Supplementary Materials

Behavioral results over training sessions

Participants' behavioral data on the first day of each CSI condition were preprocessed based on the same criteria as that in pre- and post-test sessions. Three participants' data were eliminated since there were less than 55% data left in at least one condition after the preprocessing. Data of 23 participants entered into the final analyses.

A 4 (CSI: 500 ms/300 ms/100 ms/0 ms) × 2 (language: L1/L2) × 2 (trial type: switch/non-switch) repeated-measures ANOVA was conducted on the RTs (Figure S1). The results revealed a significant main effect of CSI, $F(3, 66) = 12.30$, $p < .001$, $\eta_p^2 = .359$. Further pairwise comparisons showed that naming at the 500 ms CSI (901 ms) was significantly faster than naming at the 300 ms CSI (792 ms), $p = .001$, the 100 ms CSI (807 ms), $p = .014$, and the 0 ms CSI (805 ms), $p = .010$. The naming latencies among the latter three CSI conditions did not show significant differences, $ps = 1$. The main effect of language was significant, $F(1, 22) = 21.73$, $p < .001$, $\eta_p^2 = .497$, suggesting slower naming in Chinese (864 ms) than in English (807 ms). The main effect of trial type was also significant, $F(1, 22) = 99.91$, $p < .001$, $\eta_p^2 = .820$, indicating that responses in the switch trials (850 ms) were slower than those in the non-switch trials (803 ms).

The CSI by trial type interaction was significant, $F(3, 66) = 4.26$, $p = .011$, $\eta_p^2 = .162$. Further simple effect test revealed that naming latencies in switch trials was significantly longer than those in non-switch trial at the 500 ms CSI (918 ms vs. 885

ms, *MD* = 34 ms), $p < .001$, the 300 ms CSI (817 ms vs. 767 ms, *MD* = 50 ms), $p < .001$, the 100 ms CSI (833 ms vs. 781 ms, *MD* = 52 ms), $p < .001$, and the 0 ms CSI (833 ms vs. 778 ms, *MD* = 55 ms), $p < .001$. These results suggested that the switching costs increased as the CSI decreased.

Language interacted significantly with trial type, $F(1, 22) = 15.18$, $p = .001$, $\eta_p^2 = .408$. Further simple effect test showed that naming in switch trials was significantly slower than that in non-switch trials in Chinses (874 ms vs. 817 ms, *MD* = 57 ms), $p < .001$ and in English (826 ms vs. 788 ms, *MD* = 38 ms), $p < .001$. These patterns indicated that switching costs in two languages were asymmetric.

The interaction between CSI and language was marginally significant, $F(3, 66) = 2.97$, $p = .052$, $\eta_p^2 = .119$. The three-way interaction among CSI, language and trial type was not significant, $F(3, 66) = 1.60$, $p = .207$, $\eta_p^2 = .068$.

