



UNIVERSITY of
HOUSTON

University of Houston Education Research Center

Policies & Procedures: Approved Project Handbook

Updated: February 2023



Table of Contents

Overview	5
Research Project Workflow	7
Terms & Conditions	9
Obtaining Access	9
Institutional Review Board, Training, & Confidentiality Agreement Requirements	9
Credentials	10
Conducting Research	11
Workstations	11
Terms of Workstation Access	11
Workstation Information	11
Research Products	14
Data Security Issues	15
Information Updates	15
Special Circumstances	15
Supplemental Data	15
Research Project Approval Period & Extensions	16
Project Amendments	18
Conclusion of Research	18
Understanding Your Access & Data Security	18
Logging On to the UH ERC System	20
Forgot CougarNet ID or Password	20
Timeouts and Periods of Inactivity	20
Data Inventory & Data Documentation	20
Saving Your Work	21
Statistics Programs	21
Data Files	21
Getting Help	21
Procedure for Recognizing & Responding to Security Violations	22
Family Educational Rights and Privacy Act (FERPA)	23



Purpose & Rationale	23
Review of Research Products	23
Personally Identifiable Information (PII)	24
Commonly Used Variables	24
Review of Research Product Compliance	25
Step-by-Step Review of Research Products Process	26
Review Reminders	27
Common Issues	28
Unclear Variables or Output	28
Graphics	28
Degree of Detail	28
Masking Guidelines & Techniques	29
Required Masking	30
Small Cells	30
Complementary Cell Suppression	32
Reporting Performance Based Indicators or Outcomes	32
Common Issues	33
Profile & Context	33
Secondary Publications	33
Format	34
Output	34
Other Masking Techniques	34
Contact Information	35
Glossary	35
References	37
Appendix A Researcher Checklist	38
Appendix B Confidentiality Agreement	41
Appendix C Institutional Review Board Certification	44
Appendix D Policy Brief Suggestions	45
Appendix E Project Extension/Amendment Request Form	47
Appendix F Supplemental Data Request Forms	49



Appendix G Matching Process.....	54
Appendix H FERPA Overview	59
Appendix I Masking Exemplars	61
Appendix J Folders All Researchers Can Access.....	65



University of Houston Education Research Center Policies & Procedures Approved Project Handbook

Overview

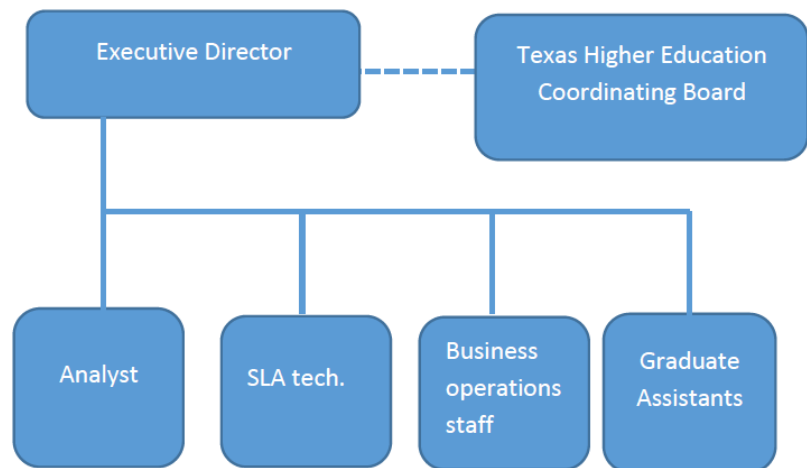
In 2006, the 79th Texas Legislature (3rd called session) identified the need for connecting educational information sources into a longitudinal data warehouse for the use of policy and practice. Legislators authorized the creation of three Education Research Centers (ERCs) to house Texas data and facilitate research that benefits all levels of education in Texas. The ERCs were to provide access to high quality, student-level data from the Texas Education Agency (TEA), the Texas Higher Education Coordinating Board (THECB), the Texas Workforce Commission (TWC), and other sources of educational information for the state of Texas. The ERC data resources would span from the Pre-K level through higher education (P-16) and into the Texas workforce; it would host longitudinal information dating back from 1990 to current day. Researchers would be able to use this rich repository of data to follow individual Texas students from their first day in school to their last day on the job.

University of Houston Education Research Center (UH ERC) serves as both a research center and as a site for the P-20/Workforce Data Repository (Repository) providing access to longitudinal, student-level data for scientific inquiry and policymaking purposes. Opened in 2017, the UH ERC's goal is to bridge gaps between theory and policy by providing a cooperative research environment for study by both scholars and policy makers. As part of its mission, the UH ERC works with researchers, practitioners, state and federal agencies, and other policymakers to help inform upon critical issues relating to education today.



UH- Education Research Center Staff

Figure 1: Organizational Chart, University of Houston Education Research Center



UH ERC Job Descriptions

Executive Director is responsible for:

- Overall management of the Center, including compliance, proposal review and fiscal responsibilities.
- Conducting and logging output reviews prior to release of data from the UH ERC for non-affiliated projects.
- Maintaining and nurturing relationships with collaborating researchers and organizations as well as appropriate Texas state agencies.

SLA Technical Support is responsible for:

- Hardware and server administration, including infrastructure and server administration of hardware.
- Networking Services
- Security
- College IT administrators will provide assistance in downloading appropriate data and install updates and security patches as required.



Research Analysts are responsible for:

- Proposing for Advisory Board approval and undertaking original research in line with the mission of the UH ERC
- Conducting and logging output reviews prior to release of data from the UH ERC for non-affiliated projects.

Business Operations Staff are responsible for:

- Onboarding researchers including log in set up and confirmation of the required IRB, FERPA and masking training.
- Providing orientation to researchers.
- Coordinate general operations support for UH ERC.
- Fiscal responsibilities
- Conducting and logging output reviews prior to release of data from the UH ERC for non-affiliated projects.
- Serve as backup in non-research activity, as needed and when appropriate, for executive director.

Graduate Research Assistants are responsible for:

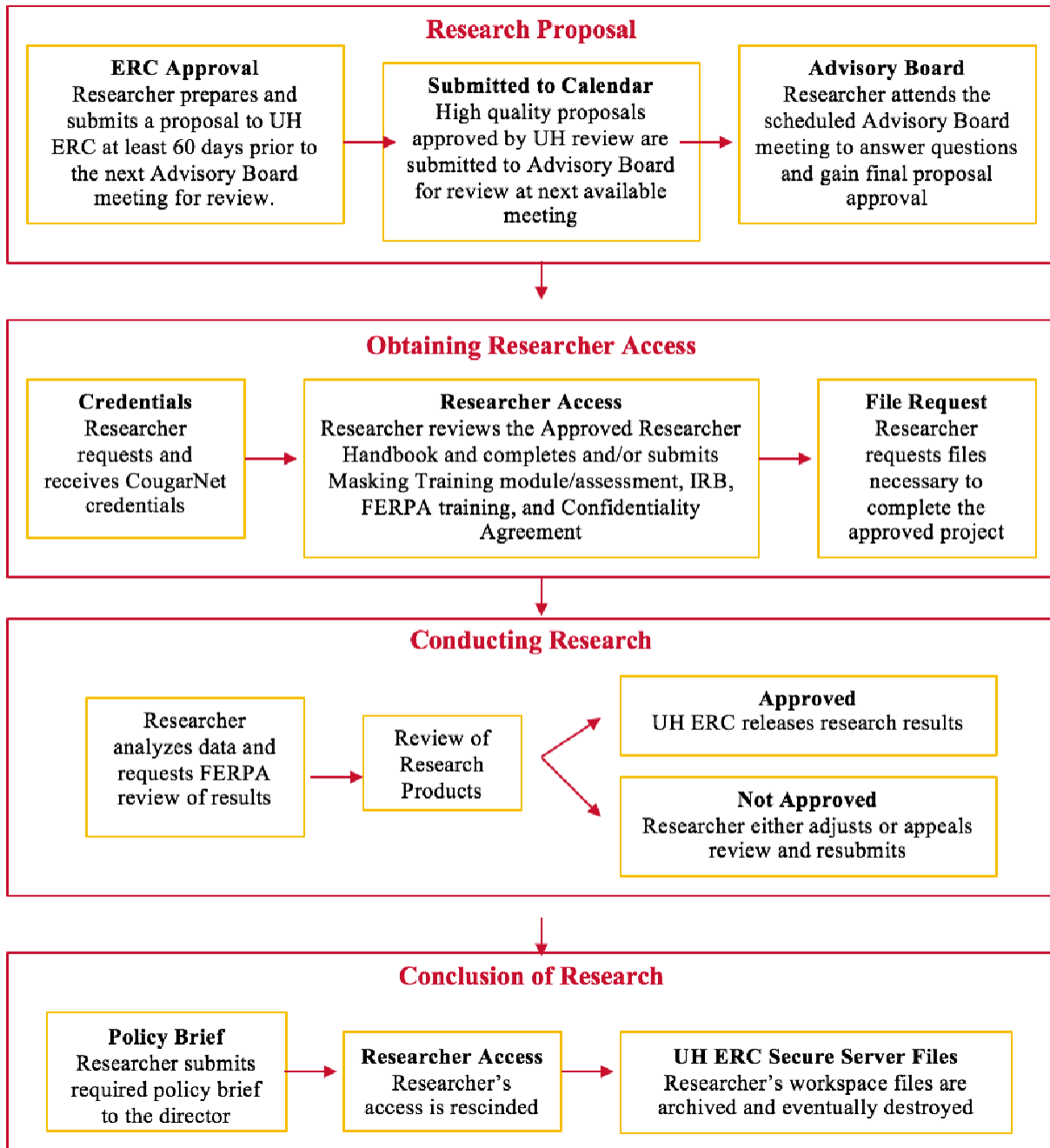
- Supporting analyses as approved
- Supporting developmental, procedural, and evaluative aspects of the project's theoretical and logical integrity, research agenda alignment, and analytical outcomes
- Serve as backup in conducting and logging output reviews prior to release of data from the UH ERC for non-affiliated projects.

Research Project Workflow

Once a proposal has been approved by the UH ERC and ERC Advisory Board, the proposal is reclassified as an approved project. Approved project researchers will first need to complete a series of trainings and submit the necessary documentation to obtain access to the Repository housed at the UH ERC. The figure below illustrates the process as a whole. Subsequent sections will outline the details of each step. Researchers may also find the provided checklist helpful for navigating the process of accessing, conducting, and concluding research at the UH ERC (see Appendix A).



Research Project Workflow



Note: Workflow chart provides an overview of the entire process. After gaining approval from the ERC Advisory Board, researcher(s) will receive specific details and policy guides for gaining access, conducting, and concluding research.



Terms & Conditions

UH ERC houses data files that contain personal information about individuals protected by the Family Educational Rights and Privacy Act of 1974 (FERPA). To protect the confidentiality of this information, the following terms, conditions, and guidelines are in place and required of all authorized researchers at the UH ERC. Terms and conditions are first covered by the stage of the research process, then by special circumstances.

Obtaining Access

Institutional Review Board, Training, & Confidentiality Agreement Requirements

Institutional Review Board (IRB): Researcher(s) must certify on the Confidentiality Agreement that they have obtained IRB approval and provide appropriate evidence to the Director and Database Administrator. In some situations, justification for exclusion from the IRB review process will be accepted. Evidence or justification must be in written form submitted by email to the Director and Database Administrator. If applicable, include the IRB study number and contact information for the IRB contact person. Researcher(s) may use the form found in Appendix C.

FERPA Training: Required of all personnel before being granted access to the confidential UH ERC data, the FERPA training is offered by University of Houston for researchers affiliated with UH. If you are affiliated with another university, you may submit proof of FERPA training from your home institution. All researcher(s) shall provide proof that the FERPA training was completed. Documentation should be submitted to the Director and Database Administrator. FERPA training is valid for three years. If your training expires mid-project, researcher(s) are required to update their training and resubmit proof.

