

## **Linking Studies and NAEP** **May 19, 2023**

A Linking Studies Working Group, which includes Rick Hanushek (Chair), Tyler Cramer, Scott Marion, Julia Rafal-Baer, and Marty West, has convened periodically beginning in early 2022. The linking studies working group was initially conceived to address recommendation 4 of the [2016 National Academies of Sciences, Engineering, and Medicine \(NASEM\) evaluation of NAEP achievement levels](#). Recommendation 4 suggests using information from linking studies to demonstrate NAEP’s relationship with measures of student preparedness for various academic and life outcomes to help contextualize the NAEP achievement levels. The Board adopted the [Achievement Levels Work Plan](#) in 2020 in response to these recommendations.

The working group has also considered how to leverage linking studies more broadly to increase the relevance and utility of NAEP data, which aligns to goals of the NAEP Innovations Agenda. Particularly, the agenda aims to increase useful and actionable information NAEP provides for policymakers and practitioners.

The working group has discussed the utility of existing linking studies, as well as considered future linking studies that should be encouraged. Refer to [Attachment E](#) of the March 2021 COSDAM meeting materials for a summary of previously completed NAEP linking studies.

Bill Tirre of the National Center for Education Research (NCES) and Markus Broer of American Institutes for Research (AIR) participate in the meetings to provide information on linking study methodologies, legislative limitations to data collection and reporting, and prior NAEP linking studies. The working group is keenly interested in what can be learned through linking studies that involve overlap samples with longitudinal studies, including the study linking NAEP with the [2009 High School Longitudinal Study \(HSLS\)](#) and the 2011 Early Childhood Longitudinal Studies (ECLS-K2011).

### **Linking Studies and NAEP Session Overview**

During the May quarterly Board meeting, Hanushek will lead a session on the recommendations of the Linking Studies Working Group. Broer will share examples of what has been learned from NAEP linking studies through work conducted for NCES. Hanushek will share the recommendations of the working group and lead a discussion on where the Board should go next regarding linking studies and NAEP.

### **Why Linking Studies?**

The Board is interested in the use of NAEP linking studies to inform research questions beyond what is possible through NAEP data alone. The NAEP program collects data through brief student, teacher, and school surveys that help provide context to NAEP scores. These data are subject to a legislative requirement that the NCES Commissioner “only collect information that

is directly related to the appraisal of academic achievement, and to the fair and accurate representation of such information” ([P.L. 107-279, NAEP Law](#)).

### **Linking Methodologies**

NAEP data can be linked at the student-level using a common set of students, sometimes referred to as an overlap sample or exact matching. These studies require advanced planning and coordination, because NAEP does not traditionally collect information that would allow identifying individual students following a NAEP administration. Alternatively, after an assessment administration concludes, NAEP data can be linked at the school-level by NCES or external researchers who obtain restricted use data licenses. However, linking at the school level does not provide an exact one to-one student match, and this limits the generalizability of the results. Board members interested in learning more about linking study methodology may review the following resources:

- [\*Uncommon Measures: Equivalence and Linkage Among Educational Tests\*](#)
- [\*Linking Educational Assessments: Concepts, Issues, Methods, and Prospects\*](#)