

Supplement to:

Workman, Joseph, Paul T. von Hippel, and Joseph Merry. 2023. "Findings on Summer Learning Loss Often Fail to Replicate, Even in Recent Data." *Sociological Science* 10: 251-285.

APPENDIX

Grade-specific coefficients

In the main document, Table 2 gives school-year learning rates averaged across grades and summer learning rates averaged across summers. In this supplement, Table A1 and Table A2 give learning rates specific to each school year and summer. The tables present results from the unconditional models. Results from the conditional models would fill many pages because of the number of interactions.

Table A1. Monthly learning rates in reading.

	Monthly SDs gained or lost			
	Renaissance	NWEA (K-5)	NWEA (2-5)	ECLS-K:2011
Kindergarten		0.258† (0.009)		0.193† (0.003)
Summer 1		-0.148† (0.019)		-0.008 (0.007)
Grade 1	0.210† (0.003)	0.238† (0.011)		0.135† (0.002)
Summer 2	-0.116† (0.010)	-0.334† (0.045)		-0.014† (0.004)
Grade 2	0.136† (0.002)	0.208† (0.010)	0.197† (0.004)	0.069† (0.001)
Summer 3	-0.075† (0.008)	-0.194† (0.027)	-0.125† (0.009)	
Grade 3	0.094† (0.002)	0.149† (0.007)	0.146† (0.003)	
Summer 4	-0.055† (0.007)	-0.154† (0.022)	-0.114† (0.008)	
Grade 4	0.072† (0.002)	0.121† (0.008)	0.111† (0.002)	
Summer 5	-0.067† (0.007)	-0.114† (0.018)	-0.090† (0.007)	
Grade 5	0.057† (0.001)	0.095† (0.004)	0.089† (0.002)	
Intercept	-0.146† (0.027)	-0.212† (0.069)	3.183† (0.049)	-0.370† (0.034)

Table A2. Monthly learning rates in math

	Monthly SDs gained or lost			
	Renaissance	NWEA (K-5)	NWEA (2-5)	ECLS-K:2011
Kindergarten		0.247† (0.008)		0.171† (0.003)
Summer 1		-0.125† (0.017)		0.015* (0.006)
Grade 1	0.217† (0.003)	0.224† (0.007)		0.123† (0.002)
Summer 2	-0.186† (0.011)	-0.316† (0.030)		-0.022† (0.004)
Grade 2	0.182† (0.003)	0.194† (0.009)	0.177† (0.003)	0.093† (0.001)
Summer 3	-0.131† (0.010)	-0.186† (0.021)	-0.149† (0.007)	
Grade 3	0.155† (0.002)	0.162† (0.006)	0.162† (0.003)	
Summer 4	-0.164† (0.010)	-0.160† (0.015)	-0.148† (0.006)	
Grade 4	0.135† (0.002)	0.140† (0.006)	0.135† (0.003)	
Summer 5	-0.162† (0.010)	-0.148† (0.017)	-0.142† (0.007)	
Grade 5	0.115† (0.002)	0.126† (0.007)	0.126† (0.002)	
Intercept	-0.152† (0.036)	-0.226† (0.063)	2.955† (0.036)	-0.327† (0.035)

† p<0.01, * p<0.05. School-clustered standard errors in parentheses. The NWEA models also include a dummy variable for each cohort except for the youngest one.

Graphs for NWEA grades 2-5

The NWEA figures in the main document give trends and gaps for the NWEA sample that covers grades K-5. The NWEA figures in this supplement gives trends for the larger sample that covers grades 2-5.

