

# Supplement 2 to ‘The Skilled, the Knowledgeable, and the Motivated: Investigating the strategic allocation of time on task in a computer-based assessment’

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## **Country-specific estimates of the LMMs**

This supplement presents country-specific estimates of the fixed and random effects of the LMMs. Variable names are to be read as follows:

### **Dependent variables:**

z\_tottime: Total time on task, logarithmised and standardized

z\_relttime: Average time on relevant pages, logarithmised and standardized

### **Variables with estimated fixed effects**

#### **Predictors:**

z\_wler: Comprehension skill (WLEs), standardized

z\_joy: Enjoyment of reading, standardized

z\_meta: Knowledge of reading strategies, standardized

logits: Task difficulty, standardized

#### **Control variables:**

gender: Gender, Boys = 1, Girls = 0

z\_escs: Socio-economic status (ESCS), standardized

### **Variables with estimated random intercepts**

user: Identification variable for students

task: Identification variable for tasks (items)

schoolID: Identification variable for schools

Correlations between fixed effects are not displayed for reasons of space, they are available from the author at [j.naumann@uni-wuppertal.de](mailto:j.naumann@uni-wuppertal.de) upon request.

## Dependent variable total time on task

### AUSTRALIA

```
summary(time.dep.r[[1]])  
  
## Linear mixed model fit by REML ['lmerMod']  
## Formula: z_tottime ~ logits * z_wler * z_joy * z_meta + logits * z_escs +  
##           logits * gender + (1 | user) + (1 | task) + (1 | schoolID)  
## Data: totdata  
##  
## REML criterion at convergence: 107971.8  
##  
## Scaled residuals:  
##      Min     1Q Median     3Q    Max  
## -7.1168 -0.4711  0.0400  0.5527  7.8092  
##  
## Random effects:  
## Groups   Name        Variance Std.Dev.  
## user     (Intercept) 0.11544  0.3398  
## schoolID (Intercept) 0.03264  0.1807  
## task     (Intercept) 0.21667  0.4655  
## Residual       0.39238  0.6264  
## Number of obs: 53607, groups: user, 2800; schoolID, 334; task, 29  
##  
## Fixed effects:  
##                               Estimate Std. Error t value  
## (Intercept)                0.069148  0.087741  0.788  
## logits                   0.449945  0.082842  5.431  
## z_wler                    0.084800  0.009621  8.814  
## z_joy                     0.013713  0.009254  1.482  
## z_meta                    0.022817  0.008910  2.561  
## z_escs                   -0.009241  0.008335 -1.109  
## gender                    -0.049299  0.016000 -3.081  
## logits:z_wler              0.094078  0.003387 27.780  
## logits:z_joy               0.030132  0.003331  9.045  
## z_wler:z_joy               -0.041197  0.008605 -4.788  
## logits:z_meta              0.024260  0.003175  7.640  
## z_wler:z_meta              -0.038372  0.008735 -4.393  
## z_joy:z_meta               0.003502  0.008933  0.392  
## logits:z_escs              0.006762  0.002856  2.367  
## logits:gender              -0.036527  0.005499 -6.643  
## logits:z_wler:z_joy         -0.007493  0.003089 -2.426  
## logits:z_wler:z_meta        -0.003014  0.003141 -0.959  
## logits:z_joy:z_meta         -0.002438  0.003230 -0.755  
## z_wler:z_joy:z_meta         0.006833  0.007463  0.916  
## logits:z_wler:z_joy:z_meta -0.010717  0.002663 -4.024  
##  
## Correlation matrix not shown by default, as p = 20 > 12.  
## Use print(x, correlation=TRUE)  or  
## vcov(x)      if you need it
```

## AUSTRIA

```
summary(time.dep.r[[2]])  
  
## Linear mixed model fit by REML ['lmerMod']  
## Formula: z_tottime ~ logits * z_wler * z_joy * z_meta + logits * z_escs +  
##           logits * gender + (1 | user) + (1 | task) + (1 | schoolID)  
## Data: totdata  
##  
## REML criterion at convergence: 104658.1  
##  
## Scaled residuals:  
##     Min      1Q  Median      3Q     Max  
## -5.7594 -0.4517  0.0556  0.5566  5.8852  
##  
## Random effects:  
##   Groups    Name        Variance Std.Dev.  
##   user      (Intercept) 0.09073  0.3012  
##   schoolID (Intercept) 0.13924  0.3732  
##   task      (Intercept) 0.13958  0.3736  
##   Residual          0.48397  0.6957  
## Number of obs: 47326, groups: user, 2483; schoolID, 253; task, 29  
##  
## Fixed effects:  
##                                         Estimate Std. Error t value  
## (Intercept)                         0.0364699  0.0743570  0.490  
## logits                                0.2754965  0.0665924  4.137  
## z_wler                                 0.1088045  0.0105535 10.310  
## z_joy                                  0.0382556  0.0092490  4.136  
## z_meta                                 0.0420400  0.0090564  4.642  
## z_escs                               -0.0003600  0.0082439 -0.044  
## gender                                0.0099502  0.0172756  0.576  
## logits:z_wler                          0.0908708  0.0040041 22.694  
## logits:z_joy                           0.0256267  0.0038640  6.632  
## z_wler:z_joy                          -0.0277759  0.0082395 -3.371  
## logits:z_meta                          0.0317356  0.0037575  8.446  
## z_wler:z_meta                         -0.0341360  0.0084981 -4.017  
## z_joy:z_meta                           0.0100988  0.0085926  1.175  
## logits:z_escs                          0.0106516  0.0033096  3.218  
## logits:gender                          -0.0009279  0.0067032 -0.138  
## logits:z_wler:z_joy                   -0.0037725  0.0035023 -1.077  
## logits:z_wler:z_meta                  0.0068128  0.0035509  1.919  
## logits:z_joy:z_meta                   -0.0000327  0.0036708 -0.009  
## z_wler:z_joy:z_meta                  0.0027625  0.0074770  0.369  
## logits:z_wler:z_joy:z_meta           -0.0143719  0.0031987 -4.493  
##  
## Correlation matrix not shown by default, as p = 20 > 12.  
## Use print(x, correlation=TRUE)  or  
##   vcov(x)      if you need it
```

## BELGUIM

```
summary(time.dep.r[[3]])  
  
## Linear mixed model fit by REML ['lmerMod']  
## Formula: z_tottime ~ logits * z_wler * z_joy * z_meta + logits * z_escs +  
##           logits * gender + (1 | user) + (1 | task) + (1 | schoolID)  
## Data: totdata  
##  
## REML criterion at convergence: 104492.5  
##  
## Scaled residuals:  
##     Min      1Q  Median      3Q     Max  
## -7.5944 -0.4736  0.0332  0.5506  6.5863  
##  
## Random effects:  
##   Groups    Name        Variance Std.Dev.  
##   user      (Intercept) 0.07895  0.2810  
##   schoolID (Intercept) 0.03795  0.1948  
##   task      (Intercept) 0.21167  0.4601  
##   Residual          0.41154  0.6415  
## Number of obs: 51096, groups: user, 2681; schoolID, 248; task, 29  
##  
## Fixed effects:  
##                               Estimate Std. Error t value  
## (Intercept)                0.0564304  0.0869718  0.649  
## logits                     0.4492741  0.0819010  5.486  
## z_wler                     0.0800592  0.0093006  8.608  
## z_joy                      0.0258789  0.0082923  3.121  
## z_meta                     0.0065936  0.0085270  0.773  
## z_escs                     0.0295950  0.0073618  4.020  
## gender                     -0.0250020  0.0140688 -1.777  
## logits:z_wler               0.0948430  0.0037615 25.214  
## logits:z_joy                 0.0159530  0.0035153  4.538  
## z_wler:z_joy                -0.0612278  0.0084200 -7.272  
## logits:z_meta                0.0248136  0.0035550  6.980  
## z_wler:z_meta                -0.0213850  0.0076370 -2.800  
## z_joy:z_meta                  0.0017960  0.0084802  0.212  
## logits:z_escs                 0.0210328  0.0030023  7.006  
## logits:gender                 -0.0101736  0.0057979 -1.755  
## logits:z_wler:z_joy            -0.0063324  0.0035775 -1.770  
## logits:z_wler:z_meta            -0.0109119  0.0031874 -3.423  
## logits:z_joy:z_meta              0.0004217  0.0036355  0.116  
## z_wler:z_joy:z_meta              0.0056863  0.0074865  0.760  
## logits:z_wler:z_joy:z_meta       -0.0040159  0.0032065 -1.252  
##  
## Correlation matrix not shown by default, as p = 20 > 12.  
## Use print(x, correlation=TRUE)  or  
##   vcov(x)      if you need it
```

