Supplementary Online Materials

The malleability of executive function in early childhood: effects of schooling and

targeted training

Qiong Zhang¹, Cuiping Wang¹, Qianwen Zhao², Ling Yang¹, Martin Buschkuehl³, Susanne M. Jaeggi⁴

¹ Department of Psychology, Zhejiang University, Hangzhou, China

²Hangzhou No. 4 High School, Hangzhou, China

³MIND Research Institute, Irvine, CA, USA

⁴School of Education, University of California, Irvine, USA

This file includes:

1. Supplementary result section that includes both, Frequentist and Bayesian analyses.

2. Table S1

Results (analysis for both Frequentist and Bayesian approach)

Baseline Performance

Comparing the three kindergarten groups, there were no group differences in most of the measures (BDST: F(2, 60) = 1.60, p = .21, $\eta_p^2 = 0.05$; BF₁₀ = 0.42; BSI RT: F(2, 60) = 0.04, p = .96, $\eta_p^2 = 0.001$; BF₁₀ = 0.13; Gf: F(2, 60) = 0.22, p = .81, $\eta_p^2 = 0.01$; BF₁₀ = 0.15), indicating that the groups were well matched at baseline in those measures. However, there was a substantial group difference for the BSI errors in the AX-CPT (F(2, 60) = 7.23, p = .002, $\eta_p^2 = 0.19$; BF₁₀ = 23.87), and thus, we ran additional post-hoc tests which revealed that the WM group outperformed the two other groups (WM vs. IC: p = .002, Cohen's d = 0.97; BF₁₀ = 11.16; WM vs. CG: p =.001, Cohen's d = 1.01; BF₁₀ = 17.63), but there was no difference between the two remaining groups (IC vs. CG: p = .895, Cohen's d = 0.04; BF₁₀ = 0.30).

Next, comparing the schooling group with all kindergarten groups to investigate the schooling effect, there was no evidence for group differences in the BDST (*F* (1, 86) = 1.64, p = .20, $\eta_p^2 = 0.02$; BF₁₀ = 0.49) and AX-CPT (BSI RT: *F* (1, 86) = 0.28, p= .60, $\eta_p^2 = 0.003$; BF₁₀ = 0.27). However, for Gf, there was very strong evidence for a schooling effect in that the schooling group outperformed the kindergarten groups (*F* (1, 86) = 13.28, p < .001, $\eta_p^2 = 0.13$; BF₁₀ = 58.69; see Figure 3b). For AX-CPT (BSI errors), given that the WM group outperformed the IC and the kindergarten control group at baseline, we calculated two separate ANOVAs, one comparing the schooling group with the WM group, which did not provide any evidence for a schooling effect (F(1, 43) = 2.36, p = .13, $\eta_p^2 = 0.05$; BF₁₀ = 0.77), but comparing the schooling group with the remaining two kindergarten groups revealed anecdotal to moderate evidence for a schooling effect (SG vs. IC and CG: F(1, 66) = 6.00, p = .02, $\eta_p^2 = 0.08$; BF₁₀ = 3.07).

Training Effects

The average performance of all trainees during the five-week intervention period as a function of training task is presented in Figure 2. The children in the WM group decisively improved their performance as reflected by their increase in maximum set sizes (t(19) = 9.58, p < .001, ES = 2.14; BF₋₀ = 2.39e+6), as did the children in the IC training group in both the modified Stroop task (accuracy in the congruent condition: t (20) = 4.08, p < .001, ES = 0.89; BF₋₀ = 115.17; accuracy in the incongruent condition: t (20) = 6.46, p < .001, ES = 1.41; BF₋₀ = 14,577.89; RT in the congruent condition: t (20) = 10.11, p < .001, ES = 2.21; BF₊₀ = 8.81e+6; RT in the incongruent condition: t (20) = 8.53, p < .001, ES = 1.86; BF₊₀ = 657,268.79), as well as the stop-signal task (SSRT: t (20) = 2.41, p = .01, ES = 0.53; BF₊₀ = 4.53), although this latter effect was considerably less pronounced.

