How the US Department of Education is Increasing Public Access to Federally Funded Research

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What is the Institute of Education Sciences?

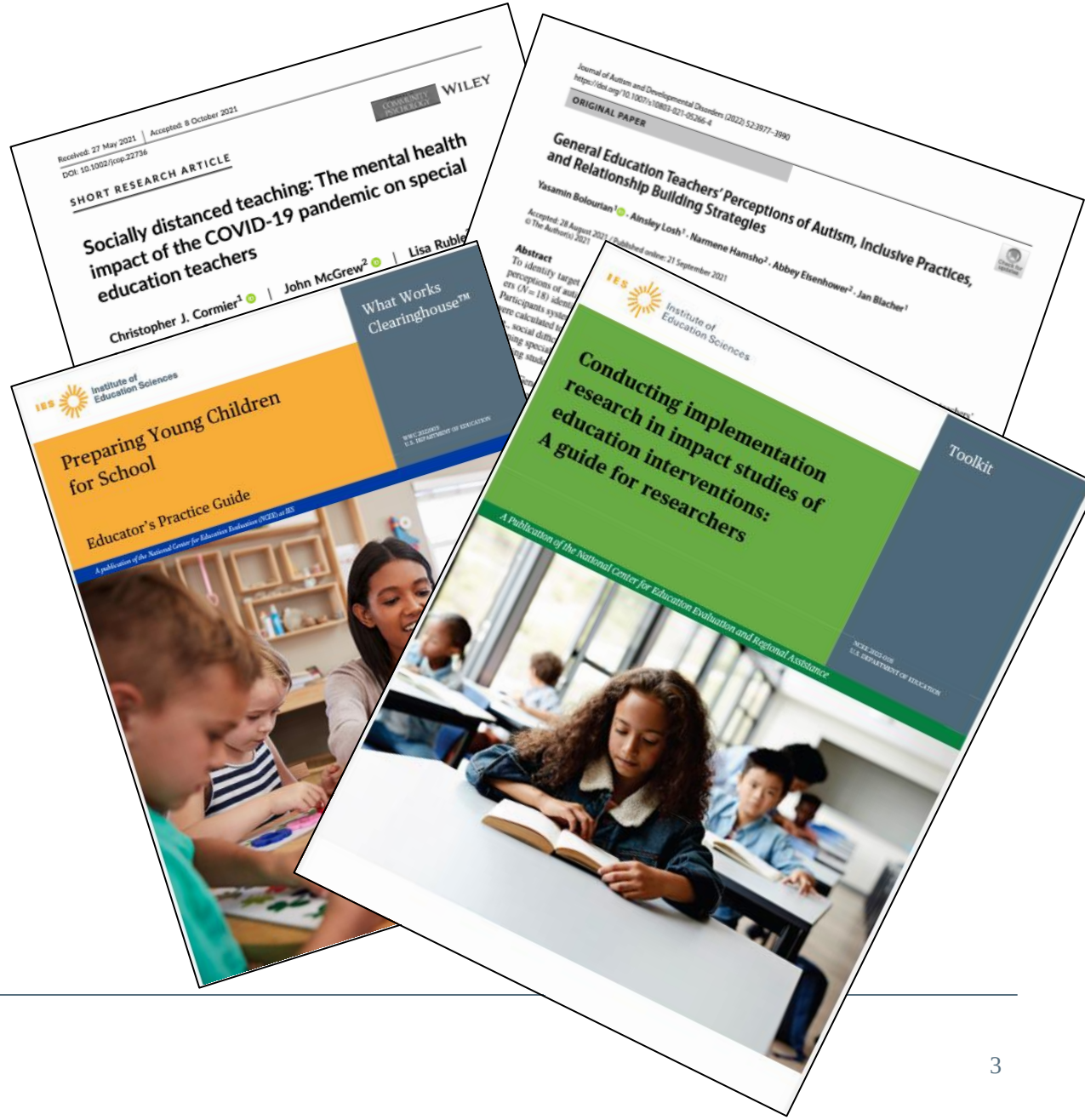
- Mission: “To provide scientific evidence on which to ground education practice and policy and to share this information in formats that are useful and accessible to educators, parents, policymakers, researchers, and the public.”

- The work of **NCES** provides the most accurate view of the condition of our nation’s education systems.
- **NCER** and **NCSER** work with researchers to discover, design, and test solutions to the most challenging problems in education.
- **NCEE** catalyzes evidence into action, conducting rigorous evaluations of federal policy and supporting educators' and policymakers' use of high-quality research.