## CHILE

```
summary(time.dep.r[[4]])  
  
## Linear mixed model fit by REML ['lmerMod']  
## Formula: z_tottime ~ logits * z_wler * z_joy * z_meta + logits * z_escs +  
##           logits * gender + (1 | user) + (1 | task) + (1 | schoolID)  
## Data: totdata  
##  
## REML criterion at convergence: 67692.7  
##  
## Scaled residuals:  
##     Min      1Q  Median      3Q     Max  
## -6.2321 -0.4675  0.0601  0.5796  4.6570  
##  
## Random effects:  
##   Groups    Name        Variance Std.Dev.  
##   user      (Intercept) 0.11925  0.3453  
##   schoolID (Intercept) 0.07199  0.2683  
##   task      (Intercept) 0.14353  0.3788  
##   Residual          0.54503  0.7383  
## Number of obs: 28924, groups: user, 1638; schoolID, 198; task, 29  
##  
## Fixed effects:  
##                                         Estimate Std. Error t value  
## (Intercept)                         0.055837  0.074834  0.746  
## logits                                0.332437  0.067657  4.914  
## z_wler                               0.075564  0.013134  5.753  
## z_joy                                 0.034129  0.012059  2.830  
## z_meta                                0.038321  0.011859  3.231  
## z_escs                               -0.036866  0.013557 -2.719  
## gender                                -0.021977  0.022694 -0.968  
## logits:z_wler                          0.070230  0.005193 13.524  
## logits:z_joy                           0.009335  0.005045  1.850  
## z_wler:z_joy                          -0.015131  0.011230 -1.347  
## logits:z_meta                          0.032812  0.004898  6.699  
## z_wler:z_meta                         -0.039605  0.011128 -3.559  
## z_joy:z_meta                           -0.011180  0.011784 -0.949  
## logits:z_escs                          0.016536  0.004782  3.458  
## logits:gender                          0.005497  0.008977  0.612  
## logits:z_wler:z_joy                  -0.005066  0.004647 -1.090  
## logits:z_wler:z_meta                 0.007100  0.004513  1.573  
## logits:z_joy:z_meta                  0.014191  0.004892  2.901  
## z_wler:z_joy:z_meta                 -0.006263  0.011008 -0.569  
## logits:z_wler:z_joy:z_meta          -0.008803  0.004678 -1.882  
##  
## Correlation matrix not shown by default, as p = 20 > 12.  
## Use print(x, correlation=TRUE)  or  
##   vcov(x)      if you need it
```

## COLOMBIA

```
summary(time.dep.r[[5]])  
  
## Linear mixed model fit by REML ['lmerMod']  
## Formula: z_tottime ~ logits * z_wler * z_joy * z_meta + logits * z_escs +  
##           logits * gender + (1 | user) + (1 | task) + (1 | schoolID)  
## Data: totdata  
##  
## REML criterion at convergence: 56176.8  
##  
## Scaled residuals:  
##     Min      1Q  Median      3Q     Max  
## -5.2177 -0.5229  0.0703  0.6195  4.8749  
##  
## Random effects:  
##   Groups    Name        Variance Std.Dev.  
##   user      (Intercept) 0.12062  0.3473  
##   schoolID (Intercept) 0.06134  0.2477  
##   task      (Intercept) 0.12305  0.3508  
##   Residual          0.60404  0.7772  
## Number of obs: 23017, groups: user, 1345; schoolID, 136; task, 29  
##  
## Fixed effects:  
##                                         Estimate Std. Error t value  
## (Intercept)                         8.130e-02 7.064e-02 1.151  
## logits                                2.772e-01 6.282e-02 4.412  
## z_wler                                 6.286e-02 1.502e-02 4.184  
## z_joy                                  3.103e-02 1.375e-02 2.256  
## z_meta                                 3.235e-02 1.301e-02 2.486  
## z_escs                                -4.179e-02 1.416e-02 -2.952  
## gender                                 -8.290e-02 2.336e-02 -3.549  
## logits:z_wler                          5.252e-02 6.255e-03 8.398  
## logits:z_joy                           -3.244e-05 5.963e-03 -0.005  
## z_wler:z_joy                          -4.001e-04 1.335e-02 -0.030  
## logits:z_meta                          1.342e-02 5.808e-03 2.310  
## z_wler:z_meta                          2.479e-03 1.222e-02 0.203  
## z_joy:z_meta                           -6.868e-03 1.272e-02 -0.540  
## logits:z_escs                          2.350e-02 5.538e-03 4.243  
## logits:gender                          -1.797e-02 1.032e-02 -1.741  
## logits:z_wler:z_joy                   -3.621e-03 5.813e-03 -0.623  
## logits:z_wler:z_meta                  1.702e-02 5.442e-03 3.128  
## logits:z_joy:z_meta                   3.033e-04 5.643e-03 0.054  
## z_wler:z_joy:z_meta                  -1.579e-02 1.166e-02 -1.355  
## logits:z_wler:z_joy:z_meta           -4.345e-04 5.240e-03 -0.083  
##  
## Correlation matrix not shown by default, as p = 20 > 12.  
## Use print(x, correlation=TRUE)  or  
## vcov(x)      if you need it
```

## DENMARK

```
summary(time.dep.r[[6]])  
  
## Linear mixed model fit by REML ['lmerMod']  
## Formula: z_tottime ~ logits * z_wler * z_joy * z_meta + logits * z_escs +  
##           logits * gender + (1 | user) + (1 | task) + (1 | schoolID)  
## Data: totdata  
##  
## REML criterion at convergence: 50300.6  
##  
## Scaled residuals:  
##     Min      1Q  Median      3Q     Max  
## -6.6088 -0.4660  0.0465  0.5547  6.4438  
##  
## Random effects:  
##   Groups    Name        Variance Std.Dev.  
##   user      (Intercept) 0.1111   0.3333  
##   schoolID (Intercept) 0.0732   0.2705  
##   task      (Intercept) 0.1892   0.4350  
##   Residual          0.4643   0.6814  
## Number of obs: 23011, groups: user, 1204; schoolID, 220; task, 29  
##  
## Fixed effects:  
##                               Estimate Std. Error t value  
## (Intercept)                0.0487991  0.0845997  0.577  
## logits                   0.3463516  0.0776223  4.462  
## z_wler                    0.1046258  0.0148023  7.068  
## z_joy                     0.0355568  0.0139356  2.552  
## z_meta                    0.0396245  0.0140098  2.828  
## z_escs                   -0.0226094  0.0129553 -1.745  
## gender                    -0.0456740  0.0238297 -1.917  
## logits:z_wler              0.0970868  0.0054685 17.754  
## logits:z_joy               0.0287113  0.0051897  5.532  
## z_wler:z_joy              -0.0495660  0.0134286 -3.691  
## logits:z_meta              0.0170310  0.0052095  3.269  
## z_wler:z_meta              -0.0096722  0.0129181 -0.749  
## z_joy:z_meta               -0.0018404  0.0135298 -0.136  
## logits:z_escs              0.0110382  0.0047677  2.315  
## logits:gender              -0.0107908  0.0093239 -1.157  
## logits:z_wler:z_joy         -0.0042996  0.0050735 -0.847  
## logits:z_wler:z_meta       0.0111533  0.0049033  2.275  
## logits:z_joy:z_meta        0.0017718  0.0051134  0.346  
## z_wler:z_joy:z_meta        0.0004221  0.0117531  0.036  
## logits:z_wler:z_joy:z_meta -0.0114926  0.0044312 -2.594  
##  
## Correlation matrix not shown by default, as p = 20 > 12.  
## Use print(x, correlation=TRUE) or  
## vcov(x) if you need it
```