Researchers may visit: [FERPA 201: Data Sharing under FERPA](#), provided by the U.S. Dept. of Education or can submit documentation from an institution of higher education's office of research.

Masking Training: Required of all researchers, the masking training module covers FERPA compliance as it relates to the UH ERC, masking guidelines and techniques, and the process for reviewing and releasing research results. Upon finishing the training module, researchers will be



directed to an online assessment. Once the assessment is completed successfully, the researcher must email the Director and Operations staff certifying completion of both the training module and online assessment. Training can be accessed [here](#).

Confidentiality Agreement: Researcher(s) must initial, sign, and submit the Confidentiality Agreement (see Appendix B) to the Director and Operations staff. Your signature on the Confidentiality Agreement acknowledges your receipt and acceptance of the terms and conditions outlined in the *Policies & Procedures: Approved Project Handbook*. Any questions regarding data security and/or the Confidentiality Agreement should be directed to the Director or Operations staff.

Credentials:

Researchers will need two credentials to access ERC Workstations: CougarNet Account and Cougar Card. Researchers should allow 10 business days for processing of CougarNet and Cougar Cards.

CougarNet. Access to the research workstations is managed through CougarNet, which provides individuals with a user account and password. This system meets the statutory strength requirements for public agencies in Texas.

1. **UH-affiliated researcher(s)**, either employees or students, are expected to use their current CougarNet username and password.
2. **Non-UH researcher(s)** may apply for a guest CougarNet account by accessing <https://uh.edu/infotech/services/accounts/sponsored/procedure/>

Cougar Card. Access to workstations is controlled by card-swipe access doors. In order to access workstations, researchers will need to apply for and obtain a Cougar Card ID.

Researchers can apply for a Cougar Card here <https://uh.edu/af-university-services/cougarcard/>

*Note that Cougar Cards must be picked up in person on the UH Campus.



Conducting Research

Research conducted at the UH ERC must occur within a secure environment using established data security protocol. The Repository data is accessed through a set of closed networked workstations monitored and maintained by the UH ERC and University of Houston. Access is granted through a secure log-on. To conduct research at the UH ERC, researcher(s) must adhere to the established data security and terms of use.

Workstations

Workstations are available to access the Repository data and many types of statistical tools are available for analysis of these data. The access points are located on the UH Main campus. Workstations are generally available to researchers for access around the clock. For specific availability information, contact ERC staff. **Note- UH ERC may be unavailable during Winter and Spring breaks due to scheduled building maintenance.

To book workstation access times, approved researchers can use the online booking app accessible on the UH ERC's website: <https://uh.edu/education/research/institutes-centers/erc/>.

Terms of Workstation Access

- Access to the Repository data at the UH ERC **must** always be gained through a researcher's own account. Under no circumstance may a researcher log in to the UH ERC system under another researcher's account or allow another researcher to log in through his or her account.
- Each project will be provided with a project folder. The project folder will be shared by all researchers approved to work on the project.
- No portable memory devices, thumb drives, jump drives, or any like devices are permitted at the research workstation locations. **The presence of such portable memory devices at UH ERC workstations may result in the immediate revocation of a researcher's approval to use the UH ERC.**
- All workstation computers are disconnected from the Internet to ensure that the security of the data is maintained.
- Researchers are allowed to bring their own laptop computers to the workstation locations and connect to the Internet. **No data may be transferred to a computer connected to the network.** UH-affiliated researchers can access the UH restricted wireless network (UH Secure). Non-UH affiliated researchers can access the free UH wireless network (UH Wireless). Under no circumstances may data from outside the UH ERC be used in the ERC, unless provided by the UH ERC staff.



-
- The door to the room that houses a research workstation **must** remain closed while a researcher accesses the UH ERC data to ensure the confidentiality of the data is maintained.

UH ERC Room Guidelines

- ******Researchers must always keep CougarNet ID with them. The card-swipe access door automatically locks.
- Please make sure the door closes behind you.
- Phone calls are permitted; however, use of cameras and other recording devices to capture data/screen images is strictly prohibited.
- No data can be transferred (including on paper).
- Lock computer when away from workstation.
- Please use only your assigned workstation and data.
- Enjoy collaborating but please remember your findings are confidential.
- Be respectful of others using the room by limiting conversation and cleaning up your station.
- Please sign out after you are finished with your work.
- Remember to call campus Police at 713.743.3333 or dial 911 for emergencies.

WIFI

Researchers can access UH's secure or unsecure networks.

UHSecure Network

The Wi-Fi network for UH Students, Faculty, and Staff

- Provides secure communications.
- Provides access to campus resources.
- Requires a CougarNet account for access.
- Connect following these four easy steps:
 - Select the UHSecure SSID
 - Login using your CougarNet userID.
 - Use your current CougarNet password.
 - If any messages occur that need your acceptance, then press accept.

UHWireless Network

The University of Houston's Public (open) Wi-Fi network

- Is an unencrypted (unsecured) Wi-Fi network.
- Provides access to campus resources and the Internet.
- Requires user to open web browser and accept Acceptable Use Policy
- Does **not** require a CougarNet account for access.

More information is available here:

<http://www.uh.edu/infotech/services/computing/networks/wireless/>



Parking

The UH ERC is in Stephen Power Farish Hall ([campus map](#)) and has no dedicated parking.

Researchers are responsible for parking. UH Parking options can be found here:

<https://uh.edu/af-university-services/parking/parking-on-campus/visitor/>.

Nearby garage parking is available at the Stadium Garage. Researchers are also encouraged to use public transportation. Information on bus and rail routes is accessible here:

<https://www.ridemetro.org/Pages/index.aspx>.

Food

UH offers several on-campus options for food, many located within the Student Center.

Student Center information can be accessed here: <http://www.uh.edu/studentcenters/>

Emergency

In the event of an emergency, dial 911 or call Campus Police at 713.743.3333

Data Usage

- UH ERC data may be used only for research projects that have been specifically approved by the ERC Advisory Board and for investigative and analysis tasks upon directive given by a Commissioner of Texas Higher Education Coordinating Board (THECB), Texas Education Agency (TEA), or Texas Workforce Commission (TWC).
- Research results must be reported in a manner that does not enable readers to learn or surmise the identity of individual people (see *Masking Guidelines & Techniques*).
- Permission to use UH ERC data is granted for a fixed amount of time and may be renewed, if needed, at the discretion of the ERC Advisory Board.
- Permission may be revoked at any time. Immediate termination of access will result in cases where there is a significant risk of unauthorized disclosure of confidential information or violation of security guidelines.
- No UH ERC data files, individual records, or results may be removed from the UH ERC in any form, including hand-written or printed copies, without prior approval from the Director.



Research Products

All research products (statistical output, tables, graphs, papers, PowerPoint presentations, proposals, etc.) that use the Repository data must be compliant with FERPA requirements. It is mandatory that all such data products be submitted to the UH ERC for review and confirmation of compliance prior to removal from the UH ERC. Failure to follow these rules shall result in immediate termination of researcher and research project access. Please see *Review of Research Products* for an explanation of the data review and approval process. Additionally, small cell reporting restrictions and the suggested strategies for addressing can be found in the *Masking Guidelines & Techniques* section.

Process to Send Data to Reviewer for Masking and FERPA Compliance

1. Researcher ensures that output is scrubbed as per requirements.
2. Researchers send an email to Jeanette Narvaez (jgnarvaez@uh.edu) that the output to leave the ERC is ready to be reviewed and provides the location within his/her folder structure. (ie: \\HTERC0_project1\ForReview).
3. Narvaez will then move data to a location that only ERC Data Reviewers have access to within the ERC.
4. Data Reviewer will communicate with the Researcher about any changes that need to be made.
5. Once data is certified by Data Reviewer, the Reviewer will email Narvaez that it is approved for release and can leave the ERC. Narvaez will move data to external SFTP server. Then Narvaez will email data to all requested.

According to the Texas Administrative Code authorizing ERCs, all **final** research products produced using the Repository data at the UH ERC must:

- Be made available upon request to cooperating agencies including TEA, THECB, and TWC.
- A single copy of copyright publications must be provided at no cost to the cooperating agencies via the Director of the ERC.
- Non-copyright publications must be made available for public distribution at no cost to the ERC or cooperating agencies; and
- Include the disclaimer below: *“The conclusions of this research do not necessarily reflect the opinion or official position of the University of Houston Education Research Center, the Texas Education Agency, the Texas Higher Education Coordinating Board, the Texas Workforce Commission, or the State of Texas.”*



Data Security Issues

Secure physical and electronic access to the UH ERC and its data is paramount to protecting the privacy of individuals and ensuring the continued trusted operation of the UH ERC. Researchers are required to adhere to the center's security guidelines and procedures and notify the UH ERC of any observed or suspected security violations. For more information about reporting violations see the *Procedure for Recognizing and Responding to Security Violations*.

Information Updates

Researchers should make every effort to keep the UH ERC apprised of the research project progress. Good communication with the UH ERC may help avoid issues related to the timeline. Periodically, the UH ERC may also ask for information related to your research project. These inquiries may relate to data requests, the review process prior to releasing information, or IRB. It is important that you respond in a timely manner to these requests.

Special Circumstances

Supplemental Data

Supplemental data refers to additional data not currently housed in the Repository. Procedures and mechanisms are available to enable researchers to add confidential and non-confidential supplemental data to the Repository for use by a specific research project. If requested and approved in proposals, each state agency whose data is involved will need to approve each request. Confidential supplemental data will be de-identified prior to uploading to the ERC data Repository. Researchers using the de-identified confidential supplemental data without the secure UH ERC environment, *must not* have access to the identified confidential data outside the ERC environment.

If de-identification of confidential supplemental data is necessary, the researcher will be charged a cost for processing and manipulating such data (19 Tex. Admin. Code § 1.18 (d)). Researchers must cover the additional costs. All requests will be processed in the order received.

Supplemental data requests must be made at the time of the proposal to allow for a seamless review by the ERC Advisory Board. After reviewer Advisory Board approval, researcher(s) should complete the appropriate supplemental data request form (see Appendix E). Requests must be submitted to both the Director and the Operations staff.

It should be noted that to comply with FERPA requirements, supplemental data files must



have a destruction date that corresponds with the end of the dependent research project, plus five years for publication purposes.

Research Project Approval Period & Extensions

The approval period of a research project at the UH ERC is dependent on determinations made by the ERC Advisory Board and the funding of a given research project. Normally, with secured funding at the time of the proposal, the initial approval period can be up to 5 years.

Extensions may be approved for up to two years. The ERC Advisory Board reserves the authority to make individual decisions based on individual circumstances.

Each research project has a specific completion date established at the time of approval, yet circumstances may arise that require an extension beyond the original timeline. If an extension is deemed necessary, the researcher(s) should complete the Project Extension/Amendment form (see Appendix E) and submit it to the Director and Operations staff. To assist the researcher(s) and the ERC Advisory Board, the UH ERC has outlined acceptable and unacceptable reasons for granting extensions to approved projects.

Potential Reasons for Requesting a Project Extension	
Data Issues	Acceptable <ul style="list-style-type: none"> Data unavailable at the beginning of the project Delay in data availability leaving little time for analysis. Unacceptable <ul style="list-style-type: none"> Waiting for the release of most recent year's data
Life Issues	Addressed on an individual basis. The researcher should provide documentation defining the issue(s), such as: extreme illness, unforeseen family responsibilities, etc. The researcher should explain how this issue(s) impacted the timely completion of the project and next steps towards completion.



