

TECHNICAL BRIEF

Technical appendix for: Chronic absenteeism: A continued impediment to academic recovery

July 2026

Sofia Postell, Emily Morton, Megan Kuhfeld



NWEA, a division of HMH, supports students and educators worldwide by providing assessment solutions, insightful reports, professional learning offerings, and research services. Visit [NWEA.org](https://nwea.org) to find out how NWEA can partner with you to help all kids learn.

© 2026 NWEA. NWEA and MAP are registered trademarks, and MAP Growth is a trademark of NWEA in the US and in other countries. All rights reserved. No part of this document may be modified or further distributed without written permission from NWEA.

Suggested citation Postell, S. (2026). Technical appendix for: **Chronic absenteeism: A continued impediment to academic recovery**

Table of Contents

1. Introduction	2
2. Data	2
3. Methods	3

List of Tables

Table 1. Sample District Demographics Relative to U.S. Population of Public School Districts ..	5
Table 2. District Recovery by Chronic Absenteeism Category.....	6
Table 3. District Recovery by Chronic Absenteeism Category and Poverty Level	7

1. Introduction

The purpose of this technical appendix is to more fully describe the sample, methods, and results of the research brief “Chronic absenteeism: A continued impediment to academic recovery”. We investigated three research questions in this brief:

- 1) How did rates of chronic absenteeism change from 2017-18 to 2023-24 and did they differ by district characteristics?
- 2) Did districts with consistently high levels of chronic absenteeism from 2021-22 to 2023-24 also show the least academic recovery?
- 3) Within poverty level, did consistently high levels of chronic absenteeism from 2021-22 to 2023-24 also show the least academic recovery?

2. Data

Data Sources

NWEA MAP Growth. The MAP Growth data for this study are from the NWEA anonymized longitudinal student achievement database. School districts use [NWEA® MAP® Growth™](#) assessments¹ to monitor elementary and secondary students’ reading and math achievement and gains, with assessments typically administered in the fall (usually between August and November), winter (usually December to March), and spring (late March through June). The NWEA data also include demographic information, including student race/ethnicity, gender, and age at assessment.

Chronic absenteeism rates. Data on district-level chronic absenteeism rates were provided by the American Enterprise Institute (AEI). The data used in this report were the same as those reported by year on AEI’s [Return to Learn Tracker](#), which collected data at the district level from 2016-17 through 2024-25. National data for all public school districts with available free and reduced price lunch data were used for research question 1, while research questions 2 and 3 were limited to the samples described below.

MAP Growth Samples

For our latter two research questions, we used a sample of 3rd to 8th grade Math and Reading test scores from US public schools. The sample for our study is drawn from the set of U.S. public schools that used MAP Growth to test students in both math and reading in grades 3-8 in fall 2019, 2021, and 2024. To be included in the analytic sample, a school had to test at least 50% of enrolled students (based on CCD enrollment) across all tested grades and at least 10 students and 60% of enrolled students per grade included in the analysis across each of the three terms. Schools had to meet these criteria for both subjects, and the same sample of districts was used to analyze math and reading test scores. In addition, to appear in our sample, a district had to have available chronic absenteeism data from AEI in all three post-COVID years (2021-22, 2022-23, and 2023-24).

¹ In the 2023-24 school year, NWEA began the phased implementation of an enhanced item-selection algorithm (EISA) for the MAP Growth assessment, which altered the test scale of the math assessment. To account for the differences in test version, we converted the MAP with EISA math test scores to be on the traditional MAP Growth scale. For more detail on the score conversion process, please see NWEA’s [EISA documentation](#).

Descriptive information for the district in our sample for research questions 2 and 3 along with comparisons to the population of all U.S. public school districts enrolling 3rd to 8th grade students is provided in Table 1. There were 2299 districts in our sample, relative to approximately 17 thousand total U.S. public school districts serving 3rd through 8th graders. Our sample reflects a diversity of schools from across various locales (urban, suburban, town, and rural). Relative to the population of U.S. schools, our sample includes schools serving a higher average percentage of White students and a lower average percentage of Hispanic students.

3. Methods

RQ1: The first research question used all U.S. public school districts with both consistently available chronic absenteeism data from AEI and with available free- and reduced- price lunch (FRL) data from the Common Core of Data (CCD). We first averaged school-level FRL percentages to the district level and assigned districts a poverty category based on their average school-level FRL percentage. Districts with average percent FRL less than 25% were categorized as "Low Poverty"; Districts with average percent FRL greater than or equal to 25% and less than 75% were categorized as "Mid Poverty"; Districts with average percent FRL greater than or equal to 75% were categorized as "High Poverty". We then calculated the average chronic absenteeism rate within each poverty category.

