

## Analyzing NAEP and TIMSS Data Using R: 2021 EdSurvey Large-Scale Data Analysis Training Series

Four virtual sessions on each Wednesday of October 2021 | 12:00pm-2:30pm ET

### Join each session virtually on Zoom

**Join Virtually:** <https://air-org.zoom.us/j/97593609156?pwd=Q09hR2tKZEh0U3ExeExjVldlS0lDQT09>

**Meeting ID:** 975 9360 9156

**Passcode:** EdSur7ey!&

### Download course materials from repository

<https://github.com/American-Institutes-for-Research/2021-Oct-EdSurvey-Training-Series>

### Session 1: Wednesday, October 6, 2021

<b>12:00-12:30</b>	<b>Welcome remarks</b> -Emmanuel Sikali <b>Introductions</b> <b>Review of agenda, Overview of goals and expected outcomes</b>
<b>12:30-1:15</b>	<b>Introduction to Large-Scale Assessments (with NAEP and TIMSS as examples)-</b> Martin Hooper
<b>1:15-1:25</b>	<b>Break</b>
<b>1:25-1:55</b>	<b>Sampling design, weights and variance estimation—</b> Paul Bailey
<b>1:55-2:00</b>	<b>Break</b>
<b>2:00-2:30</b>	<b>Psychometric Model and Analysis-</b> Ting Zhang
<b>Homework</b>	<b>Install R, Rstudio, install EdSurvey, download TIMSS 2011, 2015 and 2019</b>

## Session 2: Wednesday, October 13, 2021

<b>12:00-12:15</b>	<b>Q&amp;A from last session</b>  <b>Intro to R EdSurvey package functionality</b>
<b>12:15-12:45</b>	<b>Why R and why EdSurvey – Michael Lee</b> <b>Get to know the R environment</b>
<b>12:45-1:15</b>	<b>Data processing—Thomas Fink</b> <b>Meet your data-sdf, searchSDF, levelSDF, showCodebook, summary2</b>
<b>1:15-1:45</b>	<b>Data manipulation—Eric Buehler</b>
<b>1:45-2:15</b>	<b>Data visualization – Eric Buehler</b>
<b>2:15-2:30</b>	<b>Hands-on practice with NAEP/TIMSS data</b>

## Session 3: Wednesday, October 20, 2021

<b>12:00-12:15</b>	<b>Q&amp;A from last session</b>
<b>12:15-2:30</b>	<b>Summary statistics- edsurveyTable, etc – Eric Buehler</b>  <b>Linear regression – Eric Buehler &amp; Paul Bailey</b>  <b>Percentile analysis – Charles Blankenship</b>  <b>Quantile regression- Charles Blankenship</b>  <b>Hands-on practice with NAEP/TIMSS data</b>

## Session 4: Wednesday, October 27, 2021

<b>12:00-1:30</b>	<b>Q&amp;A from last session</b>  <b>Achievement-level analysis – Sinan Yavuz</b> <b>Gap analysis – Ting Zhang</b>  <b>Logistic regression – Sinan Yavuz</b>
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**Other analysis types available in EdSurvey – Paul Bailey**

**Doing your own analyses using NAEP/TIMSS data**

**1:30-2:30**

**How to get NAEP Restricted-Use Data; NAEP funding streams and opportunities - Emmanuel Sikali**

**Challenges and opportunities in areas in NAEP that NCES has identified as needing innovative research and applications – Emmanuel Sikali**

**Concluding Remarks – Emmanuel Sikali**