### Appendix

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| **Table 1 QUALITY ASSESSMENT QUESTIONS** | |
| **No.** | **Questions** |
| QA1 | Are the aims of the research clearly defined? |
| QA2 | Is the estimation context clearly defined? |
| QA3 | Are the methods well defined and implemented? |
| QA4 | Is the experimental design sufficient and justifiable? |
| QA5 | Is the experimental design applied to relevant and sufficient data sets |
| QA6 | Is the estimation accuracy measured and reported? |
| QA7 | Are the limitations of the study stated explicitly? |
| QA8 | Does the study add value to the industry or academia? |

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| **Table 2** |
| **DATA EXTRACTION CARD** |
| Research Topic or Title |
| Focus |
| Date Published |
| The decision for Exclusion/Inclusion |
| Reason for Exclusion/Inclusion |
| Sample Size |
| Population |
| Control Population |
| Methodology |
| Data Classification |
| Data Source |
| Journal Name |
| URL |
| Issues Not Covered |
| Research Group |
| Bias |
| Internal Validity |
| External Validity |
| Quality control of data collection |
| Accuracy Measures |
| Techniques and Measures Used |
| Most Accurate Technique |
| Electrode Loci |
| Data Acquisition |
| Data Analysis |
| Data Transformation Done |
| Variables used in cross Validation |
| Method of Cross-Validation |
| Baseline/Benchmark |
| Baseline/benchmark comparison results |
| Other results |
| Purpose of Study |
| End of Study Criteria |
| Background |
| Discussion |
| RQ1: to study the effects of SLI Neurofeedback on SLI individuals and exhibited changes across cognitive profiles using EEG or MRI. |
| RQ2: to compare the pre-existing behavioral intervention and assessment methods with those using SLI Neurofeedback |
| RQ3: to suggest standardization methodologies, and procedural guidelines, and assistive technology solutions using BCI methods targeting SLI cognitive profiles |

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| **Table 3** | | | |
| **PUBLICATION VENUES AND DISTRIBUTION OF SELECTED STUDIES** | | | |
| **Publication Venue** | **Type** | **# of Studies/Papers** | **Percent** |
| Taylor and Francis | Database | 6 | 0.12 |
| Wiley Online Library | Database | 2 | 0.04 |
| Springer Link | Database | 4 | 0.08 |
| ScienceDirect | Database | 18 | 0.36 |
| PLOS One | Journal | 5 | 0.1 |
| SAGE Pub | Database | 3 | 0.06 |
| ISNR Online | Journal | 2 | 0.04 |
| IOP Science | Journal | 1 | 0.02 |
| IOS Press | Journal | 1 | 0.02 |
| NCBI | Journal | 2 | 0.04 |
| Frontiers in Human Neuroscience | Journal | 1 | 0.02 |
| IEEE Symposium | Journal | 1 | 0.02 |
| Google Scholar | Database | 4 | 0.08 |
| Total | 13 | 50 | 100 |

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| **Table 4** | |
| **COMPARATIVE ANALYSIS DISTRIBUTION AMONGST THE SELECTED PAPERS** | |
| **Paper ID** | **Comparative Analysis** |
| PO1 | 1 |
| PO2 | 1 |
| PO3 | 1 |
| PO4 | 1 |
| PO5 | 1 |
| PO6 | 1 |
| PO7 | 0 |
| PO8 | 1 |
| PO9 | 0 |
| PO10 | 1 |
| PO11 | 0 |
| PO12 | 0 |
| PO13 | 1 |
| PO14 | 1 |
| PO15 | 1 |
| PO16 | 0 |
| PO17 | 0 |
| PO18 | 0 |
| PO19 | 0 |
| PO20 | 1 |
| PO21 | 1 |
| PO22 | 1 |
| PO23 | 0 |
| PO24 | 0 |
| PO25 | 0 |
| PO26 | 0 |
| PO27 | 0 |
| PO28 | 1 |
| PO29 | 0 |
| PO30 | 1 |
| PO31 | 0 |
| PO32 | 1 |
| PO33 | 1 |
| PO34 | 1 |
| PO35 | 1 |
| PO36 | 1 |
| PO37 | 1 |
| PO38 | 1 |
| PO39 | 0 |
| PO40 | 1 |
| PO41 | 1 |
| PO42 | 1 |
| PO43 | 1 |
| PO44 | 1 |
| PO45 | 1 |
| PO46 | 1 |
| PO47 | 0 |
| PO48 | 0 |
| PO49 | 0 |
| PO50 | 1 |

Note: 1 suggests “yes,” while 0 suggests “No.”

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| **Table 5** | |
| **STANDARDIZED BCI METHOD ADOPTION DISTRIBUTION AMONGST SELECTED PAPERS** | |
| **Paper ID** | **Standardized BCI Method Adoption** |
| PO1 | 1 |
| PO2 | 0 |
| PO3 | 0 |
| PO4 | 0 |
| PO5 | 0 |
| PO6 | 0 |
| PO7 | 0 |
| PO8 | 1 |
| PO9 | 0 |
| PO10 | 0 |
| PO11 | 0 |
| PO12 | 0 |
| PO13 | 0 |
| PO14 | 0 |
| PO15 | 0 |
| PO16 | 0 |
| PO17 | 0 |
| PO18 | 0 |
| PO19 | 0 |
| PO20 | 0 |
| PO21 | 0 |
| PO22 | 0 |
| PO23 | 0 |
| PO24 | 0 |
| PO25 | 0 |
| PO26 | 0 |
| PO27 | 0 |
| PO28 | 0 |
| PO29 | 0 |
| PO30 | 0 |
| PO31 | 0 |
| PO32 | 0 |
| PO33 | 0 |
| PO34 | 0 |
| PO35 | 0 |
| PO36 | 0 |
| PO37 | 1 |
| PO38 | 0 |
| PO39 | 0 |
| PO40 | 1 |
| PO41 | 0 |
| PO42 | 1 |
| PO43 | 1 |
| PO44 | 1 |
| PO45 | 0 |
| PO46 | 0 |
| PO47 | 0 |
| PO48 | 0 |
| PO49 | 0 |
| PO50 | 0 |

Note: 1 suggests “yes,” while 0 suggests “No.”

