

**American Educational Research Association**  
**Response to Federal Register Notice for Public Comment (December 9, 2009)**  
**Agency: Office of Science and Technology Policy (OSTP), Executive Office of the President**  
**Re: Public Access Policies for Science and Technology Funding Agencies Across the Federal Government**

As a scientific and scholarly society committed to knowledge dissemination, building cumulative knowledge, and promoting data access and data sharing, the American Educational Research Association (AERA) applauds the principles leading OSTP and the President to think through policy issues supporting the scientific enterprise and public access to knowledge. There are complexities, however, to consider in contemplating the role of the federal government and scholarly societies in these endeavors. The comments below seek to foster further examination of this issue, including the appropriate role of the federal government, from the vantage of sound research policy and optimal business models. We speak from the vantage of a research society committed to affordable, sustainable publishing and maximizing opportunities for publishing research of the highest merit irrespective of the source of its funding.

*1. How do authors, primary and secondary publishers, libraries, universities, and the federal government contribute to the development and dissemination of peer reviewed papers arising from federal funds now, and how might this change under a public access policy?*

AERA: Authors contribute a significant share of the work, and their work is vetted and significantly refined as the result of the requirements of editors and reviewers, via primarily the publisher's peer-review process. In the social and behavioral sciences, including education research, that process is highly selective and costly, as indicated by the 2009 report *The Future of Scholarly Journals Publishing among Social Science and Humanities Associations* (<http://www.nhalliance.org/news/humanities-social-science-scholarly-journal-publis.shtml>).

The American Educational Research Association (AERA) is the national scientific and scholarly society for approximately 25,000 education researchers and graduate students from across research fields and disciplines. AERA members undertake education research to address fundamental problems and inform policy and practice that relate to education across the life span and contexts of learning. Researchers in this field address all aspects of education from the processes of teaching and learning, curriculum development, and the social organization of schools to the effects of education on cognitive and social capacity, human development, workforce skills and attainment, and health and at-risk behaviors.

AERA supports the advancement of knowledge through five high-quality refereed journals and other publications, an annual meeting with approximately 14,000 attendees, and substantial professional development and training programs, among other initiatives. Throughout its programs, AERA emphasizes advancement of knowledge, high standards

for well-warranted research, and translation of research to policy and practice. AERA provides free online access to its flagship peer-reviewed journal *Educational Researcher* via the AERA website. AERA's *Research Points* links education research knowledge to the community of policy makers and is also disseminated freely in print and online.

AERA invests heavily in the selection, training, and support of its journal editors, including arranging for state-of-the-art web-based peer-review software that allows careful review of large numbers of submitting manuscripts. Like many social science journals, AERA journals accept only 5 to 10% of what is submitted to them, and typically that is only after multiple revisions. This highly selective process results in high-quality published research in our journals. Out of 105 education and education research journals, ours are ranked 1, 7, 9, 14, and 42 by *Journal Citation Reports*.

This high-quality published research is funded by the subscription fees paid by research libraries, which in turn make the research available to all their constituents. Through our publisher, we offer libraries and other subscribers a range of options to access our content, including online-only options that utilize the state-of-the-art web platform at Stanford University's HighWire Press. This platform includes tollfree reference linking within the platform and reference linking with other platforms' journals via the CrossRef consortium.

In 2007, we shifted from self publishing to an arrangement with a professional publisher (to execute the production functions on our behalf) in order to facilitate worldwide electronic access to our journal content. In subsequent years, AERA and our publisher put the decades of back content from our five journals online, a process that required significant investment. As a result of this investment, our tables of contents and abstracts are now freely accessible to anyone with Internet access, and our full-text content is searchable by anyone. In the past three years, the number of institutions worldwide with subscription access to our journals increased almost 8-fold (780%). Through our online portal, about 1,300 U.S. research institutions provide access to millions of faculty, students, and employees through market-based subscription fees.