## SPAIN

```
summary(time.dep.r[[7]])  
  
## Linear mixed model fit by REML ['lmerMod']  
## Formula: z_tottime ~ logits * z_wler * z_joy * z_meta + logits * z_escs +  
##           logits * gender + (1 | user) + (1 | task) + (1 | schoolID)  
## Data: totdata  
##  
## REML criterion at convergence: 68861.5  
##  
## Scaled residuals:  
##     Min      1Q  Median      3Q     Max  
## -6.4175 -0.4752  0.0476  0.5577  5.2214  
##  
## Random effects:  
##   Groups    Name        Variance Std.Dev.  
##   user      (Intercept) 0.09178  0.3029  
##   schoolID (Intercept) 0.07871  0.2806  
##   task      (Intercept) 0.17462  0.4179  
##   Residual          0.47782  0.6912  
## Number of obs: 31294, groups: user, 1649; schoolID, 164; task, 29  
##  
## Fixed effects:  
##                               Estimate Std. Error t value  
## (Intercept)                0.0387489  0.0818019  0.474  
## logits                     0.3690479  0.0745134  4.953  
## z_wler                     0.0906213  0.0113144  8.009  
## z_joy                      0.0170440  0.0107282  1.589  
## z_meta                     0.0508662  0.0108648  4.682  
## z_escs                     0.0120850  0.0105844  1.142  
## gender                     -0.0166491  0.0187446 -0.888  
## logits:z_wler               0.0882782  0.0046978 18.792  
## logits:z_joy                 0.0192469  0.0045446  4.235  
## z_wler:z_joy                -0.0287576  0.0102929 -2.794  
## logits:z_meta                0.0140745  0.0045495  3.094  
## z_wler:z_meta                -0.0321625  0.0099080 -3.246  
## z_joy:z_meta                  0.0029021  0.0100616  0.288  
## logits:z_escs                 0.0154339  0.0040516  3.809  
## logits:gender                 -0.0148782  0.0079994 -1.860  
## logits:z_wler:z_joy            -0.0099187  0.0043663 -2.272  
## logits:z_wler:z_meta            0.0004029  0.0042423  0.095  
## logits:z_joy:z_meta             -0.0007936  0.0042472 -0.187  
## z_wler:z_joy:z_meta              -0.0128782  0.0100828 -1.277  
## logits:z_wler:z_joy:z_meta       0.0030086  0.0042618  0.706  
##  
## Correlation matrix not shown by default, as p = 20 > 12.  
## Use print(x, correlation=TRUE)  or  
## vcov(x)      if you need it
```

## FRANCE

```
summary(time.dep.r[[8]])  
  
## Linear mixed model fit by REML ['lmerMod']  
## Formula: z_tottime ~ logits * z_wler * z_joy * z_meta + logits * z_escs +  
##           logits * gender + (1 | user) + (1 | task) + (1 | schoolID)  
## Data: totdata  
##  
## REML criterion at convergence: 48389.2  
##  
## Scaled residuals:  
##     Min      1Q  Median      3Q     Max  
## -7.7149 -0.4592  0.0422  0.5557  5.5028  
##  
## Random effects:  
##   Groups    Name        Variance Std.Dev.  
##   user      (Intercept) 0.06658  0.2580  
##   schoolID (Intercept) 0.05974  0.2444  
##   task      (Intercept) 0.21718  0.4660  
##   Residual          0.42925  0.6552  
## Number of obs: 23164, groups: user, 1229; schoolID, 139; task, 29  
##  
## Fixed effects:  
##                               Estimate Std. Error t value  
## (Intercept)                0.0375404  0.0900397  0.417  
## logits                   0.4295563  0.0830889  5.170  
## z_wler                    0.0503412  0.0130358  3.862  
## z_joy                     0.0180231  0.0108290  1.664  
## z_meta                    0.0122412  0.0109665  1.116  
## z_escs                    0.0016088  0.0105863  0.152  
## gender                    -0.0146841  0.0187129 -0.785  
## logits:z_wler              0.0929740  0.0054226 17.146  
## logits:z_joy               0.0109134  0.0049511  2.204  
## z_wler:z_joy               -0.0521404  0.0107836 -4.835  
## logits:z_meta              0.0318781  0.0050020  6.373  
## z_wler:z_meta              -0.0257437  0.0104967 -2.453  
## z_joy:z_meta               -0.0002877  0.0110830 -0.026  
## logits:z_escs              0.0183177  0.0045531  4.023  
## logits:gender              -0.0169586  0.0086953 -1.950  
## logits:z_wler:z_joy         -0.0001967  0.0048781 -0.040  
## logits:z_wler:z_meta       -0.0139672  0.0048096 -2.904  
## logits:z_joy:z_meta        0.0091757  0.0051002  1.799  
## z_wler:z_joy:z_meta        -0.0105169  0.0094164 -1.117  
## logits:z_wler:z_joy:z_meta -0.0097894  0.0044054 -2.222  
##  
## Correlation matrix not shown by default, as p = 20 > 12.  
## Use print(x, correlation=TRUE) or  
## vcov(x) if you need it
```

## HONG KONG-CHINA

```
summary(time.dep.r[[9]])  
  
## Linear mixed model fit by REML ['lmerMod']  
## Formula: z_tottime ~ logits * z_wler * z_joy * z_meta + logits * z_escs +  
##           logits * gender + (1 | user) + (1 | task) + (1 | schoolID)  
## Data: totdata  
##  
## REML criterion at convergence: 52767.6  
##  
## Scaled residuals:  
##     Min      1Q  Median      3Q     Max  
## -7.2694 -0.4849  0.0538  0.5828  5.2927  
##  
## Random effects:  
##   Groups    Name        Variance Std.Dev.  
##   user      (Intercept) 0.09861  0.3140  
##   schoolID (Intercept) 0.02382  0.1543  
##   task      (Intercept) 0.22814  0.4776  
##   Residual          0.38767  0.6226  
## Number of obs: 26363, groups: user, 1414; schoolID, 149; task, 29  
##  
## Fixed effects:  
##                               Estimate Std. Error t value  
## (Intercept)                0.0416655  0.0908558  0.459  
## logits                   0.4718833  0.0851121  5.544  
## z_wler                    0.1122260  0.0120909  9.282  
## z_joy                     0.0076189  0.0112028  0.680  
## z_meta                    0.0140220  0.0108926  1.287  
## z_escs                   -0.0194088  0.0109475 -1.773  
## gender                    0.0046333  0.0206980  0.224  
## logits:z_wler              0.0942007  0.0043543 21.634  
## logits:z_joy               0.0023798  0.0043880  0.542  
## z_wler:z_joy              -0.0349233  0.0105174 -3.321  
## logits:z_meta              0.0202247  0.0041805  4.838  
## z_wler:z_meta              -0.0247742  0.0111148 -2.229  
## z_joy:z_meta               0.0029540  0.0105317  0.280  
## logits:z_escs              -0.0027303  0.0038948 -0.701  
## logits:gender              -0.0040711  0.0078532 -0.518  
## logits:z_wler:z_joy         -0.0062213  0.0041206 -1.510  
## logits:z_wler:z_meta       -0.0130100  0.0043152 -3.015  
## logits:z_joy:z_meta        0.0130500  0.0041135  3.173  
## z_wler:z_joy:z_meta        -0.0002741  0.0094058 -0.029  
## logits:z_wler:z_joy:z_meta -0.0072613  0.0036390 -1.995  
##  
## Correlation matrix not shown by default, as p = 20 > 12.  
## Use print(x, correlation=TRUE) or  
## vcov(x) if you need it
```

