Roles and responsibilities

Explain how the responsibilities regarding the management of your data will be delegated. This should include time allocations, project management of technical aspects, training requirements, and contributions of non-project staff - individuals should be named where possible. Remember that those responsible for long-term decisions about your data will likely be the custodians of the repository/archive you choose to store your data. While the costs associated with your research (and the results of your research) must be specified in the Budget Justification portion of the proposal, you may want to reiterate who will be responsible for funding the management of your data. Consider the following:

- Outline the staff/organizational roles and responsibilities for implementing this data management plan.
- Who will be responsible for data management and for monitoring the data management plan?
- How will adherence to this data management plan be checked or demonstrated?
- What process is in place for transferring responsibility for the data?
- Who will have responsibility over time for decisions about the data once the original personnel are no longer available?

Type of data and format to be shared

Provide a description of the data you will collect or re-use, including the file types, dataset size, number of expected files or sets, and content. Data types could include text, spreadsheets, images, 3D models, software, audio files, video files, reports, surveys, patient records, etc. Data that underlie the findings reported in a journal article or conference paper should be deposited in accordance with the policies of the publication and according to the procedures laid out in the DMP included in the proposal that led to the award on which the research is based.

Consider the following:

- What data will be generated in the research?
- What data types will you be creating or capturing?
- How will you capture or create the data?
- If you will be using existing data, state this and include how you will obtain it.
- What is the relationship between the data you are collecting and any existing data?
- How will the data be processed?
- What quality assurance & quality control measures will you employ?
Documentation to be provided

Describe the format of your data, and think about what details (metadata) someone else would need to be able to use these files. Metadata may entail descriptions of research details such as: experiments, apparatuses, computational codes, etc. Consider these questions:

- Which file formats will you use for your data, and why?
- What form will the metadata describing/documenting your data take?
- How will you create or capture these details?
- Which metadata standards will you use and why have you chosen them? (e.g. accepted domain-local standards, widespread usage).
- What contextual details (metadata) are needed to make the data you capture or collect meaningful?

Confidentiality of data

Investigators should plan their study design and procedures to enable data access. Investigators should seek to optimize the opportunity for data sharing while working with their IRB to protect the privacy rights of study participants and confidentiality of the data.

It is the responsibility of the researchers to develop a data sharing plan that protects the rights of study participants and confidentiality of the data, as required by their IRB and state and federal laws and regulations. Data that are to be shared should be free of identifiers that would allow linkages to individuals participating in the research as well as other elements that could lead to deductive disclosure of the individual study participants.

For the Human Subjects section of the application, discuss the potential risks to research participants posed by data sharing and steps taken to address those risks. Consider these questions:

- Have you gained consent for data preservation and sharing?
- What have you done to comply with your obligations in your IRB Protocol?
- Are there ethical and privacy issues? If so, how will these be resolved?
- How will you protect the identity of participants?

Expected schedule for data sharing

Any restrictions on data sharing, such as a delay of disclosing proprietary data, should be presented. IES acknowledges that there may be issues associated with data sharing when the data collected are proprietary (e.g., when a published curriculum is being evaluated). If findings are published after the grant period has ended, grantees are still required to adhere to their Data Sharing Plan. Consider these questions:

- How long will the original data collector/creator/principal investigator retain the right to use the data before opening it up to wider use?
- Explain details of any embargo periods for political/commercial/patent reasons?
- When will you make the data available?
Method of data sharing
IES acknowledges that there are several methods to share data. These include

- The investigator taking on the responsibility for data sharing, which may involve making data available to the requestor through a variety of means, including their institutional or personal website
- Use of a data archive or data enclave. Archives can be particularly attractive for investigators concerned about a large volume of requests, vetting requests, or providing technical assistance for users seeking help with analyses. Researchers can use a data archive or enclave when datasets cannot be distributed to the general public, for example, because of participant confidentiality concerns, third-party licensing, or use agreements that prohibit redistribution.
- Use of some combination of these methods. A mixed method for data sharing (is allowed) that allows for more than one version of the dataset and provides different levels of access depending on the version.

Consider the following:

- Will you share data via a repository, handle requests directly or use another mechanism?
- If your method of sharing is with an archive, which archive/repository/database have you identified as a place to deposit data?
- What procedures does your intended long-term data storage facility have in place for preservation and backup?
- What is the long-term strategy for maintaining, curating and archiving the data?
- What metadata/documentation will be submitted alongside the data or created on deposit/transformation in order to make the data reusable?
- What related information will be deposited?
- What costs if any will your selected sharing method charge (In the budget and budget justification sections of the application, include and describe the costs of data sharing)?

Data sharing agreement
To prepare for data sharing, investigators should plan their study design and procedures to enable data access. One important consideration will be the consent forms and agreements used in recruiting individuals and/or institutions (e.g., schools, early childhood programs) to participate in research studies. Currently, the content of the informed consent limits how that data can subsequently be used, including data sharing. Investigators should seek to optimize the opportunity for data sharing while working with their IRB to protect the privacy rights of study participants and confidentiality of the data.

In cases where data cannot be free of identifiers or when identifiers are important for linking datasets, then investigators should consider restrictions on data sharing, as provided by data archives or enclaves described in the DMP section Methods of Data Sharing. Consider these questions:

- Will any permission restrictions need to be placed on the data?
- With whom will you share the data, and under what conditions?
- Will a data sharing agreement be required?
Circumstances that prevent sharing

There may be circumstances, such as when a state or district will not allow student data to be released, where investigators will not be able to share their complete data set. However, IES expects primary data collected by the project or extant data obtained from a private source to be shared.

IES recognizes that data sharing may be complicated or limited by institutional policies, local Institutional Review Board (IRB) rules, as well as state and federal laws and regulations that address issues of the rights and privacy of human subjects.

In cases where data cannot be free of identifiers or when identifiers are important for linking datasets, then investigators should consider restrictions on data sharing, as provided by data archives or enclaves described in the Methods section above.

Any restrictions on data sharing, such as a delay of disclosing proprietary data, should be presented. If researchers believe that full data sharing is not possible, they must provide a written rationale in their DSP.