

# All univariate results

| Outcome variable                          | Predictor         | DF | p                                        |
|-------------------------------------------|-------------------|----|------------------------------------------|
| LANGUAGE_post                             | LANGUAGE_pre      | 1  | <.0001 ***                               |
|                                           | Intervention      | 2  | 0.318                                    |
|                                           | Sex               | 1  | 0.611                                    |
|                                           | SES               | 1  | 0.367                                    |
|                                           | SECDIwords        | 1  | 0.562                                    |
|                                           | ECERS             | 1  | 0.159                                    |
|                                           | SDQ               | 1  | 0.478                                    |
|                                           | Age               | 1  | 0.014 **                                 |
|                                           | Start             | 1  | 0.541                                    |
|                                           | BestLanguage      | 1  | 0.635                                    |
|                                           | L2                | 1  | 0.354                                    |
|                                           | FLP               | 1  | 0.687                                    |
|                                           | Fidelity          | 1  | 0.269                                    |
| (Model DF= 14, error DF= 290, R2= 0.319 ) |                   |    |                                          |
| COMMUNICATION_post                        | COMMUNICATION_pre | 1  | <.0001 ***                               |
|                                           | Intervention      | 2  | 0.131                                    |
|                                           | Sex               | 1  | 0.4953 (boys compared to baseline girls) |
|                                           | SES               | 1  | 0.1216                                   |
|                                           | SECDIwords        | 1  | 0.1139                                   |
|                                           | ECERS             | 1  | 0.524                                    |
|                                           | SDQ               | 1  | 0.6088                                   |
|                                           | Age               | 1  | 0.0854                                   |
|                                           | Start             | 1  | 0.727                                    |
|                                           | BestLanguage      | 1  | 0.3817                                   |
|                                           | L2                | 1  | 0.9388                                   |
|                                           | FLP               | 1  | 0.0198 **                                |
|                                           | Fidelity          | 1  | 0.0695                                   |
| (Model DF= 14, error DF= 302, R2= 0.371)  |                   |    |                                          |
| EF_post                                   | EF_pre            | 1  | <.0001 ***                               |
|                                           | Intervention      | 2  | 0.179                                    |
|                                           | Sex               | 1  | 0.762                                    |
|                                           | SES               | 1  | 0.024 *                                  |
|                                           | SECDIwords        | 1  | 0.886                                    |
|                                           | ECERS             | 1  | 0.756                                    |
|                                           | SDQ               | 1  | 0.515                                    |
|                                           | Age               | 1  | 0.001 ***                                |
|                                           | Start             | 1  | 0.886                                    |
|                                           | L2                | 1  | 0.878                                    |
|                                           | BestLanguage      | 1  | 0.737                                    |
|                                           | FLP               | 1  | 0.152                                    |
|                                           | Fidelity          | 1  | 0.745                                    |
| (Model DF= 14, error DF= 259, R2= 0.636)  |                   |    |                                          |
| TEC_post                                  | TEC_pre           | 1  | <.0001 ***                               |
|                                           | Intervention      | 2  | 0.073                                    |
|                                           | Sex               | 1  | 0.184                                    |
|                                           | SES               | 1  | 0.511                                    |
|                                           | SECDIwords        | 1  | 0.692                                    |
|                                           | ECERS             | 1  | 0.272                                    |
|                                           | SDQ               | 1  | 0.242                                    |
|                                           | Age               | 1  | 0.034 *                                  |
|                                           | Start             | 1  | 0.522                                    |
|                                           | BestLanguage      | 1  | 0.257                                    |
|                                           | L2                | 1  | 0.062                                    |
|                                           | FLP               | 1  | 0.719                                    |
|                                           | Fidelity          | 1  | 0.014 **                                 |
| (Model DF= 14, error DF= 326, R2= 0.368)  |                   |    |                                          |
| MATH_post                                 | MATH_pre          | 1  | <.0001                                   |
|                                           | Intervention      | 2  | 0.892                                    |
|                                           | Sex               | 1  | 0.211                                    |
|                                           | SES               | 1  | 0.028 *                                  |
|                                           | ECERS             | 1  | 0.294                                    |
|                                           | SDQ               | 1  | 0.474                                    |
|                                           | Age               | 1  | 0.001 ***                                |
|                                           | Start             | 1  | 0.129                                    |
|                                           | SECDIwords        | 1  | 0.236                                    |
|                                           | BestLanguage      | 1  | 0.216                                    |
|                                           | L2                | 1  | 0.233                                    |
|                                           | FLP               | 1  | 0.605                                    |
|                                           | fidelity2         | 1  | 0.621                                    |
| (Model DF= 14, error DF= 326, R2= 0.565)  |                   |    |                                          |

## All Multivariate results

### Multivariate Analysis of Variance

MANOVA Test Criteria and F for the Hypothesis of

| Predictor                          | Wilks' Lambda | F Value | Num DF | Den DF | p     |
|------------------------------------|---------------|---------|--------|--------|-------|
| No Overall ECERS*Intervention      | 0.947         | 1.25    | 10     | 450    | 0.258 |
| No Overall SES*Intervention Effect | 0.935         | 1.54    | 10     | 450    | 0.124 |