Other	<p>Acceptable</p> <ul style="list-style-type: none"> Delay of grant funding Changing of key team members When original approved research project noted the grant was greater than two years, the research may request and receive an extension for continuing research. <p>Unacceptable</p> <ul style="list-style-type: none"> Reassignment of work duties and lack of time for research completion Involvement in too many research projects and lack of time for research completion Additional time needed to learn computer statistical software
Life Issues	Addressed on an individual basis. The researcher should provide documentation defining the issue(s), such as: extreme illness, unforeseen family responsibilities, etc. The researcher should explain how this issue(s) impacted the timely completion of the project and next steps towards completion.
Other	<p>Acceptable</p> <ul style="list-style-type: none"> Delay of grant funding Changing of key team members When original approved research project noted the grant was greater than two years, the research may request and receive an extension for continuing research. <p>Unacceptable</p> <ul style="list-style-type: none"> Reassignment of work duties and lack of time for research completion Involvement in too many research projects and lack of time for research completion Additional time needed to learn computer statistical software

Note: Table is not all-inclusive and should be used as a guideline. Issues with the timeline of a research project should be addressed to the Director as soon as possible. See Appendix E for more details. The ultimate decision of Acceptable and Unacceptable is determined by the ERC Advisory Board and not UH ERC staff.

The table provided above is not all-inclusive, yet it covers extension rationales addressed in the past. All extension requests must be submitted at least 60 days prior to the next ERC Advisory Board meeting. Extension requests require approval from the ERC Advisory Board and, if approved, the execution of a new Confidentiality Agreement.



Project Amendments

Requests for changes to the original approved proposal require a formal request and ERC Advisory Board approval. These changes are referred to as project amendments. Like the proposal process itself, paperwork must be submitted at least 60 days prior to the next ERC Advisory Board meeting. Project amendments are rarely approved, yet if there is a valid reason to request a proposal amendment instead of submitting a new proposal, an amendment can be submitted to the board for a vote. To submit a project amendment, complete the *Project Extension/Amendment* form (Appendix E).

Conclusion of Research

When the approved project is completed, researcher(s) must complete a series of tasks. The first is notification. If the project is completed prior to the approved project period, researcher(s) should notify the Director and Operations staff in writing, email preferred. Researcher(s) should deliver to the Director the required policy brief as well as copies of other work products produced. Researchers should refer to the guidelines provided in Appendix D for writing policy briefs. These are just suggestions to serve as an aid for the researcher. Other final research products (reports, journal articles, book chapters, etc.) must be made available to the UH ERC and cooperating agencies. If the publication is under copyright, a single copy must be provided at no cost. If publication is non-copyright, a copy must be made available for public distribution (19 Tex. Admin. Code § 1.18 (d)). When these conditions are satisfied, the research project will conclude in good standing.

Access to the UH ERC workstations and secure environment will be rescinded on the approved project expiration date or an earlier date if the researchers conclude before project expiration date. When access is rescinded, physical access to the workstations will expire along with log on permissions. All researcher folders/workspace files will be archived for a period of five years then destroyed. Access to the UH ERC secure facility will also be rescinded.

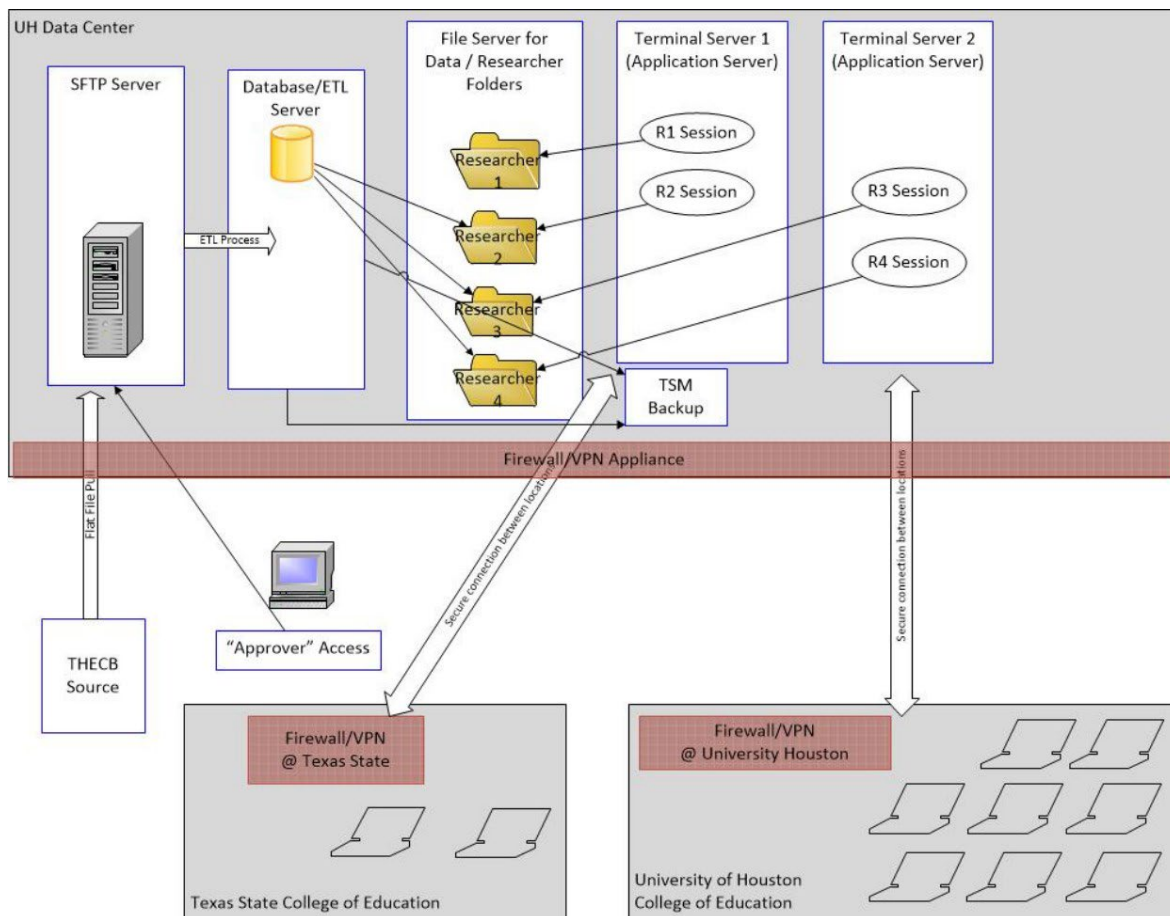
Understanding Your Access & Data Security

For data security reasons, key data security details have been excluded from this publicly available *Policies & Procedures: Approved Project Handbook* including IP addresses and specific workstation locations. Data security is vital to the UH ERC existence.



The *UH ERC Access & Secure Environment* figure illustrates the overall server environment. Researcher(s) access the secure physical location of the UH ERC workstations, and then logs on to a client workstation. Following login, researcher(s) can access the secure UH ERC resources, which store the statistical applications and data necessary for an approved project. An authorized researcher can save log files, output, and other files to their established individual or project-specific folders. The client workstations do not have access to unsecured environment such as the Internet. Only a UH ERC staff member, following the *Review of Research Products* process, may transfer FERPA-compliant files outside of the secure server environment.

UH ERC Access & Server Environment





Logging On to the UH ERC System

UH ERC staff will assist approved researcher(s) with initial login and orient researchers to the workstations.

Forgot CougarNet ID or Password

CougarNet Passwords cannot be reset by UT ERC staff.

Researchers can use the CougarNet password wizard to reset credentials. Password Wizard: <https://uh.edu/cougarnet-wizard/#/>

Timeouts and Periods of Inactivity

If a timeout or break is needed during a work session, pressing CTRL+ALT+END will give you the option to lock your computer. It can be unlocked by entering your password.

If you execute a long-running procedure that requires no user interaction, you will be automatically logged out of the ERC Client. However, your procedure will continue to run and be accessible when you re-logout. Here again researchers need to be mindful that you are using a shared computer environment. Questions about this process should be directed to the Database Administrator.

Data Inventory & Data Documentation

The format and content of the Repository data at the UH ERC are based on the format and content of the information that comes from Texas Education Agency, Texas Higher Education Coordination Board, and Texas Workforce Commission. A detailed inventory of the file names, available years, and basic descriptions is listed as the *UH ERC Data Inventory* on the UH ERC website. In addition, TEA, THECB, and TWC agencies maintain documentation on their own websites that describe the data provided by their respective organizations.

Following are links to resources to familiarize yourself with available data:

- The UH ERC Data Warehouse tab:
 - <https://uh.edu/education/research/institutes-centers/erc/data-warehouse/>
- TEA Public Education Information Management System (PEIMS) data,
 - https://www.texasstudentdatasystem.org/TSDS/TEDS/TEDS_Latest_Release
- TEA TAAS and TAKS assessment data and the State Board of Education data, Testing/Accountability section
 - <https://tea.texas.gov/> under the “Student Assessment” link
- STAAR explanations
 - <https://tea.texas.gov/student-assessment/testing/taar/taar-resources>



-
- STAAR testing results.
 - <https://tea.texas.gov/texas-schools/accountability/academic-accountability/performance-reporting/texas-academic-performance-reports>
 - THECB reports and FADS data.
 - <http://www.txhighereddata.org/>
 - TWC wage report data
 - <https://www.twc.texas.gov/>

Saving Your Work

When given access to the UH ERC, a project folder will be created by ERC Staff. This project folder will be shared by all researchers on the project. Other UH ERC researcher folders in the E drive are not accessible except for manuals and layout file folders (See Appendix J).

Statistics Programs

The UH ERC provides the most common statistical applications. If researchers request an older or newer version of the provided statistical applications or another software, an additional cost to cover the licensing and IT labor costs may be accessed. Any special requests should be directed to the Director and Operations staff. Such requests are handled in the order that they are received. The statistical applications available for researchers at the UH ERC are STATA, SPSS, and R.

Data Files

Researchers will be given access to approved files for the project. The request must match your approved proposal. A UH ERC staff member will move the requested files to shared project folder. The best approach to investigating the files you will need is described in the *Data Inventory & Data Documentation* section. Repository data sets are provided to researchers in the same structure and timeframe breakdown as the original data files are received from the source agencies. For an up-to-date list of data included in the Repository, see the UH ERC Warehouse website data tab.

Getting Help

The UH ERC workstations are generally available during normal business hours. Technical support is available during regular business hours, Monday-Friday, 8:00am to 5:00pm from ERC staff located in Farish Hall Rm. 401. If emergency support during the evening or on weekends, you may contact the UH ERC staff.



Procedure for Recognizing & Responding to Security Violations

Physical security violations at the UH ERC may include any of the following:

- Access to the secure environment by an unauthorized person.
- Removal of unapproved confidential material via any method (e.g., print, electronic data transfer, internal hard drive removal, transfer to portable memory devices such as USB flash memory devices, writing notes on paper, etc.).
- Loss or theft of any access card, key, or device that would permit access to the secure environment; or
- Modification to and/or destruction of read-only UH ERC data sets and files.

If a suspected security violation in progress is detected, action should be taken to avert the violation only if it is safe to do so. If any risk is perceived, the appropriate security officials should be notified immediately. UH ERC staff and researchers **must not** attempt to intervene in a potentially dangerous situation, such as a burglary of the facility.

At University of Houston, University Police should be the initial point of contact (Emergency situations call 911, UHPD mainline [\(713\) 743-3333](tel:7137433333)) for notification of dangerous security violations in progress. All such events should then be reported to the Director. If the Director is not available, another responsible ERC staff member (e.g., Operations staff) should be notified.

If it is safe to do so, a staff member or researcher can attempt to assess and, if necessary, intervene in the suspected violation. Examples of appropriate interventions include:

- Politely challenging any unknown person, especially individuals who do not appear to have properly gained access to the facility or are not wearing an appropriate visitor badge.
- Advising or reminding researchers or staff members of security guidelines if they appear to be engaging in behaviors that may lead to a violation, such as inserting a thumb drive into a research workstation's USB outlet.

