

Materials List for

# Inter-Brain Synchrony in Open-Ended Collaborative Learning: An fNIRS-Hyperscanning Study

Nan Zhao<sup>1,2</sup>, Yi Zhu<sup>1,2</sup>, Yi Hu<sup>1,2</sup>

<sup>1</sup>School of Psychology and Cognitive Science, East China Normal University <sup>2</sup>Shanghai Key Laboratory of Mental Health and Crisis Intervention, East China Normal University

## Corresponding Author

Yi Hu  
yhu@psy.ecnu.edu.cn

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## Materials

Name	Company	Catalog Number	Comments
EEG caps	Compumedics Neuroscan, Charlotte, USA	64-channel Quik-Cap	We choose two sizes of cap (i.e. medium and large).
NIRS measurement system with probe sets and probe holder grids	Hitachi Medical Corporation, Tokyo, Japan	ETG-7100 Optical Topography System	The current study protocol requires an optional second adult probe set for 92 channels of measurement in total.
Numeric computing platform	The MathWorks, Inc., Natick, MA	MATLAB R2020a	Serves as base for Psychophysics Toolbox extensions (stimulus presentation), Homer2 (fNIRS preprocess analysis), and "wtc" function (WTC computation).
Psychology software	psychology software tools, Sharpsburg, PA, USA	E-prime 2.0	We apply E-prime to start the fNIRS measurement system and send triggers which marking the rest phase and collaborative learning phase for fNIRS recording data.
Swimming caps	Zoke corporation, Shanghai, China	611503314	We first placed the standard 10-20 EEG cap on the head mold, and placed the swimming cap on the EEG cap. Second, we marked (inion, Cz, T3, T4, PFC and P5) with chalk.
Three-dimensional (3-D) digitizer	Polhemus, Colchester, VT, USA;	Three-dimensional (3-D) digitizer	Anatomical locations of optodes in relation to standard head landmarks were determined for each participant using a Patriot 3D Digitizer