**DATA MANAGEMENT PLAN**

In the proposed project, multiple data types and data formats will be collected, stored, analyzed, and disseminated. Specifically, the following types of raw data will be collected:

(1) (project-specific: focus groups, rubrics, evaluation reports, other?)

Accordingly, all human subject research data will be collected in compliance with the University of Nebraska Medical Center/University of Nebraska at Omaha Institutional Review Board. As outlined in the proposal, a concurrent mixed methods design, utilizing a grounded constructivist theory qualitative approach, will be used to answer the project’s research questions.

**Specific Data Management Questions**

*1. Describe the data that will be collected, and the data and metadata formats and standards used.*

Data will be collected from a number of instruments and protocols that provide formative and summative evaluation of our program… Including…

*2. Describe what physical and/or cyber resources and facilities (including third party resources) will be used to store and preserve the data after the grant ends.*

The UNO College of \_\_\_\_ and \_\_\_\_ lab secure recording for interviews and focus groups, with all data stored on specialized servers. The server user management and security/permission structure allow video to be segmented by departments thus keeping any confidential data secured. UNO has contracted with Instructure to provide the Qualtrics Research Suite. This provides a powerful tool for creating online surveys and sophisticated social science research instruments with extensive scripting, randomization and interactive question presentation. UNO has also contracted with Box to provide secure cloud storage through UNO Box-Research. This provides unlimited data storage capacity. It is also an exclusive resource for UNO research programs with administrator- controlled access. Access to the video server, Qualtrics projects, and Box-Research for this project will be controlled by the PI. All raw data will be stored on the respective acquisition system and/or duplicated on Box-Research. Analyzed data will be stored on Box-Research and it will reside in that location after the grant ends.

*3. Describe what media and dissemination methods will be used to make the data and metadata available to others after the grant ends.*

Data and metadata dissemination methods will include publication in peer reviewed journals, presentation at conferences, and internal presentations to administrators and faculty. In addition, project progress and top-level results will be posted on the UNO STEM TRAIL Center website (https://stemtrail.unomaha.edu) and shared both with internal and external stakeholders via presentations/workshops hosted by the STEM TRAIL Center. This project will also generate an annual report that will be available by request. Data and metadata from the project will be available on the UNO STEM TRAIL Center website and by request after completion.

*4. Describe the policies for data sharing and public access (including provisions for protection of privacy, confidentiality, security, intellectual property rights, and other rights as appropriate).*

UNO policies for data sharing and public access are described in the “Regulated Data Security” policy document (https://www.unomaha.edu/campus-policies/regulated-data-security.php). Raw video and audio data with identifiable features such as faces and voices will be stored on the secure video server, with access restricted to project personnel. Data storage on Box-Research will include de-identification as required by the IRB. Data sharing among UNO principle investigators will be controlled by access permissions to VALT, Qualtrics, and Box-Research. Public data sharing will be accomplished through the dissemination channels as outlined above.

*5. Describe the roles and responsibilities of all parties with respect to the management of the data (including contingency plans for the departure of key personnel from the project) after the grant ends.*

Data entry, data storage, and data analysis will be conducted by all designated project key personnel (PI, Co-PIs, Senior Personnel, Evaluators, and Research Technologist). All key personnel will therefore be responsible for ensuring that data remains properly stored and secured. The PI will have administrative authority to grant or remove access to all other key personnel. The PI will also be responsible for administering the data after the grant ends. Should key personnel depart from the project, access to project data will be removed, unless a specific memorandum of understanding authorizing further access has been established by the PI and approved by the cognizant NSF program officer. It is also worth noting that the PI maintains data in two places (i.e. with a backup) so if someone departs the project and tries to erase all data, they will not be permanently lost. Moreover, the PI has specifically requested salary tied to each position to ensure the best chance to avoid loss of key personnel. If someone would be absent from the project, the PI will work with the PO on replacement with a new partner with that salary tied to the incumbent. Finally, each member of the team has been very active in the preparation of the proposal, hopefully further ensuring the long-term success of the team and program.