The observer should make notification of all real or suspected security violations to the Director or Operations staff of the UH ERC **as soon as possible**. If it is ascertained that a significant violation of security procedures has occurred or the confidentiality of controlled data has been jeopardized, the incident will be reported by the UH ERC to both the University's Chief Information Security Officer and the THECB.



Family Educational Rights and Privacy Act (FERPA)

Purpose & Rationale

The federal law known as the Family Educational Rights and Privacy Act of 1974 (20 U.S.C. § 1232g; 34 C.F.R. § 99), commonly referred to as FERPA, protects the release of and access to educational records. Educational records include those maintained by an educational institution, agency, or party acting on behalf of the agency or institution that are directly related to a student (34 C.F.R. § 99.3). The law applies to all educational records generated by schools that receive funds under the applicable programs of the United States Department of Education. FERPA further defines who shall be granted access, what information is considered personally identifiable, and criteria for what is considered a legitimate educational interest allowing for access (see 34 C.F.R. § 99.3; 99.30; 99.31). The data housed in the Repository contains educational records and personal information about students, educators, and employees in Texas and all such records are considered confidential and protected by FERPA regulations.

Review of Research Products

To maintain compliance with FERPA, The ERC Advisory Board requires designated ERC staff members to review all research products derived from the Repository. Research product is a broad term, but for the purposes of the UH ERC it includes any written outcome or display resulting from the use confidential data. This includes, but is not limited to, output from statistical software, tables, or graphs. Consider any electronic file or written artifact intended to, or which potentially could be, viewed by anyone not currently approved to access the Repository as a research product. All research products must be reviewed by UH ERC staff prior to release to the researcher outside the secure UH ERC environment.

The review process serves as a safeguard to prevent the inadvertent release of any personally identifiable information (PII). The review provides a secondary check of the researcher(s) efforts to mask and appropriately report research results in a manner that protects PII. The following section covers the process and procedures related to protecting confidential UH ERC data. Additionally, it includes a discussion on what qualifies as PII, commonly used variables, common issues that arise during the review process, and suggestions for simplifying the review process.



Personally Identifiable Information (PII)

Under FERPA, PII is comprised of both personal identifiers and indirect identifiers (National Center for Educational Statistics [NCES], 2010a; 34 C.F.R. § 99.3). Personal identifiers include information like the student's name or Social Security Number. The data in the UH ERC Repository is devoid of Social Security Numbers and names, and a state generated identification number links the information. Indirect identifiers include any “other information that, alone or in combination, is linked or linkable to a specific student that would allow for a reasonable person in the school community, who does not have personal knowledge of the relevant circumstances, to identify the student with reasonable certainty” (NCES, 2010a, p.2). Examples of indirect identifiers include race/ethnicity, program specific enrollment, grade level, or course enrollment (NCES, 2010a). The UH ERC review process aims to ensure that researcher(s) have followed the established masking guidelines (see *Masking Guidelines and Techniques*) to appropriately protect PII.

Commonly Used Variables

The UH ERC serves as a repository of data spanning numerous datasets with countless variables. While not all the variables within the dataset are considered PII, in conjunction with other information related to educational performance records, they can act as indirect PII that needs to be masked to protect the individual. Due to the vast number of variables, it is impossible to list all the possible combinations of variable that might qualify as PII. Moreover, requirements for masking research products may depend on the research design or the method of displaying results.

The UH ERC does, however, see many commonly used variables that may produce results that fall under the protections of FERPA. This typically is caused by disaggregation (broken down, splitting up, or isolating) the data enough to create small groups (cells) that can reflect individual performance. Please note that these variables may not alone qualify as PII. It is when they are combined, especially with performance indicators, that it might be possible to link the data to a specific student. Below is an initial, not all-inclusive, list of commonly used variables that *may* constitute PII:



Performance Based Indicators: STAAR, TAKS, SAT/ACT scores, Texas Success Initiative (TSI), exit exams, cumulative pass rates, college readiness:

- **Specialized or Sensitive Programs:** special education, gifted & talented, English Language Learner (ELL)/Limited English Proficiency (LEP), International Baccalaureate (IB), Developmental Education/Disability Services, Advanced Placement (AP) enrollment, college/dual credit courses.
- **Student Demographics:** race/ethnicity, age, immigrant status, gender, at-risk indicator, homeless status, foster care status.
- **Completion:** dropout, graduation, time to completion, high school degree plan
- **Other:** attendance, school transfers, teacher value-added scores, student discipline

Review of Research Product Compliance

Conducting research using the secure computer systems at the UH ERC to analyze confidential data will, from time to time, require the removal of **output** and **results** from the secure environment for inclusion in write-ups, reports, articles, or other research products that are primarily authored in the context of the researcher's non-secure computing environment. An authorized staff member, prior to release from the secure computing environment, must review research products. The process for review is to ensure that released research products do not contain confidential student information, as defined by FERPA. For more information on the particulars of FERPA compliance, see the *Masking Guidelines & Techniques* section.

To ensure that reviews and releases meet those guidelines, a set of internal monitoring procedures is in place to assure compliance.

- Completion of ERC FERPA and masking training is required every three years to assure that they remain aligned with current best practices
- Required primary review of all masked files by an ERC staff reviewer not actively participating on a project
- Quarterly review by non-primary ERC staff reviewer of sampled (10 percent) set of previously reviewed and released files



Step-by-Step Review of Research Products Process

1. The researcher must formally request the output or results by sending an email from their e-mail account to the Director and Database Administrator.

The e-mail must include:

- Server, project name and folder where the file(s) are located.
- Name of the file(s) to be reviewed.
- Summary of what the file(s) contain (e.g., These are regression results.). The outcome variables are individual student test scores. The independent variables are individual student demographics.
- In addition, please define variables that have been derived or renamed that may not be discernible to the reviewer. For example: Pcpr = percent campus pass rate; T10 = top 10 percent; T25 = top 25 percent

The researcher must certify in the email that *“the output or results contains no individually identifiable data, and no information derived from data concerning a group of fewer than five individuals”*.

2. The Director or authorized designee will review the requested files for the evidence of any information controlled under the provisions of FERPA, and to ensure that it appears consistent with the researcher's certification of compliance as required above.

When individual documents are reviewed for compliance, the following steps are taken:

- Log requested review, including reviewer, requestor, project name, and date reviewed.
- Confirm project and researcher match (i.e., researcher is affiliated with the specific project for which document release requests are being made)
- Review each file for the following:
 - ⇒ Masking expectations are met.
 - ⇒ Identifiers meet FERPA regulations.
 - ⇒ General project alignment
- Mask any identifying variables OR send them back to the requestor for correction.
- Indicate in the log each file approved for release.
- Notify appropriate SLA technical support that approved files are ready for release.
- Appropriate SLA technical support staff releases approved files to requestor.



If the reviewer is satisfied that the item appears consistent with the researcher's representation, the reviewer may transmit the files to the researcher by e-mail or any other means.

If the reviewer has any cause to suspect that the item does not conform to the requestor's certification of FERPA compliance, still has questions regarding definitions, or any other questions, the reviewer will request further evidence of such from the researcher.

If, after further review, the reviewer is satisfied that the article is consistent with the researcher's certification, the item may be released to the researcher.

If the reviewer cannot satisfy himself or herself that the item is consistent with the researcher's certification of compliance, or the researcher cannot or will not provide the required certification, the reviewer must refuse to release the item from the secure system.

The researcher may appeal the reviewer's decision to the Director or ERC primary-investigator. The UH ERC's decision on the matter is final.

Each item requested for review is to be recorded in the Released Item Review Log, together with the ultimate disposition. A copy of any items released will also be retained in the directory location designated for that purpose.

Review Reminders

The UH ERC would like to also stress the following reminders:

- **It is the researcher's responsibility to make sure all work is FERPA compliant.**
- **The clarity of the file names, descriptors, and variable definitions is directly related to the speed and ability of the reviewer to release the products.**
- The reviewer uses the criteria described in *Masking Guidelines & Techniques* to evaluate the research product.
- The UH ERC staff reviewer will not perform the masking for the researcher.
- Remember, if files are not compliant when first submitted, there will be a delay in the release.
- Each request for review is logged, together with all activity related to review of the item and the final decision made.
- Under normal circumstances, research product reviews are **completed in seven to ten working days**. Please be mindful of the number of files submitted for review. The amount of time needed for review will depend on the number of requests at the time and



the length and number of files. If a researcher requires more immediate action, he can attempt to negotiate this directly with the UH ERC. Please note that **larger documents might need more** than ten days for review and in such cases, the researcher should contact the UH ERC for a more accurate estimate.

Common Issues

The research products vary greatly across the many ongoing research projects at the UH ERC. Despite this variability, UH ERC staff members have identified common issues encountered during the review process.

Unclear Variables or Output

- Considering the sheer number of variables and the creation of new variables during the research process (collapsing groups, new categorical variables, or indices), reviewers may not be able to determine if the variables included require masking for FERPA compliance. This requires additional information from the researcher(s).
- Researcher(s) should ensure:
 - Variables/output are clearly labeled,
 - Each variable/output includes a definition; and
 - Derived or created variables are identified.

The easiest method for labeling and defining variables is to use Microsoft Excel. When exporting output from a statistical software package or creating new output, be sure to include the descriptors. Tables, graphics, and other displays may be done in the same manner.

Graphics

The statistical packages available at the UH ERC provide many options for the visual display of information. The outputs of graphics, however, are often overlooked by researcher(s) when reviewing for PII. The same guidelines (see Masking Guidelines & Techniques) apply to visual displays such as graphs or charts. If the graph illustrates aggregated data about a subgroup with fewer than five persons, it must be appropriately masked.

Degree of Detail

The depth and richness of the dataset available in the UH ERC database affords research opportunities from the individual to institutional level. This ability is invaluable for several



lines of inquiry in education. These same fine-grained abilities of the dataset, however, may necessitate a greater degree of masking. The UH ERC encourages researcher(s) to consider the following question when determining subgroup/categorical groupings, variable sections, reporting, and other methodological decisions:

Considering your research purpose, what degree of detail is required to answer your research questions?

For instance, consider a research project focused on high school IB program enrollment and time to completion in higher education. Is it necessary to report the outcomes for all racial/ethnic subgroups, which will require additional masking, or would it be more beneficial to report the outcome for all IB, which would require less masking? The answer is up to the researcher(s), but the decision may impact the amount of time required to complete the review process.

Masking Guidelines & Techniques

Masking is a general term used to describe methods that limit or hide original values in a data set. Data suppression, recoding, blurring, perturbation, and selective reporting are all forms of masking (NCES, 2010b; NCES, 2011; Privacy Technical Assistance Center [PTAC], 2012). In the case of the UH ERC, masking refers to the purposeful exclusion or removal of information prior to public release to protect individuals under FERPA.

A common situation where masking is needed is within small cells (see pp. 4-5). According to the U.S. Department of Education (2014), FERPA mentions but does not specifically designate a small cell count standard. Rather, states must define minimums within their respective State Accountability Plans approved by the federal government (U.S. Department of Education, 2014) and required by the Elementary and Secondary Education Act. The state of Texas has defined the minimum reporting requirement as fewer than five students (“Texas State Accountability Plan”, 2010, p. 43; also see Texas Education Agency, 2014a).

Further, the state of Texas requires the consideration of cells with a count fewer than five in its memorandum of understanding (MOU) with ERCs in Texas:

“All research results must not disclose personally identifiable information. Data must exclude any data cell or subgroup that *may permit identification* [emphasis added]. Small data cells will be considered any cell containing between one and four individuals inclusive. Information may not be disclosed where small data cells can be determined



through subtraction or other simple mathematical manipulations or subsequent cross-tabulation of the same data with other variables. Institutions may use any of the common methods for masking including: a) masking the small cell and the next larger cell on the row and column so the size of the small cell cannot be determined; b) masking the small cell and displaying the total for both the row and column as a range of at least ten; or c) any methodology approved by the Texas Higher Education Coordinating Board and the Advisory Board.”