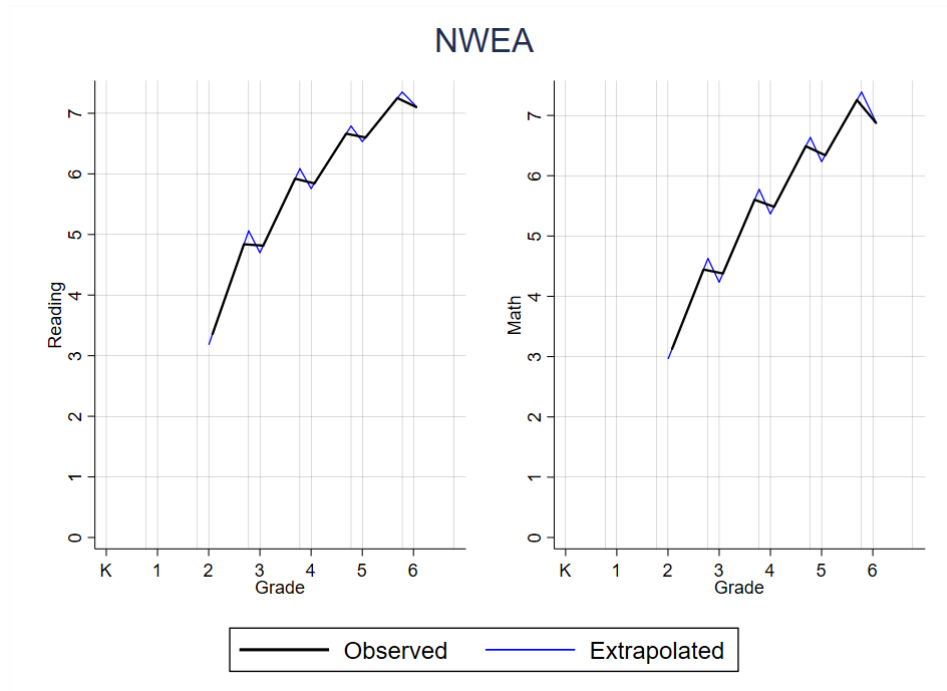


Figure A 1. Average school-year and summer gains and losses in reading and math. The black lines connect the average of observed scores in fall and spring. The blue lines connect the scores that, according to linear extrapolation, would have obtained on the first and last day of each grade.

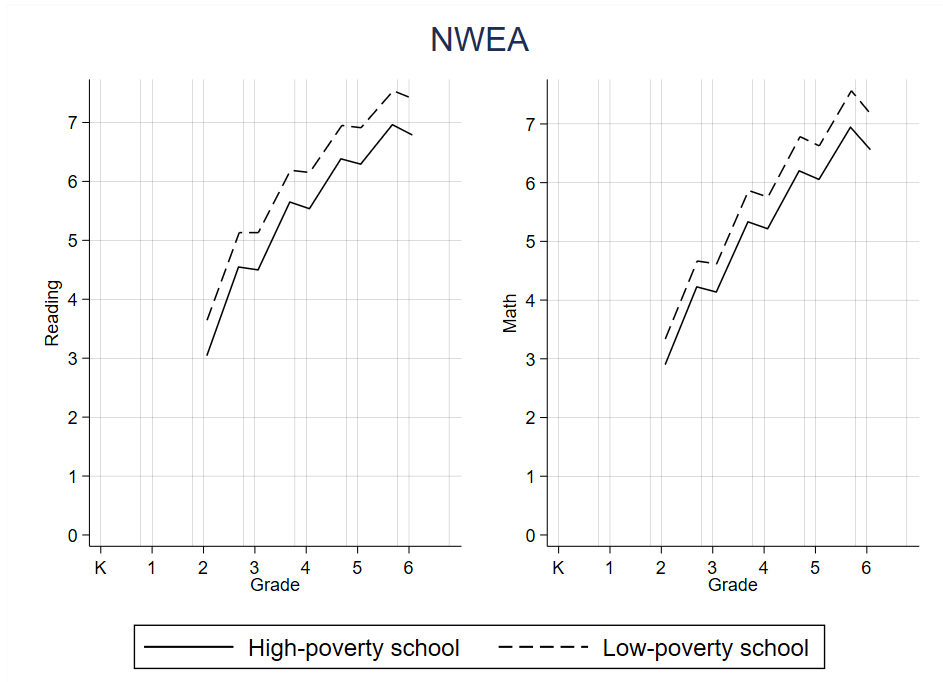


Figure A 2. Average school-year and summer gains and losses in high-poverty and low-poverty schools (i.e., >40% vs <40% free and reduced-price lunch).

