**Supplementary materials**

**Method**

Statistical analysis was based on the general linear model (GLM). Two regressors of interest for each session were defined for individual first-level analysis for each participant, respectively, i.e., correct writing sequences minus incorrect ones and vice versa (SPM 12; https://www.fil.ion.ucl.ac.uk/spm/).

For the second-level analysis, beta maps for the two interested contrasts for each participant were fed to the one-sample *t* tests, and only positive *t* values were focused for each test to pinpoint brain regions significantly activated differently between two writing sequence conditions. The results, at last, passed a family-wise error (FWE) correction of *p* < 0.05 on cluster level.

**Results**

As shown in Figure S1, no brain areas were more strongly activated by correct writing sequences than incorrect ones. In contrast, the left inferior frontal gyrus (pars triangularis), left middle frontal cortex (precentral gyrus), left inferior parietal lobule, and right superior occipital gyrus were activated greater in the condition of incorrect writing sequences (Table S1).

**Table S1.** *Brain regions revealed by the contrast of incorrect writing sequences minus correct ones from traditional General Linear Model Analysis (k > 40, FWE corrected, p < 0.05)*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Brain Region** | **MNI coordinates** | | | **BA** | **cluster size** | ***t*** |
| **x** | **y** | **z** |
| Left Inferior Frontal Gyrus (Pars Triangularis) | -33 | 36 | 6 | 9 | 279 | 6.46 |
| Left Middle Frontal Cortex (Precentral Gyrus) | -27 | 18 | 48 | 8/6 | 63 | 6.22 |
| Left Inferior Parietal Lobule | -27 | -66 | 30 | 7 | 384 | 7.74 |
| Right Superior Occipital Gyrus | 33 | -63 | 36 | 39 | 48 | 5.21 |



**Figure S1**. *Brain regions showing stronger activity in reviewing incorrect writing sequences than correct ones.*