The UH ERC has elected to fulfill the requirements of the MOU through option “c” by outlining our masking guidelines. The UH ERC has subsequently sought approval from the ERC Advisory Board for the required masking guidelines below. Masking guidelines and techniques are based on the practices of the Texas Education Agency and the Texas Higher Education Coordinating Board, and the guidance of the U.S. Department of Education’s Privacy Technical Assistance Center (PTAC).

Remember, the protection of individual information is nuanced. The best practice is for researcher(s) to ask outlined by FERPA:

- Q: Can a reasonable person in a school community use the information presented, alone or in combination with other publicly available information, to identify an individual?
- A: If the answer is maybe or yes, then you must proceed with masking the data. Data that needs to be masked varies across projects, but the Commonly Used Variables subsection (p.4) provides examples.

Required Masking

The subsequent three masking guidelines provide the basis of the required masking for UH ERC. For exemplars with rationale, see Appendix I.

Small cells. Any cell representing fewer than five individuals presents a small cell reporting issue that must be addressed with masking. Researcher(s) may have subgroups over five individuals, but individual cells fail to reach the minimum of five with subgroups are further broken down by outcomes or other measures of interest. Whether reporting subgroups or categorizations of subgroups, any cell with fewer than five must be masked if it *may permit identification*.



Small Cell Masking Guide

Condition	Solution		
	Numerator	Denominator	Percent
If denominator is <5 including 0	Mask (*)	Mask (*)	Mask (*)
If percent is 100% or rounds to 100%	Mask (*)	Mask (*)	Top Code %
If percent is 0% or rounds to 0%	Mask (*)	Mask (*)	Bottom Code %
If the difference between the numerator and the denominator is fewer than 3	Mask (*)	Mask (*)	%
If the numerator is <5 including 0	Mask (*)	Mask (*)	%

Note: Based on Texas Education Agency Performance-Based Monitoring (2014b) but modified to include top and bottom coding requirements.

If reporting a percentage, and the percentage either is or rounds to 0% or 100%, then you must top and bottom code. The guideline for top and bottom coding depends on the size of the group you are reporting, and it is a form of blurring. The table below provides the conditions, solutions, and exemplars of top-and bottom-coding practices.

Top and Bottom Coding Guide

Size Range	Solution	Top Code	Bottom Code
N < 10	Mask (*)	Mask (*)	Mask (*)
10 < N < 15	Change percent by 10%	≥90%	≤10%
15 < N > 20	Change by 7%	≥93%	≤7%
20 < N > 30	Change by 4%	≥96%	≤4%
30 < N > 50	Change by 3%	≥97%	≤3%



50 < N > 300	Change by 2%	≥98%	≤2%
N > 300	Change by 1 %	≥99%	≤1%

Note: Based on guidance from PTAC described in the NCES (2011) regarding group size.

For instance, if the test passing rate is 100% with N=275, then the researcher(s) would report the passing rate as >98%. While a passing rate of 100% with N=25, would be reported as >96%. This masking technique generally masks the percentage to the difference between +/- one individual's score.

Complementary Cell Suppression

Researcher(s) should be mindful of complementary cells following the masking of small cells. The National Center for Education Statistics (2010b) warned that by combining suppressed information with information in complementary cells, the “reported information can then be used to recover the suppressed data through a series of calculations” (p.9). If a *reasonable person* can reverse calculate the mask cells as a product of total count and/or percentages reported for each subgroup or category, then the researcher(s) must take additional measures to protect small cells.

Complementary cell suppression, also known as second least subgroup suppression, is the technique of identifying the next smallest subgroup or categorization to the cell with fewer than five individuals and masking it. The use of complementary suppression protects against the recovery of the suppressed cell information. UH ERC requires complementary cell suppression of small cell information if there is a chance that the masked cell information can be recovered.

UH ERC urges researchers(s) to consider: Using proportions, counts, and simple mathematic calculations, can a reasonable person recover masked information? If the answer is maybe or yes, then complementary cell suppression must occur.

Reporting Performance Based Indicators or Outcomes

Performance based indicators, like student assessment scores, need additional precautions. Due to the reporting format of the Texas Education Agency publicly available information, percentages for performance-based indicators must be whole numbers. Round to the whole number for performance-based indicators is also recommended by PTAC (see NCES 2011).



Common Issues

Frequently, the process of masking information for FERPA compliance includes steps beyond suppression. The situations and suggestions provided below represent common issues that arise for researchers.

Profile & Context. During the writing process of a research product, providing context is necessary to justify the approach, explain the results, and address the discussion component of the study. Researcher(s) may perfectly mask data according to the UH ERC guidelines but undermine their efforts in the writing process.

To avoid compromising the masking efforts of results, researcher(s) should consider the following:

- In-depth profiles of schools, districts, regions, or states can provide a road map for use of secondary data sources to unmask the reported data. Be mindful of the profiles given in the write-up.
- Descriptions of a population/sample, in narrative or table form, may unmask results information. Researcher(s) should compare results and descriptives to ensure the combination of the materials does not lead to unintended disclosure of individuals.
- Ensure that the information provided in a product (see Glossary) comes only from reviewed research products.
- In some cases, detailed descriptions of masking techniques can comprise masking efforts.

Secondary Publications. The existence of secondary publications, available through the Texas Education Agency, Texas Higher Education Coordinating Board, and other entities reporting data that are found in the UH ERC Repository, may require additional considerations. The impact of secondary publications depends principally on the purpose and targeted population of a given study. The researcher(s) output from this study may be specific enough that when combined with annual public reporting could allow a reasonable person to identify individuals. In such a situation, additional precautions for FERPA compliance must be taken. These techniques may include range reporting for counts or the use of counts from a related, but different time period (e.g., fall enrollment counts and spring assessment by rate). UH ERC must approve any such contextual reporting of counts.



Format. Another common issue is the format of the information. Consistency is key. Researcher(s) should determine a given format for reporting and stay with the same basic format for their research products. The lack of consistency may lead to the ability for a reasonable person to apply reverse calculations or simple mathematical formulas to recover masked data. An example of this issue may be reporting across different related subgroups or researcher created classifications. The review of research products typically occurs in several stages. While the UH ERC makes every effort to track the approved research products for each project, the responsibility for FERPA compliance falls on the researcher(s). The more consistent the format over the various stages of review, the easier it will be to ensure FERPA compliance.

Another helpful suggestion is the inclusion of a short description of how and where you masked data for the reviewer. This can be done when submitting the formal request for review. For instance, a brief descriptor may read:

“Excel file (8thgrade_GT_STAAR): File contains counts of grade 8 students classified as gifted and talented by STAAR performance levels within a specific, unnamed, district. Two cells, A17 & A49, represented fewer than five individuals. Those cells were masked. Additionally, corresponding cells of B17 and B51 were masked according to guidelines for complementary cell suppression. No totals rounded to are/were zero or 100%. All other percentages were rounded to the nearest whole number since STAAR is a performance-based indicator.”

Output. The statistical outputs must also be reviewed for possible disclosure of PII. Namely, the following types of output have shown to be problematic: crosstabs, population marginal means, fixed effects, least squared means, some regression outputs (e.g., logistic regression)

Other Masking Techniques

The UH ERC also wants to acknowledge that there are several other techniques used to avoid the disclosure of information. Moreover, there may be a unique situation in which the guidelines listed above fail to meet the needs of the researcher(s) and/or FERPA compliance. In such a rare situation, where the above-mentioned guidelines are inadequate, UH ERC reserves the right to require or suggest researcher(s) to take additional precautions through the application of other masking techniques. These techniques may include the blurring of data (e.g., aggregation, rounding, truncation, top/bottom coding), additional suppression (e.g.,



collapsing across outcome subgroups), and perturbation (e.g., introduction of noise, data swapping, creation of synthetic data). These additional masking techniques, if necessary, in an exceptional case, will follow the guidelines produced by PTAC, Federal Commission on Statistical Methodology, and National Center for Education Statistics.

The UH ERC aims for a seamless review process that allows researcher(s) to conduct analyses while protecting the confidentiality of individuals within a dataset. In an exceptional situation, UH ERC will work with researcher(s) to find the best possible solution to meet both researcher and FERPA compliance.

Contact Information

If you have any questions, concerns, or issues with any UH ERC policies or procedures, please contact the Director or Principal Investigators. Additional information and all forms can be found on the UH ERC website.

UH ERC Director

Catherine Horn, Ph.D.
(713)743-5032
clhorn2@uh.edu

Glossary:

Approved Project– A research project utilizing the ERC data, to be conducted under the auspices of the ERC and for which approval has been granted by the ERC Advisory Board.

Authorized Representative– The State of Texas’ designated ERCs (University of Houston and The University of Texas at Dallas Education Research Centers) are considered authorized representatives of the state as defined by Family Educational Rights and Privacy Act of 1974 (FERPA).

Complementary Suppression– A masking technique used to further protect individuals represented in masked cells. Requires the suppression or masking of the second least subgroup or category to prevent recovery of suppressed information. Also known as Second Least Subgroup suppression.

Educational Record– Any record that is directly related to a student and is maintained by an education agency, institution, or by a party action for the agency or institution. FERPA further provides exclusions under this definition (see 34 C.F.R. § 99.3).



End Product– Any written outcome or display developed from a reviewed and approved research product. This may include the following: a) abstracts, manuscripts, reviews for publication; (b) research proposals; (c) abstracts, manuscripts, and reviews for submission for funding; (d) posters for display; (e) write-ups for a website; (f) dissertations; (g) term papers; (h) handouts; (i) presentations; (j) book chapters; and (k) policy briefs.

ERC Authorized Researcher– An ERC Authorized Researcher is considered an *Agent* of the ERC. An *Agent* is a person who is authorized to access the ERC data to conduct work as part of an approved project at a designated ERC access location. An **Agent** or ERC Authorized Researcher must either be a primary investigator designated for an approved project or be assigned to conduct work on behalf of an approved project by one or more of its primary investigators of record. An **Agent** or ERC Authorized Researcher must have a current, signed confidentiality agreement on file with the UH ERC.

Masking– Refers to the purposeful exclusion or removal of information prior to public release to protect individuals under FERPA.

Personally Identifiable Information (PII)– Information that can be used to distinguish an individual directly or indirectly through linkages with other information. Many of the direct PII, such as student name and Social Security Number are removed, yet PII remains rich in the UH ERC Repository. Information alone, or in combination with other reported information, can be linked back to a specific student.

Research Products– Any written outcome or display derived from the Repository. Including but is not limited to, any research output (e.g., printouts of log files, statistical output, tables, or graphs) intended to, or potentially could be, viewed by anyone not currently approved to use the Repository.

Small Cell Reporting– Referring to suppression of subgroups or categories represented in each cell with fewer than five individuals. Several masking techniques are used to address small cell reporting (see Complementary Suppression).

Student– An ERC Authorized Researcher who is currently seeking a college degree. Used in reference to the fee schedule. Also used to describe educational records.

Within System– An institution that is a member of the same Texas university system as the Educational Research Center’s institution (e.g., University of Houston Clearlake).



