Table S1a.

Correlations among Study Variables (Part 1)

	1	2	3	4	5	6	7	8	9	10	11
1. Age											
2. Female	0.18***										
Race											
3. White	-0.18***	-0.04***									
4. Hispanic	0.01	0.03***	-0.26***								
5. Other	0.02***	0.01*	-0.20***	-0.10***							
Education											
6. No schooling	0.03***	-0.01	-0.03***	0.01*	0.02***						
7. 8th and below	0.05***	-0.01	0.09***	-0.01	-0.01	-0.04***					
8. 9th	-0.06***	-0.02***	0.08***	-0.02***	-0.03***	-0.05***	-0.19***				
9. 11th	-0.04***	0.01	-0.05***	-0.02***	-0.04***	-0.06***	-0.22***	-0.29***			
10. 12th	0.16***	0.03***	-0.13***	0.10***	0.10***	-0.04***	-0.16***	-0.22***	-0.25***		
11. HS diploma/ equivalency	0.08***	0	-0.09***	0.07***	0.07***	-0.02**	-0.10***	-0.13***	-0.12***	0.62***	
12. Low income	0.05***	0.18***	-0.08***	-0.11***	-0.05***	-0.01	0.05***	0.04***	0	-0.11***	-0.10***
Special Needs											
13. Yes	0.10***	-0.01	0.02**	-0.06***	-0.02**	0	0.03***	0.01	-0.04***	0.03***	0.01*
14. Unknown	0	-0.01	-0.02**	-0.03***	0	0.02**	0.01	-0.01	0	-0.01	0
15. Barriers	0.04***	-0.08***	0.01	-0.06***	-0.02***	0	0.04***	0.02***	-0.01	-0.05***	-0.03***
16. Dual enrolled	-0.03***	0.01*	0.05***	-0.03***	0	0.01*	-0.02***	-0.02***	-0.02**	0.05***	0.08***
17. Distance class	0.01	0.06***	0.04***	0	-0.01	0	-0.01	0	0.01	-0.01*	-0.02**
18. IET class	0.01	-0.02***	0.01	0	0	-0.01	-0.01*	-0.02**	-0.01	0.07***	0.10***
19. Teacher full-time	-0.01*	0.03***	0.01	0	0.01*	0	-0.01	0	0.01	-0.03***	0
20. Teacher experience	0.04***	0.01	-0.05***	0.04***	0.04***	0	-0.01**	-0.02***	-0.02**	0.07***	0.07***
Teacher Certification											
21. K-12	0	0	0	0.02***	0.01	0	0.01	-0.01	0	0.02**	0.01
22. Other	0.02***	0.01	-0.02**	0.01	0.02***	0	0.01	-0.01	-0.01	0.02***	-0.01

Note. Values are Pearson correlations computed using pairwise complete observations. T1 = pretest; T2 = posttest. Binary variables are coded 0 (absence) and 1 (presence). Race/ethnicity is represented using dummy variables with White as the reference group; coefficients for Black, Hispanic, and Other race reflect comparisons relative to White. Attendance is log-transformed to account for skew in total attendance hours. *$p < .05$. **$p < .01$. ***$p < .001$.

Table S1b

Correlations among Study Variables (Part 2)

	12	13	14	15	16	17	18	19	20	21
1. Age										
2. Female										
Race										
3. White										
4. Hispanic										
5. Other										
Education										
6. No schooling										
7. 8th and below										
8. 9th										
9. 11th										
10. 12th										
11. HS diploma/equivalency										
12. Low income										
Special Needs										
13. Yes	0.15***									
14. Unknown	0	-0.11***								
15. Barriers	0.13***	0.12***	-0.01*							
16. Dual enrolled	-0.01	-0.01	0	0						
17. Distance class	0	0	-0.01	0	0.01					
18. IET class	0	-0.01	0	0.02***	0.07***	-0.01*				
19. Teacher full-time	0.01	0	-0.03***	-0.01	0.03***	0.05***	0.04***			
20. Teacher experience	-0.04***	-0.01**	0	-0.03***	0	0.03***	-0.01*	0.22***		
Teacher Certification										
21. K-12	-0.02***	-0.01*	-0.01	-0.02***	-0.01*	-0.04***	-0.03***	-0.09***	-0.12***	
22. Other	-0.01	-0.01	0.02***	0.01	0.03***	-0.02***	0.01*	0	0.10***	-0.17***

Note. Values are Pearson correlations computed using pairwise complete observations. T1 = pretest; T2 = posttest. Binary variables are coded 0 (absence) and 1 (presence). Race/ethnicity is represented using dummy variables with White as the reference group; coefficients for Black, Hispanic, and Other race reflect comparisons relative to White. Attendance is log-transformed to account for skew in total attendance hours. *$p < .05$. **$p < .01$. *$p < .001$.

