measures are adopted as targets they distort what you are measuring and create systems open to corruption.



Hirst went on to discuss the perils of summary statistics and sampling bias. He emphasised that the way you frame your expectations about the data and the information that can be lost in the processing of that data are both vital considerations if you are to accurately tell the story of that data.

Hirst discussed the role of citations as a traditional measure of scholarly impact and the ways your content can be discovered, and thereby influence through citation. He highlighted three layers of discovery: the media layer, the social layer and the search engine layer, each of which enables your material to be discovered and therefore influence behaviour. He noted that if links come through to your own domain, you can already track how they are reaching your content. What is difficult to track is when there is lots of social media activity, but none of it is coming back to your domain.

Hirst demonstrated some approaches to tracking this type of activity, including the Open University's Course Profiles Facebook app; Google search results, which are including more personalisation; and social media statistics gleaned through APIs, many of which can be accessed via an authentication route using OAuth.

Hirst concluded by discussing some visualisations of Twitter communities to show how these can provide insight into external perspectives and how we are defined by others in our community.

Conclusions

The workshop brought forward a number of concerns, that were often less about the tools and technologies involved, but more about the ethics and pitfalls of formalising the measurement of social media activity. The main concern seemed to be the potential for creating a gameable system, or metrics do not reflect reality in a useful way. Ensuring that the metrics we use are fit for purpose will not be an easy challenge, but the discussions held within this workshop helped to identify some potential routes to improving the value and integrity of social media data.

7 A Framework For Metrics

Summary of UKOLN's Evidence, Impact, Metrics Work

UKOLN's Evidence, Impact, Metrics activity developed a methodology for gathering quantitative evidence on use of online services which can help to understand the impact of the services and inform the development of the services.

Initially there was some scepticism about the relevance of quantitative evidence gathering work. There were legitimate concerns that metrics can provide only a partial understanding of the services and that metrics can be 'gamed' if undue emphasis is placed on their importance. However in light of an awareness of the need to be able to gather evidence in order to justify funding there became a better appreciation of the value of such work.

Framework For Metrics for JISC Programmes

The following framework for metrics is proposed.

Context: Projects should therefore provide a summary of the context of their work since a 'one-size-fits-all' approach to metrics is unlikely to be of value.

Purpose of the metrics: The purposes of gathering metrics should be documented. Note that gathering metrics in order to gain an understanding of how they might be used can be a legitimate purpose, but this needs to be documented.

Tools: Where known, the tools to be used in gathering, analysing, visualising and interpreting the metrics should be documented.

Interpretation: A summary of how the metrics may be interpreted.

Comments: General comments including a summary of known limitations.

Risk Assessment: Risks associated with use of metrics, together with risks of not gathering metrics.

Using the Framework

How can this framework be used and what benefits can it provide to projects?

Using the Framework: Projects should embed the framework in their initial planning. As well as providing detailed documentation of project work plans, the framework can be used to identify success criteria for various aspects of the work.

Motivation: Projects may be able to use useful objective evidence in subsequent proposals. Evidence of a lack of success may be useful in modifying work plans.

Two examples of use of the framework in providing evidence of the effectiveness of communication channels are given below.

Case Study 1: Project Blog

Context: A project blog has a role to play in encouraging discussion and collaboration across its key stakeholders and disseminating its outputs to a wider audience.

Purpose of blog metrics: Metrics for project blogs are intended to understand usage patterns, especially examples of good practices which could be adopted more widely.

Tools: The blog is registered with the Technorati and EBuzzing services with a programme tag. The services will give rankings based on the number of links to the blog. Use of a tag will enable good practices across the programme to be easily identified. In addition to these services, Google Analytics will provide usage statistics.

Interpretation: Regular summaries of the numbers of posts and comments will be provided to programme managers who will be able to have an oversight of how blogs are being used across the programme.

Comments: Anecdotal evidence suggests that project blogs may find it difficult to gain a significant audience. Metrics can be useful in helping to identify examples which may be successful in reaching out and engaging with its audience. However since the benefits of project blogging are likely to be in

implementing open practices and allowing key stakeholders, such as project managers, to more easily read reports from across all projects, it will be inappropriate to use metrics in league tables.

Case Study 2: Project Slides

Context: A project hosts its slides on the Slideshare repository in order to allow the slides to be embedded within Web sites and viewed on mobile devices.

Purpose of Slideshare metrics: As described in [1] Slideshare metrics can help to identify successful outreach strategies including reuse on other blogs. By using programme tags to aggregate slides, use across a programme can be identified [2].

Tools: Slideshare is the most popular slide sharing services. Note that richer statistics requires subscription to the service.

Interpretation: The usage metrics do not say whether a complete slide set was viewed.