References

- 19 Tex. Admin. Code § 1.18 Code of Federal Regulations, 34 C.F.R. § 99. Family Educational Rights and Privacy Act of 1974, 20 U.S.C. § 1232g.
- National Center for Education Statistics. (2010a). *Data stewardship: Managing personally identifiable information in electronic student education records*. (Issue Brief 2, NCES 2011-602). U.S. Department of Education, Institute of Education Sciences. Retrieved from <http://nces.ed.gov/pubs2011/2011602.pdf>
- National Center for Education Statistics. (2010b). *Statistical methods for protecting personally identifiable information in aggregate reporting*. (Issue Brief 3, NCES 2011- 603). U.S. Department of Education, Institute of Education Sciences. Retrieved from http://ptac.ed.gov/sites/default/files/FAQs_disclosure_avoidance.pdf<http://nces.ed.gov/pubs2011/2011603.pdf>
- Privacy Technical Assistance Center. (2012). *Frequently asked questions—Disclosure Avoidance*. U.S. Department of Education. Retrieved from http://ptac.ed.gov/sites/default/files/FAQs_disclosure_avoidance.pdf
- Seastrom, M., Rodriguez, B., & Szuba, T. (2011, April). *SLDS technical brief #3: Statistical methods for protecting personally identifiable information in aggregate reporting*. Presented at the American Education Research Association, New Orleans, LA.
- Texas Education Agency. (2014a). *Accountability manual*. Texas Education Agency. Retrieved from <http://ritter.tea.state.tx.us/perfreport/account/2014/manual/>
- Texas Education Agency. (2014b). *Performance-based monitoring analysis system: Masking rules*. Texas Education Agency. Retrieved from [http://tea.texas.gov/Student_Testing_and_Accountability/Monitoring_and_Interventions/Performance-based_Monitoring_Analysis_System_\(PBMAS\)/PBMAS_Masking_Rules/](http://tea.texas.gov/Student_Testing_and_Accountability/Monitoring_and_Interventions/Performance-based_Monitoring_Analysis_System_(PBMAS)/PBMAS_Masking_Rules/)
- Texas State Accountability Plan. (2010). U.S. Department of Education. Retrieved from <http://www2.ed.gov/admins/lead/account/stateplans03/txcsa.pdf>



Appendix A

Researcher Checklist

1. Obtaining Access

a. Credentials/CougarNet ID

- i. **CougarNet.** If not part of the UH System, see UH CougarNet ID ePerson of Interest Process to set up your credentials for access. See <http://www.uh.edu/infotech/services/accounts/sponsored/procedure/>
- ii. **Cougar Card.** On-site research workstation access is controlled via Cougar Card swipes. Card information can be found here: <https://uh.edu/af-university-services/cougarcard/>.

b. IRB Approval

Submit evidence of IRB approval or justification for exemption by email to the Director & Operations staff, see *Policies & Procedures: Approved Project Handbook*, Appendix C.

c. FERPA Training

Complete and send a screen shot of FERPA training by email to the Director & Operations staff.

[FERPA 201: Data Sharing under FERPA](#), provided by the U.S. Dept. of Education. Please take a screenshot of the completion information that appears at the end of the course.

d. Masking Training Module

- i. Complete Masking Training Module & Assessment Certify completion of the [UH ERC Masking Training](#)
- ii. Results will automatically be sent to UH ERC staff upon completion of training.
- iii. A score of at least 21 correct out of 24 is required.

e. Confidentiality Agreement

- i. Review, complete, and submit the Confidentiality Agreement to the Operations staff and Director, see *Policies & Procedures: Approved Project Handbook*, Appendix B
- ii. Confidentiality Agreement also serves as the way you request a preferred workstation location, set a keypad access code, and provides information for the workspace scheduling calendar, see *Policies & Approved Project Handbook*.



f. Schedule Workstation Time

Access the online booking app from the UH ERC website
<http://www.uh.edu/education/research/institutes-centers/erc/>.

g. File Request

Formally request data outlined and approved in your proposal, include the preferred format (e.g., SPSS, STATA, SAS, text)

h. Confidentiality Agreement

Renew annually and submit by email to the Director & Database Administrator.

i. FERPA Training

If your training expires mid-project, proof must be resubmitted. Note: Valid for one year

2. Conducting Research

a. Masking

Review the *Policies & Procedures: Approved Project Handbook, Masking Guidelines & Techniques* for details on how to properly mask your data for FERPA compliance.

b. Review of Research Products

- i. Review the *Policies & Procedures: Approved Project Handbook, Review of Research Products* for details on how the process works.
- ii. Submit research products for review to the Director, up to 7 days to review and release if properly masked.

c. Information Updates

Submit periodic updates to the Director reporting the progress and any external publications derived from the Repository data.

d. Project Extension or Amendment

- i. If needed, submit to the Director 60 days prior to the next ERC Advisory Board meeting, see *Policies & Procedures: Approved Project Handbook*, Appendix E.
- ii. If approved, a new Confidentiality Agreement is needed.

e. Dissemination Strategy

- i. Policy Brief– Submit a policy or practice brief highlighting the findings of your study for review by the ERC Advisory Board, Director, and possible posting on the website.
- ii. Complete any other dissemination promises outlined in the proposal and submit copies of publications.



3. Conclusion of Research

a. Researcher Access & Files

- i. Notify the Director & Database Administrator of the conclusion of your research.
- ii. Access is rescinded.
- iii. Researcher folders/workspace files will be archived and destroyed five years after completion.



Appendix B

Confidentiality Agreement

between

University of Houston Education Research Center

and

Research Project # and Title

Researcher Name & CougarNet ID

Project Approved on this Date: _____

Agreement Completed on this Date: _____

A copy of the approved proposal will be kept on file at University of Houston UH ERC & the Texas Higher Education Coordinating Board (THECB).

As an “agent” of University of Houston UH ERC, you have access to confidential data. With your initials and signature below, you acknowledge and agree:

Initial	Terms and Conditions
	1. that you have received a copy (or accessed online at http://www.uh.edu/education/research/institutes-centers/erc/) of both the Policies & Procedures (<i>General Information</i> and <i>Approved Project Handbook</i>) of the Texas Education Research Center;
	2. to abide by the terms of the Texas Education Research Center’s policies and its subordinate processes and procedures;



	3. that you have completed formal FERPA training through either University of Houston or another qualified institution;
	4. that you have completed the mandatory <i>Masking Guidelines & Techniques Training Module</i> and online assessment;
	5. to obtain the necessary human subject internal review board (IRB) approval (if required) by your institution or organization before accessing the Repository data at the UH ERC and supplied documentation;
	6. to access and use the Repository data at the UH ERC only for authorized research;
	7. that you will use the confidential data for only the purpose(s) of the study;
	8. not to attempt to identify individuals or publicly release confidential data;
	9. that you understand that you must only access the Repository data at the UH ERC through your own credentials. Under no circumstance may a researcher log into the UH ERC under another researcher's account or allow another researcher to log in through their account;
	10. Researchers must provide the UH ERC with regular updates regarding the progress, changes, and extensions to the research hypotheses and personnel changes for their research projects.
	11. to ensure that all research conducted and all generated research products (papers, abstracts, PowerPoint presentations, publications, etc.) using the Repository are compliant with the Family Educational Rights and Privacy Act (FERPA), which explicitly means no information will be released that could identify individuals;
	12. to never remove unapproved confidential information from the physical or electronic workspace of the UH ERC;
	13. to ensure that all research output using the Repository data are compliant the UH ERC Masking Guidelines & Techniques;
	14. to never remove or publicly release results or output that has not been approved for release from the physical or electronic workspace of the UH ERC;



	15. to request the UH ERC review and approve all research products generated using confidential Repository data prior to any public release;
	16. to report, as soon as possible, any known or suspected breach of confidentiality, including the removal or inappropriate sharing of data, to the Director or Database Administrator of the UH ERC;
	17. that access to the UH ERC can be suspended based on any violation of this contract or risk of unauthorized disclosure of confidential information;
	18. to grant permission for the manual and electronic collection and retention of security-related information, including photographic or videotape images, of your attempts to access the facility and/or workstations; and
	19. that you understand that the data files you create for this project will be destroyed five years following the completion of the project, unless specific permission is granted for an extension by the ERC Advisory Board or another applicable state agency.

The estimated date of data destruction defined as

(Date approved + 2 active years + 5 inactive years) is: _____.

Signature:

Researcher, Date

Signature:

Dr. Catherine L. Horn, University of Houston ERC Director, Date

Preferred Email: _____ (for email)

Preferred Phone Number: _____ (for non-critical situations)

Cell Phone Number: _____ (for critical situations)



Appendix C

Institutional Review Board Certification

Certification of IRB approval IRB exclusion

Research Project Title

Principal Researcher

Name _____ CougarNet ID _____

Co-Researcher

Name _____ CougarNet ID _____

IRB Study Number

IRB Contact

Information _____

Institution Address

Phone

If certifying an IRB exclusion, please attach any necessary evidence to justify the waiver. Upon request, information may be presented to the ERC Advisory Board.

This form and any supporting documentation, if needed, should be submitted to the Director and Database Administrator.



Appendix D

Policy Brief Suggestions

A short narrative or summary of what is known about a particular problem or issue to provide context for your research at the UH ERC, the Policy Brief explains how the findings of your research can inform and benefit the State of Texas.

Structure (4-6 pages)

- | **Executive Summary**—An overview covering the problem, purpose, and key findings of your project.
- | **Study Overview Context and Importance of the Problem**—Includes an overview of the problem, prior research, and a clear statement of importance.
- | **Statement of Research**—Concisely and clearly describe the research questions, approach, and participant groups.
- | **Key Findings**—Highlight the major findings of the study in a manner that is easy to consume as a reader.
- | **Policy Recommendations**—Details the shortcomings of a current policy or highlights how the findings of your research can be applied to the current system.
- | **References/Appendix**—References are typically included in endnote format. Appendices in policy briefs are discouraged, but if necessary, included at the end.

Suggestions

- | Include disclaimer language from the data usage terms and conditions section: *“The conclusions of this research do not necessarily reflect the opinion or official position of the Texas Education Research Center, the Texas Education Agency, the Texas Higher Education Coordinating Board, the Texas Workforce Commission, or the State of Texas.”*
- | Use the third person.
- | Use tables, graphs, and other organizers to illustrate the research and findings.
- | Focus all aspects of the policy brief needed to inform the purpose.
- | Write your brief with the people of Texas as your audience (avoid jargon, explain terms,



-
- be mindful of methodological explanations that can be confusing)
 - | Stress the importance of your findings as it relates to the Texas context.
 - | Researcher(s) can reference the full research write up in-text.

Examples can be found on the [UH ERC Website](#).



Appendix E

Project Extension/Amendment Request Form

Request for extension change both

Project No. _____

Research Project Title

Principal Researcher

Name _____ CougarNet ID _____

Co-Researcher

Name _____ CougarNet ID _____

Original Project Approval Date _____ Original End Date _____

Requested Length of Extension _____ Requested End Date _____

Considerations

- Researcher(s) cannot resubmit the same proposal to the ERC Advisory Board as a new project in lieu of an extension form. The new submission must include significant modifications indicating that it is not a reiteration of an expired project.

- Substantial change requests will require the researcher(s) to resubmit a new proposal to the ERC Advisory Board.

- Extensions are granted based on the rationale of the request, initial approval period, and secured funding status of the project.

- Researcher(s) should review the *Approved Project Handbook* for details on extensions and project amendments prior to completing this request.



Answer the prompts below in a numbered format. Attach this request form along with any supplementary documentation and submit it to the Director and copy the Database Administrator. The information provided will be used to determine if the request shall be granted.

1. What project activities have been completed? What has been achieved?

2. What project activities have not been completed? What has not been achieved?

3. What is the reason that the extension is needed? Provide the reason for the delay and any supporting documents to substantiate your circumstance. If the reason is related to the data availability include a) what data was originally requested; b) what data has already been used; and c) what types/years are still needed and why.

4. Is there a change in the research questions and/or methodology accompanying the project extension? If so, be specific, comparing the original project to the revised project. Are there proposed changes in researchers?