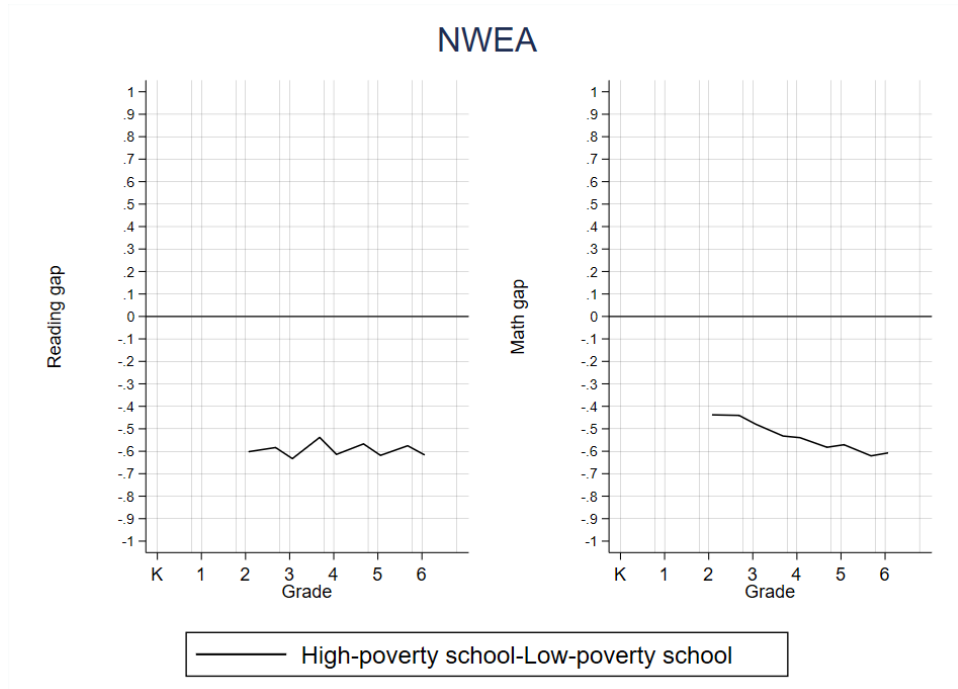


Figure A 3. Average gap between high-poverty and low-poverty schools (i.e., >40% vs <40% FRL).

