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).
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 Chinese (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.](image)
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, \( F (1, 22) = 10.21, p = .004, \eta_p^2 = .317 \), suggesting that more errors were made in Chinese naming (3.26%) than English naming (2.14%). The main effect of trial type was significant, \( F (1, 22) = 12.99, p = .002, \eta_p^2 = .371 \), 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, \( F (1, 22) = 2.52, p = .127, \eta_p^2 = .103 \). The three-way interaction among CSI, language and trial type was also not significant, \( F (3, 66) = 1.53, p = .222, \eta_p^2 = .065 \).

![Figure S2. Mean ERs of switch trials and non-switch trials in L1 and L2 on the first](image-url)
day of each CSI condition. Error bars indicate one standard error.