Comments: The risk of hosting slides locally include difficulties in gathering metrics, potentially limiting access to resources and additional effort in developing other approaches for identifying the value of the resources

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8 FAQ For Metrics

FAQ

What are metrics?

“A performance metric is a measure of an organization's activities and performance. Performance metrics should support a range of stakeholder needs from customers, shareholders to employees. While traditionally many metrics are financed based, inwardly focusing on the performance of the organization, metrics may also focus on the performance against customer requirements and value. In project management, performance metrics are used to assess the health of the project and consist of the measuring of six criteria: time, cost, resources, scope, quality, and actions.” [1]

Which should I bother with metrics?

Metrics can provide quantitative evidence of the value of aspects of project work. Metrics which indicate the success of a project can be useful in promoting the value of the work. Metrics can also be useful in helping to identify failures and limitations which may help to inform decisions on continued work in the area addressed by the metrics.

What are the benefits for funders?

In addition to providing supporting evidence of the benefits of successful projects funders can also benefit by obtaining quantitative evidence from a range of projects which can be used to help identify emerging patterns of usage.

What are the benefits for projects?

Metrics can inform project development work by helping to identify deviations from expected behaviours of usage patterns and inform decision-making processes.

What are the risks in using metrics?

Metrics only give a partial understand and need to be interpreted careful. Metrics could lead to the publication of league tables, with risks that projects seek to maximise their metrics rather than treating metrics as a proxy indicator of value. There may also be privacy implications in seeking to use personal data.

What are the resource implications of using metrics?

There are dangers that gathering, interpreting and visualising metrics can be resource-intensive. Note that increasing numbers of social media services, such as Slideshare, provide hosting services for free but have a licensed service which provides additional functionality included access to detailed usage statistics.

How can projects maximise the benefits of metrics whilst minimising the risks?

Projects may benefit from open publication of metrics and their interpretations of the metrics which can help encourage discussions. Note that the risks of using metrics should be counter-balanced by assessing the risks of failing to use metrics.

Which sources of metrics are valuable? Which are not and why?

Examples of sources of metrics for online services include usage, feedback and links. Usage statistics can provide evidence of use of a service, channel or deliverable; feedback statistics can provide evidence of interest as can statistics on links to a service. Also note the value of comparisons with peers and trend analyses, rather than using figures in isolation.

However metrics need to be carefully interpreted. Note that if benchmark figures are valued too highly projects may be tempted to ‘game the system’. Remember that high usage statistics may not be relevant for projects which have a niche audience.

What is the current status of use of metrics in institutions?

In some areas use of metrics are well-established. This includes metrics collated for the Sunday Times and Time Higher Education annual University guides. Metrics are also collated by SCOUNL for evidence of library usage and underpin citation analyses which are used to help identify the value of research papers.

Are there licensing or political issues to be aware of?

It can be helpful to publish metrics with a Creative Commons licence (possibly CC-0) to enable others to freely reuse your data. In addition government moves towards greater openness and transparency for public sector services will encourage increased moves towards openness.

What additional information sources are available?

The Oxford Internet Institute (OII) published a JISC-funded report on “Splashes and Ripples: Synthesizing the Evidence on the Impacts of Digital Resources” [2]. The OII have also published a “Toolkit for the Impact of Digitised Scholarly Resources” [3].

What should JISC projects and services be doing to keep up with good practice?

Blog posts about evidence and metrics are published under the Evidence category on the UK Web Focus blog [4]. Comments and feedback on the posts are welcomed, especially from those involved in JISC-funded activities.

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9 Running Your Own Surveys

Background

UKOLN's Evidence, Impact, Metrics activity [1] ran from August 2010-July 2011. The aim of this work was to explore ways in which systematic quantitative evidence-gathering approaches could be used help identify the impact of online services.

Three 1-day workshops were held as part of this work, together with a number of additional presentations at a variety of events [2]. A series of evidence-based surveys were published on the UK Web Focus blog [3]. The surveys were accompanied by commentary on the tools and methodologies used to gather the numerical evidence. In addition suggested interpretations of the findings and their implications of the findings were published on the posts. Feedback was invited on the posts including critiques of the survey methodologies and interpretations of the findings.

Reflections

In some quarters there were suspicions about the value of quantitative surveys and concerns that such approaches could be counter-productive, leading to the development of inappropriate league tables and people 'gaming the system' in order to exploit limitations in the tools and techniques used to produce metrics.

Whilst such concerns do have some validity, there is also an awareness of the needs to gather quantitative data related to the provision or use of services. There is an awareness that such data can be used to inform developments of services and that development plans can be usefully informed by making comparisons with one's peers. There is also a growing awareness of the risks that, in an open networked environment, third parties could make use of data about use of services and interpret finding in ways which fail to appreciate complexities. An example of this can be seen from a blog post entitled "*University Web Sites Cost Money!*"[4] which described how the Daily Telegraph newspaper interpreting the data in ways which reflected their political agenda.