## HUNGARY

```
summary(time.dep.r[[10]])  
  
## Linear mixed model fit by REML ['lmerMod']  
## Formula: z_tottime ~ logits * z_wler * z_joy * z_meta + logits * z_escs +  
##           logits * gender + (1 | user) + (1 | task) + (1 | schoolID)  
## Data: totdata  
##  
## REML criterion at convergence: 71116.3  
##  
## Scaled residuals:  
##     Min      1Q  Median      3Q     Max  
## -6.4194 -0.4828  0.0527  0.5751  5.5692  
##  
## Random effects:  
##   Groups    Name        Variance Std.Dev.  
##   user      (Intercept) 0.1071   0.3272  
##   schoolID (Intercept) 0.1137   0.3372  
##   task      (Intercept) 0.1704   0.4128  
##   Residual          0.4750   0.6892  
## Number of obs: 32296, groups: user, 1697; schoolID, 183; task, 29  
##  
## Fixed effects:  
##                               Estimate Std. Error t value  
## (Intercept)                0.042210  0.082240  0.513  
## logits                   0.301071  0.073619  4.090  
## z_wler                    0.122504  0.014281  8.578  
## z_joy                     0.031966  0.011842  2.699  
## z_meta                    0.027414  0.011613  2.361  
## z_escs                   -0.007162  0.012072 -0.593  
## gender                    -0.039025  0.021174 -1.843  
## logits:z_wler              0.102326  0.005061 20.219  
## logits:z_joy               0.020685  0.004668  4.431  
## z_wler:z_joy              -0.037535  0.011401 -3.292  
## logits:z_meta              0.012700  0.004557  2.787  
## z_wler:z_meta              -0.046405  0.011002 -4.218  
## z_joy:z_meta               0.003480  0.011029  0.316  
## logits:z_escs              0.013208  0.004294  3.076  
## logits:gender              0.012987  0.008090  1.605  
## logits:z_wler:z_joy         -0.007873  0.004443 -1.772  
## logits:z_wler:z_meta       0.005156  0.004255  1.212  
## logits:z_joy:z_meta        -0.002271  0.004403 -0.516  
## z_wler:z_joy:z_meta        -0.003486  0.010082 -0.346  
## logits:z_wler:z_joy:z_meta  0.002445  0.003974  0.615  
##  
## Correlation matrix not shown by default, as p = 20 > 12.  
## Use print(x, correlation=TRUE) or  
## vcov(x) if you need it
```

## IRELAND

```
summary(time.dep.r[[11]])  
  
## Linear mixed model fit by REML ['lmerMod']  
## Formula: z_tottime ~ logits * z_wler * z_joy * z_meta + logits * z_escs +  
##           logits * gender + (1 | user) + (1 | task) + (1 | schoolID)  
## Data: totdata  
##  
## REML criterion at convergence: 53763.3  
##  
## Scaled residuals:  
##     Min      1Q  Median      3Q     Max  
## -7.4984 -0.4775  0.0374  0.5583  6.8914  
##  
## Random effects:  
##   Groups    Name        Variance Std.Dev.  
##   user      (Intercept) 0.08834  0.2972  
##   schoolID (Intercept) 0.02073  0.1440  
##   task      (Intercept) 0.22374  0.4730  
##   Residual          0.44047  0.6637  
## Number of obs: 25383, groups: user, 1336; schoolID, 138; task, 29  
##  
## Fixed effects:  
##                               Estimate Std. Error t value  
## (Intercept)                0.077918  0.090029  0.865  
## logits                     0.463263  0.084308  5.495  
## z_wler                     0.110008  0.012333  8.920  
## z_joy                      -0.022812  0.011505 -1.983  
## z_meta                     0.003644  0.011398  0.320  
## z_escs                     -0.008602  0.010559 -0.815  
## gender                     -0.073853  0.022736 -3.248  
## logits:z_wler               0.099764  0.005137 19.422  
## logits:z_joy                 0.018134  0.004838  3.749  
## z_wler:z_joy                -0.043071  0.011113 -3.876  
## logits:z_meta                0.019914  0.004837  4.117  
## z_wler:z_meta                -0.052364  0.010626 -4.928  
## z_joy:z_meta                  0.022843  0.011042  2.069  
## logits:z_escs                 0.013557  0.004330  3.131  
## logits:gender                 -0.056250  0.008393 -6.702  
## logits:z_wler:z_joy            -0.017111  0.004694 -3.645  
## logits:z_wler:z_meta            0.003232  0.004460  0.725  
## logits:z_joy:z_meta              0.009246  0.004702  1.966  
## z_wler:z_joy:z_meta              0.002156  0.010097  0.214  
## logits:z_wler:z_joy:z_meta       -0.013165  0.004296 -3.065  
##  
## Correlation matrix not shown by default, as p = 20 > 12.  
## Use print(x, correlation=TRUE)  or  
## vcov(x)      if you need it
```

## ICELAND

```
summary(time.dep.r[[12]])  
  
## Linear mixed model fit by REML ['lmerMod']  
## Formula: z_tottime ~ logits * z_wler * z_joy * z_meta + logits * z_escs +  
##           logits * gender + (1 | user) + (1 | task) + (1 | schoolID)  
## Data: totdata  
##  
## REML criterion at convergence: 36811.2  
##  
## Scaled residuals:  
##     Min      1Q  Median      3Q     Max  
## -6.4375 -0.5042  0.0363  0.5633  5.0433  
##  
## Random effects:  
##   Groups    Name        Variance Std.Dev.  
##   user      (Intercept) 0.11638  0.3412  
##   schoolID (Intercept) 0.05191  0.2278  
##   task      (Intercept) 0.20674  0.4547  
##   Residual          0.41449  0.6438  
## Number of obs: 17706, groups: user, 930; schoolID, 118; task, 29  
##  
## Fixed effects:  
##                               Estimate Std. Error t value  
## (Intercept)                0.089198  0.089143  1.001  
## logits                     0.381135  0.081131  4.698  
## z_wler                     0.090488  0.016535  5.473  
## z_joy                      0.016163  0.015956  1.013  
## z_meta                     0.076438  0.015071  5.072  
## z_escs                     0.002471  0.014564  0.170  
## gender                     -0.082012  0.028177 -2.911  
## logits:z_wler               0.097344  0.005915 16.456  
## logits:z_joy                 0.034065  0.005870  5.803  
## z_wler:z_joy                -0.015930  0.015085 -1.056  
## logits:z_meta                0.026835  0.005462  4.913  
## z_wler:z_meta                -0.054207  0.015794 -3.432  
## z_joy:z_meta                 0.011705  0.015324  0.764  
## logits:z_escs                0.013230  0.004898  2.701  
## logits:gender                -0.037061  0.010303 -3.597  
## logits:z_wler:z_joy            -0.007554  0.005531 -1.366  
## logits:z_wler:z_meta            0.001565  0.005847  0.268  
## logits:z_joy:z_meta             -0.017946  0.005657 -3.172  
## z_wler:z_joy:z_meta            -0.016716  0.013968 -1.197  
## logits:z_wler:z_joy:z_meta     -0.016361  0.005143 -3.181  
##  
## Correlation matrix not shown by default, as p = 20 > 12.  
## Use print(x, correlation=TRUE)  or  
##   vcov(x)      if you need it
```

