

ERIC:

How IES is Increasing Access to Full Text, Peer Reviewed Education Research



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Hi. My name is Erin Pollard and I am the Project Officer for ERIC, in the Institute of Education Sciences. IES is the independent research arm of the U.S. Department of Education. Today I am going to talk to you about how IES is increasing access to full text, peer reviewed research through ERIC.

Overview

- Background
- ERIC circa 2012
- Reinventing ERIC
 - New platform
 - New website
 - New selection policy
 - New authorization agreements
- Incorporating Open Access
- Next Steps

Today we are going to talk about IES completely reinvented ERIC. I am going to begin by giving you a background of what ERIC is and where it sits within the Department of Education. I am then going to discuss how we completely reinvented ERIC, from a new website, to the content that goes inside of ERIC. In the reinvention process, we implemented new open access language and I want to share some lessons that we learned in that process. Finally, I am going to conclude with some exciting projects that we are working on.

ERIC Circa 2012

The screenshot shows the ERIC website interface. At the top, there is a navigation bar with links for 'Submit Content', 'Contact Us', and 'Help'. Below this is the ERIC logo and 'Education Resources Information Center'. A secondary navigation bar includes 'Home', 'Search ERIC', 'Our Collection', 'Thesaurus', 'About Us', and 'My ERIC'. Social media icons for Facebook, Twitter, and YouTube are also present.

The main content area is divided into several sections:

- Search ERIC Collection:** A search box with 'Search Term(s):' and 'Search in:' dropdown menus. The 'Search in:' menu is set to 'Keywords (all fields)'. A 'Search' button is below. Links for 'Advanced Search', 'Thesaurus', and 'Help' are to the right. Below the search box, it says 'Records added in the last month: 4559'.
- Sources Added May through August 2011:** A section with a '>> Learn More' link and a small icon.
- About Our Collection:**
 - What's in the ERIC Collection:** Bibliographic records of education literature, plus a growing collection of full text.
 - Journal List:** Alphabetical list covering 1966 to the present.
 - Non-Journal Source List:** Alphabetical list covering non-journal sources.
 - RSS Feeds:** Subscribe to high-interest content.
- ERIC Information:**
 - For Publishers:** Discover the benefits of indexing education-related materials in ERIC. Learn how your titles can be included.
 - For Authors:** Find out how individuals who hold copyright to their works can contribute papers, reports, and other materials to ERIC.
 - For Librarians:** Access information to support site linking, training, microfiche management, and more.
 - For Licensors:** Get information on licensing the ERIC Database and Thesaurus.
- More About ERIC:**
 - ERIC Microfiche Digitization:** Help ERIC expand online access to documents currently available only in microfiche.
 - Support and Training Materials:** Learn how to search ERIC, use My ERIC, and get answers to our most frequently asked questions. Links for 'Help', 'Tutorials', and 'FAQs' are provided.

At the bottom right, there is a 'Find ERIC on...' section with icons for Facebook, Twitter, and YouTube. The footer contains links for 'Copyright' and 'Policy Statements'.

In 2012, ERIC had a very functional website, that was very similar to the website that it launched in 2004. It was a great website for librarians and power searchers who had been trained in scholarly databases and was often thought of as a model of how to build a scholarly database.

ERIC Circa 2012

- In July 2012 ERIC allowed commercial search engines to search ERIC's full text.
 - ERIC did not have the ability to make its PDFs searchable in house
 - Most of ERIC's users come from a commercial search engine, so this would improve their ability to find information
 - This would greatly improve the usability of ERIC
- ERIC is highly ranked in search results
- Once commercial search engines indexed ERIC's full text, people could Google themselves. If their names appeared in ERIC, it would be one of the first results show

In early 2012, ERIC had been approached by commercial search engines for permission to index our full text. At this time, ERIC allowed search engines to "crawl" our metadata, but did not give permission to search the full text. We thought this would be a great idea and would really improve the functionality of the site. We did not have the resources to build this function on the ERIC website— it would have been taken a lot of time and resources to modify the existing ERIC contract to serve this function. Because we knew many users were coming to us through commercial search engines anyway, we thought this was a win-win. We granted permission for search engines to index our full text and then about 2 weeks later we ran into problems. ERIC is highly ranked in Google, so when people Googled themselves, their old papers would turn up in ERIC. This is a good thing. But if it is an old paper they wrote for school and it had their student ID number, the Google result would be their name and their ID number...