1. We provide data that describe how well the United States is educating its students.
2. We conduct surveys and sponsor research projects to understand where education needs improvement and how these improvements might be made.
3. We fund development and rigorous testing of new approaches for improving education outcomes for all students.
4. We conduct large-scale evaluations of federal education programs and policies.
5. We provide resources to increase use of data and research in education decision making.
6. We support advancement of statistics and research through specialized training and development of methods and measures.

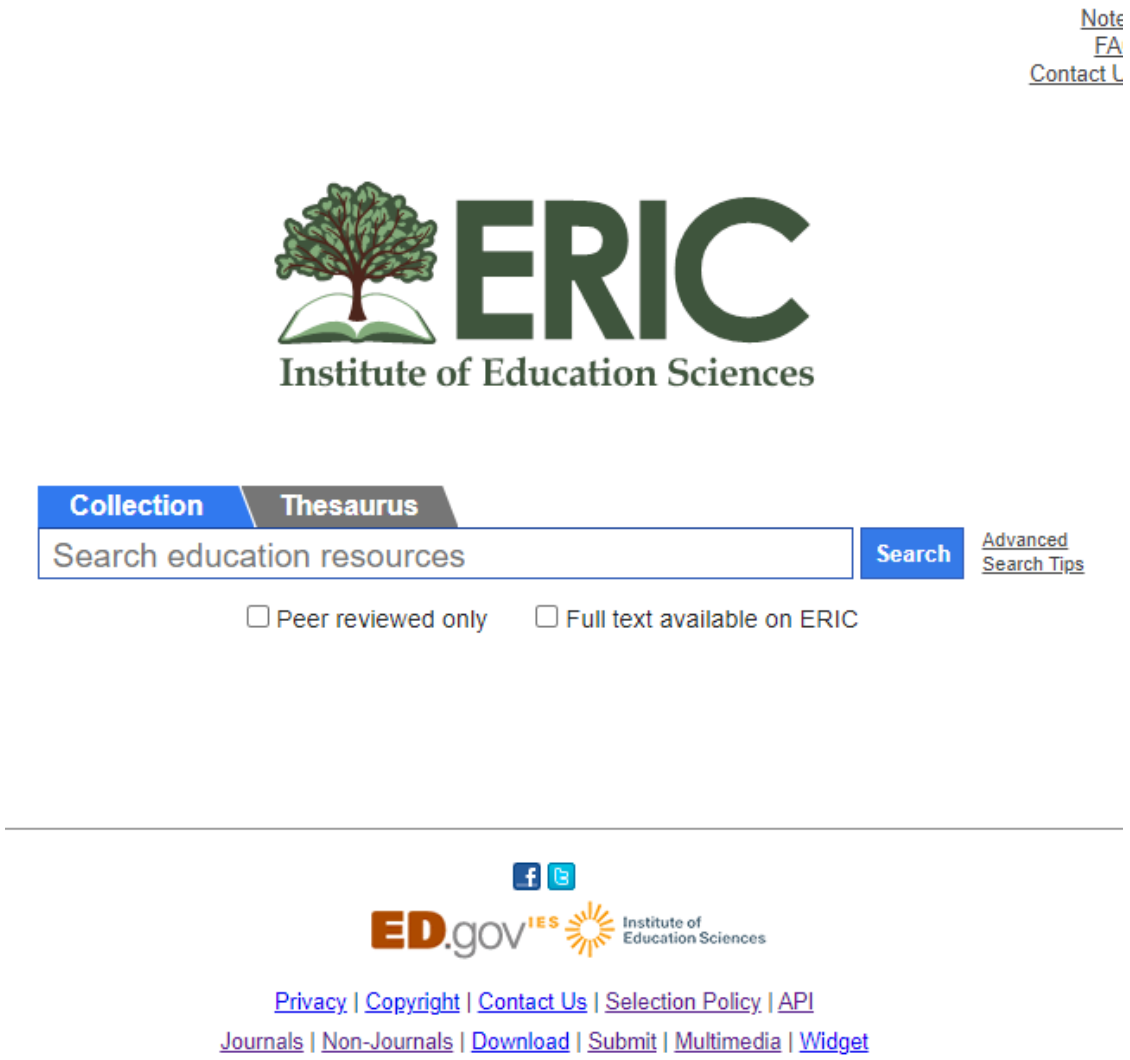
What does IES fund?