Table S2

Model	df	LL	AIC	BIC	-2LL	Comparison	$\Delta\chi^2$	Δ df	*p*	ICC	
										Teacher	Site
No clustering	2	-48776.22	97556.4	97573.1	97566.7	97552.4	—	—	—	—	—
Teacher	3	-43728.01	87462	87487	87477.5	87456	No clustering	1	<.001	.315	—
Teacher + Site	4	-43597.29	87202.6	87235.9	87223.2	87194.6	Teacher	1	<.001	.232	.107

Note. Models include random intercepts only. The "No clustering" model is an intercept-only model with no random effects. Subsequent models add random intercepts for teachers and sites. Model comparisons are based on likelihood ratio tests. ICC values represent the proportion of variance in attendance attributable to teacher and site levels.

Table S3

Variance Partitioning for Attendance Model

Outcome and Group	Variance	*SD*	Proportion of Variance
Teacher	.30	.55	.215
Site	.15	.39	.108
Residual	.96	.98	.677
Total	1.41	—	1

Note. Variance components were estimated from the final multilevel model including student and teacher/class predictors. Proportions represent the share of residual variance in log-transformed attendance attributable to each level after covariate adjustment. The majority of variance was at the residual level, with smaller but meaningful contributions from teacher and site clustering

Table S4

Random Effects Model Comparisons for Growth Models

Outcome and Model	df	LL	AIC	BIC	-2LL	Comparison	Δχ²	Δ df	*p*	ICC Student	ICC Teacher	ICC Site
Reading												
Student only	4	-94820.41	189648.8	189679.9	189640.8	—	—	—		.642	0	0
Student + Teacher (within site)	5	-94092.16	188194.3	188233.2	188184.3	Student	1456.5	1	<.001	.444	0.203	0
Student + Teacher (within site) + Site	6	-94090.74	188193.5	188240.1	188181.5	Student + Teacher	2.82	1	.093	.444	0.189	.013
Language												
Student only	4	-97811.9	195631.8	195663	195623.8	—	—	—		.590	0	0
Student + Teacher (within site)	5	-97335.34	194680.7	194719.7	194670.7	Student only	953.12	1	<.001	.439	.160	0
Student + Teacher (within site) + Site	6	-97334.03	194680.1	194726.9	194668.1	Student + Teacher	2.61	1	.106	.439	.150	.010
Math												
Student only	4	-106222.9	212453.7	212485.4	212445.7	—	—	—		.700	0	0
Student + Teacher (within site)	5	-105499.6	211009.2	211048.7	210999.2	Student only	1446.57	1	<.001	.508	.200	0
Student + Teacher (within site) + Site	6	-105498.5	211009	211056.4	210997	Student + Teacher	2.17	1	.141	.508	.189	.011

Note. Models were estimated using maximum likelihood to allow comparison of nested random-effects structures. LL = log-likelihood; −2LL = −2 × log-likelihood; AIC = Akaike Information Criterion; BIC = Bayesian Information Criterion. Δχ² tests compare each model to the less complex model listed in the Comparison column, with Δdf representing the difference in estimated parameters. ICC values indicate the proportion of variance attributable to each level (student, teacher nested within site, and site). Lower AIC and BIC values indicate better model fit.

Table S5

Variance Partitioning for Growth Models

Outcome and Group	Variance	*SD*	Proportion of Variance
Reading			
Student	1420.92	37.70	.437
Teacher (within site)	471.47	21.71	.145
Residual	1362.65	36.91	.419
Total	3255.04	—	1
Language			
Student	1501.90	38.75	.435
Teacher (within site)	410.01	20.25	.119
Residual	1541.65	39.26	.446
Total	3453.57	—	1
Math			
Student	1498.80	38.71	.516
Teacher (within site)	449.08	21.19	.154
Residual	959.01	30.97	.33
Total	2906.89	—	1

Note. Variance components are estimated from final multilevel models including student and teacher (nested within site) random intercepts. Proportions represent the share of total variance at each level. Residual variance reflects within-student variability. Site-level variance was excluded from final models due to minimal contribution to model fit.

