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Investigating the Career Development and Professional Trajectories of Disadvantaged Students in Engineering

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Data Management Plan

1. Roles and responsibilities

The PI and Co-PI share the primary responsibility for sharing the primary data and maintaining it for a minimum of 7 years. The data will be regularly made accessible as it becomes available, and all data generated by this project will be made available within 12 months of the completion of the project. All external requests for data should be made to the PI. Should the PI leave his institution, the data will either be brought with him or he will make arrangements for it to be otherwise shared. Should data provided by the PI be used in a presentation or publication, the PI and any relevant group members must be credited.

2. Data to be Collected & Stored

In Task 1, **anonymous** data will be collected on LGBTQ college students using a Qualtrics panel survey comprised of demographic info, sexual identity history & disclosure, Educational & career development history, LGBTCI instrument, VISA instrument, LGBGIM instrument, HHRDS instrument, CDMSE-SF instrument, and CES-D instrument. The purpose of this data collection is for the identification of LGBTQ college student career aspirations, college major, psychosocial health, and description of support for and barriers to academic and personal growth within their university communities and specific academic departments.

In Task 2a, data will be collected on LGBTQ college students using a Qualtrics panel survey comprised of demographic info, sexual identity history & disclosure, Educational & career development history, LGBTCI instrument, VISA instrument, LGBGIM instrument, HHRDS instrument, and CDMSE-SF instrument. The purpose of this data collection is for the identification of LGBTQ engineering majors/students will identify challenges, support systems, as well as mechanisms for combating barriers. LGBTQ students will have the option to participate in a follow-up interview or focus group to better understand the root causes and impacts of the issues raised in the surveys.

In Task 2b, individual interviews will be semi-structured, digitally recorded, and transcribed for coding. All interviews will be conducted either by Renee Galliher, a licensed clinical psychologist, or by a doctoral student in clinical and counseling psychology with training in conducting interviews. Pseudonyms will be used and identifying information will be removed when transcribing interviews to maintain participant confidentiality. Once interviews are transcribed, they will be emailed to participants for member checking. At the end of data collection, transcriptions will be reviewed for final themes and coded using a hierarchical coding technique. Interviews are expected to take between 45 minutes and 1 hour. Preliminary coding of the data will be ongoing through the use of field notes and interview summaries. Recruitment will be ongoing until saturation is achieved, and no new interview content emerges.

In Task 3, qualitative information will be collected about participating URF students. The purpose of this data collection is the identification of the day-to-day practices of LGBTQ engineering students and non-LGBTQ students interacting in a lab environment including lab meetings, activities, interviews, focus

groups, guided conversations. Participation is voluntary. Pseudonyms will be used and identifying information will be removed to maintain participant confidentiality.

3. Information to be available by request

Additional data will be retained by the PI, and can be made available by request within up to four (4) weeks after written request. No identifying information will be made available to the public to protect the students participating in the study per USU IRB policy.

4. Storage of Assessment and Evaluation Data

All data will be stored electronically on box which requires an authenticated login. Data will be archived through several network storage servers run through the Utah State University Information Technology Department. The data will be stored on campus for long-term secure access for up to 7 years. Data will be backed up periodically using dedicated hard drives which will be purchased using a portion of the materials budget for this project. The hard drives will be clearly labeled and stored in the PI's lab or office in the secured cabinet. Data will also be stored on Box, USU's online file management system. In addition, physical storage of any data in lab notebooks or notes shall be stored in a locked, fireproof cabinet in the PI's lab.

5. File management

All manuscripts produced using this test data must include a version number in the filename. Only the researcher primarily responsible for the document may change this version number. The version number must increase every time the file is copied and shared with other users, but may also change as needed when significant changes are introduced to the text. Other editors of these documents should use "track changes" features when applicable, and should add their initials to the filename when saving. (Example: Manuscript_v2_RBB_NAR.docx is version 2 which was edited first by RBB then by NAR, neither of whom are primarily responsible for the text.)