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| **Table 6** | | | |
| **FUNCTION, ELECTRODES, AND BRAIN REGIONS** | | | |
| **Function** | **Process** | **Electrodes** | **Network/Brain Region** |
| Language | Speech recognition | FT7, FT8 | Superior temporal gyrus |
| Auditory comprehension | T7, T8, TP7, TP8, P5, P6 | Middle temporal gyrus |
| Semantic processing | FT7, FT8, T7, T8, TP7, TP8, P5 | Anterior temporal lobe |
| Auditory Processing | Sound perception | FT7, FT8 | Superior temporal gyrus |
| Attention | Directing attention | C6, CP1, CP2, CPz, CP5, CP6, CP3, CP4 | Posterior parietal cortex |
| Attention control | AF3, AF4, F1, F2, FC1, FC2, FCz, Fp1, Fp2, Fz, Fpz, F3, F4, F5, F6, FC3, FC4, AF7, AF8, F7, F8 | Prefrontal cortex |
| Memory | Working memory and task switching | AF3, AF4, F1, F2, FC1, FC2, FCz, Fp1, Fp2, F3, F4, F5, F6, FC3, FC4, AF7, AF8 | Superior frontal cortex |

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| **Table 7**  **SELECTED STUDIES** | | | | |
| **ID** | **Author(s)** | **Research Questions Addressed** | | |
| PO1 | Ros, et al., 2013 | 1 | 2 | 3 |
| PO2 | Xiong, et al., 2014 | 1 | 2 | 3 |
| PO3 | Enriquez-Geppert, et al., 2014 |  |  | 3 |
| PO4 | H. Marzbani, 2016 | 1 | 2 |  |
| PO5 | Enriquez-Geppert, et al., 2017 |  | 2 | 3 |
| PO6 | Guan, et al., 2015 | 1 | 2 | 3 |
| PO7 | Kinreich, 2014 | 1 |  |  |
| PO8 | Choi, 2013 | 1 | 2 | 3 |
| PO9 | Ochs, 2006 |  | 2 |  |
| PO10 | Rubí, 2007 |  | 2 |  |
| PO11 | Hallman, 2012 |  |  | 3 |
| PO12 | Im, 2007 | 1 |  |  |
| PO13 | Meir-Hasson, et al., 2016 | 1 | 2 | 3 |
| PO14 | Todder, et al., 2010 |  | 2 | 3 |
| PO15 | Ninaus, et al., 2015 |  | 2 |  |
| PO16 | Thompson, et al., 2010 |  |  | 3 |
| PO17 | Sudirman, et al., 2010 | 1 | 2 | 3 |
| PO18 | Surmeli & Ertem, 2010 | 1 |  | 3 |
| PO19 | Zaehle, et al., 2010 |  | 2 | 3 |
| PO20 | Breteler, 2010 | 1 | 2 | 3 |
| PO21 | Kober, et al., 2015 |  | 2 | 3 |
| PO22 | Fahrion, et al., 1992 | 1 | 2 |  |
| PO23 | Sulzer et al., 2013 | 1 |  |  |
| PO24 | Legarda, et al., 2011 | 1 | 2 | 3 |
| PO25 | Hammond, 2011 |  | 2 |  |
| PO26 | Thompson, et al., 1998 | 1 | 2 | 3 |
| PO27 | Keizer, et al., 2003 | 1 |  |  |
| PO28 | Sürmeli & Ertem, 2007 | 1 | 2 | 3 |
| PO29 | Gruzelier, 2014 | 1 |  | 3 |
| PO30 | Kinreich, et al., 2012 | 1 | 2 |  |
| PO31 | Pineda et al., 2008 |  |  | 3 |
| PO32 | Myers & Young, 2012 |  | 2 | 3 |
| PO33 | Mayer, et al., 2013 |  | 2 |  |
| PO34 | Angelakis, et al., 2007 | 1 | 2 | 3 |
| PO35 | Jarusiewicz, 2002 |  | 2 |  |
| PO36 | Koush et al., 2013 | 1 | 2 | 3 |
| PO37 | Kober, et al., 2015 | 1 |  |  |
| PO38 | Humpston et al., 2020 | 1 | 2 | 3 |
| PO39 | Zhu, et al., 2002 | 1 |  |  |
| PO40 | Jirayucharoensak, et al., 2019 | 1 | 2 | 3 |
| PO41 | Fielenbach, et al., 2019 | 1 | 2 | 3 |
| PO42 | Varsehi & Firoozabadi, 2020 | 1 | 2 | 3 |
| PO43 | Jeunet, et al., 2019 | 1 |  | 3 |
| PO44 | Bauer et al., 2020 | 1 | 2 | 3 |
| PO45 | Zotev, et al., 2014 | 1 | 2 | 3 |
| PO46 | Zweerings et al., 2019 | 1 | 2 | 3 |
| PO47 | Engelbregt et al., 2016 | 1 | 2 | 3 |
| PO48 | Misaki et al., 2019 | 1 | 2 | 3 |
| PO49 | Zotev, et al., 2020 | 1 | 2 | 3 |
| PO50 | Eroğlu et al., 2020 | 1 | 2 | 3 |