

### Supplementary information

**Table S1** The main effects and interactions for *Phoneme processing* test scores. The significant results are marked in bold.

Main effects and interactions	<i>F</i>	<i>p</i>
<i>Time</i>	<i>F</i> (1, 177)=142.997	<b><i>p</i>&lt; .001</b>
<i>Music playschool</i>	<i>F</i> (1, 55)=8.121	<b><i>p</i>=.006</b>
<i>Dance lessons</i>	<i>F</i> (1,55)=3.232	<i>p</i> =.078
<i>Mother's education</i>	<i>F</i> (1,55)=.584	<i>p</i> =.448
<i>Music playschool x Time</i>	<i>F</i> (1, 175)=8.547	<b><i>p</i>=.004</b>
<i>Dance lessons x Time</i>	<i>F</i> (1,176)=1.652	<i>p</i> =.200
<i>Mother's education x Time</i>	<i>F</i> (1,176)=.779	<i>p</i> =.379
<i>Music playschool x Mother's education</i>	<i>F</i> (1,55)=.898	<i>p</i> =.347
<i>Dance lessons x Mother's education</i>	<i>F</i> (1,55)=.355	<i>p</i> =.554
<i>Music playschool x Dance lessons</i>	<i>F</i> (1,55)=2.884	<i>p</i> =.095
<i>Music playschool x Dance lessons x Time</i>	<i>F</i> (1,176)=.678	<i>p</i> =.411
<i>Music playschool x Time x Mother's education</i>	<i>F</i> (1,176)=1.815	<i>p</i> =.180
<i>Dance lessons x Time x Mother's education</i>	<i>F</i> (1,176)=2.284	<i>p</i> =.133
<i>Music playschool x Dance lessons x Mother's education</i>	<i>F</i> (1,55)=1.836	<i>p</i> =.181

**Table S2** The main effects and interactions for *Vocabulary* test scores. The significant results are marked in bold.

Main effects and interactions	<i>F</i>	<i>p</i>
<i>Time</i>	<i>F</i> (1, 176)=95.535	<b><i>p</i>&lt; .001</b>
<i>Music playschool</i>	<i>F</i> (1,55)=2.722	<i>p</i> =.105
<i>Dance lessons</i>	<i>F</i> (1,55)=2.667	<i>p</i> =.108
<i>Mother's education</i>	<i>F</i> (1,55)=1.795	<i>p</i> =.186

<i>Music playschool x Time</i>	$F(1, 174)=7.301$	<b><math>p=.008</math></b>
<i>Dance lessons x Time</i>	$F(1,175)=.019$	$p=.892$
<i>Mother's education x Time</i>	$F(1,175)=.004$	$p=.950$
<i>Music playschool x Mother's education</i>	$F(1,55)=.097$	$p=.757$
<i>Dance lessons x Mother's education</i>	$F(1, 55)= 4.953$	<b><math>p=.030</math></b>
<i>Music playschool x Dance lessons</i>	$F(1,55)=2.540$	$p=.117$
<i>Music playschool x Dance lessons x Time</i>	$F(1, 175)= 10.767$	<b><math>p=.001</math></b>
<i>Music playschool x Time x Mother's education</i>	$F(1,175)=2.101$	$p=.149$
<i>Dance lessons x Time x Mother's education</i>	$F(1,175)=3.662$	$p=.057$
<i>Music playschool x Dance lessons x Mother's education</i>	$F(1,55)=2.511$	$p=.119$

**Table S3** The main effects and interactions for *Perceptual reasoning index* scores (i.e. the sum Block desing and Matrix reasoning scores). The significant results are marked in bold.

Main effects and interactions	$F$	$p$
<i>Time</i>	$F(1, 176)=99.424$	<b><math>p&lt; .001</math></b>
<i>Music playschool</i>	$F(1,56)=.112$	$p=.739$
<i>Dance lessons</i>	$F(1,56)=.581$	$p=.449$
<i>Mother's education</i>	$F(1,56)=.000$	$p=.991$
<i>Music playschool x Time</i>	$F(1,175)=.545$	$p=.461$
<i>Dance lessons x Time</i>	$F(1,175)=.725$	$p=.396$
<i>Mother's education x Time</i>	$F(1,175)=1.062$	$p=.304$
<i>Music playschool x Mother's education</i>	$F(1,56)=.018$	$p=.893$
<i>Dance lessons x Mother's education</i>	$F(1,56)=.436$	$p=.512$
<i>Music playschool x Dance lessons</i>	$F(1,56)=.056$	$p=.813$

<i>Music playschool x Dance lessons x Time</i>	$F(1,175)=1.817$	$p=.179$
<i>Music playschool x Time x Mother's education</i>	$F(1,175)=.497$	$p=.482$
<i>Dance lessons x Time x Mother's education</i>	$F(1, 175)=4.320$	<b><math>p=.039</math></b>
<i>Music playschool x Dance lessons x Mother's education</i>	$F(1, 56)=6.721$	<b><math>p=.012</math></b>

**Table S4** The main effects and interactions for *Inhibition* test scores. The significant results are marked in bold.

Main effects and interactions	$F$	$p$
<i>Time</i>	$F(1, 179)=9.103$	<b><math>p=.003</math></b>
<i>Music playschool</i>	$F(1,55)=.010$	$p=.922$
<i>Dance lessons</i>	$F(1,55)=.199$	$p=.657$
<i>Mother's education</i>	$F(1,55)=1.105$	$p=.298$
<i>Music playschool x Time</i>	$F(1,176)=1.536$	$p=.217$
<i>Dance lessons x Time</i>	$F(1,178)=.963$	$p=.328$
<i>Mother's education x Time</i>	$F(1,177)=.124$	$p=.725$
<i>Music playschool x Mother's education</i>	$F(1,55)=3.308$	$p=.074$
<i>Dance lessons x Mother's education</i>	$F(1,54)=.618$	$p=.435$
<i>Music playschool x Dance lessons</i>	$F(1,54)=.163$	$p=.688$
<i>Music playschool x Dance lessons x Time</i>	$F(1,177)=.016$	$p=.900$
<i>Music playschool x Time x Mother's education</i>	$F(1,177)=.009$	$p=.925$
<i>Dance lessons x Time x Mother's education</i>	$F(1,177)=1.246$	$p=.266$
<i>Music playschool x Dance lessons x Mother's education</i>	$F(1,54)=.001$	$p=.973$