## JAPAN

```
summary(time.dep.r[[13]])  
  
## Linear mixed model fit by REML ['lmerMod']  
## Formula: z_tottime ~ logits * z_wler * z_joy * z_meta + logits * z_escs +  
##           logits * gender + (1 | user) + (1 | task) + (1 | schoolID)  
## Data: totdata  
##  
## REML criterion at convergence: 41206.5  
##  
## Scaled residuals:  
##     Min      1Q  Median      3Q     Max  
## -6.7977 -0.4868  0.0359  0.5608  6.1033  
##  
## Random effects:  
##   Groups    Name        Variance Std.Dev.  
##   user      (Intercept) 0.063923 0.25283  
##   schoolID (Intercept) 0.007502 0.08662  
##   task      (Intercept) 0.273491 0.52296  
##   Residual          0.358958 0.59913  
## Number of obs: 21591, groups: user, 1155; schoolID, 41; task, 29  
##  
## Fixed effects:  
##                               Estimate Std. Error t value  
## (Intercept)                0.0661054  0.0989562  0.668  
## logits                     0.5211900  0.0931561  5.595  
## z_wler                     0.0635450  0.0111782  5.685  
## z_joy                      -0.0075631  0.0099476 -0.760  
## z_meta                     0.0259091  0.0103127  2.512  
## z_escs                     -0.0030977  0.0093770 -0.330  
## gender                     -0.0277232  0.0185716 -1.493  
## logits:z_wler               0.0628117  0.0048756 12.883  
## logits:z_joy                 0.0133554  0.0045534  2.933  
## z_wler:z_joy                -0.0333912  0.0104321 -3.201  
## logits:z_meta                0.0177818  0.0047044  3.780  
## z_wler:z_meta                -0.0395571  0.0088274 -4.481  
## z_joy:z_meta                 -0.0022161  0.0103158 -0.215  
## logits:z_escs                 0.0007855  0.0041264  0.190  
## logits:gender                 -0.0027755  0.0081129 -0.342  
## logits:z_wler:z_joy            -0.0169244  0.0048011 -3.525  
## logits:z_wler:z_meta            0.0026116  0.0039150  0.667  
## logits:z_joy:z_meta             -0.0112353  0.0047455 -2.368  
## z_wler:z_joy:z_meta              0.0183072  0.0084480  2.167  
## logits:z_wler:z_joy:z_meta       0.0094963  0.0039628  2.396  
##  
## Correlation matrix not shown by default, as p = 20 > 12.  
## Use print(x, correlation=TRUE)  or  
##   vcov(x)      if you need it
```

## KOREA

```
summary(time.dep.r[[14]])  
  
## Linear mixed model fit by REML ['lmerMod']  
## Formula: z_tottime ~ logits * z_wler * z_joy * z_meta + logits * z_escs +  
##           logits * gender + (1 | user) + (1 | task) + (1 | schoolID)  
## Data: totdata  
##  
## REML criterion at convergence: 51377.2  
##  
## Scaled residuals:  
##     Min      1Q  Median      3Q     Max  
## -8.6581 -0.5532  0.0042  0.5809  5.1798  
##  
## Random effects:  
##   Groups    Name        Variance Std.Dev.  
##   user      (Intercept) 0.06179  0.2486  
##   schoolID (Intercept) 0.01419  0.1191  
##   task      (Intercept) 0.28330  0.5323  
##   Residual          0.33891  0.5822  
## Number of obs: 27747, groups: user, 1452; schoolID, 156; task, 29  
##  
## Fixed effects:  
##                               Estimate Std. Error t value  
## (Intercept)                0.008793  0.100096  0.088  
## logits                     0.559587  0.094759  5.905  
## z_wler                     0.059320  0.009872  6.009  
## z_joy                      -0.013554  0.008980 -1.509  
## z_meta                     -0.002625  0.009244 -0.284  
## z_escs                     -0.001103  0.008635 -0.128  
## gender                      0.040534  0.018430  2.199  
## logits:z_wler               0.050554  0.004209 12.012  
## logits:z_joy                 0.009703  0.003951  2.456  
## z_wler:z_joy                -0.026874  0.009079 -2.960  
## logits:z_meta                0.014094  0.004040  3.489  
## z_wler:z_meta                -0.029717  0.008405 -3.536  
## z_joy:z_meta                  0.011061  0.009651  1.146  
## logits:z_escs                 0.008290  0.003595  2.306  
## logits:gender                 -0.026360  0.006993 -3.769  
## logits:z_wler:z_joy            -0.004874  0.004023 -1.212  
## logits:z_wler:z_meta            -0.010308  0.003694 -2.790  
## logits:z_joy:z_meta              -0.003099  0.004235 -0.732  
## z_wler:z_joy:z_meta              0.011607  0.007557  1.536  
## logits:z_wler:z_joy:z_meta       0.001534  0.003331  0.460  
##  
## Correlation matrix not shown by default, as p = 20 > 12.  
## Use print(x, correlation=TRUE) or  
## vcov(x) if you need it
```

## MACAO-CHINA

```
summary(time.dep.r[[15]])  
  
## Linear mixed model fit by REML ['lmerMod']  
## Formula: z_tottime ~ logits * z_wler * z_joy * z_meta + logits * z_escs +  
##           logits * gender + (1 | user) + (1 | task) + (1 | schoolID)  
## Data: totdata  
##  
## REML criterion at convergence: 90494.6  
##  
## Scaled residuals:  
##     Min      1Q  Median      3Q     Max  
## -7.2790 -0.5139  0.0510  0.5951  6.1843  
##  
## Random effects:  
##   Groups    Name        Variance Std.Dev.  
##   user      (Intercept) 0.07484  0.2736  
##   schoolID (Intercept) 0.01179  0.1086  
##   task      (Intercept) 0.25153  0.5015  
##   Residual          0.39651  0.6297  
## Number of obs: 45159, groups: user, 2484; schoolID, 44; task, 29  
##  
## Fixed effects:  
##                               Estimate Std. Error t value  
## (Intercept)                0.053592  0.095196  0.563  
## logits                     0.531319  0.089259  5.953  
## z_wler                     0.050365  0.007904  6.372  
## z_joy                      0.003785  0.007324  0.517  
## z_meta                     0.016412  0.007113  2.307  
## z_escs                    -0.010355  0.007341 -1.411  
## gender                     -0.054267  0.015009 -3.615  
## logits:z_wler               0.094521  0.003291 28.720  
## logits:z_joy                 0.014969  0.003330  4.495  
## z_wler:z_joy                -0.038714  0.006695 -5.783  
## logits:z_meta                0.009376  0.003182  2.947  
## z_wler:z_meta                -0.020788  0.006735 -3.087  
## z_joy:z_meta                  0.012569  0.006794  1.850  
## logits:z_escs                -0.004382  0.002967 -1.477  
## logits:gender                 -0.037170  0.006171 -6.024  
## logits:z_wler:z_joy            -0.006514  0.003034 -2.147  
## logits:z_wler:z_meta            -0.004462  0.003051 -1.463  
## logits:z_joy:z_meta              0.005695  0.003072  1.854  
## z_wler:z_joy:z_meta             -0.003203  0.005401 -0.593  
## logits:z_wler:z_joy:z_meta       -0.001052  0.002430 -0.433  
##  
## Correlation matrix not shown by default, as p = 20 > 12.  
## Use print(x, correlation=TRUE) or  
## vcov(x) if you need it
```