- ~$375 million annually in research
- Fund approximately 1,000 articles a year
- Approximately 160-180 grants per year
- Approximately 50 research contracts



What is ERIC?

- ERIC is a free, online database of education research
- ERIC was founded in 1964 and includes content from 1907 – present.
- The collection encompasses the following:
  - 1,070 publishers participating from 41 countries
  - 1,248 journals and 727 non-journal sources
  - 2 million total records
  - 1.2 million peer-reviewed records
  - 500k records with full text



Current Public Access Policy

- Awardees submit the electronic version of their final manuscripts to ERIC upon acceptance for publication
  - Approximately 700 journals and IES will deposit the full text of articles on behalf of the author
- ERIC makes citation of submitted studies available shortly after submission.
- ERIC makes the full text of the final manuscript is available 12 months after the publication.

Nelson Memo

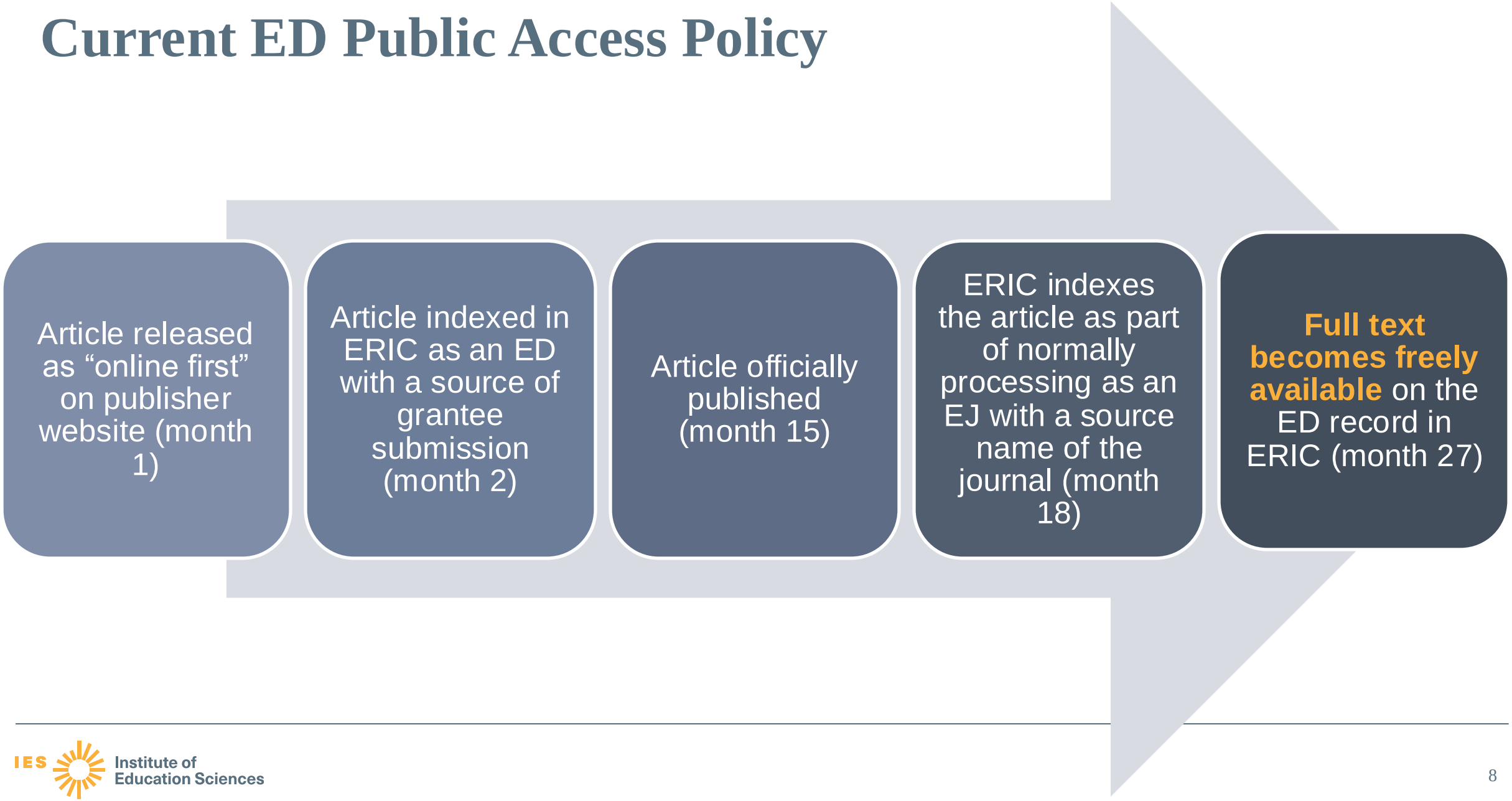
- Memo from Alondra Nelson, Deputy Assistant to the President and Deputy Director for Science and Society Performing the Duties of Director, dated August 25, 2022