Interaction effects are nonsignificant, thus fit the multivariate model without these interaction effects below=

|                                                |                   |       |       |    |     |        |
|------------------------------------------------|-------------------|-------|-------|----|-----|--------|
| No Overall lang_pre Effect                     | LANGUAGE_pre      | 0.853 | 7.89  | 5  | 229 | <.0001 |
| No Overall comm_pre Effect                     | COMMUNICATION_pre | 0.689 | 20.63 | 5  | 229 | <.0001 |
| No OverallEF_pre Effect                        | EF_pre            | 0.671 | 22.49 | 5  | 229 | <.0001 |
| No OverallTEC_pre Effect                       | TEC_pre           | 0.774 | 13.36 | 5  | 229 | <.0001 |
| No Overall math_pre Effect                     | MATH_pre          | 0.787 | 12.38 | 5  | 229 | <.0001 |
| No Overall Intervention Effect                 | Intervention      | 0.942 | 1.38  | 10 | 458 | 0.186  |
| No Overall Sex Effect                          | Sex               | 0.991 | 0.44  | 5  | 229 | 0.824  |
| No Overall fidelity Effect                     | Fidelity          | 0.974 | 1.2   | 5  | 229 | 0.308  |
| No Overall ECERS Effect                        | ECERS             | 0.976 | 1.11  | 5  | 229 | 0.359  |
| No Overall SES Effect                          | SES               | 0.963 | 1.75  | 5  | 229 | 0.123  |
| No Overall FLP (FamilyLanguageProblems) Effect | FLP               | 0.974 | 1.23  | 5  | 229 | 0.294  |
| No Overall L2 Effect                           | L2                | 0.970 | 1.4   | 5  | 229 | 0.226  |
| No Overall SDQ Effect                          | SDQ               | 0.990 | 0.45  | 5  | 229 | 0.811  |
| No Overall SECDIwords Effect                   | SECDIwords        | 0.995 | 0.23  | 5  | 229 | 0.949  |
| No Overall Start Effect                        | Start             | 0.958 | 2.03  | 5  | 229 | 0.075  |
| No Overall age Effect                          | Age               | 0.962 | 1.83  | 5  | 229 | 0.108  |
| Number of Observations Read                    |                   |       |       |    | 432 |        |
| Number of Observations Used                    |                   |       |       |    | 251 |        |

### Estimated effects for the multivariate model

| Outcome variables  | Parameter         | Estimate | SE    | t     | p          |
|--------------------|-------------------|----------|-------|-------|------------|
| language_post      | EF_pre            | 0.683    | 0.326 | 2.1   | 0.0372 *   |
|                    | math_pre          | -0.010   | 0.052 | -0.19 | 0.8519     |
|                    | language_pre      | 0.397    | 0.066 | 6.05  | <.0001 *** |
|                    | communication_pre | 3.635    | 2.388 | 1.52  | 0.1293     |
|                    | TEC_pre           | 0.060    | 0.140 | 0.43  | 0.6664     |
| communication_post | EF_pre            | 0.001    | 0.008 | 0.08  | 0.9348     |
|                    | math_pre          | -0.002   | 0.001 | -1.5  | 0.135      |
|                    | language_pre      | 0.004    | 0.002 | 2.56  | 0.011 *    |
|                    | communication_pre | 0.592    | 0.059 | 10.04 | <.0001 *** |
|                    | TEC_pre           | 0.009    | 0.003 | 2.54  | 0.0116 *   |
| EF_post            | EF_pre            | 0.532    | 0.056 | 9.54  | <.0001 *** |
|                    | math_pre          | 0.027    | 0.009 | 2.99  | 0.0031 **  |
|                    | language_pre      | 0.015    | 0.011 | 1.31  | 0.1931     |
|                    | communication_pre | -0.877   | 0.409 | -2.15 | 0.033 *    |
|                    | TEC_pre           | -0.002   | 0.024 | -0.07 | 0.9409     |
| TEC_post           | EF_pre            | 0.389    | 0.130 | 3     | 0.003 **   |
|                    | math_pre          | 0.001    | 0.021 | 0.03  | 0.9758     |
|                    | language_pre      | -0.004   | 0.026 | -0.17 | 0.8677     |
|                    | communication_pre | 0.677    | 0.950 | 0.71  | 0.4768     |
|                    | TEC_pre           | 0.440    | 0.056 | 7.89  | <.0001 *** |
| math_post          | EF_pre            | 1.586    | 0.386 | 4.1   | <.0001 *** |
|                    | math_pre          | 0.464    | 0.061 | 7.54  | <.0001 *** |
|                    | language_pre      | 0.002    | 0.078 | 0.03  | 0.9747     |
|                    | communication_pre | 3.027    | 2.830 | 1.07  | 0.2859     |
|                    | TEC_pre           | 0.004    | 0.166 | 0.02  | 0.9815     |