## NORWAY

```
summary(time.dep.r[[16]])  
  
## Linear mixed model fit by REML ['lmerMod']  
## Formula: z_tottime ~ logits * z_wler * z_joy * z_meta + logits * z_escs +  
##           logits * gender + (1 | user) + (1 | task) + (1 | schoolID)  
## Data: totdata  
##  
## REML criterion at convergence: 76507.6  
##  
## Scaled residuals:  
##     Min      1Q  Median      3Q     Max  
## -7.0443 -0.4924  0.0419  0.5756  5.9013  
##  
## Random effects:  
##   Groups    Name        Variance Std.Dev.  
##   user      (Intercept) 0.12279  0.3504  
##   schoolID (Intercept) 0.05744  0.2397  
##   task      (Intercept) 0.20478  0.4525  
##   Residual          0.43160  0.6570  
## Number of obs: 36225, groups: user, 1902; schoolID, 180; task, 29  
##  
## Fixed effects:  
##                               Estimate Std. Error t value  
## (Intercept)                0.074360  0.087069  0.854  
## logits                     0.358228  0.080614  4.444  
## z_wler                     0.131159  0.011667 11.242  
## z_joy                      0.031972  0.011121  2.875  
## z_meta                     0.019317  0.011067  1.745  
## z_escs                     -0.019205  0.009831 -1.954  
## gender                     -0.044086  0.019187 -2.298  
## logits:z_wler               0.101996  0.004239 24.059  
## logits:z_joy                 0.022661  0.004035  5.616  
## z_wler:z_joy                -0.046112  0.010535 -4.377  
## logits:z_meta                0.016443  0.004035  4.075  
## z_wler:z_meta                -0.043273  0.010104 -4.283  
## z_joy:z_meta                  0.008091  0.010591  0.764  
## logits:z_escs                 0.005648  0.003486  1.620  
## logits:gender                 -0.010880  0.007173 -1.517  
## logits:z_wler:z_joy            0.003068  0.003867  0.793  
## logits:z_wler:z_meta           -0.009012  0.003693 -2.440  
## logits:z_joy:z_meta             0.004721  0.003905  1.209  
## z_wler:z_joy:z_meta            0.013150  0.008402  1.565  
## logits:z_wler:z_joy:z_meta     -0.006485  0.003064 -2.117  
##  
## Correlation matrix not shown by default, as p = 20 > 12.  
## Use print(x, correlation=TRUE)  or  
## vcov(x)      if you need it
```

## NEW ZEALAND

```
summary(time.dep.r[[17]])  
  
## Linear mixed model fit by REML ['lmerMod']  
## Formula: z_tottime ~ logits * z_wler * z_joy * z_meta + logits * z_escs +  
##           logits * gender + (1 | user) + (1 | task) + (1 | schoolID)  
## Data: totdata  
##  
## REML criterion at convergence: 64321.2  
##  
## Scaled residuals:  
##     Min      1Q  Median      3Q     Max  
## -7.3803 -0.4763  0.0326  0.5484  6.6725  
##  
## Random effects:  
##   Groups    Name        Variance Std.Dev.  
##   user      (Intercept) 0.09108  0.3018  
##   schoolID (Intercept) 0.02539  0.1593  
##   task      (Intercept) 0.23433  0.4841  
##   Residual          0.39321  0.6271  
## Number of obs: 32018, groups: user, 1687; schoolID, 145; task, 29  
##  
## Fixed effects:  
##                               Estimate Std. Error t value  
## (Intercept)                0.0987008  0.0919232  1.074  
## logits                     0.4787232  0.0862162  5.553  
## z_wler                      0.0185470  0.0113929  1.628  
## z_joy                       0.0295036  0.0107380  2.748  
## z_meta                      0.0287287  0.0102225  2.810  
## z_escs                     -0.0008652  0.0096376 -0.090  
## gender                      -0.0801077  0.0204313 -3.921  
## logits:z_wler                0.0907153  0.0046012 19.715  
## logits:z_joy                 0.0218164  0.0043461  5.020  
## z_wler:z_joy                -0.0434919  0.0093626 -4.645  
## logits:z_meta                0.0294064  0.0040989  7.174  
## z_wler:z_meta                -0.0603485  0.0097186 -6.210  
## z_joy:z_meta                 -0.0114671  0.0097628 -1.175  
## logits:z_escs                 0.0143240  0.0037150  3.856  
## logits:gender                 -0.0273652  0.0073036 -3.747  
## logits:z_wler:z_joy            -0.0050610  0.0037905 -1.335  
## logits:z_wler:z_meta            -0.0139964  0.0039082 -3.581  
## logits:z_joy:z_meta             -0.0057833  0.0039599 -1.460  
## z_wler:z_joy:z_meta              0.0111536  0.0084679  1.317  
## logits:z_wler:z_joy:z_meta       -0.0076935  0.0034331 -2.241  
##  
## Correlation matrix not shown by default, as p = 20 > 12.  
## Use print(x, correlation=TRUE)  or  
##   vcov(x)      if you need it
```

## SWEDEN

```
summary(time.dep.r[[18]])  
  
## Linear mixed model fit by REML ['lmerMod']  
## Formula: z_tottime ~ logits * z_wler * z_joy * z_meta + logits * z_escs +  
##           logits * gender + (1 | user) + (1 | task) + (1 | schoolID)  
## Data: totdata  
##  
## REML criterion at convergence: 70626  
##  
## Scaled residuals:  
##     Min      1Q  Median      3Q     Max  
## -7.6801 -0.4834  0.0324  0.5525  7.0580  
##  
## Random effects:  
##   Groups    Name        Variance Std.Dev.  
##   user      (Intercept) 0.12477  0.3532  
##   schoolID (Intercept) 0.02241  0.1497  
##   task      (Intercept) 0.20812  0.4562  
##   Residual          0.43342  0.6583  
## Number of obs: 33405, groups: user, 1760; schoolID, 179; task, 29  
##  
## Fixed effects:  
##                               Estimate Std. Error t value  
## (Intercept)                0.0748750  0.0867085  0.864  
## logits                     0.3867098  0.0812784  4.758  
## z_wler                     0.1015969  0.0128173  7.927  
## z_joy                      0.0375066  0.0116814  3.211  
## z_meta                     0.0391137  0.0115996  3.372  
## z_escs                     0.0185164  0.0105270  1.759  
## gender                     -0.0429426  0.0205051 -2.094  
## logits:z_wler               0.0939511  0.0046685 20.125  
## logits:z_joy                 0.0183929  0.0042877  4.290  
## z_wler:z_joy                -0.0696576  0.0108298 -6.432  
## logits:z_meta                0.0280632  0.0041674  6.734  
## z_wler:z_meta                -0.0332060  0.0111321 -2.983  
## z_joy:z_meta                  0.0102281  0.0114208  0.896  
## logits:z_escs                 0.0129221  0.0038128  3.389  
## logits:gender                 -0.0117051  0.0076361 -1.533  
## logits:z_wler:z_joy            -0.0060196  0.0039925 -1.508  
## logits:z_wler:z_meta            -0.0101156  0.0040804 -2.479  
## logits:z_joy:z_meta              0.0091135  0.0042011  2.169  
## z_wler:z_joy:z_meta              0.0001551  0.0088717  0.017  
## logits:z_wler:z_joy:z_meta       -0.0082859  0.0033119 -2.502  
##  
## Correlation matrix not shown by default, as p = 20 > 12.  
## Use print(x, correlation=TRUE)  or  
## vcov(x)      if you need it
```