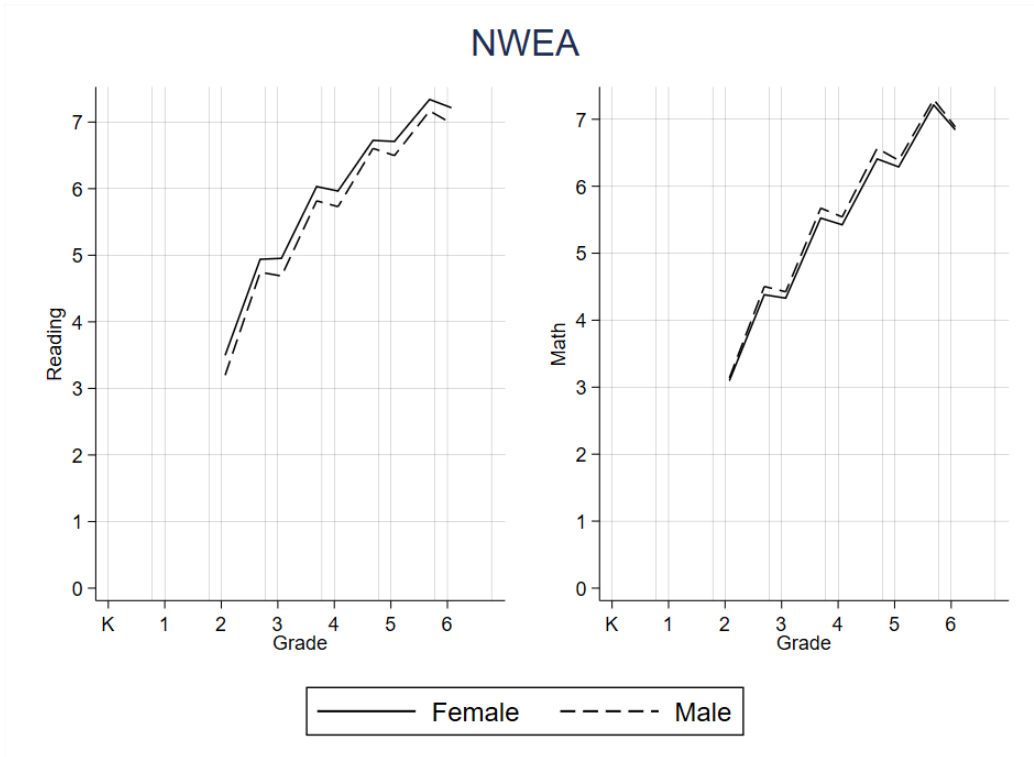


Figure A 4. Average school-year and summer gains and losses for boys and girls.

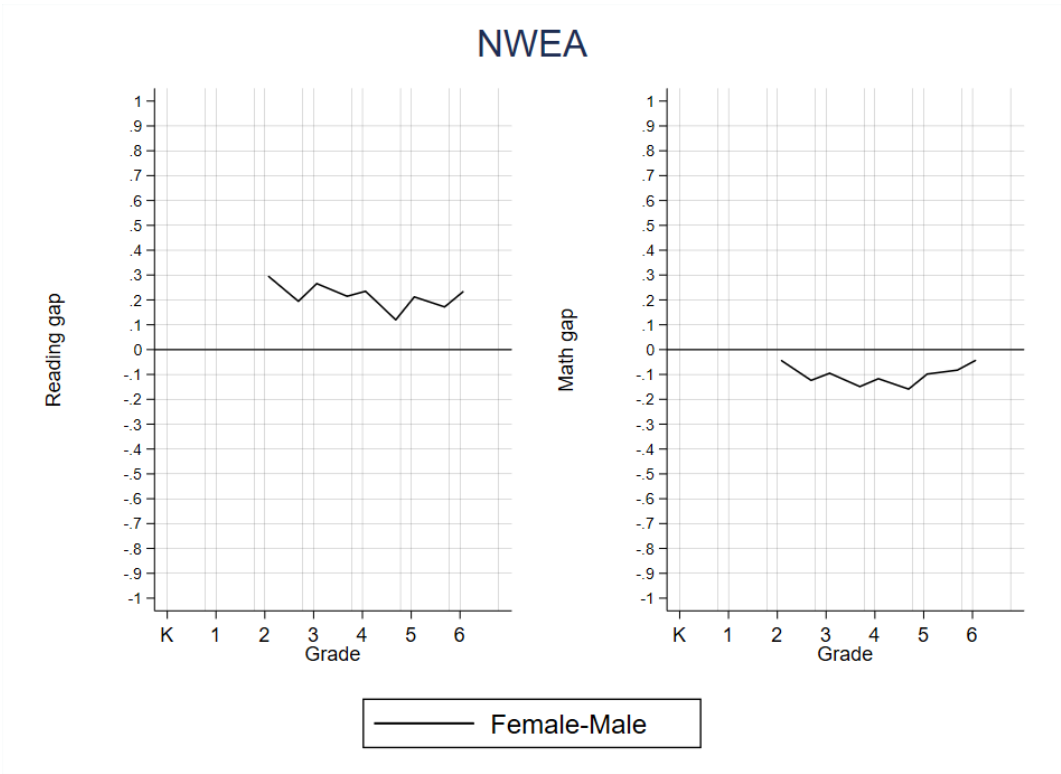


Figure A 5. Gaps between boys and girls.