Outcome Measures

WM Task. A mixed ANOVA on the BDST to test for immediate changes (pre vs. post) revealed no evidence for either the main effect of session ($F(1, 84) = 1.76, p = .19, \eta_p^2 = 0.02$; BF₁₀ = 0.36), or the main effect of group ($F(3, 84) = 0.92, p = .43, \eta_p^2 = 0.03$; BF₁₀ = 0.16), or the session by group interaction ($F(3, 84) = 0.80, p = .50, \eta_p^2 = 0.03$; BF₁₀ = 0.15). Within-group comparisons did not indicate any changes either (all $ps \ge .16$; BF₋₀ ≤ 0.60), except for the IC group, but the evidence was merely anecdotal (p = .037, ES = 0.41; BF₋₀ = 1.92) (see Table 1).

A mixed ANOVA to test for any longitudinal effects (BDST; pre vs. follow-up) revealed a decisive main effect of session ($F(1, 84) = 17.50, p < .001, \eta_p^2 = 0.17$; BF₁₀ = 564.04), as well as a moderate main effect of group ($F(3, 84) = 4.56, p = .005, \eta_p^2 =$ 0.14; BF₁₀ = 3.88), however, there was no evidence for an interaction between session and group ($F(3, 84) = 1.19, p = .32, \eta_p^2 = 0.04$; BF₁₀ = 0.28). Within-group comparisons showed that the schooling group and the IC training group substantially improved from baseline to follow-up (SG: p = .007, ES = 0.53; BF₋₀ = 7.43; IC: p =.004, ES = 0.64; BF₋₀ = 12.29), while the evidence was merely anecdotal in the WM training group (p = .025, ES = 0.47; BF₋₀ = 2.70). The kindergarten control group did not show any change (p = .28, ES = 0.13; BF₋₀ = 0.37; see Table 1 and Figure 3a).

Similarly, the ANOVAs that specifically compared the WM or IC training groups with kindergarten control group revealed anecdotal evidence for an interaction between session and group, but only from pretest to follow-up, and only for the IC vs. CG comparison (IC vs. CG: F(1, 41) = 4.46, p = .04, $\eta_p^2 = 0.10$; BF₁₀ = 1.30; all other $ps \ge .14$; BF₁₀ < 1).

To further test for group differences, we compared the performance of the four groups at each test session. There was no evidence for group differences at either the pretest (F (3, 84) = 1.61, p = .19, $\eta_p^2 = 0.05$; BF₁₀ = 0.34) or the posttest (F (3, 84) = 0.17, p = .91, $\eta_p^2 = 0.01$; BF₁₀ = 0.08). However, strong evidence for group differences appeared at follow-up (F (3, 84) = 4.89, p = .004, $\eta_p^2 = 0.15$; BF₁₀ = 11.31), and further analyses revealed that the schooling group decisively outperformed the kindergarten control group (p = .001, Cohen's d = 1.20; BF₁₀ = 122.81), providing strong evidence for a schooling effect. Notably, at this point also the two training groups outperformed the kindergarten control group indicating transfer. While there was strong evidence for an effect in the WM training group (WM vs. CG: p = .004, Cohen's d = 1.06; BF₁₀ = 25.77), the evidence was merely anecdotal for the IC group (IC vs. CG: p = .036, Cohen's d = 0.66; BF₁₀ = 1.94). Overall, those results provide evidence that schooling and WM training impact BDST performance over the long run, and notably, there were no differences between the two training groups and the schooling group (all $ps \ge .19$; BF₁₀ ≤ 0.55), suggesting that both targeted training and schooling impact BDST performance (see Figure 3a).

IC Task. The mixed ANOVA to test for immediate changes in the AX-CPT (BSI errors; pre vs. post) revealed no evidence for a main effect of session (F(1, 84) =

2.49, p = .12, $\eta_p^2 = 0.03$; BF₁₀ = 0.57), but there was very strong evidence for a main effect of group (*F* (3, 84) = 6.10, p = .001, $\eta_p^2 = 0.18$; BF₁₀ = 38.77), however, there was no evidence for a session by group interaction (*F* (3, 84) = 0.82, p = .49, $\eta_p^2 =$ 0.03; BF₁₀ = 0.16). Within group comparisons indicated that only the schooling group substantially changed from baseline to posttest (p = .007, ES = 0.54; BF₋₀ = 7.47; i.e. changing towards using a more proactive strategy), while none of the three kindergarten groups did (all $ps \ge .10$; BF₋₀ ≤ 0.83).

