

Supplementary Materials

Table S1. Effects of providing Math Garden on performance with items > .30 item-scale correlation

	Addition performance			Subtraction performance		
	β	SE	<i>p</i>	β	SE	<i>p</i>
<i>Predictors</i>						
Outcome at T ₁	.55	.10	.000	.67	.06	.000
Math Learning Program ^a	−.00	.07	.973	−.01	.07	.941
<i>Covariates</i>						
Gender ^b	−.08	.05	.162	−.09	.05	.117
Migration background T ₁ ^c	.02	.05	.709	.04	.05	.425
Tablet typing speed T ₁	.05	.09	.631	−.02	.06	.769
<i>R</i> ²		.33			.46	

Note. Significant coefficients are printed in bold ($p \leq .05$). Continuous predictors were standardized ($M = 0$; $SD = 1$). $n = 370$. Reference categories: ^a wait-list control condition. ^b male. ^c no other languages spoken at home besides German.

Table S2. Effects of providing Math Garden on performance with all performance items

	Addition performance			Subtraction performance		
	β	SE	<i>p</i>	β	SE	<i>p</i>
<i>Predictors</i>						
Outcome at T ₁	.55	.10	.000	.65	.06	.000
Math Learning Program ^a	.03	.07	.686	−.01	.07	.918
<i>Covariates</i>						
Gender ^b	−.07	.05	.148	−.08	.06	.134
Migration background T ₁ ^c	−.05	.05	.296	.05	.05	.249
Tablet typing speed T ₁	.02	.08	.788	.01	.06	.912
<i>R</i> ²		.32			.45	

Note. Significant coefficients are printed in bold ($p \leq .05$). Continuous predictors were standardized ($M = 0$; $SD = 1$). $n = 370$. Reference categories: ^a wait-list control condition. ^b male. ^c no other languages spoken at home besides German.

Table S3. Effects of practice behavior on performance with items > .30 item-scale correlation

	Addition performance			Subtraction Performance		
	β	<i>SE</i>	<i>p</i>	β	<i>SE</i>	<i>p</i>
PRACTICED TASKS						
<i>Predictors</i>						
Outcome at T ₁	.49	.14	.000	.70	.06	.000
Practiced tasks	.07	.07	.316	.12	.05	.015
<i>Covariates</i>						
Gender ^a	−.11	.06	.056	−.14	.10	.095
Migration background T ₁ ^b	−.00	.05	.976	−.04	.06	.515
Tablet typing speed T ₁	.16	.12	.185	−.01	.08	.885
<i>R</i> ²	.34			.53		
PRACTICED WEEKS						
<i>Predictors</i>						
Outcome at T ₁	.49	.14	.000	.68	.07	.000
Practiced weeks	.13⁺	.05	.015	.06	.06	.282
<i>Covariates</i>						
Gender ^a	−.13 ⁺	.05	.014	−.15 ⁺	.07	.045
Migration background T ₁ ^b	−.00	.05	.953	−.04	.06	.589
Tablet typing speed T ₁	.18	.12	.154	−.01	.09	.928
<i>R</i> ²	.36			.52		

Note. Significant coefficients are printed in bold ($p \leq .05$). Continuous predictors were standardized ($M = 0$; $SD = 1$). $n = 200$. Reference categories: ^a male, ^b no other languages spoken at home besides German. ⁺Coefficient differed in significance level ($p \leq .05$) in contrast to original analysis with item-scale correlation > .5.

Table S4. Effects of practice behavior on performance with all performance items

	Addition performance			Subtraction Performance		
	β	<i>SE</i>	<i>p</i>	β	<i>SE</i>	<i>p</i>
PRACTICED TASKS						
<i>Predictors</i>						
Outcome at T ₁	.47	.14	.001	.70	.07	.000
Practiced tasks	.09	.08	.237	.14	.04	.001
<i>Covariates</i>						
Gender ^a	−.11[†]	.05	.042	−.13	.08	.093
Migration background T1 ^b	.03	.05	.507	−.01	.06	.894
Tablet typing speed T ₁	.14	.11	.199	.01	.07	.939
<i>R</i> ²	.30			.54		
PRACTICED WEEKS						
<i>Predictors</i>						
Outcome at T ₁	.47	.14	.001	.68	.07	.000
Practiced weeks	.11	.06	.070	.09	.05	.087
<i>Covariates</i>						
Gender ^a	−.12[†]	.05	.012	−.15[†]	.07	.041
Migration background T1 ^b	.03	.06	.568	−.01	.06	.933
Tablet typing speed T ₁	.15	.11	.167	.03	.08	.692
<i>R</i> ²	.31			.52		

Note. Significant coefficients are printed in bold ($p \leq .05$). Continuous predictors were standardized ($M = 0$; $SD = 1$). $n = 200$. Reference categories: ^a male. ^b no other languages spoken at home besides German. [†] Coefficient differed in significance level ($p \leq .05$) in contrast to original analysis with item-scale correlation $> .5$.

Table S5. Comparing Study Variables With and Without Missing Values

	Without Missing Values		With Missing Values	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
ALL STUDENTS				
Math addition performance T ₁	5.76	3.15	5.38	3.11
Math addition performance T ₂	7.88	2.76	8.40	2.84
Math subtraction performance T ₁	5.24	3.74	5.13	3.47
Math subtraction performance T ₂	6.62	3.73	6.90	3.00
Math self-concept T ₁	2.73	0.86	2.65	0.76
Math self-concept T ₂	2.74	0.83	2.36	0.82
Math anxiety T ₁	3.39	1.24	3.32	1.12
Math anxiety T ₂	3.21	1.28	3.02	1.00
Gender ^a	0.48	0.50	0.50	0.50
Migration background T ₁ ^b	0.52	0.50	0.44	0.50
Tablet typing speed T ₁	7.97	2.20	7.75	2.59
EXPERIMENTAL CONDITION				
Practiced addition tasks	193.36	246.17	159.70	291.88
Practiced subtraction tasks	69.61	150.24	37.19	69.72
Overall practiced tasks	1280.06	1467.16	870.58	1211.08
Practiced weeks addition	3.02	2.42	2.42	1.66
Practiced weeks subtraction	1.97	2.01	1.43	1.08
Overall practiced weeks	5.58	3.31	3.51	2.00

Note. All students: $n_{\text{without}} = 214$, $n_{\text{with}} = 156$. Experimental condition: $n_{\text{without}} = 116$, $n_{\text{with}} = 84$. Bold print indicates values that were statistically significantly different at $p \leq .05$. Reference categories: ^a male. ^b no other languages spoken at home besides German.