**The eTIMSS with PSI 2019 U.S. Public-Use Database contains the following:**

* U.S. supplemental eTIMSS with PSI school, teacher, and student public-use data files for grades 4 and 8 in ASCII text format;
* SPSS and SAS control files for reading the U.S. supplemental eTIMSS with PSI public-use data and producing SPSS system files and SAS datasets;
* Codebooks for the U.S. supplemental eTIMSS with PSI public-use data files in HTML format, with unweighted frequencies;
* Illustrative code for merging eTIMSS with PSI public-use data files; and
* AAREADME file for grade 4 and one for grade 8 listing in detail all eTIMSS with PSI 2019 U.S. PSI public-use files.

The eTIMSS with PSI 2019 U.S. Public-Use database includes the data files for eTIMSS that contain additional data for the students that were administered problem-solving inquiry tasks (PSIs). These files are add-on files that are supplemental to the U.S. eTIMSS with PSI 2019 data files in the international databases released by the International Association for the Evaluation of Educational Achievement (IEA) and cannot be used without merging with the IEA international databases.

TIMSS 2019 marked the beginning of the TIMSS transition to computer-based assessment, known as eTIMSS. Half the participating education systems, including the United States, chose to administer eTIMSS, while the other half administered the paper-and-pencil version as in previous assessment cycles (paperTIMSS).

As an important feature of the transition, PSI tasks were developed to gain insights into how using digitally-based interactive assessment items to capture students’ responses could be incorporated into the assessment. As explained in detailed in IEA’s TIMSS 2019 PSI Report (<https://timss2019.org/psi/>), this created the opportunity to develop innovative assessment measures that would enhance coverage of problem solving and inquiry processes. Eight Problem Solving and Inquiry (PSI) tasks were developed—two for mathematics and two for science each at fourth grade and eighth grade. These PSI tasks were assembled into two special eBooklets per grade that were assessed together with eTIMSS in the eTIMSS countries according to a rotated design. Because PSI tasks were new and experimental in 2019, producing results for students who were administered booklets with PSI items was a separate initiative. The eTIMSS with PSI 2019 data include cases for these students and their teachers, in addition to cases for students who were administered regular eTIMSS booklets. The eTIMSS with PSI 2019 data files also include updated weights for all students and teachers, as well as additional achievement variables for the PSI items, and process data.

Details of selecting the PSI sample are provided in Chapter 3 of Methods and Procedures: TIMSS 2019 Technical Report at <https://timssandpirls.bc.edu/timss2019/methods/chapter-3.html>. Additional information about the eTIMSS with PSI data files is provided in the TIMSS 2019 User Guide for the International Database at <https://timss2019.org/international-database/downloads/TIMSS-2019-User-Guide-for-the-International-Database-2nd-Ed.pdf>.

The international datasets are available in two versions: A public-use version and a restricted-use version. The public-use datasets are available as SAS export files or SPSS “.sav” files through the TIMSS 2019 International Database (<https://timss2019.org/international-database/>). The restricted-use datasets are available by request by contacting the IEA Data Repository to obtain permission and access to the restricted-use version of the TIMSS 2019 international database (<https://www.iea.nl/node/3263>).

Discussions of the international public- and restricted-use datasets can be found in the Methods and Procedures: TIMSS 2019 Technical Report (<https://timss2019.org/international-database/>) and the TIMSS 2019 User Guide for the International Database (<https://timss2019.org/international-database/>). These two documentations are the more comprehensive and detailed information for the TIMSS 2019 data, including the eTIMSS with PSI files and should represent as the primary references.

For more details about the eTIMSS with PSI 2019 data, please refer to the U.S. Technical Report and User Guide for the 2019 Trends in International Mathematics and Science Study (TIMSS), available at <https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2022049>.

**Creating Working Files**

Users can extract TIMSS 2019 data for their own use by producing SAS and/or SPSS datasets using the code from the control files. These control files read in the raw ASCII data files, which are found in the user-specified directory (i.e., the directory where the user has downloaded or placed the files). The control files will need to be edited to reflect both the locations for reading in the ASCII files and writing out the SAS/SPSS datasets. The control files include code for recoding user-defined numeric missing values. The names of the control files have extensions that identify whether they are for creating SAS datasets (\*.sas) or SPSS system files (\*.sps). The names of the control files match the names of the ASCII files (\*.dat).

The illustrative code is included for performing SAS/SPSS merges of NCES U.S. public-use eTIMSS with PSI school-, student-, and teacher-level data with IEA data files to create files for analysis for eTIMSS with PSI 2019 files:

* Merging\_Code\_Illustrative\_for\_TIMSS2019\_US\_G4\_Public\_Use\_PSI.docx
* Merging\_Code\_Illustrative\_for\_TIMSS2019\_US\_G8\_Public\_Use\_PSI.docx

**Data Use Agreement**

Under law, public-use data collected and distributed by NCES may be used only for statistical purposes.

Any effort to determine the identity of any reported case by public-use data users is prohibited by law. Violations are subject to Class E felony charges and a fine of up to $250,000, a prison term of up to 5 years, or both. NCES does all it can to ensure that the identity of data subjects cannot be disclosed. All direct identifiers, as well as any characteristics that might lead to identification, are omitted or modified in the dataset to protect the true characteristics of individuals. Any intentional identification or disclosure of a person violates the assurances of confidentiality given to the providers of information. Therefore, users must adhere to the following:

* Use the data in this dataset for statistical purposes only.
* Make no use of the identity of any person discovered inadvertently, and advise NCES of any such discovery.
* Do not link this dataset with individually identifiable data from other NCES or non-NCES datasets.
* Signify their agreement to comply with the above-stated statutorily based requirements in order to proceed.