The mixed ANOVA to test for the longitudinal effects (BSI errors; pre vs. follow-up) provided decisive evidence for a main effect of session (F(1, 84) = 18.29, p < .001, $\eta_p^2 = 0.18$; BF₁₀ = 407.00), as well as strong evidence for a main effect of group (F(3, 84) = 5.76, p = .001, $\eta_p^2 = .17$; BF₁₀ = 26.11). However, there was only anecdotal evidence for an interaction between group and session (F(3, 84) = 2.72, p = .049, $\eta_p^2 = 0.09$; BF₁₀ = 1.14). Within group comparisons indicated that the schooling group as well as the kindergarten control group changed from baseline to follow-up (SG: p < .001, ES = 0.89; BF₋₀ = 324; CG: p = .004, ES = 0.64; BF₋₀ = 12.86), while there was no evidence for changes in the two trainings groups (both $ps \ge .16$; BF₋₀ ≤ 0.60).

This pattern was further illustrated by the fact that the ANOVAs that specifically compared the WM or IC training group with kindergarten control group revealed anecdotal evidence for session by group interactions, but only from pretest to follow-up, which were driven by the changes in kindergarten control group (IC vs. CG: F(1, 41) = 4.13, p = .049, $\eta_p^2 = 0.09$; BF₁₀ = 1.66; WM vs. CG: F(1, 40) = 3.66, p = .06, $\eta_p^2 = 0.08$; BF₁₀ = 1.29).

Comparing the performance between the four groups revealed group differences at pretest (*F* (3, 84) = 5.44, p = .002, $\eta_p^2 = 0.16$; BF₁₀ = 19.22), and further analyses indicated anecdotal evidence for a schooling effect in that the schooling group differed from the kindergarten control group and the IC training group (SG vs. CG: p= .04, Cohen's d = 0.64; BF₁₀ = 1.94; SG vs. IC: p = .06, Cohen's d = 0.48; BF₁₀ = 1.40). In addition, there was strong evidence showing that the WM training group differed from both, the kindergarten control group (WM vs. CG: p = .001, Cohen's d= 1.01; BF₁₀ = 17.63) and IC training group (WM vs. IC: p = .001, Cohen's d = 0.97; BF₁₀ = 11.16). There was no evidence for any other group differences (all $ps \ge .11$; BF₁₀ ≤ 0.77 ; see Figure 3c).

There was also substantial evidence for group differences at posttest ($F(3, 84) = 4.15, p = .009, \eta_p^2 = 0.13$; BF₁₀ = 4.90). Further analyses showed a similar pattern that was observed at pretest, indicating anecdotal to moderate evidence for a schooling effect in that the schooling group was still different from the kindergarten control group (SG vs. CG: p = .07, Cohen's d = 0.56; BF₁₀ = 1.30) and the IC training group (SG vs. IC: p = .008, Cohen's d = 0.80; BF₁₀ = 5.30). Furthermore, the WM training group was still different from both, the kindergarten control group (albeit weakly) and

the IC training group (WM vs. CG: p = .037, Cohen's d = 0.66; BF₁₀ = 1.72; WM vs. IC: p = .004, Cohen's d = 0.88; BF₁₀ = 5.72). There was no evidence for other group differences (both $ps \ge .36$; BF₁₀ ≤ 0.39).

At the follow-up test, the overall group differences remained substantial (*F* (3, 84) = 4.48, p = .006, $\eta_p^2 = 0.14$; BF₁₀ = 7.10). Further analyses revealed strong to decisive evidence that the schooling group and the WM training group were different from the IC training group (SG vs. IC: p = .001, Cohen's d = 1.16; BF₁₀ = 107; WM vs. IC: p = .003, Cohen's d = 0.98; BF₁₀ = 11.52). There was also anecdotal evidence that the kindergarten control group was now also different from the IC training group (CG vs. IC: p = .02, Cohen's d = 0.60; BF₁₀ = 1.34). There was no evidence for any other group differences (all $ps \ge .35$; BF₁₀ ≤ 0.41).