## POLAND

```
summary(time.dep.r[[19]])  
  
## Linear mixed model fit by REML ['lmerMod']  
## Formula: z_tottime ~ logits * z_wler * z_joy * z_meta + logits * z_escs +  
##           logits * gender + (1 | user) + (1 | task) + (1 | schoolID)  
## Data: totdata  
##  
## REML criterion at convergence: 76249.1  
##  
## Scaled residuals:  
##     Min      1Q  Median      3Q     Max  
## -6.7555 -0.4756  0.0608  0.5823  6.2396  
##  
## Random effects:  
##   Groups    Name        Variance Std.Dev.  
##   user      (Intercept) 0.11564  0.3401  
##   schoolID (Intercept) 0.05996  0.2449  
##   task      (Intercept) 0.17142  0.4140  
##   Residual          0.46845  0.6844  
## Number of obs: 34848, groups: user, 1823; schoolID, 179; task, 29  
##  
## Fixed effects:  
##                                         Estimate Std. Error t value  
## (Intercept)                         4.898e-02 8.026e-02  0.610  
## logits                                3.550e-01 7.381e-02  4.810  
## z_wler                               1.374e-01 1.191e-02 11.537  
## z_joy                                 3.367e-02 1.135e-02  2.968  
## z_meta                                2.327e-02 1.054e-02  2.207  
## z_escs                               -1.119e-02 1.105e-02 -1.012  
## gender                                -5.948e-03 1.978e-02 -0.301  
## logits:z_wler                          8.549e-02 4.490e-03 19.038  
## logits:z_joy                           3.435e-02 4.369e-03  7.861  
## z_wler:z_joy                          -5.110e-02 1.083e-02 -4.719  
## logits:z_meta                          1.760e-02 4.085e-03  4.309  
## z_wler:z_meta                         -4.701e-02 1.054e-02 -4.462  
## z_joy:z_meta                           1.056e-02 1.072e-02  0.985  
## logits:z_escs                          1.943e-02 3.903e-03  4.977  
## logits:gender                           1.522e-03 7.754e-03  0.196  
## logits:z_wler:z_joy                  -1.709e-02 4.192e-03 -4.076  
## logits:z_wler:z_meta                 -4.479e-03 4.050e-03 -1.106  
## logits:z_joy:z_meta                  5.493e-03 4.157e-03  1.321  
## z_wler:z_joy:z_meta                  4.005e-03 9.497e-03  0.422  
## logits:z_wler:z_joy:z_meta          -2.829e-05 3.635e-03 -0.008  
##  
## Correlation matrix not shown by default, as p = 20 > 12.  
## Use print(x, correlation=TRUE)  or  
## vcov(x)      if you need it
```

## Dependent variable average time on relevant pages

### AUSTRALIA

```
summary(reltimes.dep.r[[1]])  
  
## Linear mixed model fit by REML ['lmerMod']  
## Formula: z_reltimes ~ logits * z_wler * z_joy * z_meta + logits * z_escs +  
##           logits * gender + (1 | user) + (1 | task) + (1 | schoolID)  
## Data: totdata  
##  
## REML criterion at convergence: 95046.3  
##  
## Scaled residuals:  
##      Min     1Q Median     3Q    Max  
## -8.7500 -0.4508  0.0641  0.5654  7.2569  
##  
## Random effects:  
## Groups   Name        Variance Std.Dev.  
## user     (Intercept) 0.08869  0.2978  
## schoolID (Intercept) 0.02438  0.1561  
## task     (Intercept) 0.51436  0.7172  
## Residual            0.30846  0.5554  
## Number of obs: 53607, groups: user, 2800; schoolID, 334; task, 29  
##  
## Fixed effects:  
##                               Estimate Std. Error t value  
## (Intercept)                 0.056708  0.133826  0.424  
## logits                     0.218424  0.127540  1.713  
## z_wler                      0.091050  0.008442 10.785  
## z_joy                       0.014770  0.008122  1.819  
## z_meta                      0.023330  0.007820  2.984  
## z_escs                      -0.009152  0.007311 -1.252  
## gender                      -0.053156  0.014036 -3.787  
## logits:z_wler                0.085453  0.003003 28.460  
## logits:z_joy                 0.026830  0.002954  9.084  
## z_wler:z_joy                 -0.034095  0.007552 -4.515  
## logits:z_meta                0.021124  0.002815  7.503  
## z_wler:z_meta                -0.033088  0.007667 -4.316  
## z_joy:z_meta                 0.002472  0.007840  0.315  
## logits:z_escs                0.005668  0.002532  2.238  
## logits:gender                -0.030892  0.004875 -6.337  
## logits:z_wler:z_joy          -0.006796  0.002739 -2.481  
## logits:z_wler:z_meta         -0.002606  0.002785 -0.936  
## logits:z_joy:z_meta          -0.002021  0.002864 -0.706  
## z_wler:z_joy:z_meta          0.002032  0.006549  0.310  
## logits:z_wler:z_joy:z_meta   -0.009671  0.002361 -4.095  
##  
## Correlation matrix not shown by default, as p = 20 > 12.  
## Use print(x, correlation=TRUE)  or  
## vcov(x)      if you need it
```

## AUSTRIA

```
summary(reltime.dep.r[[2]])  
  
## Linear mixed model fit by REML ['lmerMod']  
## Formula: z_reltim ~ logits * z_wler * z_joy * z_meta + logits * z_escs +  
##           logits * gender + (1 | user) + (1 | task) + (1 | schoolID)  
## Data: totdata  
##  
## REML criterion at convergence: 89824  
##  
## Scaled residuals:  
##     Min      1Q  Median      3Q     Max  
## -6.7628 -0.4440  0.0770  0.5687  5.5640  
##  
## Random effects:  
##   Groups    Name        Variance Std.Dev.  
##   user      (Intercept) 0.06410  0.2532  
##   schoolID (Intercept) 0.09438  0.3072  
##   task      (Intercept) 0.45366  0.6735  
##   Residual          0.35398  0.5950  
## Number of obs: 47326, groups: user, 2483; schoolID, 253; task, 29  
##  
## Fixed effects:  
##                               Estimate Std. Error t value  
## (Intercept)                0.0212825  0.1270196  0.168  
## logits                     0.0803956  0.1198035  0.671  
## z_wler                     0.1060124  0.0088954 11.918  
## z_joy                      0.0316082  0.0078006  4.052  
## z_meta                     0.0380129  0.0076380  4.977  
## z_escs                     0.0006761  0.0069511  0.097  
## gender                     0.0005003  0.0145656  0.034  
## logits:z_wler               0.0786935  0.0034242 22.982  
## logits:z_joy                 0.0230464  0.0033044  6.974  
## z_wler:z_joy                -0.0229337  0.0069498 -3.300  
## logits:z_meta                0.0259865  0.0032133  8.087  
## z_wler:z_meta                -0.0262662  0.0071677 -3.665  
## z_joy:z_meta                  0.0110485  0.0072484  1.524  
## logits:z_escs                 0.0092514  0.0028303  3.269  
## logits:gender                 -0.0011397  0.0057324 -0.199  
## logits:z_wler:z_joy            -0.0045075  0.0029951 -1.505  
## logits:z_wler:z_meta            0.0058567  0.0030366  1.929  
## logits:z_joy:z_meta              0.0014500  0.0031392  0.462  
## z_wler:z_joy:z_meta              0.0008051  0.0063072  0.128  
## logits:z_wler:z_joy:z_meta       -0.0124790  0.0027354 -4.562  
##  
## Correlation matrix not shown by default, as p = 20 > 12.  
## Use print(x, correlation=TRUE)  or  
##   vcov(x)      if you need it
```