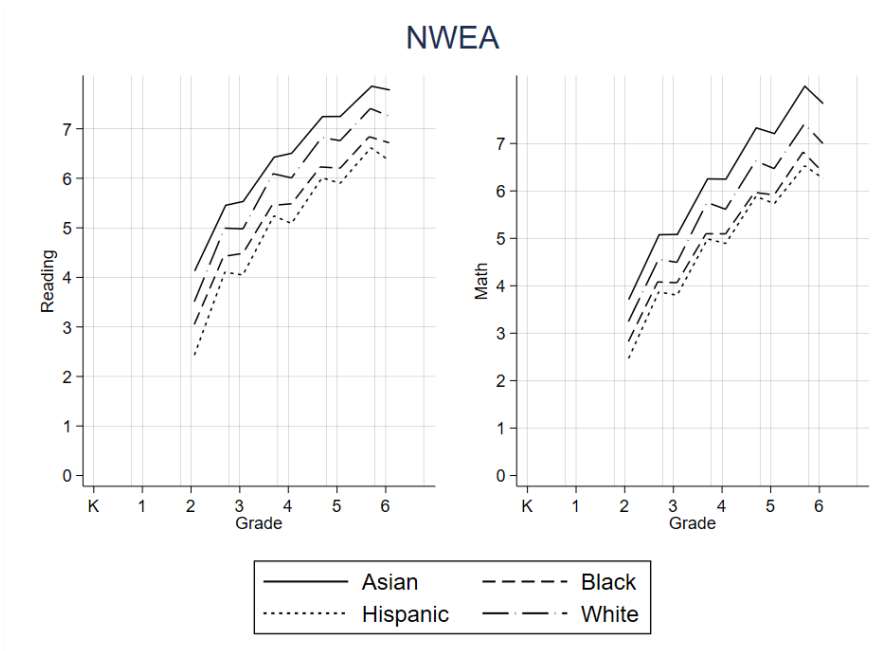


Figure A 6. Average school-year and summer gains and losses for children of 4 different races/ethnicities: white, black, Hispanic, Asian American.

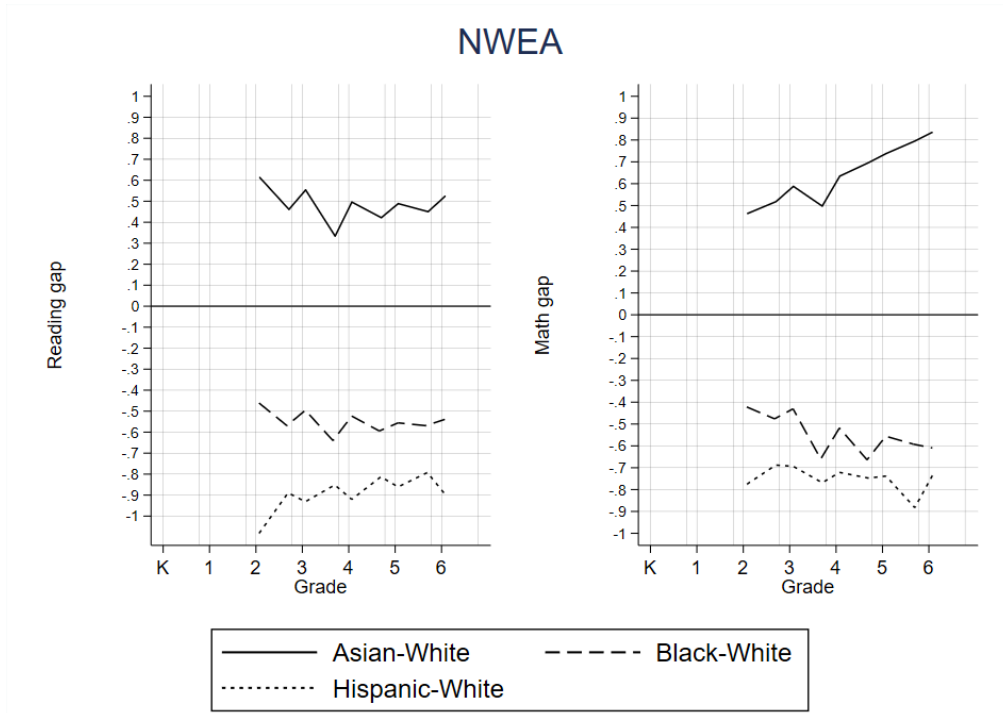


Figure A 7. Average gaps between non-Hispanic white children and children of three other races/ethnicities.