To further explicate the children's strategy use, we calculated the difference between BSI and 0, which indicates whether the children adopted a more proactive (> 0) or reactive (< 0) strategy (see Figure 3c). At pretest, there was anecdotal evidence that the WM training group was relying on a proactive strategy (BSI > 0; p = .035, Cohen's d = 0.72; BF₁₀ = 1.86), whereas the IC training group and the kindergarten control group relied on a reactive strategy (BSI < 0; IC: p = .047, Cohen's d = 0.65; BF₁₀ = 1.39; CG: p = .03, Cohen's d = 1.05; BF₁₀ = 2.31). The score in the schooling group was not different from 0 (p = .55, Cohen's d = 0.25; BF₁₀ = 0.25). At posttest, there was now moderate evidence that the WM training group and the schooling group relied on a proactive strategy (BSI > 0; WM: p = .01, Cohen's d = 0.85; BF₁₀ = 3.77; SG: p = .01, Cohen's d = 0.76; BF₁₀ = 3.87). The BSI in the IC training group and kindergarten control group was no longer different from 0 (both $ps \ge .16$; BF₁₀ ≤ 0.58). At follow-up, the evidence for the WM training group and the schooling group using a proactive strategy was now even stronger, and it was decisive in the case of the schooling group (BSI > 0; WM: p = .003, Cohen's d = 1.53; BF₁₀ = 12.20; SG: p < .001, Cohen's d = 2.36; BF₁₀ = 3,403). In contrast, the BSI for neither the IC training group nor the kindergarten control group was different from 0 (both $ps \ge .12$; BF₁₀ ≤ 0.67).

The mixed ANOVA to test for immediate changes (pre vs. post) for the BSI RT revealed no evidence for a main effect of session ($F(1, 84) = 0.01, p = .92, \eta_p^2 < 0.001$; BF₁₀ = 0.17) or for a main effect of group ($F(3, 84) = 2.34, p = .08, \eta_p^2 = 0.08$; BF₁₀ = 0.35), or for a session by group interaction ($F(3, 84) = 1.46, p = .23, \eta_p^2 = 0.05$; BF₁₀ = 0.41), and the within group comparisons revealed no changes from baseline to the posttest (all $ps \ge .17$; BF₋₀ ≤ 0.58).

To test for the longitudinal effects (BSI RT; pre vs. follow-up), the mixed ANOVA indicated anecdotal evidence for a main effect of session (F(1, 84) = 3.50, p= .065, $\eta_p^2 = 0.04$; BF₁₀ = 1.35), but there was no evidence for either the main effect of group ($F(3, 84) = 0.29, p = .83, \eta_p^2 = 0.01$; BF₁₀ = 0.06), or the group by session interaction ($F(3, 84) = 0.11, p = .95, \eta_p^2 = 0.004$; BF₁₀ = 0.08), and the within group comparisons did not indicate any changes from baseline to follow-up (all $ps \ge .64$; BF₋₀ ≤ 0.18).

The ANOVAs that specifically compared the WM or IC training with kindergarten control group revealed anecdotal evidence for a session by group interaction, but only from pretest to posttest, and only for the WM vs. CG comparison (WM vs. CG: F(1, 40) = 3.60, p = .065, $\eta_p^2 = 0.08$; BF₁₀ = 1.79; all other $ps \ge .13$; BF₁₀ < 1).

Comparing the performance of the four groups at each test session provided no evidence for group differences at pretest ($F(3, 84) = 0.12, p = .95, \eta_p^2 = 0.004$; BF₁₀ = 0.07). However, there was anecdotal evidence for group differences at posttest ($F(3, 84) = 5.63, p = .001, \eta_p^2 = 0.17$; BF₁₀ = 2.28). Further analyses showed that both, the WM training group and the IC training group were different from the kindergarten control group (WM vs. CG: p = .003, Cohen's d = 0.83; BF₁₀ = 4.73; IC vs. CG: p =.051, Cohen's d = 0.75; BF₁₀ = 2.88), and there was anecdotal evidence for a difference between the schooling group and the kindergarten control group as well (SG vs. CG: p = .025, Cohen's d = 0.61; BF₁₀ = 1.58). There was no evidence for other group differences (all $ps \ge .29$; BF₁₀ ≤ 0.55). At follow-up, there was no evidence for group differences ($F(3, 84) = 0.29, p = .83, \eta_p^2 = 0.01$; BF₁₀ = 0.09) (see Figure 3d). *Gf Task.* With regards to the immediate changes (pre vs. post), the mixed ANOVA revealed anecdotal evidence for a main effect of session ($F(1, 84) = 5.67, p = .02, \eta_p^2 = 0.06$; BF₁₀ = 1.77) and moderate evidence for a main effect of group ($F(3, 84) = 4.07, p < .01, \eta_p^2 = 0.13$; BF₁₀ = 5.55). However, there was no evidence for a session by group interaction ($F(3, 84) = 0.61, p = .61, \eta_p^2 = 0.02$; BF₁₀ = 0.12). Within group comparisons indicated anecdotal evidence for the WM group improving from baseline to posttest (p = .025, ES = 0.47; BF₋₀ = 2.65), but there was no evidence for any of the other groups improving (all $ps \ge .14$; BF₋₀ ≤ 0.68).

