

Topic 4

Institutional Repository Success Is Dependent Upon Mandates

Institutional Repositories: The Great Debate

Affirmative Argument

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The institutional repository (IR) movement is an outgrowth of two movements that preceded it:

1. Open Archives Initiative (OAI) [1], which designed the OAI Protocol for Metadata Harvesting in order to make all (what eventually came to be called) institutional repositories interoperable – so their distributed local contents could be treated as if they were all in one global repository
2. Open Access (OA) [2] movement, which defined the primary target contents of IRs within academic institutions (refereed research journal articles) and the fundamental reason for depositing them (to make research freely accessible to all would-be users online so as to maximize research uptake, usage and impact)

There are, of course, many other kinds of things one may wish to deposit in IRs (such as unrefereed drafts, courseware, data, multimedia or software), and there are similar repositories associated with different types of institutions besides those of higher education. However, that said, if IRs

Negative Argument

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would like to approach this problem by first re-stating it. If we deconstruct the assertion in the topic, it has three components: *success*, *dependent* and *mandates*. How might these three concepts be defined in this context?

Although the term *institutional repository* itself is a concept to consider in the topic statement, this response accepts the view that the scope of an institutional repository varies by organization and is whatever the organization determines it to be [14].

What does *success* mean for an institutional repository? Defining success – or success metrics – is a precursor to measuring success. Indicators of success for an institutional repository might include the following:

- **Submissions**

- *Number of submissions* – a high number of submissions (i.e., digital content that is contributed to the institutional repository by its creator or producer)
- *Frequency of submissions* – the occurrence of submissions is continuous over time and/or there are increasing submissions from recurring producers
- *Type of submitter* – broad representation of constituents (e.g., this might mean that faculty at all levels – staff, graduate students and undergraduate students – in most or all departments submit content)
- *Participation of key stakeholders* – for example, submissions by senior faculty or documentable support from institutional or other funders of the institutional repository

HARNAD, continued

Affirmative, from page 27

in higher education are to be successful in what was and still ought to be their main *raison d'être*, then they need to capture their target contents: their own institutional refereed research journal article output. The measure of that success is accordingly *the proportion of their faculty's annual journal article output being deposited in the IR*.

The global baseline value for this deposit rate is about 15% according to various estimates, such as Bjork et al (2008) [3]. Institutional repositories within higher education can only be counted as successes if they are ingesting a significantly higher percentage of their institution's scholarly output, approaching 100%, rather than languishing at the global baseline.

Thanks to large international, pan-disciplinary surveys conducted by Alma Swan and her associates [4], we know that academic authors are favorable to open access, but most will not self-archive until and unless their institutions and/or their funders mandate that they do so. If it is indeed mandated, however, 95% of authors report that they will comply – over 80% of them saying they will do so willingly.

Does actual behavior conform to the self-predictions in these surveys? Although their number is growing rapidly, IRs are indeed nearly empty, languishing at or below the 15% rate for OA's primary target content: refereed journal articles. There are exceptions, however, namely, the IRs of those institutions that have adopted a deposit mandate (currently about 30 institutions [5]).

Arthur Sale [6] compared the deposit rates of three comparable Australian universities, (a) one with only an IR, (b) one with an IR plus encouragement and help in depositing, provided by library staff and (c) one with an IR, encouragement/help *plus a self-archiving mandate*. Their

MCGOVERN, continued

Negative, from page 27

■ Use

- *Number of users* – many users of the institutional repository, both new and recurring
- *Type of content used* – use of the majority of the content in the institutional repository rather than use of only a small portion
- *Nature of use* – content in the institutional repository is routinely cited in reports and publications

■ Support

- *Constituent support* – depositors and users express satisfaction with the institutional repository.
- *Financial support* – the institution provides ongoing, and preferably increasing, support.
- *Technical support* – there is adequate support for and interest in the development and enhancement of the infrastructure, software and tools required by the institutional repository.

The above are just some of the possible metrics for success that might be considered. To demonstrate success, an organization that manages an institutional repository would have to either promote or document a perception within the institution that an institutional repository is successful or establish a means to define and measure the success of an institutional repository.

What does *dependent* mean in this topic statement? *Dependent* suggests that the success of the institutional repository relies upon – solely or in large part – or requires mandates. The statement does not explicitly state, but does imply, that the success of an institutional repository is solely dependent on mandates. Therefore, another way of say this would be that mandates provide the only means for achieving a successful institutional repository.

What do mandates refer to in this context? A mandate refers to the authority or the obligation to do something. An institutional repository might be the authorized or designated repository for all digital content produced by or for the institution. Creators of content that fall within the scope of the institution's responsibility (however that is defined) might be obligated to deposit content they create or produce in the institutional repository. The latter is more likely to affect the success of the institutional repository, although the designation of an institutional repository should imply the commitment of resources to maintain it.

HARNAD, continued

Affirmative, from page 28

deposit rates were, respectively, 15%, 30% and close to 100% (within two years of adoption of the mandate).

Arthur Sale's findings confirm in Australia what surveyed researchers from a wide array of disciplines have repeatedly said in their own self-reports worldwide: They will only self-archive if required to do so. For two years, the National Institutes of Health (NIH) merely encouraged deposit and elicited a deposit rate below the global baseline (< 4%). But with mandated deposit the deposit rate has risen to over 60% and is rapidly climbing toward full compliance. (About 35 other funders have likewise mandated OA self-archiving.)

