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Supplemental material

Interhemispheric connections in the maintenance of language performance and prognosis prediction: fully connected layer-based deep learning model analysis

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SUPPLEMENTARY FIGURE 1: HIDDEN CONVOLUTION LAYERS
Encoding from the hidden convolution layers received from the CNN architectures. (A) 1D-CNN lost the two-dimensional features in the adjacency matrix, while (B) 2D-CNN had gradual feature maps with a small range of values. The horizontal and vertical coordinates numbers correspond to the serial numbers of the 90 brain regions on the AAL90 template.

SUPPLEMENTARY FIGURE 2: TRAINING LOSSES
The training losses with the Convolutional Neural Network (CNN) architectures. Red curves present the training losses of the auto-encoder model, and the blue curves are for the classification model. (A) shows the losses when using a 1D-CNN approach. The errors do not converge for various values of the learning rates, activation functions, and optimizer hyperparameters. (B) shows the losses for the 2D-CNN approach, where the losses display a periodic fluctuation or no gradient descent.