Appendix F

Supplemental Data Request Forms

The forms below are used by the Texas Education Agency (TEA) and other cooperating agencies. As a reminder, these forms should accompany your proposal to the ERC Advisory Board. Requests for supplemental data will not be accepted by the respective agency without the project approval of the ERC Advisory Board. All requests will be processed through the Director. Please also copy the Database Administrator on your request.



ERC Request for Supplemental External Data–To TEA

Texas Education Agency Procedures for Processing Supplemental Data

For Use by Education Research Centers with Advisory Board-Approved Projects

Supplemental data requiring processing. TEA must process any supplemental student or staff data that are to be matched to individual K-12 student or staff records in the ERC database. This supplemental data processing request form applies only to individual-level data. Data not at the individual level (e.g., school level, district level) do not need TEA processing.

Supplemental data acquired by a researcher. Supplemental data that is owned by a researcher must be destroyed by the researcher prior to its placement in an ERC by THECB. TEA will process the supplemental data and provide the de-identified dataset along with the original dataset to THECB; THECB will provide the supplemental dataset to the ERC once the researcher has certified the original dataset has been destroyed; and, at the conclusion of the research project, THECB will return the original dataset to the researcher. Supplemental data owned by a researcher must be sent directly to TEA via the secure file sharing program, Accellion. Prior to transmitting data to TEA, the researcher must submit the Supplemental Data Processing Request Form (attached) to Nina Taylor and have obtained permission to submit data. TEA will not accept data unless prior permission has been obtained from the agency. Contact Nina Taylor at (512) 475-2085.

Supplemental data maintained by an entity other than the researcher. Supplemental data owned by an external source such as a school district must be sent directly to TEA by the external owner, not the researcher, via the secure file sharing program, Accellion. Prior to transmitting data to TEA, the researcher must submit the Supplemental Data Processing Request Form (attached) to Nina Taylor and have obtained permission for the external owner to submit data. TEA will not accept data unless prior permission has been obtained from the agency. Contact Nina Taylor at (512) 475-2085.

Quality of matches between supplemental data and TEA data. Note that successful matching of supplemental data to TEA data is dependent on the quality of identification fields (e.g., first name, last name) in the supplemental dataset. TEA will not clean or modify supplemental data to increase successful matches.

Timeline for processing supplemental data. Requests are processed in the order received. THECB will notify the researcher when the supplemental data is available.

How to begin the supplemental data request process. Submit the attached form to Nina Taylor at Nina.Taylor@tea.state.tx.us or call her for instructions at (512) 475-2085.



Texas Education Agency Supplemental Data Processing Request Form

1. Instructions

- a. Complete this form and send it to: Nina.Taylor@tea.state.tx.us
- b. Attach the data element documentation or data dictionary.

2. To be completed by Requestor

- a. Research Project Number:
- b. Advisory Board Approval Date:
- c. Education Research Center:
- d. Contact Phone Number:

3. To be completed by TEA Staff

- a. Date Data Received by TEA:
- b. Research Project Name:
- c. Date Request was Submitted:
- d. Contact for this Request:
- e. Date Supplemental Data Sent to THECB:



ERC Request for Supplemental External Data – To the THECB

(Use this document for all requests that are not sent to the Texas Education Agency)

Note: *This document must be **approved and submitted by the ERC Primary Contact**. Requests for external data will only be accepted if an applicable Research Project has already been submitted to the THECB or is accompanying this document.*

When documenting this request, please avoid using abbreviations and acronyms.

I. Project / Requestor Information

1. ERC Requesting the data:
2. Date of Request:
3. ERC Primary Contact Name:
4. Institution or organization conducting the research:
5. Project contact for this data request
 - b. Name:
 - c. Telephone Number:
 - d. Email Address:
6. What is the name of the project that this data request is to be associated with?



II. Data

1. Agency or Organization that owns the data:
2. Agency or Organization contact information:
3. Name:
4. Telephone Number:
5. Email Address:
6. Please provide information about the data requested.
7. Period of time the data should cover (mm/dd/yy through mm/dd/yy):
8. Description of the requested data:
9. Specific data items that need to be included as part of the request (e.g. SSN, Race, Age etc.):
10. Data destruction date:
11. Please provide any other information that will help ensure timely and accurate handling of this request.



Appendix G

Matching Process

Within the Repository, there are two identifiers used for matching:

ID1—Only appears with TEA Data. The ID1 is a unique replacement for the data posted in the PEIMS ID (PID) field.

ID2— Appears in all data sets TEA and Non-TEA. This variable is a unique substitute for what is posted in the SSN field. The sections below are intended as guides for matching data files using the identifiers. As mentioned in the *Policies & Procedures: Approved Project Handbook*, the Repository data is held in the format it is received by cooperating agencies. Depending on the research project, it may be necessary to match student level data across data files.

Matching TEA Student Data

Condition

If needing to match TEA Student Data file (master) to other Student TEA Data file (target), matching within PEIMS/TAAS/TAKS

Process

- | **If matching within multiple school years**—Match by ID1 where the `invalid_id1_flag= '0'`. This scenario matches students with a valid TEA identity (permanent PID).
- | **If matching within a specific school year** – You can expand this type of match by including student records where the `invalid_id1_flag = '1'`. These are records where students have only been assigned a temporary TEA identity. Although these student records will not carry forth from year, the ID1 and `invalid_id1_flag = '1'` identifies a unique student record. This record can be matched with other TEA data files within the same school year.

Other Considerations

- | A student may have attended school in multiple districts even within the same fiscal year. This may cause multiple student records (one for each district), where you may be expecting unique student records. Depending on the nature of the research, it may be appropriate to also match the District variable.



Matching All Other Data

Condition

- | If needing to match TEA to THECB, THECB to TEA, SBEC to TEA, or other combinations.

Process

For the purposes below, we will call “valid ID2s” as ID2s that replace valid SSNs.

- | **Step 1**–Identify valid **ID2s** in **NEW** data set (Recently released file to THECB for the ERC Repository)
 - 1**TEA** (Valid ID2 criteria (PEIMS/TAKS/TAAS)– State_Assigned_Flag='0', Invalid_ID1_Flag='0', ID1 field is not blank, and Invalid_ID2_Flag='0' (this last variable is in TAAS/TAKS only)
 - 1**TWC** (data not yet posted) – ID2 is always valid unless the ID2 field is blank.
 - 1**All Other Sources** (THECB SBEC etc.) – Valid ID2 Criteria - ID2 field is not blank, and Invalid SSN Flag = '0'
- | **Step 2**–Match valid **ID2s** with **target** data. No criteria are needed for target data. If the ID2 is valid in the **NEW** file, the ID2 that matches in the target data will also be a valid ID2.

Additional Matching TEA data with THECB Data

Condition

- | Beginning in FY2009 the THECB Enrollment Report CBM001 includes the field TEA_ID2. When this field is populated, it means the corresponding TEA data for this student included a State Assigned SSN/ID2 (state_assigned_flag = '1').

Process

- | In these cases, the THECB SSN/ID2 variable will not match the TEA's State Assigned SSN/ID2. However, by matching the populated CBM001 TEA_ID2 field to the TEA's ID2 field you will create a match. Although the TEA_ID2 field only appears on the THECB CBM001, you can carry the TEA_ID2 variable to other THECB data sets by matching on the ID2.



Other Approaches

The UH ERC recognizes some limitations in the data matching process. Below is something to consider with caution. The following description may assist the researcher in matching but should be used with caution understanding the limitations and issues it presents.

- | Higher Education student records that have an Invalid_SSN_Flag='1', generally have ID2's that cannot be used for matching. However, when a College/University cannot assign a SSN/ID2, the school is supposed to assign a SSN replacement unique to the school (fice). This same SSN/ID2 replacement number will follow the student through subsequent years at the same school. Hence, matching on the ID2 **and** the FICE will allow you expanded Higher Ed school tracking. The problem with this method is that Higher Ed data sets still have some SSN records entered as '00000000' and as other invalid extraneous "gibberish". Some schools are better/worse than others. In addition, each Higher Ed school '00000000' record has a different ID2. Where these bad records are obvious non-matches when you can see the actual SSN data, they are not obvious at all when you only have the ID2. The older the data, the worse the SSN/ID2 data you will encounter. **Under no circumstance should this be used on data prior to FY 2000. Use this search method at your own risk.**

Teacher IDs

- There is not an invalid_ID1 field on the SBEC certification data files because TEA only keeps the certification records that match TEAs crosswalk. So, there are no invalid ID1s.
- There are no invalid SSNs or PID numbers in p.employ, and there are no state-assigned numbers given to staff.

Student IDs

- Generally, all students in TEA data sets have either a valid SSN or a State Assigned (state assigned flag='1'). Either way, there is a unique ID2 posted for both SSNs and State Assigned SSNs. Technically, the ID1s with a State Assigned Flag = 1 cannot be matched with non-TEA data. Since matching within TEA data uses the ID1, those ID2s where there is a State Assigned Flag='1' are problematic.

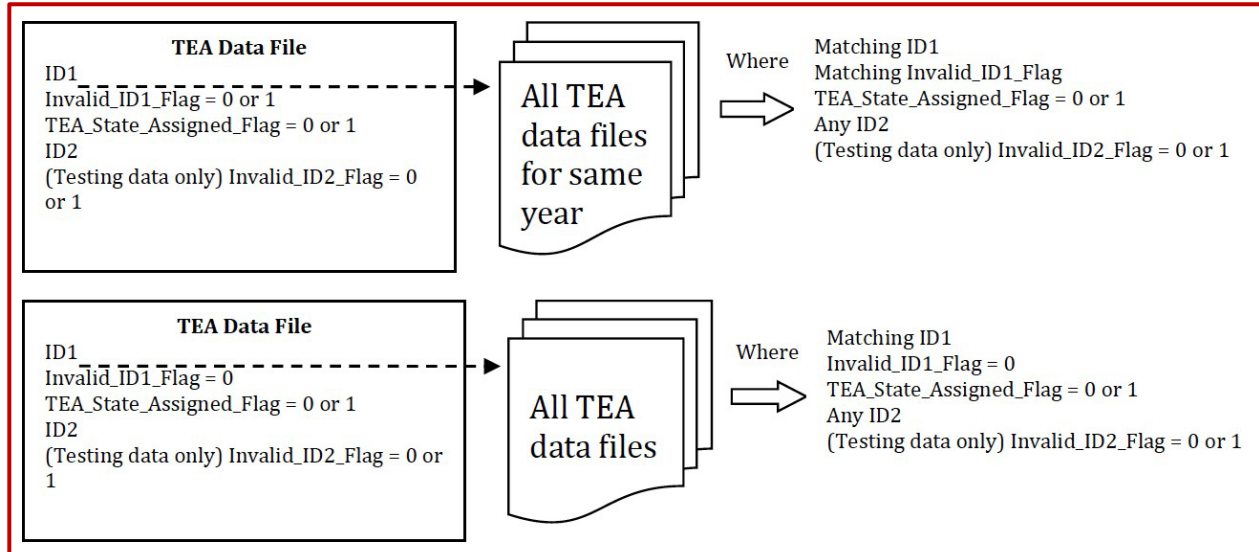


- Each year there can be a unique record for each ID1/ID2 combination. Where there may just be two records where the ID1 matches more than one ID2 on one file, each of those unique ID1/ID2 combinations may show up over the years, possibly even once for each year. Each record of two ID1/ID2 combinations could potentially have many mismatches over time.