With respect to the longitudinal effect (pre vs. follow-up), the mixed ANOVA revealed decisive evidence for a main effect of session ($F(1, 84) = 19.99, p < .01, \eta_p^2$ = 0.19; BF₁₀ = 327.24) as well as very strong evidence for a main effect of group ($F(3, 84) = 6.46, p < .01, \eta_p^2 = 0.19$; BF₁₀ = 65.04). However, there was no evidence for an interaction between session and group ($F(3, 84) = 2.56, p = .06, \eta_p^2 = 0.08$; BF₁₀ = 0.93). Nonetheless, it is worth noting that both training groups substantially improved from baseline to follow-up (WM: p = .003, ES = 0.70; BF₋₀ = 17.12; IC: p = .002, ES = 0.70; BF₋₀ = 19.74), as did the schooling group, although to a lesser extent (p =.019, ES = 0.44; BF₋₀ = 3.15). In contrast, the kindergarten control group did not show any change (p = .38, ES = 0.07; BF₋₀ = 0.29; see Table 1). To further illustrate this point, the ANOVAs that directly compared the WM or IC training group with kindergarten control group revealed anecdotal evidence for session by group interactions, but only from pretest to follow-up (WM vs. CG: F(1, 40) = 4.73, p = .04, $\eta_p^2 = 0.11$; BF₁₀ = 1.78; IC vs. CG: *F* (1, 41) = 3.65, *p* = .06, $\eta_p^2 = 0.08$; BF₁₀ = 1.29).

Comparing the performance of the four groups in each test session, there was moderate evidence for a group effect at pretest (F (3, 84) = 4.50, p = .006, $\eta_p^2 = 0.14$; $BF_{10} = 8.00$). Further analyses indicated that the schooling group outperformed each of the three kindergarten groups (SG vs. WM: p = .008, Cohen's d = 0.85; BF₁₀ = 6.56; SG vs. IC: p = .011, Cohen's d = 0.79; BF₁₀ = 4.74; SG vs. CG: p = .001, Cohen's d = 0.98; BF₁₀ = 22.23), indicating a schooling effect. At posttest, although there was no evidence for an overall group difference (*F* (3, 84) = 1.85, p = .14, $\eta_p^2 =$ 0.06; $BF_{10} = 0.46$), further analyses revealed anecdotal evidence for the schooling group still outperforming the kindergarten control group (p = .03, Cohen's d = 0.64; $BF_{10} = 1.92$). There was no evidence for any other group difference at posttest (all ps \geq .08; BF₁₀ \leq 0.95). At follow-up, there was very strong evidence for a group difference (F (3, 84) = 6.56, p < .001, $\eta_p^2 = 0.19$; BF₁₀ = 65.55). Further analyses revealed that the schooling group now decisively outperformed the kindergarten control group (SG vs. CG: p < .001, Cohen's d = 1.36; BF₁₀ = 663.42), however, there was now also substantial evidence for the two training groups outperforming the kindergarten control group as well (WM vs. CG: p = .003, Cohen's d = 0.89; BF₁₀ = 7.01; IC vs. CG: p = .009, Cohen's d = 0.84; BF₁₀ = 5.55), indicating transfer in that both, WM and IC training facilitated performance in the Gf task. Importantly, there was no longer any evidence for a difference between the two training groups and the schooling group that was observed at baseline (all $ps \ge .14$; both BF₁₀ ≤ 0.80), despite the fact that the training groups now also outperformed the kindergarten control group control group, indicating that the training groups caught up to the schooling group (see Figure 3b).