ERIC Circa 2012

- Types of places PII was found:
 - Graduate theses
 - Grant reports
 - Forms
 - Resumes
- Some PII were examples:
 - John Doe, 123-45-6789
 - Mary Smith, 111-11-1111
- Many (600+) were real

Prior to the year 2000, student ID numbers were often Social Security numbers. So clearly this was a problem. ERIC cannot post individual's Social Security Numbers online. So we had to remove all 400,000+ full text documents from our collection. For more information on how we solved this problem, see here:

http://eric.ed.gov/pdf/ERIC_PDF_Restoration_Webinar.pdf

ERIC Circa 2012

- With PII in the system, access to full text documents was temporarily disabled
- ERIC (or really Erin) answered over 10,000 user emails.

Having to remove all of the full text in the collection was not something that was a popular decision or something we wanted to do. Users expected their full text (and we wanted to provide it!).

We asked users to email us any documents that they wanted returned to ERIC, so we could prioritize them for return into ERIC. We wanted to get the most used documents in ERIC first.

Because this involved PII, government staff had to handle the response, and I was the only federal employee working on ERIC. As a result, I ended up answering over 10,000 user emails. While I was only looking for the document number (that was all we asked for), many users also emailed us why they wanted their documents– the emails often read like “Dear ERIC, I am Sally Jones, a freshman in Dr. Simon’s ED 101 class and I would like ED456543, a masters thesis from Montclair State from the 1970s, on my paper on current teaching practices”. I naturally started reading some of these emails.

In the spirit of making lemonade out of lemons, this ended up being a wonderful opportunity to gather user feedback.

What we learned from users

- Many users were trying to access questionable sources
- Most of the users that contacted us were millennials/undergraduates
 - Got to us through Google
 - Overusing the advanced search
 - Not going through their academic librarians– they were doing searches themselves

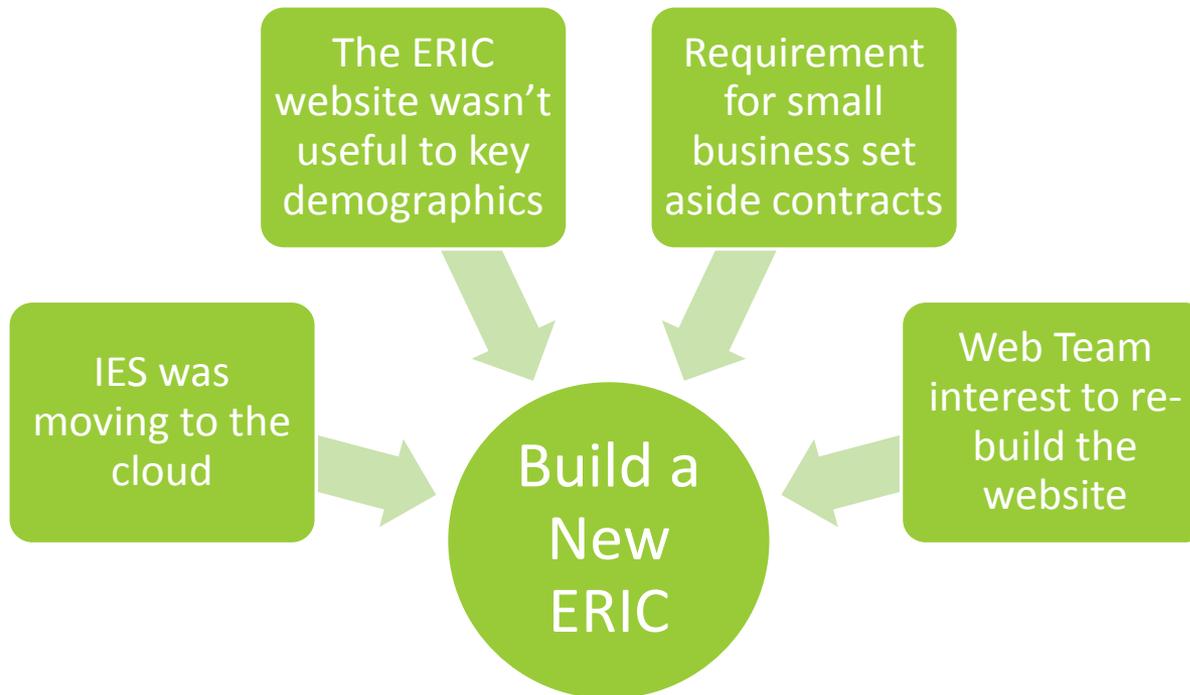
We realized what an opportunity this was to get user feedback to realize how people use ERIC. This wasn't a scientific sample, but it was a large sample of antidotes that began to paint a picture.