Why does deposit have to be mandated in order to reach high levels of deposit, despite the many demonstrated benefits of OA self-archiving, foremost among them being a significant increase in research usage and impact [7]? There are at least 34 reasons [8], all of them spurious and easily corrected, but sufficient to keep authors' fingers in a state of Zeno's Paralysis [9], rather than doing the few keystrokes [10] it takes to deposit each article. Faculty appear very responsive, however, to mandates from their institutions and/or funders along with a little encouragement and assistance. The two foremost reasons for Zeno's Paralysis are ergonomic and legal worries.

First, authors are afraid self-archiving might prove time-consuming to deposit the papers but once a mandate gets their fingers moving, they discover it takes less than 10 minutes to deposit a paper – a minute fraction of the keystrokes it took to write it (let alone conduct the research on which it was based). To the second worry, authors are also concerned that if they self-archive they might either be breaking the law or putting publication in their journal of choice at risk. Yet 97% of journals have already given their

MCGOVERN, continued

Negative, from page 28

There are different types of mandates that might have an impact on an institutional repository: a deposit mandate, as discussed in the preceding paragraph; a preservation mandate that might require an organization to provide ongoing access over time to content deposited in an institutional repository, for example; or a confidentiality mandate, requiring an organization to adhere to a range of access control requirements regarding digital content for which it is responsible. For many institutional repositories, there may be the expectation that the content will be preserved without explicit commitment by the institution to do so.

Restating the Topic Statement

Having examined these core concepts in the original statement, we can restate it for consideration in this context:

The obligation for content creators, especially within a sponsoring organization, to deposit content is the prerequisite for the establishment of a well-populated and widely-used institutional repository.

With this understanding of the statement, there are several aspects to discuss, especially regarding the concept of mandates.

Case against the Topic Statement

Preference for carrots. Studies are beginning to show that other factors – for example, incentives, peer pressure, positive outcomes (e.g., increased citations for the content) – may contribute more to success than the stick (mandates). See, for example, the results of a study that looked at carrots (such as value-added services for users, promotional plans or financial incentives) and sticks for institutional repositories [15].

Implications of mandates. Mandates may be difficult and potentially costly to promulgate and enforce. In practice, staff and other resources might have to be used to ensure that the mandate is enforced. Determining the content that should be submitted to an institutional repository may itself be a challenging task. Accomplishing this task may include determining who is affected by the mandate based on the nature and terms of their affiliation with the institution, then determining what content they produce falls within the scope of the mandate. There may be challenges in determining that the whole of the scope of expected content has been submitted depending on the type of persistent identifiers used, if these devices are in place for all of the relevant content types.

HARNAD, continued

Affirmative, from page 29

assent to some form of immediate open access self-archiving, 63% for the final refereed, accepted draft [11]. Moreover, a deposit mandate only requires immediate deposit [12] in the IR, not necessarily making the deposit openly accessible immediately.

If an academic institution stipulates that the procedure for submitting refereed journal articles for annual performance review is for faculty members to deposit them in the institution's IR, that requirement immediately makes the few minutes worth of work well worthwhile – doubly so given that open access is also likely to increase their citation impact, another factor taken into account in performance reviews.

For the minority of articles published in journals that have not yet endorsed authors making their deposits immediately open access, they can be deposited as closed access, so that only their metadata are accessible web-wide. Institutional repositories have an “email eprint request” button [13] that will allow would-be users to request a single eprint with one click and the author to fulfill the request with one click. None of this, however, is possible without universal IR deposit mandates. Without them, IRs will continue to languish near-empty, as most them are now. Hence institutional repository success is dependent upon mandates. ■

MCGOVERN, continued

Negative, from page 29

Resistance to mandates. Some content creators may not accept the mandate – that is, may not believe the institution has the authority to require that their content be deposited. Based on responses from repository managers who have attended the Digital Preservation Management workshops, for example, some organizations intentionally do not call their implementation an institutional repository to avoid the problem of defining what the “institutional” portion of the term *institutional repository* includes.

Unfunded mandates. Mandates can be difficult to sustain in the absence of dedicated funding from the institution for which it is implemented. The institution effectively commits to the idea rather than the reality of having the repository. A lack of funding may make it difficult to justify continuing to maintain an institutional repository, especially in difficult financial times.

Competing mandates. In addition, if depositors are allowed to deposit content that does not have a known, feasible or affordable preservation strategy (for example, new types of or complex forms of digital content) and there is an expectation that content will be accessible to depositors and other users over time, this practice could challenge the ultimate success of the institutional repository. Preservation issues regarding institutional repositories are further considered in a forthcoming article [16] in a special issue on institutional repositories.

Re-stating the Topic Statement Again

Considering these factors, the original statement might be again restated:

Success for an institutional repository should be explicitly defined (qualified or quantified) to reflect its organizational context; then appropriate incentives should be determined to achieve what should be the inherent mandate of institutional repositories: to capture (and preserve) designated content to optimize the value and impact of an organization's digital assets (designated digital content) over time.

Mandates alone – or possibly at all – are not the determining factor in the success of institutional repositories. ■

Resources Mentioned in the Topic 4 Debate

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