- Requires “federal agencies with research and development expenditures” to update public access policies to require “all peer-reviewed scholarly publications authored or coauthored by individuals or institutions resulting from federally funded research are made freely available and publicly accessible by default in agency-designated repositories without any embargo or delay after publication.”

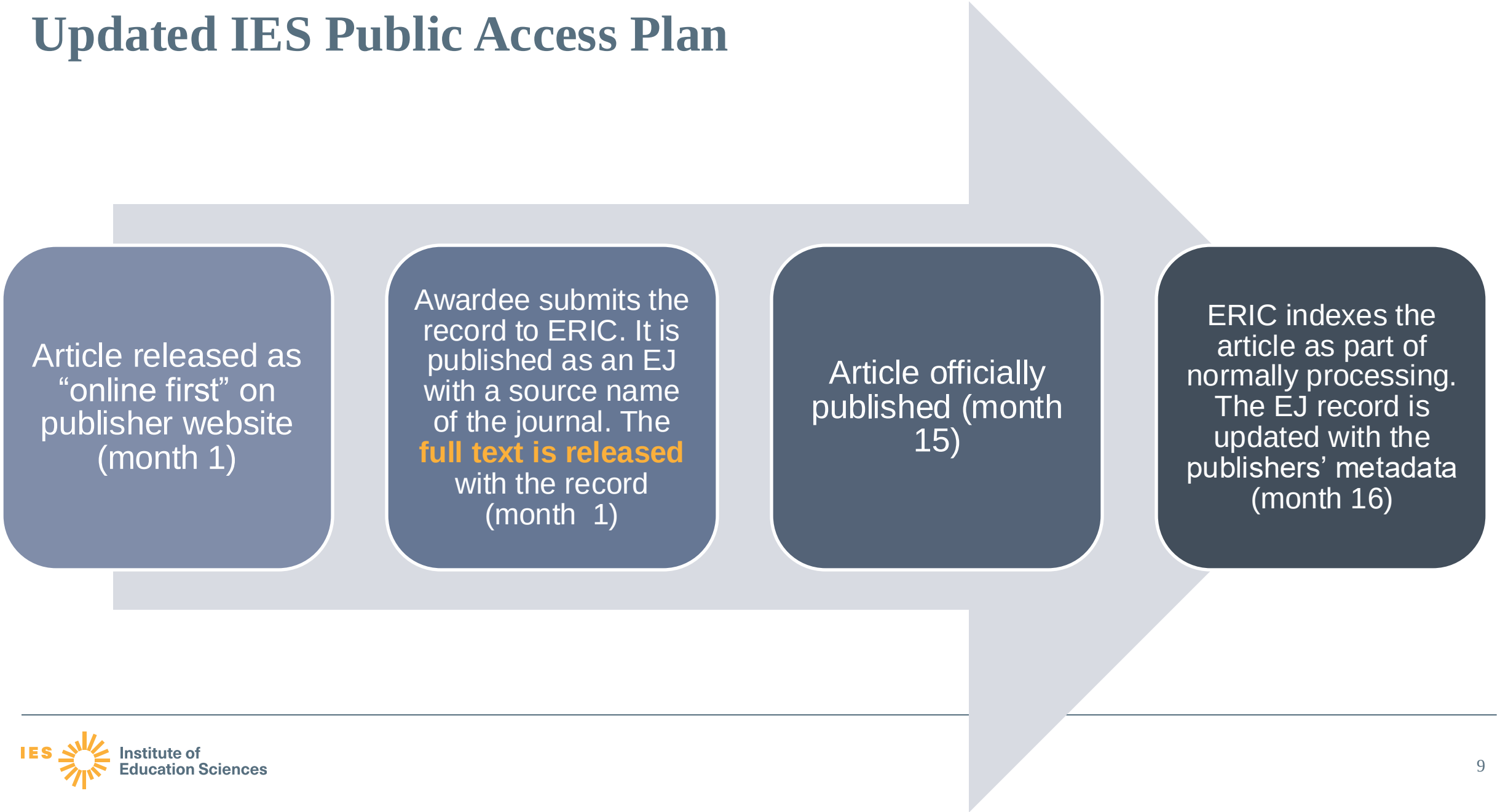
Key elements of the policy

- Work needs to be released immediately when the publisher ***releases*** it
- Publications need to be machine readable– in XML
- Publications need to be freely and publicly available by default
- Data from the study must be released at the same time as the publication