What I learned was that many of our users were college freshman or first year masters of education students. They were millennials and were accessing ERIC through Google to try to get research materials for their classes. When they got to ERIC, the some of the material that they were accessing was probably not what they were looking for. This material should absolutely be in ERIC, but given what they wrote in their email, I was positive that we had much better, more relevant material that would help them. It wasn't my role to tell them how to do their work– I was simply trying to restore as many documents as quickly as possible-- but I did find the pattern interesting.

I ended up having extended conversations with a few users who followed up on my initial email response. In talking to them, they confirmed that they got to ERIC through Google. When they landed on the ERIC page, they tried using the advanced search, but were not getting as good of results as they got from Google. These weren't necessarily "bad searchers". They had an excellent search technique of searching Google for what they were looking for and limiting the site to ERIC.ED.GOV. They were using modern search techniques to search ERIC and were finding that our search engine wasn't designed for that functionality.

We also learned that these users did not use their academic librarians to learn how to user ERIC– they expected to be able to use the site without formal training.

ERIC Circa 2012



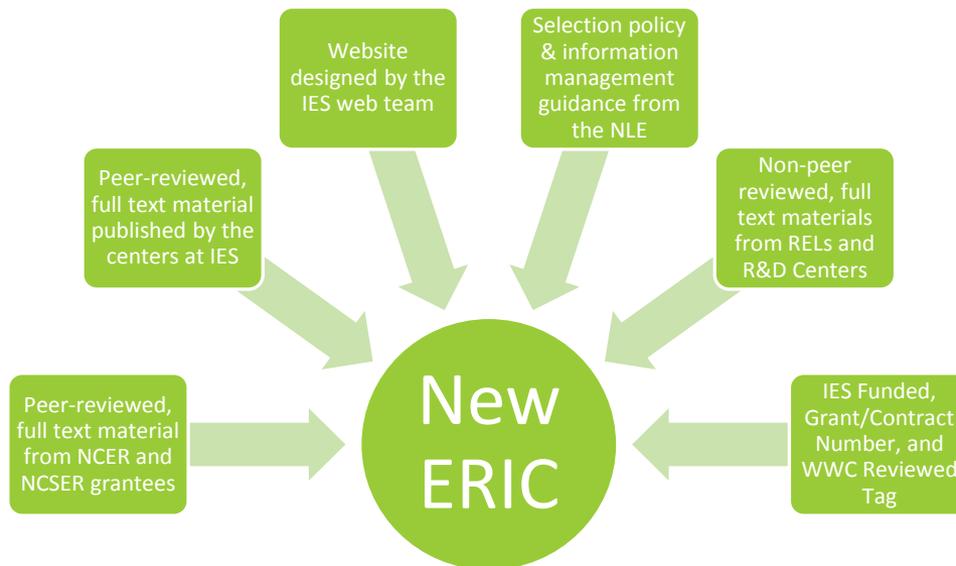
At the same time, IES was transitioning to a “cloud” server, which would allow us to host ies.ed.gov and nces.ed.gov for a lot cheaper. At that time, ERIC was hosted on contractor servers, but once IES was ‘on the cloud’ we could host the site on the IES servers and save taxpayer money while doing so.