We recognize the stake that the federal government and other grant-funding organizations hold in facilitating access to federally-funded research, and we support exploring a range of direct and indirect mechanisms for the Federal government to consider aligned with this interest. Yet, a policy that results in duplicating publishers' full-text online hosting will deplete the revenues needed to support high-quality peer review and dependable archiving, and may not be the best mechanism to maximize access. Below we propose how the federal government and publishers, including scholarly societies such as AERA, might cooperate to meet their respective goals.

*2. What characteristics of a public access policy would best accommodate the needs and interests of authors, primary and secondary publishers, libraries, universities, the federal government, users of scientific literature, and the public?*

AERA: A public access policy that duplicates scholarly society publishers' full-text online hosting will erode their ability to sustain the high-quality peer review that validates the research. A policy that requires authors to deposit full text will tend to create confusion about which manuscript is the authoritative version. Also, a policy that requires deposit of published social science research within 1 year of publication, while perhaps feasible for biomedical and some other research, would likely deprive social science publishers of the revenues needed to support high-quality peer review. (See [http://www.publishingresearch.org.uk/documents/Self-archiving\\_report.pdf](http://www.publishingresearch.org.uk/documents/Self-archiving_report.pdf).)

Nevertheless, we value the principle of early access to knowledge and below recommend an alternative open access model that involves government-publisher cooperation, as suggested in the recent *Report and Recommendations from the Scholarly Publishing Roundtable* (<http://science.house.gov/press/PRArticle.aspx?NewsID=2712>).

In order to achieve the goals of wider access to research publications, we propose an alternative model that avoids the negative effects on peer review. We propose that any federal policy allows deposit of tollfree hyperlinks leading to the authoritative version of record (VoR) on the publisher's website. As a publisher, we would be willing to provide such tollfree hyperlinks, which would take any user to the VoR without barrier. To facilitate searching on any external web platform designated by federal policy, we would also be willing to provide full-text of the article, but we would seek it to remain dark to Google and to all users, including government agencies. The full text would be live to the platform's search function, but users would be directed to the VoR. Keeping the full text dark, yet linking tollfree to the publisher website would give the both government and the public access and also support and preserve the scholarly society's model for sustaining high-quality peer review.

*3. Who are the users of peer-reviewed publications arising from federal research? How do they access and use these papers now, and how might they if these papers were more accessible? Would others use these papers if they were more accessible, and for what purpose?*

AERA: The users of the research published in our journals are generally researchers, faculty, other scientists and scholars, policy analysts, and students. They access the content either via their institution's subscription or via their membership in our organization. We believe that our published content is fully accessible to interested persons now, discoverable via Google, Bing, and other search engines, searchable on our journal websites at HighWire, and accessible via institutional and membership subscriptions, as well as pay-per-view options. We also offer each of our authors a tollfree hyperlink to their article, to be placed on the author's or their institution's website; thus, users may access our content through these free links. As stated before, our flagship journal *Educational Researcher* is openly accessible via our website.

It is unclear what other users would access our research if it were freely available to all. We and our publisher attempt to price access to our journals in a market-based way that is affordable to all who value the content. Our publisher offers pay-per-view as an option to

others. We welcome broader access to our content in such a way that does not endanger our ability to sustain peer review and reliable archiving.

*4. How best could Federal agencies enhance public access to the peer-reviewed papers that arise from their research funds? What measures could agencies use to gauge whether there is increased return on federal investment gained by expanded access?*

AERA: The best way for Federal agencies to enhance public access is to do so in a way that does not endanger the peer-review process that serves as a quality marker for those papers and that does not erode the capacity of societies such as AERA to support that process. Accepting tollfree hyperlink deposits in any online system mandated by federal policy would give the public increased access to research funded by the agencies but without endangering the peer-review process that validates that research.

Measures to gauge increased return on federal investment might include usage statistics on any online system that hosts the tollfree hyperlinks. Yet, web accesses do not adequately describe the return on investment; published research might be better measured by how much it contributes to future research and applications. Current citation metrics include the *Journal Citation Report* impact factor and the eigenfactor ([www.eigenfactor.org](http://www.eigenfactor.org)).

