

## Supplementary Material

Table S1. Available data per course and school year. Some students used the tool for both English and French and/or in more than one school year, causing the total number of students to be slightly less than the sum of the separate counts.

	Number of	of students	Number	of trials	Split multiple choice / open answer			
Course	18/19	19/20	18/19	19/20	18/19	19/20		
English French	58,422 21,551	61,957 26,287	38,334,387 14,582,897	42,561,143 19,754,128	99.98% / 00.02% 56.39% / 43.61%	99.99% / 00.01% 58.67% / 41.33%		
Total	75,695	83,486	52,917,284	62,315,271				



**Figure S1.** Comparison of English-language study activity during a regular school year (18/19) and the school year affected by COVID-19 (19/20), stratified by year group (columns) and education level (rows). Activity is measured through the number of trials completed per week. The shaded area marks the school closure period in the 19/20 school year. The change in activity during this period is shown as a percentage in each plot.



**Figure S2.** Progress through the English materials over time: the share of study trials pertaining to each textbook chapter as a percentage of all trials completed in a week. The school closure period in the 19/20 school year and the corresponding period in the previous year are marked by a dashed border. The change in trial share during this period is shown below each set of plots, where the dark-grey and light-grey bands indicate the variability between the two school years in the period preceding the lockdown (1 SD and 2 SD, respectively).

Table S2. Change in trial share during the lockdown period in the 19/20 school year compared to the corresponding period in the previous school year, in percentage points. "Baseline (1 SD)" indicates the typical variability in percentage points in the period preceding the lockdown. Trial share changes of more than 2 SD are marked in bold.

Course	Year	Level	Baseline (1 SD)	Ch. 1	Ch. 2	Ch. 3	Ch. 4	Ch. 5	Ch. 6	Ch. 7	Ch. 8	Ch. O	Ch. 12	Ch. 13
French	1	vmbo	4.29	-0.45	+0.13	-0.16		+9.55	-2.53	-6.54				
1 1011011	1	havo	11.66	-2.29	-4.92	+18.28		-12.35	+4.40	-3.12				
		VWO	1.87	-4.08	-3.07	+1.03		-2.44	+8.39	+0.18				
	2	vmbo	4.64	+1.89	-4.89	-0.89		+7.42	-5.46	+1.93				
		havo	7.80	-1.68	-2.35	-13.62		+12.56	+3.13	+1.96				
		vwo	2.06	-1.79	-1.08	-6.83		-6.61	+12.57	+3.74				
	3/4	vmbo	7.89	+1.56	-3.04	+1.82		-16.59	+22.62	+12.52			-0.45	-18.44
		havo	14.76	-0.89	-1.64	-2.50		+21.31	-15.46	-0.82				
		vwo	10.08	+0.51	-2.67	-14.87		+8.58	+8.53	-0.09				
English	1	vmbo	1.99	-0.06	+0.04	-3.26	-3.71	+5.12	+4.58	-2.37	-0.34			
e		havo	7.15	+0.01	-0.24	-0.92	+18.77	-4.54	-9.05	-2.81	-1.22			
		vwo	3.38	+0.28	+0.39	-0.04	-14.02	+4.18	+4.28	+1.74	+3.19			
	2	vmbo	9.75	+0.32	+0.11	-2.38	-1.73	-2.06	+4.02	+1.34	+0.40	-0.01		
		havo	1.84	-0.03	-0.11	-1.27	-5.57	+2.85	+1.52	+1.68	+0.97	-0.03		
		VWO	3.51	-1.85	-1.53	-6.76	-8.49	-1.47	+11.38	+6.73	+1.99			
	3	vmbo	8.76	+0.43	-0.07	-0.29	-3.97	-1.65	+3.80			+1.75		
		havo	1.97	-0.28	-1.25	-5.81	-11.01	+1.33	+7.31	+10.29	-0.62	+0.04		
		VWO	3.60	+0.26	-3.29	-6.79	-5.33	+0.67	+1.70	+11.11	+1.67			
	4	vmbo	1.94	+0.58	-2.30	-2.70	+14.02	-13.41				+3.81		

Table S3. Fixed effects estimates of the generalised linear mixed-effects model of response accuracy. The model assumed a binomial distribution for accuracy and had a logistic link function. The model also included random intercepts for students and courses.

Effect	b	SE	z	p
Intercept (Period: pre-lockdown, School year: 19/20, Question type: open answer)	1.632	0.166	9.84	<.001
Period: lockdown	0.265	0.003	95.92	<.001
Period: post-lockdown	0.159	0.004	38.06	<.001
School year: 18/19	0.116	0.003	45.07	<.001
Question type: multiple choice	0.959	0.002	454.98	<.001
Period: lockdown $\times$ School year: 18/19	-0.317	0.004	-71.50	<.001
Period: post-lockdown $\times$ School year: 18/19	-0.252	0.006	-39.09	<.001
Period: lockdown $\times$ Question type: multiple choice	-0.334	0.003	-114.52	<.001
Period: post-lockdown $\times$ Question type: multiple choice	-0.287	0.005	-62.88	<.001
School year: $18/19 \times \text{Question type: multiple choice}$	0.004	0.003	1.63	.103
Period: lockdown $\times$ School year: 18/19 $\times$ Question type: multiple choice	0.385	0.005	80.54	<.001
Period: post-lockdown $\times$ School year: $18/19 \times$ Question type: multiple choice	0.345	0.007	48.73	<.001

Table S4. Fixed effects estimates of the generalised linear mixed-effects model of response time. The model assumed a Gamma distribution for response time and had an identity link function. The model also included random intercepts for students and courses.

Effect	b	SE	z	p
Intercept (Period: pre-lockdown, School year: 19/20, Question type: open answer)	2134.021	12.889	165.57	<.001
Period: lockdown	208.799	7.148	29.21	<.001
Period: post-lockdown	197.658	11.085	17.83	<.001
School year: 18/19	27.350	6.744	4.06	<.001
Question type: multiple choice	150.272	5.544	27.11	<.001
Period: lockdown $\times$ School year: 18/19	-281.173	11.675	-24.08	<.001
Period: post-lockdown $\times$ School year: 18/19	-293.256	17.615	-16.65	<.001
Period: lockdown $\times$ Question type: multiple choice	-211.632	7.688	-27.53	<.001
Period: post-lockdown $\times$ Question type: multiple choice	-200.943	12.213	-16.45	<.001
School year: $18/19 \times \text{Question type: multiple choice}$	-61.876	7.084	-8.73	<.001
Period: lockdown $\times$ School year: 18/19 $\times$ Question type: multiple choice	279.138	12.590	22.17	<.001
Period: post-lockdown $\times$ School year: 18/19 $\times$ Question type: multiple choice	316.380	19.331	16.37	<.001