The significant interest in the evidence-based blog posts suggest that the need to engage in such activities is now becoming more widely appreciated. However rather than reducing the findings to simplistic league tables, the surveys demonstrated a number of ways in which such surveys could be beneficial to the service providers:

- **Trends over time:** Organisations, services or individuals can find it useful to monitor trends of uses of services over time. Examples of such surveys were described in posts on "*Evidence of Personal Usage Of Social Web Service*" [6] (which suggested that the take-up of a new service was reliant on reaching a critical mass of users, identification of personal use cases which demonstrated the value of a new services and the deployment of more effective tools for using he service) and two posts on "*DCMI and JISC Mail: Profiling Trends of Use of Mailing List*"[6] and "*The Decline in JISC Mail Use Across the Web Management Community*" [7] which provided evidence of the decline in use of well-established communication tools in certain sectors.
- **Comparisons with one's peers:** A series of blogs provided evidence of uses of services such as Facebook, Twitter, YouTube and iTunes across the twenty Russell Group Universities.
- **Identification of differing patterns:** The 'sense-making' of the data which has been collected can help in understanding differing usage patterns which may be emerging.
- **Providing benchmarks:** Snapshots of usage may be useful in identifying future trends. For example the post on the "*HTML and RDFa Analysis of Welsh University Home Pages*" [8] showed that currently RDFa is not currently being deployed on institutional home pages within this community.
- **Conforming Expectations or challenging orthodoxies?** WH Smiths made a policy decision to stop selling LPs in their stores at one stage based on analysis of purchasing patterns and predictions of future trends. At the time this was a noteworthy decisions which was featured in the national press. Surveys may be useful in confirming expectations (such as the surveys which confirmed the decline in use of mailing lists) or challenging conventional beliefs and expectations. A survey on "*How People Find This Blog, Five Years On*" [9] provided evidence which challenged orthodox thinking on the primacy of Google for finding content on Web sites and questioned the importance of RSS for providing access to blog posts, by highlighting the importance of Twitter.

Implementing Your Own Metrics-Based Surveys

The experiences gained in providing a range of surveys and interpreting the findings may be useful for others who wish to carry out their own surveys, perhaps to help benchmark organisational, project-based or individual developments or by funders and other third parties to monitor developments, identify best practices which can be used to inform the sector or services which may be in decline.

- **Identify purposes:** When planning a survey you should identify the purpose of the survey. Possible purposes may include understanding how one is doing in comparisons with one's peers; helping to identify return on investment or gaining understanding of a new area.
- **Identification of a community to compare:** If you wish to benchmark your service with others you will need to identify the others services to be compare with. UKOLN's surveys have included comparisons across Russell Group and 1994 Group Universities; regional groups (Scotland and Wales) and participants at particular events.
- **Identification of tools and methodologies:** You will need to identify the tools and methodologies used to gather the evidence. The UKOLN surveys have typically made use of freely available tools, often web-based, which can analyse open data.
- **Understanding limitations of tools and methodologies:** There will be a need to understand the limitations of the tools and methodologies used. It should be noted that in many cases quantitative data may only provide proxy indicators of value. In order to avoid accusations of publishing flawed summaries one should be willing to document the limitations of the approaches used.
- **Documentation of survey processes (paradata):** There is also a need to document data associated with the gathering of data [10]. This might include, for example, documenting the dates of the data collection. As an example, if you are comparing Twitter usage across events you should ensure that you use equivalent data ranges.
- **Support openness:** Commercial organisations may seek to provide surveys as an income-generation activity. Within the higher education sector there may be expectations regarded the openness of data, with sharing of data helping to provide cost-effectiveness across the sector. Unless your organisation has chosen to seek to make a profit from its data collections and analysis services it would be beneficial across the sector if data was to be made freely available for reuse by others. An example can be seen in Katrina James's post on "*Evaluating networks: Twitter activity of 1994 Group universities*" [11].
- **Openness of additional data generated:** You should try to ensure that new data you create is made available for others to reuse (which might include validating or repudiating your methodology). As an example the post on JISCMail usage statistics for DCMI lists [12] which required manual collection of data, stored the data in a publicly readable Google Spreadsheet [13].
- **Interpretation:** Once you have gathered data and published the analysis you may also wish to provide an interpretation of the findings and discuss the implications. It should be noted that when interpreting findings based on data associated with use of innovative services you should be careful of misinterpreting the findings. There may be particular temptations to do this when the evidence suggests that one's own services are highly rated.
- **Encourage feedback:** In order to minimise the risks of misinterpretation of the findings you should encourage feedback and discussion.
- **Publish corrections:** If your findings or interpretations are shown to be incorrect you should publish a correction.

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