		Descriptive Data						Paired Comparisons					
		Pre		Post		Follow-Up		Pre vs. Post			Pre vs. Follow-up		
	N	Mean	SD	Mean	SD	Mean	SD	BF₀	r	ES	BF₀	r	ES
AX-CPT (AX errors)										<u> </u>			
WM	20	18.61	9.19	20.83	7.77	20.24	11.61	0.13	0.33	-0.22	0.16	0.29	-0.13
IC	21	18.52	9.51	20.08	10.20	14.92	6.06	0.15	0.33	-0.14	1.99	0.45	0.41
SG	25	16.90	6.53	20.73	7.09	17.64	4.12	0.07	0.40	-0.51	0.15	0.06	-0.10
CG	22	17.79	8.15	16.84	11.15	22.26	8.97	0.31	0.40	0.09	0.08	0.47	-0.51
AX-CPT (AY errors)													
WM	20	6.24	2.40	5.65	2.41	5.96	2.79	0.70	0.53	0.25	0.32	0.25	0.09
IC	21	5.05	2.19	3.47	2.22	3.66	2.03	3.70	-0.02	0.50	7.71	0.38	0.59
SG	25	5.59	2.00	6.50	1.97	6.05	1.87	0.07	0.48	-0.45	0.10	0.55	-0.25
CG	22	5.21	1.79	5.34	2.98	6.16	2.78	0.19	0.59	-0.05	0.10	0.32	-0.34
AX-CPT (BX errors)													
WM	20	4.45	2.24	4.20	3.17	3.43	1.98	0.31	0.32	0.08	2.48	0.45	0.46
IC	21	6.63	2.47	5.51	2.99	4.55	2.39	1.32	0.35	0.36	27.09	0.33	0.74
SG	25	5.44	2.48	4.99	2.86	3.67	1.37	0.43	0.45	0.16	66.58	0.35	0.74
CG	22	7.12	2.44	5.57	2.94	4.61	3.00	2.01	0.02	0.41	32.93	0.22	0.73
AX-CPT (BY errors)													
WM	20	2.14	2.60	1.42	1.36	0.83	0.81	0.79	0.28	0.28	3.79	0.23	0.52
IC	21	2.57	2.60	1.89	1.61	1.19	1.11	0.60	-0.02	0.22	5.27	0.27	0.54
SG	25	2.52	1.64	2.64	1.29	1.57	0.91	0.16	0.39	-0.07	6.82	0.09	0.53
CG	22	2.72	1.42	2.01	2.42	2.30	1.78	0.85	0.23	0.28	0.48	-0.06	0.18
AX-CPT (AX RT)													
WM	20	558	122	538	148	473	99	0.42	0.57	0.15	60.35	0.60	0.84
IC	21	547	93	595	110	624	207	0.09	0.39	-0.42	0.09	0.45	-0.42
SG	25	577	123	521	100	487	51	16.86	0.69	0.61	76.38	0.29	0.76
CG	22	564	96	524	115	524	84	1.37	0.43	0.36	3.18	0.54	0.47
AX-CPT (AY RT)													
WM	20	764	121	840	180	680	173	0.10	0.10	-0.37	2.44	0.25	0.45
IC	21	791	153	753	99	736	99	0.72	0.37	0.26	2.04	0.53	0.42
SG	25	825	160	774	136	677	140	0.70	-0.03	0.24	91.55	0.18	0.77
CG	22	741	122	747	126	719	154	0.19	0.48	-0.04	0.42	0.46	0.15
AX-CPT (BX RT)													
WM	20	614	216	588	160	538	125	0.38	0.45	0.13	1.48	0.42	0.38
IC	21	649	249	581	95	613	118	0.81	0.22	0.28	0.48	0.64	0.18
SG	25	634	177	606	235	559	109	0.32	0.02	0.10	1.84	0.09	0.38
CG	22	600	176	705	266	627	173	0.09	0.26	-0.38	0.14	0.54	-0.16
AX-CPT (BY RT)													
WM	20	710	207	598	145	563	142	12.82	0.59	0.67	104.85	0.63	0.91
IC	21	725	175	661	98	656	131	1.77	0.43	0.40	3.10	0.59	0.48
SG	25	665	188	605	124	540	103	1.45	0.42	0.34	16.52	0.12	0.62
CG	22	665	114	644	128	588	132	0.80	0.80	0.27	28.37	0.64	0.72

Table S1. Descriptive data and effect sizes, as well as results for paired comparisons within each group.

Note : WM: working memory training group; IC: inhibitory control training group; SG: schooling group; CG: control group; BF₋₀ = Bayes Factor for paired comparisons (note that values >1 that provide evidence in favor of the hypothesis are indicated in bold italic fond); r = correlation between the pre- and posttest/follow-up measures; ES = effect size accounting for r: $(\mu_2 - \mu_1)/\sqrt{(\sigma_1^2 + \sigma_2^2 - 2r_{12}\sigma_1\sigma_2)}$. Note that ES are reversed so that positive ES indicate improvement.