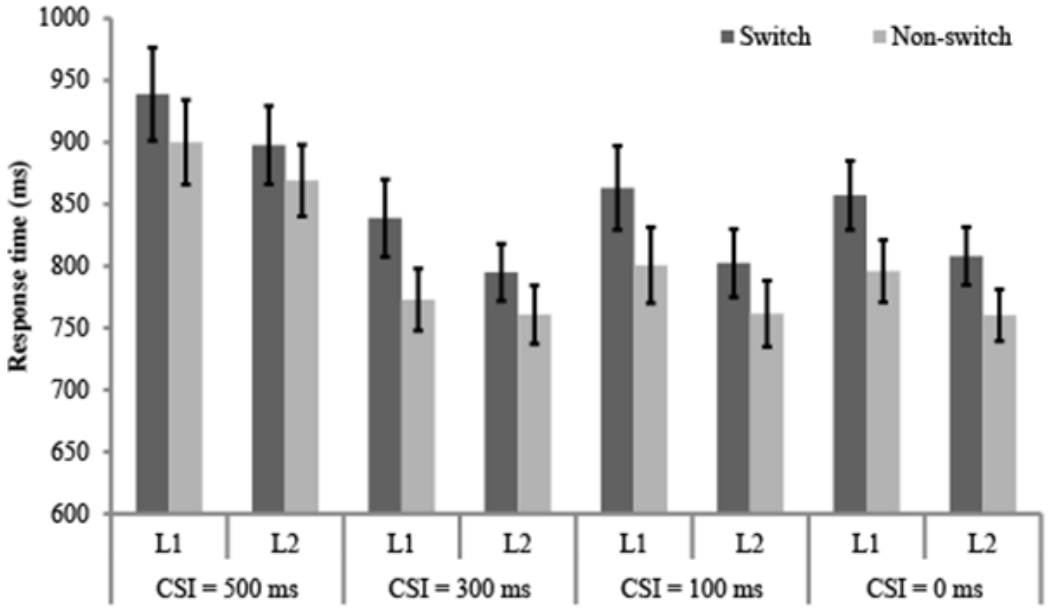

Figure S1. Mean RTs of switch trials and non-switch trials in L1 and L2 on the first day of each CSI condition. Error bars indicate one standard error.

A 4 (CSI: 500 ms/300 ms/100 ms/0 ms) × 2 (language: L1/L2) × 2 (trial type: switch/non-switch) repeated-measures ANOVA was conducted on ERs (Figure S2). The results showed that the main effect of CSI was not significant, F (3, 66) < 1. The main effect of language was significant, F (1, 22) = 10.21, p = .004, η_p^2 = .317, suggesting that more errors were made in Chinese naming (3.26%) than English naming (2.14%). The main effect of trial type was significant, F (1, 22) = 12.99, p = .002, η_p^2 = .371, suggesting that ERs of switch trials (3.26%) were higher than those of non-switch trials (2.14%).

Neither the interaction between CSI and language nor the interaction between CSI and trial type was significant, Fs < 1. The language by trial type interaction did not reach significance either, F (1, 22) = 2.52, p = .127, η_p^2 = .103. The three-way interaction among CSI, language and trial type was also not significant, F (3, 66) = 1.53, p = .222, η_p^2 = .065.

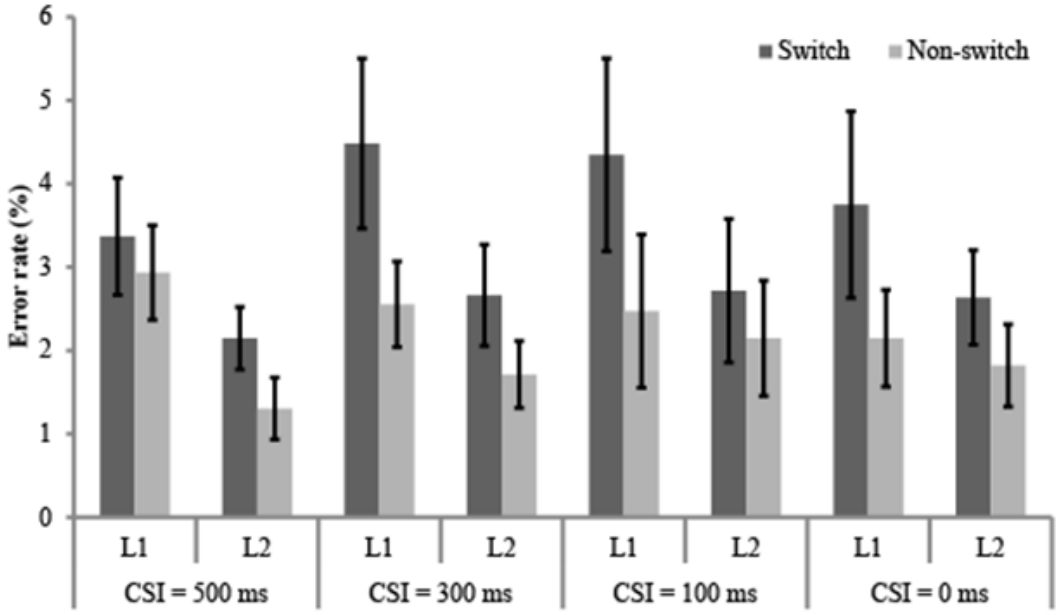

Figure S2. Mean ERs of switch trials and non-switch trials in L1 and L2 on the first

day of each CSI condition. Error bars indicate one standard error.