It was also an administration priority to award new contracts to small businesses. ERIC was a good candidate to be hosted by a small business if the website especially if IES could host the website on IES servers,

Finally, we had the interest in house to re-build the website. The IES web team had a contract in place that would allow us to build a new website that could work on the new server. The site would be responsive to users needs and could be easily maintained. The costs to build the website were already factored into the web team’s contract, so this would not cost ERIC any money and would allow for a much more flexible design process than having the ERIC contract manage the process.

The choice became clear– we could have a brand new website on faster servers for less money. The new site would be more useful to key users. This seemed like the most logical approach.

Making ERIC an IES Investment



In rebuilding the site, we wanted to leverage IES' resources and highlight ERIC as an IES investment. We tapped expertise across the Institute to make ERIC a great resource for researchers. We used our web team to re-design the site and made it a priority to have ERIC index IES materials— whether it is the peer-reviewed materials published by IES, the peer-reviewed journal articles written by IES grantees that are submitted under public access requirements, and non peer-reviewed, valuable resources from the RELs and the R&D Centers.

We then tapped the information management expertise in the NLE to help draft a selection policy that would increase the amount of rigorous and high quality material in ERIC.

Finally, we figured out ways to cross-promote IES and ERIC. We added in fields in ERIC that would indicate in a study had been reviewed by the What Works Clearinghouse (and what its rating was), whether it has been cited in an IES Reference list, if the work was funded by IES, and what the grant or contract number that funded the publication was.

New ERIC



So once we had the vision to rebuild ERIC, we took a three phase approach. First, we launched the new website. Then we wrote a new selection policy to guide what types of materials would go into ERIC going forward. We then worked on getting new content into ERIC.

New ERIC Website



Peer reviewed only Full text available on ERIC

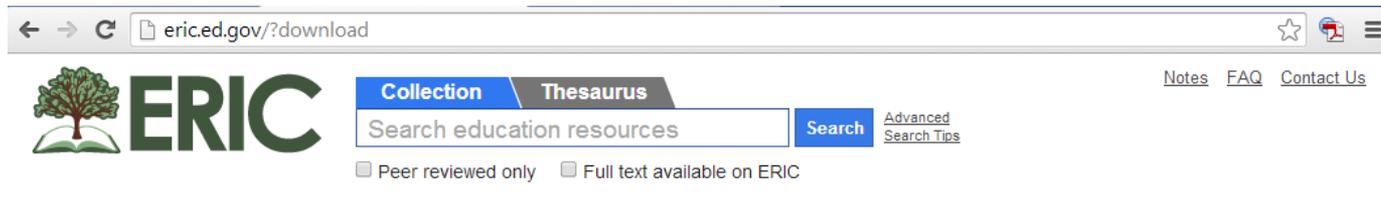
So on day one– exactly 1 year after the PII incident that caused us to suspend the availability of full text– we launched a new website. This is what it looked like on Day 1. Many people compared it to Google and we took that as a complement. That is how our users were using ERIC and we wanted a website that our users could use and use well.

The New ERIC

- https://www.youtube.com/channel/UC5dqbm1sX7iMvcbAX_2lufg

Now we are going to break to watch a video that we put together on how the ERIC website works and how our search logic works differently that traditional academic search engines.

Downloads



Downloads

The ERIC thesaurus and ERIC database are available for use by the general public. Please see our [copyright policy](#) for more information on acceptable use.

Thesaurus

This file will be updated when changes to the thesaurus are made. The next scheduled Thesaurus update is scheduled for 2015.

