Data Management Plan

In the frame of the proposed project, there will be one primary method for data collection: downloading from the New Jersey Department of Education website. Additionally, MarGrady Research may contact the National Student Clearinghouse (NSC) to gain access to distributive data to enable more nuanced analysis. Data received from the National Student Clearinghouse would, in accordance with their Privacy Commitment Policy and the Student Privacy Pledge, be deidentified to the furthest extent possible and only information that is required for the analysis will be supplied. Moreover, contracting with NSC for access to data requires accordance with FERPA's iKeepSafe guidelines.

MarGrady Research will abide by all aspects of the NSF Award and Administration Guide, Section VI.D.4. In addition, MarGrady Research has a number of policies that address various aspects of data management including a company Research and Projects Policy, Intellectual Property Policy and Access to and Retention of Data Policy.

As noted above, MarGrady Research will abide by the provisions of the NSF Award and Administration Guide, Section VI.D.4 which addresses publication and data sharing. In response to requests to share research, we may use a Non-Disclosure Agreement in order to protect intellectual property rights. The point of using such agreements is to enable sharing of data and materials for the benefit of the scientific and academic community while protecting the legitimate intellectual property rights belonging to MarGrady Research and its researchers.

MarGrady Research has in place an Access to and Retention of Data Policy. This policy aligns with NSF's and ensures that NSF will have appropriate access to research data in accordance with the terms and conditions of the grant.

The Principal Investigator and individual responsible for data safety and monitoring will be Eli Groves. During the project, Eli Groves will monitor project progression and will report to NSF if any unanticipated problems arise or if adjustments to protocols or expectations set henceforth are necessary.

The Principal Investigator's specific plans for retrieving, archiving and ensuring appropriate access to research data are described below.

Access and Sharing: Internally, access to data will be limited to members of the research team: Eli Groves and Jesse Margolis, PhD. At a minimum, data verification and protocol compliance checks will be performed at the conclusion of each stage of analysis. In the context of this proposed project, this entails data verification anytime data is manipulated in R Studio to export a CSV file that will be analyzed and visualized in Microsoft Excel.

Externally, the educational and research data resulting from this project will be made available for use by both educators and researchers as soon as the project is completed and no later than 6 months after publication. For dissemination, these materials will be widely accessible to the public in the form of Microsoft Word, Microsoft Excel, PDF and R Markdown files. These files will be located on the MarGrady Research website. Additionally, some of the project's findings may be converted into a public Tableau Dashboard, enabling another means of data access and interaction.

Format: Primary data will be downloaded originally as standard Microsoft Excel or Microsoft Access files. These files may be converted into Comma-Separated Value files in order to reduce file space and for easier readability into R Studio.

Ethics and Privacy: Data from this project is unlikely to pose a risk for disclosure, because all data is aggregated at either the school, district, or state level, as are the findings. Moreover, the source of the data is publicly accessible via the NJDOE Date page. Under the possibility that MarGrady Research does contract with NSC for student-level data, it will be deidentified from the outset.

MarGrady Research believes it is important for results from the research to be accessible to those who produced the data. To that end, MarGrady Research will contact the appropriate state and educational entities to further publicize the report and increase data dissemination to those who may have interest.

Intellectual Property Rights: Throughout the conduct of the research project, all ownership rights rest with MarGrady Research. As mentioned, all data and materials will be freely available for use by the research community no later than 6 months after completion of the project.

Storage and Backup: The data will primarily be stored and accessed on MarGrady Research's Google Team Drive. As noted above, access to data will be limited to members of the research team. Thus, data will be stored on a subserver of the company Team Drive that is restricted to only those on the research team.

Additionally, to ensure ongoing and long-term security, a copy of the data generated by analysis throughout this project will also be independently stored, in its entirety, locally on two desktop computers located at MarGrady Research, the primary site of work. These local backups will be updated at least once weekly at the conclusion of each work week and also whenever deemed necessary by significant progress in analysis. Both of these desktops are password protected and do not leave the premise.

Archiving and Preservation: Upon completion of the project, the PI will identify which materials are of probable long-term interest for archiving and preservation. In the scope of this project, this may include clean and formatted data sheets that present the results of the analysis succinctly. Data will be converted to a searchable PDF document format. They will then be archived locally, and, if deemed appropriate, will be transmitted to the National Center for Professional Research Ethics which acts a repository for educational materials. Due to the fact that project findings are not a part of an ongoing research initiative, it is likely not imperative that the data be retained indefinitely.