Table S6

Estimated Pre–Post Growth Slopes by Moderator from Final Growth Models

Moderator	Estimate	*SE*	z	*p*	Lower 95% CI	Upper 95% CI
Reading						
Age						
Low (-1 SD)	11.88	2.134	5.568	<.001	7.698	16.062
Mean	9.687	2.068	4.684	<.001	5.633	13.742
High (+1 SD)	7.495	2.189	3.424	<.001	3.205	11.784
Race						
Black†	9.884	2.067	4.783	<.001	5.834	13.935
White	17.027	2.181	7.807	<.001	12.753	21.302
Hispanic	11.475	2.562	4.479	<.001	6.453	16.496
Other	9.124	2.842	3.21	0.001	3.554	14.694
Language						
Age						
Low (-1 SD)	30.358	2.19	13.86	<.001	26.065	34.651
Mean	26.14	2.118	12.342	<.001	21.988	30.291
High (+1 SD)	21.922	2.246	9.762	<.001	17.52	26.323
Race						
Black†	26.395	2.117	12.47	<.001	22.246	30.543
White	30.387	2.217	13.706	<.001	26.041	34.732
Hispanic	25.149	2.663	9.443	<.001	19.929	30.369
Other	23.479	2.974	7.896	<.001	17.651	29.307
Educational Attainment						
10th†	26.395	2.117	12.47	<.001	22.246	30.543
No schooling	37.458	5.643	6.638	<.001	26.398	48.518
8th and below	22.963	2.458	9.344	<.001	18.146	27.780
9th	26.648	2.218	12.016	<.001	22.301	30.995
11th	24.355	2.146	11.348	<.001	20.149	28.562
12th	24.355	2.746	8.868	<.001	18.972	29.738
Special Needs						
No†	26.395	2.117	12.47	<.001	22.246	30.543
Yes	24.208	2.905	8.332	<.001	18.513	29.902
Unknown	30.666	2.626	11.679	<.001	25.519	35.812
Teacher Certificate						
None†	26.395	2.117	12.47	<.001	22.246	30.543
K-12	23.074	2.191	10.532	<.001	18.78	27.368
Other	25.088	2.901	8.647	<.001	19.401	30.774
Math						

Age						
Low (-1 SD)	28.847	1.645	17.54	<.001	25.623	32.070
Mean	23.934	1.586	15.095	<.001	20.826	27.041
High (+1 SD)	19.021	1.67	11.39	<.001	15.748	22.294
Race						
Black†	23.939	1.586	15.099	<.001	20.832	27.047
White	29.466	1.648	17.881	<.001	26.236	32.696
Hispanic	24.903	1.975	12.608	<.001	21.031	28.774
Other	25.544	2.291	11.151	<.001	21.054	30.034
Educational Attainment						
10th†	23.939	1.586	15.099	<.001	20.832	27.047
No schooling	13.136	4.33	3.034	0.002	4.65	21.622
8th and below	19.954	1.821	10.959	<.001	16.386	23.523
9th	21.571	1.659	13.005	<.001	18.32	24.822
11th	21.767	1.606	13.558	<.001	18.62	24.914
12th	21.121	2.052	10.292	<.001	17.099	25.143
Special Needs						
No†	23.939	1.586	15.099	<.001	20.832	27.047
Yes	17.402	2.192	7.941	<.001	13.107	21.697
Unknown	27.717	1.974	14.042	<.001	23.848	31.586
Dual Enrollment						
No†	23.939	1.586	15.099	<.001	20.832	27.047
Yes	38.143	3.098	12.311	<.001	32.07	44.216
Class Distance						
In Person†	23.939	1.586	15.099	<.001	20.832	27.047
Distance Education	18.554	2.822	6.576	<.001	13.024	24.085
Teacher Fulltime						
Part Time†	23.939	1.586	15.099	<.001	20.832	27.047
Full Time	26.101	1.473	17.722	<.001	23.214	28.987

Note. Values represent simple slopes of time (post vs. pre) estimated from multilevel growth models. Slopes reflect the expected change in scores within each subgroup. Continuous moderators (age) were probed at −1 SD, the mean, and +1 SD. Categorical moderators are interpreted relative to their reference groups (male, Black, 10th grade education, no high school diploma, not low income, no special needs, no barriers, not dual enrolled, in-person instruction, part-time teacher, 4–10 years of experience, and no teacher certification). *p*-values were adjusted using the Benjamini–Hochberg false discovery rate (FDR) procedure within outcome. Confidence intervals are unadjusted 95% intervals.