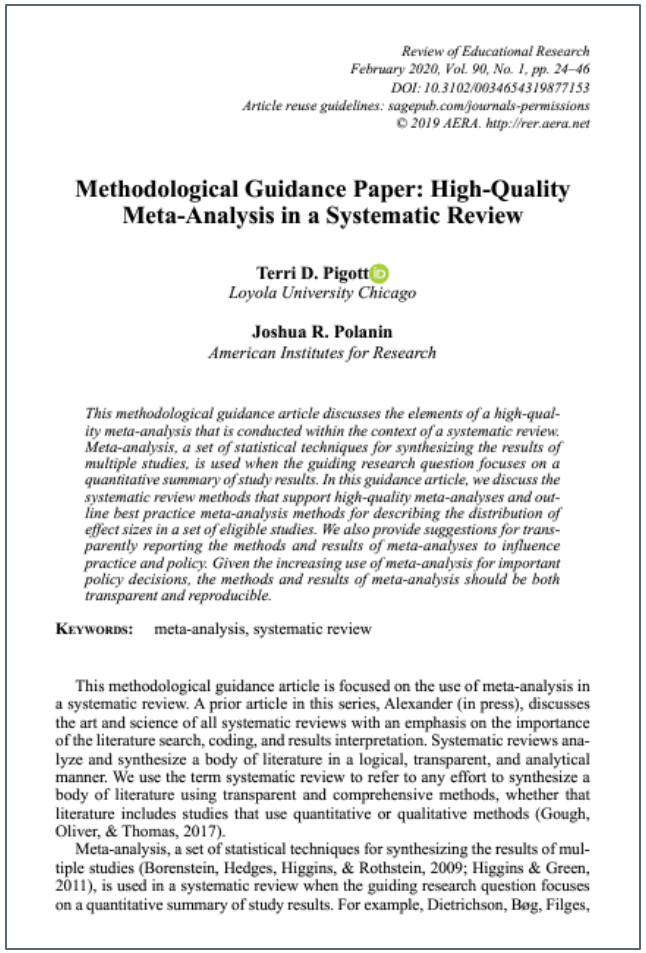
Current ED Public Access Policy



Updated IES Public Access Plan



New Format for Full Text



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Methodological Guidance Paper: High-Quality Meta-Analysis in a Systematic Review