RQ2: To analyze district recovery, we re-used the school-level academic recovery outcomes from 2019-2024 from previous work on academic recovery². For both research questions 2 and 3, we used district recovery from 2019 to 2024 as the primary recovery indicator. Fall and spring RIT scores in each subject were standardized relative to the 2025 MAP Growth Norms, which situates test performance relative to students in the same grade, subject, and time in school prior to testing.

School recovery was defined as:

$$Recovery = A_{jsFall\ 2024} - A_{jsFall\ 2019}$$

where A denotes the mean norms-standardized achievement score for school j in subject s at time t . School-level recovery indicators were aggregated to the district level to merge recovery data with district-level chronic absenteeism rates. Values closer to zero indicate districts that are closer to their pre-pandemic achievement levels.

We grouped districts into one of three categories to define their chronic absenteeism level during the three most recent post-COVID years used in our analysis (2021-22, 2022-23, and 2023-24). Districts were categorized as having *consistently high* absenteeism if they had a chronic absenteeism rate greater than 20% in all three post-COVID years. Districts were categorized as having *never high* absenteeism if their chronic absenteeism rate remained less than or equal to 20% in all three years. Districts were categorized as having *inconsistent* absenteeism if their chronic absenteeism rate fluctuated between consistently high and never high during the three years. After categorizing districts based on their chronic absenteeism rates, we calculated average district recovery within each absenteeism level. The brief focuses on the contrast between the never high and consistently high absenteeism groups because these categories provide the clearest interpretation of sustained attendance patterns. Results for the inconsistent

² Morton, E., Kuhfeld, M., Hashim, A., & Peters, S. (2026). From loss to recovery: Diverging paths and uneven gains across schools. NWEA. https://www.nwea.org/uploads/From-loss-to-recovery-diverging-paths-and-uneven-gains-across-schools_NWEA_researchBrief.pdf

group are reported in Tables 2 and 3. The analyses were descriptive, and should not be interpreted as evidence of a causal relationship between absenteeism and academic recovery.

RQ3: To answer research question 3, we used the same recovery indicator detailed under RQ2 as well as the district poverty levels detailed under RQ1 to calculate average district recovery within both chronic absenteeism category and district poverty. To be included in the analysis for this research question, districts had to have available FRL data in the 2023-24 school year.

Table 1. Sample District Demographics Relative to U.S. Population of Public School Districts

	MAP Sample Districts	U.S. Public School Districts
District enrollment	3457	2062
N. schools in district	4	5
% FRL	53.5	55.9
% White	61.1	57.5
% Asian	2.9	2.6
% Black	13	11.5
% Hispanic	16.2	20.2
City	13.4	17.2
Suburb	27.3	21.9
Rural	37.2	48.1
Town	11.7	12.1
N. districts	2299	16947

Table 2. District Recovery by Chronic Absenteeism Category

Subject	Absenteeism Category	N. Districts	Mean Dis. Recovery
Math	Never High	692	-0.11
Math	Consistently High	1089	-0.17
Math	Inconsistent	518	-0.11
Reading	Never High	692	-0.11
Reading	Consistently High	1089	-0.13
Reading	Inconsistent	518	-0.11

Note. Achievement metrics are standardized using the 2025 NWEA MAP Growth norms and are reported in standard deviation units.

Table 3. District Recovery by Chronic Absenteeism Category and Poverty Level

Subject	Absenteeism Category	District Poverty Level	N. Districts	Mean Dis. Recovery
Math	Never High	Low Poverty	184	-0.10
Math	Never High	Mid Poverty	369	-0.11
Math	Never High	High Poverty	37	-0.13
Math	Consistently High	Low Poverty	37	-0.11
Math	Consistently High	Mid Poverty	561	-0.16
Math	Consistently High	High Poverty	333	-0.18
Math	Inconsistent	Low Poverty	56	-0.08
Math	Inconsistent	Mid Poverty	334	-0.12
Math	Inconsistent	High Poverty	59	-0.14
Reading	Never High	Low Poverty	184	-0.10
Reading	Never High	Mid Poverty	369	-0.11
Reading	Never High	High Poverty	37	-0.10
Reading	Consistently High	Low Poverty	37	-0.09
Reading	Consistently High	Mid Poverty	561	-0.12
Reading	Consistently High	High Poverty	333	-0.13
Reading	Inconsistent	Low Poverty	56	-0.09
Reading	Inconsistent	Mid Poverty	334	-0.10
Reading	Inconsistent	High Poverty	59	-0.13

Note. Achievement metrics are standardized using the 2025 NWEA MAP Growth norms and are reported in standard deviation units. Limited to districts with available free- and reduced-price lunch data in 2023-24.