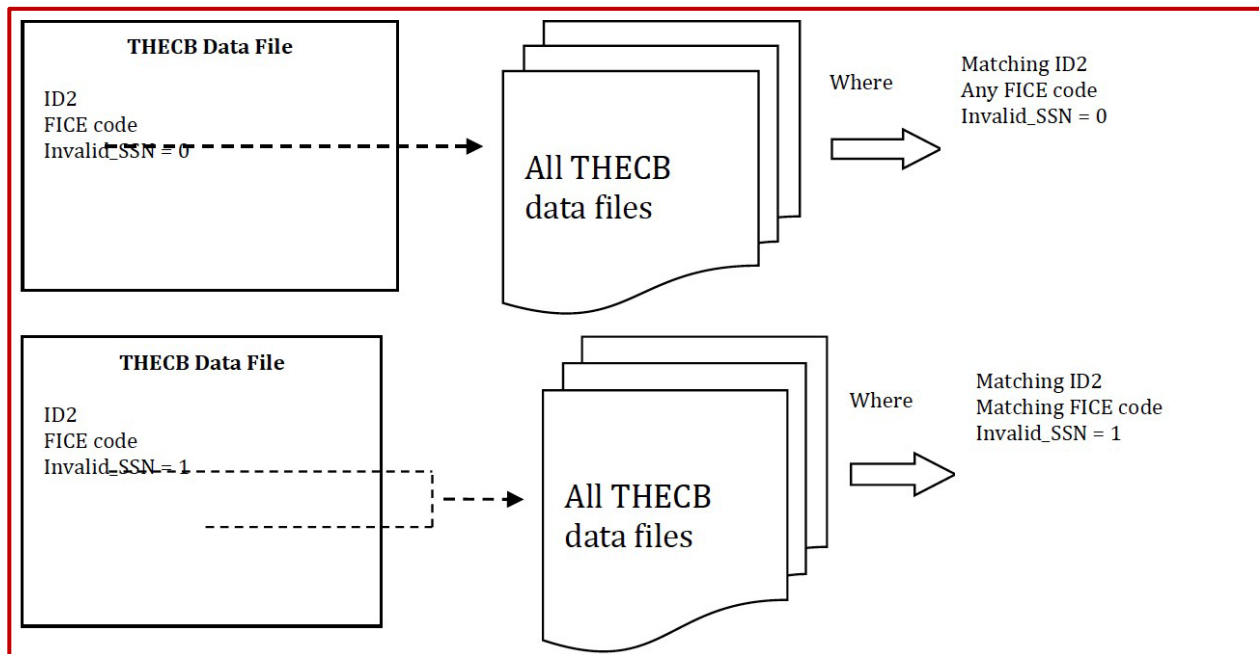


Matching Process Visuals

Matching Student Records within the TEA Data Files



Matching Student Records within the THECB Data Files





Appendix H

FERPA Overview

Overview

- **What is FERPA?** The Family Educational Rights and Privacy Act of 1974 (20 U.S.C. § 1232g; 34 CFR Part 99) is a federal law that pertains to the release of and access to educational records. The law, also known as the Buckley Amendment, applies to all schools that receive funds under applicable programs of the United States Department of Education.

- **To which information does FERPA apply?** FERPA applies to personally identifiable information in educational records. This includes items such as a student's name, names of family members, addresses, personal identifiers such as social security numbers, and personal characteristics or other information that could reveal a student's identity.

- **What are educational records?** Educational records are all records that contain information directly related to a student and that are maintained by an educational agency or institution or party acting on the behalf of an educational agency or institution. A record is any information recorded in any way, including handwriting, print, tape, film, microfilm, microfiche, electronic data storage, and digital images.

- **Educational records do not include** Sole possession records, which are records kept in the sole possession of the maker for intended use as personal memory aids. They may not be accessible or viewed by any person other than the maker of the record, except for someone serving as a temporary substitute for the maker.

- Medical or psychological treatment records, including those maintained by physicians, psychiatrists, and psychologist.

- Employment records, provided that employment is not contingent upon the employee's status as a student.

- Law enforcement records

- **Who has access to student educational records?** Generally, schools must have written permission from a parent or eligible student to release any information from a student's educational record. FERPA allows schools to disclose records, without consent, to the following parties or under the following conditions (34 CFR § 99.31):



-
- School officials with a legitimate educational interest
 - Other schools to which a student is applying, enrolling, or transferring.
 - Specified officials for audit or evaluation purposes.
 - Appropriate parties in connection with financial aid for a student
 - Organizations conducting certain studies for or on behalf of the school.
 - Accrediting organizations
 - In compliance with a judicial order or lawfully issued subpoena
 - Appropriate officials in cases of health and safety emergencies
 - State and local authorities within a juvenile justice system, pursuant to specific State law

- **What is legitimate educational interest?** At University of Houston, legitimate educational interest is access to educational records by appropriate University administrators, faculty members, staff members, appropriate administrators and staff members of the Texas Exes, and contractors acting on behalf of the University, who require such access to perform their legitimate educational and business duties in the furtherance of the educational and business purposes of the student or the University.

- **What is directory information?** Schools may disclose, without consent, directory information such as a student's name, address, telephone number, date and place of birth, honors and awards, and dates of attendance. However, schools must inform parents and eligible students about directory information and allow parents and eligible students a reasonable amount of time to deny release of this information by the school.

Additional Resources

For government information about FERPA: <http://www.ed.gov/policy/gen/guid/fpco/ferpa/>
<http://www.ed.gov/legislation/FedRegister/finrule/2008-4/120908a.pdf>
<http://www.ed.gov/policy/gen/guid/fpco/pdf/ht12-17-08-att.pdf>

For University information about FERPA: <http://www.uh.edu/parents/resources/ferpa-explanation/>



Appendix I

Masking Exemplars

The following examples provide researchers with concrete examples of how the UH ERC guidelines are applied. The information presented below is fabricated and does not represent actual data from the Repository. Moreover, the examples are simplified for demonstration purposes and do not capture the nuance a researcher(s) may encounter with the individual level data available at the UH ERC.

Small Cell Reporting

Let us take the example of a single campus to demonstrate the need for masking. Below is a simplified table that shows the STAAR Reading assessment results for a single elementary school campus. This table is one of many being presented to compare elementary schools across a single named district. Cells highlighted in red indicate values that must be masked due to small cell reporting guidelines.

Table 1: Small Cell Masking Appleseed Elementary School, STAAR Reading by Phase-II Levels 2014, Grade 5

		Level I: Unsatisfactory	Level II: Satisfactory	Level III: Advanced
All Students	290	75	174	41
Gifted & Talented	28	0	8	20
Special Education	25	13	12	0
Economically Disadvantaged	272	71	165	36
English Language Learner	90	53	35	2

Note: Red color fill indicates cells to be masked.



Remember, we need to apply masking if any of the following conditions arise:

- | If the denominator is <5 including 0 If the difference between the numerator and the denominator is fewer than 3
- | If the numerator is <5 including 0
- | If the percentage is 100% or rounds to 100%, then top code.
- | If the percentage is 0% or rounds to 0%, then bottom code.

First, we must check for the denominators within this table. All totals across group and level meet this threshold. Second, we must mask any cell values with a difference between the numerator and denominator being fewer than three. In this case, we must first compare the overall subgroups then the levels to the total number of students. Completing the first three conditions we have addressed the other two conditions and may proceed to complementary cell suppression.

Complementary Cell Suppression

The next step in the exemplar is the consideration of complementary cell suppression. In the case of this simplified table, we can recover small cell masked information through simple calculations. By subtracting the Level III and Level II values from the total number of Economically Disadvantaged students the Level I count is revealed. Cells highlighted in red indicate values that must be masked to avoid reverse calculations.

Table 2 Complementary Cell Suppression Appleseed Elementary School, STAAR Reading by Phase-II Levels 2014, Grade 5

		Level I: Unsatisfactory	Level II: Satisfactory	Level III: Advanced
All Students	290	75	174	41
Gifted & Talented	28	*	8	20
Special Education	25	13	12	*
Economically Disadvantaged	272	71	165	36
English Language Learner	90	53	35	*

Note: Red color fill indicates cells “to-be” masked.



Table 3 Final Table with Small Cell & Complementary Suppression Applied Applesseed Elementary School, STAAR Reading by Phase-II Levels 2014, Grade 5

		Level I: Unsatisfactory	Level II: Satisfactory	Level III: Advanced
All Students	290	75	174	41
Gifted & Talented	28	*	*	20
Special Education	25	13	*	*
Economically Disadvantaged	272	71	165	36
English Language Learner	90	53	*	*

Collapsing Categories

After applying the small cell and complementary cell suppression guidelines, you can see how information pertaining to Gifted & Talented, Special Education, and English Language Learners had to be masked. The loss of information can be avoided if researcher(s) consider the needs of their research question(s). If your research question(s) revolve around proficiency, then reporting Level III achievement may not be necessary. By collapsing the performance-based indicators into two categories, information related to English Language Learners and Special Education subgroups can be restored.

Table 4 Collapsing Categories, Counts Applesseed Elementary School, STAAR Reading by Phase-II Levels 2014, Grade 5

		Level I: Unsatisfactory	Level II & Level III: Satisfactory or Above
All Students	290	75	215
Gifted & Talented	28	*	*
Special Education	25	13	12
Economically Disadvantaged	272	71	201
English Language Learner	90	53	37

Secondary Publications & Top and Bottom Coding

A researcher may conclude the way around losing information is to report percentages only. This technique may work for some research products, but not all. Secondary publications must be considered. Take for example, Table 5. In this table, total counts and subgroup counts have been removed.



Table 5 Reporting by Percent Appleseed Elementary School, STAAR Reading by Phase-II Levels 2014, Grade 5

	Level I: Unsatisfactory	Level II: Satisfactory	Level III: Advanced
Gifted & Talented	0%	28.5%	71.4%
Special Education	52.0%	48.0%	0%
Economically Disadvantaged	26.1%	60.7%	13.2%
English Language Learner	58.9%	38.8%	2.2%

Note: Red color fill indicates cells to be masked.

Remembering the top and bottom coding rules outlined in the masking guidelines regarding percentages that round to or are either zero or 100, you apply the bottom coding conditions for a group of N=290. You realize that you have two cells with 0%, indicated in red (see Table 5). Furthermore, you apply the whole number guideline to percentages related to performance-based indicators. The result is table 6.

Table 6 Reporting by Percent Appleseed Elementary School, STAAR Reading by Phase-II Levels 2014, Grade 5

	Level I: Unsatisfactory	Level II: Satisfactory	Level III: Advanced
Gifted & Talented	$\leq 2\%$	29%	71%
Special Education	52%	48%	$\leq 2\%$
Economically Disadvantaged	26%	60%	13%
English Language Learner	59%	39%	$\leq 2\%$

Note: Percentages may not add up to 100% due to rounding.

At first glance, Table 6 looks like it is compliant. Secondary publication data, however, undermines these efforts. The TARP 2013-2014 report for Appleseed Elementary School will reveal the detailed counts for each subgroup. With the counts, small cells within this table are disclosed. As such, this table would need masked to protect cells with less than five (refer to Table 3 or Table 4).



Appendix J

Folders All Researchers Can Access

Write Folders

As explained in the Approved Project Handbook, researcher(s) may only access folders/files specific to their approved project.

- | **Project Name**–The project folder with a convention of the project’s title. The project folder is a shared folder for all approved researchers on the project.

Read Only

The files listed below are ‘read only’ documents that may serve the researcher(s) in understanding the format, codes, and variables in the Repository datasets.

- | **ERC Master (Read Only)** – contains a list of all the data files that are in the ERC Repository. Currently, there are four types of formats available: SPSS, Stata, SAS, and TEXT.
- | **SBEC Documentation (Read Only)** – contains a description of the SBEC teacher files.
- | **TEA File Layouts (Read Only)** – contains layout files mainly for key tables.
- | **THECB Manuals (Read Only)** – contains many of the THECB Manuals. The newest manuals can be found at the THECB website:
<http://www.txhighereddata.org/index.cfm?objectId=3874B639-B8B5-1533-24CEAC194113B058>
- | **TWC Documentation (Read Only)** – contains a description of the TWC files.