[Download ERIC Thesaurus](#)

Database

A file with new records will be added monthly. At the start of each calendar year a new master file will be available to download. This will incorporate any changes or corrections to the existing files. The next scheduled annual update is January 2015.

[Download 2014 Apr](#)
[Download 2014 Mar](#)

During this time we also changed our policy of licensing out data for vendors to use. Prior to this website redesign, we would allow users and vendors to apply for a license to use ERIC's data for their own purposes. This was an expensive and time consuming process... especially because given the administration's efforts to make government data freely available to the people. It is the tax payer's data and should be made available without a license.

What we did was ended all of our licenses and instead put all of ERIC's metadata on our website for users to download, free of cost and without restriction. We update the files monthly— normally around the 15th of every month . Anyone who wants to use our data can download it here. So while our website is updated weekly, the files that vendors use will be roughly a month old.

New ERIC



So this covers the new website, now we are going to go into the new Selection Policy and how we worked to make sure that the content that went into ERIC met our vision.

Why the new Selection Policy?

- Increase selectivity of new resources in ERIC to provide searchers with the very best education research articles and reports.
- Enable ERIC to bypass less relevant resources and focus on the most important education literature without incurring a backlog of material.
- Ensure the best use of taxpayer dollars—we will still be indexing 4,000 records a month, but want to ensure that those records are meaningful additions to the collection.

We wrote a new selection policy that was applied for all work that went into ERIC from January 2014 onward. We are not applying the policy retroactively to anything that already existed in ERIC. Nothing will be removed from the collection.

In drafting this policy we wanted to keep ERIC's pace of indexing to be about the same as it was in the past— 4000 records a month—but to shift the focus slightly. We are now focusing on getting material into the collection quickly, so there is not an unnecessary delay between when an article is released and when it is available to you.

We are also making a shift in quality, we want to make sure what we are indexing is the highest quality educational research and a prudent use of taxpayer dollars.

Goals of the New Selection Policy

1. Assure each approved source is relevant to one or more of the topic areas in the IES authorizing legislation and is education research.
 - Research includes original presentations of education work or study, such as data and/or empirical analysis; literature reviews or summaries of a field; methodological work; presentations or critiques of theories; or logic models that can guide practice.

As we set out on this process, we at IES had four overarching goals. The first was to make sure that the articles that we included in ERIC were education research and were on one of the topics we were required to cover by law. Topic areas include the 16 topics covered by the former ERIC Clearinghouses as well as closing the achievement gap, and education practices that improve academic achievement and promote learning.

Below is our definition of research and this does mark an important shift in the ERIC collection. We are no longer indexing just articles on education, but they have to be research. This meant we lost some great sources that were education related, but not research. However, we gained some truly fantastic research in return, much of it with full text access.

Goals of the New Selection Policy

2. Increase the number of rigorous and relevant non- peer reviewed, full-text material
- Sources include policy organizations, institutional repositories, research organizations, state and district research offices, and technical assistance providers.
 - Materials considered rigorous have undergone a review process and present a method and a scholarly approach that is reasonable and sound to the field.
 - Materials considered relevant have demonstrable bearing on the field of education.

Our second goal is to increase the amount of full text documents that is not peer reviewed. We want to ensure that this material is rigorous and relevant education research. For the most part, these sources would have gone through a considerable review process, but it might not be the kind that meets the threshold of peer review.

Some examples of these documents would be think tank pieces, white papers, reports from school district research offices, and work published by federal technical assistance providers. We are currently indexing some of those, but we would like to increase the amount of material like this.

One interesting observation in doing this is that a lot of these documents are marked as “not peer reviewed” because we do not assign peer review status to non-journal sources. However, in our review process, it was clear that the quality of the non-journal sources was often just as good, if not better, than the peer reviewed journals. Our non-journal sources are rigorous and relevant research, just like our journal sources.