*5. What features does a public access policy need to have to ensure compliance?*

AERA: The best way to ensure compliance is to enlist the cooperation of research societies and scholarly publishers. NIH's compliance rate was quite low until PubMed Central developed channels of cooperation with publishers, such as the NIH Portfolio Project, whereby the publisher supplies the VoR to NIH on behalf of NIH-funded authors and NIH keeps the VoR dark until a designated date of no more than 1 year after publication.

NIH has not yet accepted publisher offers of tollfree hyperlinks, but we believe that sustaining the business model of social science publishing requires a different approach, one that involves closer cooperation between government and publishers. It is well established that an embargo period of 1 year would endanger social science publishing, but keeping material dark also causes a delay in public access to published research. Tollfree hyperlinks would circumvent the difficulties of adhering to an embargo period: They could become live at publication and would obviate the need to enforce either an embargo or a deposit.

*6. What version of the paper should be made public under a public access policy (e.g., the author's peer reviewed manuscript or the final published version)? What are the relative advantages and disadvantages to different versions of a scientific paper?*

AERA: We support distribution of only the version of record. As recommended by the Scholarly Publishing Roundtable, "access should be to ... the VoR produced and stewarded by the publisher" (page 9). Multiple versions can create confusion, among all

types of readers including the lay public. The publisher is best positioned to attest to the final authoritative version.

*7. At what point in time should peer-reviewed papers be made public via a public access policy relative to the date a publisher releases the final version? Are there empirical data to support an optimal length of time? Should the delay period be the same or vary for levels of access (e.g. final peer reviewed manuscript or final published article, access under fair use versus alternative license), for federal agencies and scientific disciplines?*

AERA: We support dissemination at the earliest possible date of final reports submitted by grantees to the federal government, and we also support access to published research immediately upon publication via tollfree hyperlinks leading to the VoR. Were there to be a mandate for full-text deposit, the deposit timeframe must be appropriate for the social sciences. The median age of cited AERA journal articles (aka, citation half life) is well over 10 years, and the business model of social science publishers, encumbered by high publishing costs per article, is predicated on this half life. A 5-year timeframe could be one that allows financial sustainability in social science. We would prefer, however, to provide tollfree hyperlinks immediately.

*8. How should peer-reviewed papers arising from federal investment be made publicly available? In what format should the data be submitted in order to make it easy to search, find, and retrieve and to make it easy for others to link to it? Are there existing digital standards for archiving and interoperability to maximize public benefit? How are these anticipated to change?*

AERA: To the extent that this question refers to peer-reviewed articles, the highly structured and searchable format of XML (eg, NLM XML DTD) allows for the most robust searching of published articles, even if the full-text XML remains dark to users. Accepting full-text XML into an online system would serve as a backup if tollfree hyperlinks became inoperative. Making metadata such as article abstracts available in an online system would inform public access without endangering market-based publishing endeavors.

To the extent that this question relates to federally funded data collected or analyzed that leads to scholarly publications, AERA values data sharing and supports access to these data (through a variety of mechanisms) that permit scholars to verify findings, test rival hypotheses, or explore interrelated questions or issues. The social science community, including education research, and federal agencies have developed procedures for doing so consonant with confidentiality and data protection. In our online journal articles, we are expanding the use of links to such data.

*9. Access demands not only availability, but also meaningful usability. How can the Federal government make its collections of peer-reviewed papers more useful to the American public? By what metrics (e.g. number of articles or visitors) should the Federal government measure success of its public access collections? What are the best examples of usability in the private sector (both domestic and international)? And, what makes*

*them exceptional? Should those who access papers be given the opportunity to comment or provide feedback?*

AERA: Usage statistics that are granular enough to distinguish abstract usage from fulltext/hyperlink usage would reveal the depth of use to a certain extent. Scholarly impact metrics such as the impact factor and the eigenfactor are useful within fields and disciplines but not to the public endeavor. Commenting/feedback features are not utilized very frequently or reliably now within social science publishing but could be useful to the government as a measure of public engagement. Such features would require additional editorial and technical oversight.

Any online system interested in usability by the lay public may wish to include technical provision for authors to upload an executive summary, lay summary, or author commentary on its site. The ability to generate usage statistics on such a summary could help measure the lay utility of federally funded research.