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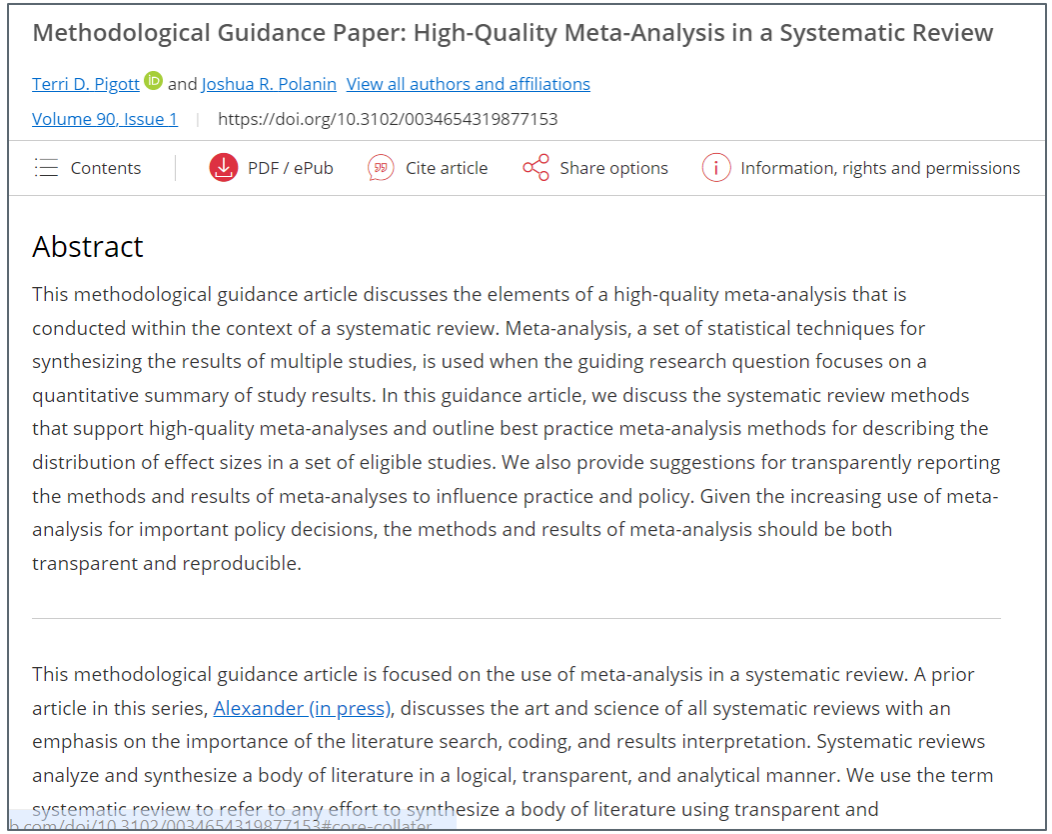
This methodological guidance article discusses the elements of a high-quality meta-analysis that is conducted within the context of a systematic review. Meta-analysis, a set of statistical techniques for synthesizing the results of multiple studies, is used when the guiding research question focuses on a quantitative summary of study results. In this guidance article, we discuss the systematic review methods that support high-quality meta-analyses and outline best practice meta-analysis methods for describing the distribution of effect sizes in a set of eligible studies. We also provide suggestions for transparently reporting the methods and results of meta-analyses to influence practice and policy. Given the increasing use of meta-analysis for important policy decisions, the methods and results of meta-analysis should be both transparent and reproducible.

Keywords: meta-analysis, systematic review

This methodological guidance article is focused on the use of meta-analysis in a systematic review. A prior article in this series, Alexander (in press), discusses the art and science of all systematic reviews with an emphasis on the importance of the literature search, coding, and results interpretation. Systematic reviews analyze and synthesize a body of literature in a logical, transparent, and analytical manner. We use the term systematic review to refer to any effort to synthesize a body of literature using transparent and comprehensive methods, whether that literature includes studies that use quantitative or qualitative methods (Gough, Oliver, & Thomas, 2017).

Meta-analysis, a set of statistical techniques for synthesizing the results of multiple studies (Borenstein, Hedges, Higgins, & Rothstein, 2009; Higgins & Green, 2011), is used in a systematic review when the guiding research question focuses on a quantitative summary of study results. For example, Dietrichson, Bøg, Filges,



Methodological Guidance Paper: High-Quality Meta-Analysis in a Systematic Review

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Abstract

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New Metadata

- ORCID iDs and author affiliation
- A DOI permalink to the publisher's record of the article
- Increased links to grant funding information
- Links to the underlying data

How Will ERIC Implement These Changes?

- Awardees will submit their work to ERIC within 5 days of it being publicly available. The package will include:
  - A Word document of the full text
  - Any underlying data or figures
  - Alternative text of images
  - A 508 compliant PDF, if available
  - Metadata needed for the ERIC record
- ERIC will create the XML file and post the record within 30 days of acceptance
- Awardees can submit a request to update the record, if needed

Can Publishers Submit on Behalf of the Awardee?

- YES!! But…
  - The publisher would need to submit the XML file and all associated metadata in an appropriate format within 5 days of making the article publicly available.
  - Currently, no publisher submits content prior to publication. This would be a shift.
  - We expect that few publishers will be able or willing to meet the requirements.

What is changing: Data

- ED expects all data collected to be made freely available and publicly accessible by default and **at the time of publication**.

- Documentation that provides all the information necessary for other researchers to use the data…must be prepared and made accessible with the data at the time of initial publication of research results **or within 5 years of award close-out, whichever occurs first**.

- If researchers believe that full data access is not possible, such as when states or districts limit access or access is limited by applicable law, they must provide a written rationale in their data management plan. Researchers should also describe how a more limited set of data can be made accessible

Additional questions?

https://eric.ed.gov
https://whatworks.ed.gov

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