Goals of the New Selection Policy

3. Limit citation-only indexing to those materials that are peer reviewed or are of substantial rigor and relevance.
4. Increase the number of peer-reviewed, full-text materials in ERIC.

Third, we would like to limit the citation only indexing, so the material without full text, to only those resources that are peer reviewed or are of substantial rigor and relevance. If we cannot provide full text access, we want to ensure that the citation alone will be useful to users conducting research.

Finally, and in some ways our most exciting goal, is to increase the number of peer-reviewed, full text documents. We plan to do this through two ways– first, there is an increase in open access journals that we will try to index. Second, there are a new series of federal requirements that require all federal grantees who are funded by research dollars to publish their final, peer-reviewed manuscripts in depositories like ERIC

Journals and Non-Journals List



ERIC

Collection

Thesaurus

Search education resources

Search

[Advanced Search Tips](#)

[Notes](#) [FAQ](#) [Contact Us](#)

Peer reviewed only Full text available on ERIC

ERIC indexes a wide variety of journal sources. The coverage of an approved journal source is determined by an examination of three to five current issues during the source review process. A journal may be switched between being comprehensively, selectively, or occasionally indexed at any time. Source coverage is defined as follows:

- **Comprehensively indexed** journals contain an average of 80% or more education-related articles; ERIC creates a bibliographic record for all articles in every acquired issue.
- **Selectively indexed** journals contain an average of 50-79% education-related articles and are critical to topic area coverage; ERIC applies a manual article-by-article selection process and indexes only the articles that conform to the standard and criteria outlined in the [selection policy](#).
- **Occasionally indexed** journals contain an average of 25-49% education-related articles and are critical to topic area coverage; ERIC applies a manual article-by-article selection process and indexes only the articles that conform to the standard and criteria outlined in the [selection policy](#).

As of April 2014, the journals currently indexed in ERIC are listed below. Click on the letter to go to the list of sources from each source:

[A](#) | [B](#) | [C](#) | [D](#) | [E](#) | [F](#) | [G](#) | [H](#) | [I](#) | [J](#) | [K](#) | [L](#) | [M](#) | [N](#) | [O](#) | [P](#) | [Q](#) | [R](#) |

A

[AASA Journal of Scholarship & Practice](#)
[About Campus](#)
[Academic Questions](#)
[ACM Transactions on Computing Education](#)
[Action in Teacher Education](#)
[Action Learning: Research and Practice](#)
[Action, Criticism, and Theory for Music Education](#)
[Active Learning in Higher Education](#)
[Adult Education Quarterly: A Journal of Research and Theory](#)
[Adult Learner: The Irish Journal of Adult and Community Education](#)
[Adult Learning](#)

Once the selection policy was complete, we went through every journal and non-journal source individually (and there are a lot of them!) to see if it fit the new selection policy. Many did, but some did not. We then contacted each publisher to let them know about the decision and posted the list of approved sources on the website.

We will revise this list every 6 months and do a complete re-analysis every 5 years. At the 6 month mark we will review new sources for consideration, so if there is a source you think we should add, please send it to us!

We will also remove any sources that are no longer publishing or sending us their material.. At the 5 year mark we will go through every source again and compare it to the selection policy.

New ERIC



Once we got the new selection policy completed, we worked on getting new content into ERIC.

New Authorization Agreements

- Previous authorization agreements were between the former contractor and the publisher
- Every existing agreement needed to have an addenda added and a countersignature
- It was only logical to add in open access language at the same time
 - Only peer-reviewed journals needed this clause

We first had to amend every single agreement in ERIC to reflect that we had a new contractor. We transferred permissions to index the content from our former contractor to the U.S. Department of Education. In addition, there was a new set of federal requirements for federal grantees to provide the final, peer-reviewed manuscripts of their publicly funded work to ERIC. To ease burden on the publishers, as well as on us, we added in this clause at the same time.

Example of an authorization agreement

U. S. Department of Education
Institute of Education Sciences

Transfer of Authorization Agreement:

The previously held agreement between <<Contractor>> (LICENSEE) and <<Journal>> (LICENSOR) has now been transferred to the US Department of Education as the LICENSEE.

Modification to the agreement: Open access

Investigators funded by an ED program office that supports scientific research through grants and contracts are required to submit the electronic version of their final manuscripts upon acceptance for publication in a peer-reviewed journal or upon completion of an institution's internal peer-review process. An author's final manuscript is defined as the final version accepted for publication, and includes all modifications from the peer review process. If work subject to this requirement is published by the LICENSOR, the LICENSOR will allow ERIC to display the full text of the article, as it appears in the journal.

Yes, with no embargo

Yes, with an embargo period of 12 months (must be within 12 months of the publisher's official date of final publication.)

No, ERIC should not use the journal published article as the version of record, but use the final, peer reviewed version instead.

Please sign to indicate acceptance of this modification:

To give you an idea of the language of the agreements, this is what they look like:

Status of the authorization agreements

829 required open access modification

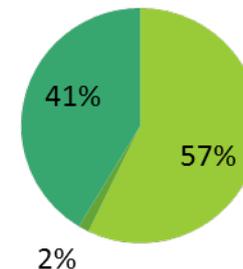
474 are signed

12 have been declined

343 have not responded or are in process

Agreement Status

- Signed
- Declined
- Not Responded on In Process



As of today, 57% of the agreements are signed– that is 474 of them. We are still working to get the other 343. Not all publishers like these requirements. We have had 12 publishers decline to be in ERIC.

Things we learned about open access

- Many smaller publishers had not heard of this requirement before
- Many organizations have quirks— having flexibility and talking through the issues are helpful
- Many publishers were expecting the policy to change during OSTP approval
- Everyone was willing to talk to us

During this time we learned a lot of things. While the large publishers were very familiar with the requirements, many new publishers were hearing about this law for the first time. They were very willing to work with us, but had questions. We ended up having lots of one on one conversations and needed to be flexible to adapt to individual publisher's needs and requirements.

Many were very worried about the impact

- Just as one bit of clarification, the open access clause in your agreement stems from new federal laws and only apply to a very small subset of articles—those which were funded by US Department of Education grantees. If an individual accepts a grant from the US Department of Education and writes an article that gets accepted into a peer reviewed journal, the author must deposit the final, peer reviewed manuscript in ERIC. The author knows to notify the publisher of this clause prior to acceptance in the journal. We are giving journals the option of having the peer reviewed manuscript appear as a second entry in ERIC or adding the journal version of the article (with branding and formatting) to your existing record. **As a sense of scale, in the past 10 years we have never had a grantee publish in your journal. While it is not to say we won't have a grantee publish with you in the future, the odds are fairly low.**

One thing that really helped was this paragraph in many of my emails– we wanted people to realize what the law was and the impact that they were going to be impacted by it. For most of our publishers most worried about the requirement, the forecasted impact is minimal. Once they realized that, they were much more willing to sign the agreements.

Was this successful?

- Reduced the budget of the program by \$14 million over 5 years (40%), while increasing the level of production
- Increased usership
- Much more positive feedback from key users

So were we successful? We think we are on the road to success. We saved taxpayers \$14 million over 5 years, increased the quality of materials in ERIC, and increased the level of production. Users seem much happier with the search and we have seen increasing number of users. While this wasn't a perfect rollout, we do consider it to be a success so far.

What's next?

- Encouraging federal grantees to submit their final, peer reviewed manuscripts to ERIC
- ERIC is producing peer-reviewed topic summaries to go on a new section focused for novice users
- Videos and webinars!

So what's next? We are hosting webinars on how to submit work to ERIC (see eric.ed.gov/?multimedia) and we are producing peer-reviewed topic summaries that are a Wikipedia like articles on ERIC. They will help guide users to the right types of materials. We are also working on several more videos and webinars in the future. It is an exciting time and there are more exciting things to come in the future!

Thank you

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