## BELGUIM

```
summary(reltime.dep.r[[3]])  
  
## Linear mixed model fit by REML ['lmerMod']  
## Formula: z_reltim ~ logits * z_wler * z_joy * z_meta + logits * z_escs +  
##           logits * gender + (1 | user) + (1 | task) + (1 | schoolID)  
## Data: totdata  
##  
## REML criterion at convergence: 88644  
##  
## Scaled residuals:  
##     Min      1Q  Median      3Q     Max  
## -8.6610 -0.4485  0.0599  0.5602  6.4409  
##  
## Random effects:  
##   Groups    Name        Variance Std.Dev.  
##   user      (Intercept) 0.0565   0.2377  
##   schoolID (Intercept) 0.0253   0.1591  
##   task      (Intercept) 0.5514   0.7425  
##   Residual          0.3019   0.5495  
## Number of obs: 51096, groups: user, 2681; schoolID, 248; task, 29  
##  
## Fixed effects:  
##                               Estimate Std. Error t value  
## (Intercept)                0.039166  0.138546  0.283  
## logits                     0.203039  0.132048  1.538  
## z_wler                      0.080730  0.007871 10.256  
## z_joy                       0.022179  0.007027  3.156  
## z_meta                      0.010780  0.007223  1.492  
## z_escs                      0.024972  0.006233  4.006  
## gender                      -0.026646  0.011916 -2.236  
## logits:z_wler                0.084282  0.003222 26.160  
## logits:z_joy                 0.013442  0.003011  4.464  
## z_wler:z_joy                 -0.050428  0.007136 -7.067  
## logits:z_meta                 0.020799  0.003045  6.831  
## z_wler:z_meta                 -0.017654  0.006469 -2.729  
## z_joy:z_meta                  0.002736  0.007188  0.381  
## logits:z_escs                 0.017388  0.002572  6.762  
## logits:gender                 -0.009335  0.004966 -1.880  
## logits:z_wler:z_joy            -0.006469  0.003064 -2.111  
## logits:z_wler:z_meta           -0.008358  0.002730 -3.061  
## logits:z_joy:z_meta             0.002173  0.003114  0.698  
## z_wler:z_joy:z_meta            0.004333  0.006346  0.683  
## logits:z_wler:z_joy:z_meta     -0.003594  0.002746 -1.309  
##  
## Correlation matrix not shown by default, as p = 20 > 12.  
## Use print(x, correlation=TRUE)  or  
##   vcov(x)      if you need it
```

## CHILE

```
summary(reltime.dep.r[[4]])  
  
## Linear mixed model fit by REML ['lmerMod']  
## Formula: z_relttime ~ logits * z_wler * z_joy * z_meta + logits * z_escs +  
##           logits * gender + (1 | user) + (1 | task) + (1 | schoolID)  
## Data: totdata  
##  
## REML criterion at convergence: 56127.6  
##  
## Scaled residuals:  
##     Min      1Q  Median      3Q     Max  
## -6.5077 -0.4538  0.0823  0.5856  4.8608  
##  
## Random effects:  
##   Groups    Name        Variance Std.Dev.  
##   user      (Intercept) 0.07679  0.2771  
##   schoolID (Intercept) 0.04173  0.2043  
##   task      (Intercept) 0.51572  0.7181  
##   Residual          0.36560  0.6046  
## Number of obs: 28924, groups: user, 1638; schoolID, 198; task, 29  
##  
## Fixed effects:  
##                               Estimate Std. Error t value  
## (Intercept)                2.280e-02 1.348e-01  0.169  
## logits                   1.099e-01 1.278e-01  0.860  
## z_wler                    6.779e-02 1.055e-02  6.427  
## z_joy                     2.924e-02 9.703e-03  3.013  
## z_meta                    3.875e-02 9.539e-03  4.062  
## z_escs                   -2.998e-02 1.085e-02 -2.764  
## gender                    -3.335e-02 1.824e-02 -1.829  
## logits:z_wler              5.578e-02 4.253e-03 13.117  
## logits:z_joy               1.041e-02 4.132e-03  2.520  
## z_wler:z_joy              -1.801e-02 9.038e-03 -1.993  
## logits:z_meta              2.803e-02 4.011e-03  6.989  
## z_wler:z_meta              -2.960e-02 8.945e-03 -3.309  
## z_joy:z_meta               -9.888e-03 9.481e-03 -1.043  
## logits:z_escs              1.266e-02 3.916e-03  3.234  
## logits:gender              4.537e-05 7.352e-03  0.006  
## logits:z_wler:z_joy         -4.979e-03 3.805e-03 -1.308  
## logits:z_wler:z_meta       5.428e-03 3.696e-03  1.468  
## logits:z_joy:z_meta        1.095e-02 4.006e-03  2.733  
## z_wler:z_joy:z_meta        -1.192e-03 8.860e-03 -0.135  
## logits:z_wler:z_joy:z_meta -6.755e-03 3.831e-03 -1.763  
##  
## Correlation matrix not shown by default, as p = 20 > 12.  
## Use print(x, correlation=TRUE) or  
## vcov(x)      if you need it
```

## COLOMBIA

```
summary(reltime.dep.r[[5]])  
  
## Linear mixed model fit by REML ['lmerMod']  
## Formula: z_reltime ~ logits * z_wler * z_joy * z_meta + logits * z_escs +  
##           logits * gender + (1 | user) + (1 | task) + (1 | schoolID)  
## Data: totdata  
##  
## REML criterion at convergence: 45879.7  
##  
## Scaled residuals:  
##     Min      1Q  Median      3Q     Max  
## -5.3922 -0.4986  0.0895  0.6236  5.3101  
##  
## Random effects:  
##   Groups    Name        Variance Std.Dev.  
##   user      (Intercept) 0.07300  0.2702  
##   schoolID (Intercept) 0.03498  0.1870  
##   task      (Intercept) 0.50299  0.7092  
##   Residual          0.38624  0.6215  
## Number of obs: 23017, groups: user, 1345; schoolID, 136; task, 29  
##  
## Fixed effects:  
##                               Estimate Std. Error t value  
## (Intercept)                0.0316362  0.1333578  0.237  
## logits                     0.0772331  0.1262205  0.612  
## z_wler                     0.0514936  0.0117392  4.386  
## z_joy                      0.0235120  0.0107532  2.187  
## z_meta                     0.0271893  0.0101818  2.670  
## z_escs                     -0.0356047  0.0110459 -3.223  
## gender                     -0.0818115  0.0182734 -4.477  
## logits:z_wler               0.0413936  0.0050008  8.277  
## logits:z_joy                 0.0013840  0.0047678  0.290  
## z_wler:z_joy                -0.0017556  0.0104411 -0.168  
## logits:z_meta                0.0110599  0.0046436  2.382  
## z_wler:z_meta                0.0037422  0.0095633  0.391  
## z_joy:z_meta                 -0.0003481  0.0099496 -0.035  
## logits:z_escs                0.0157026  0.0044282  3.546  
## logits:gender                 -0.0196268  0.0082547 -2.378  
## logits:z_wler:z_joy            -0.0046873  0.0046474 -1.009  
## logits:z_wler:z_meta            0.0149201  0.0043507  3.429  
## logits:z_joy:z_meta              0.0030215  0.0045121  0.670  
## z_wler:z_joy:z_meta             -0.0153671  0.0091217 -1.685  
## logits:z_wler:z_joy:z_meta       0.0017814  0.0041895  0.425  
##  
## Correlation matrix not shown by default, as p = 20 > 12.  
## Use print(x, correlation=TRUE)  or  
##   vcov(x)      if you need it
```

## DENMARK

```
summary(reltime.dep.r[[6]])  
  
## Linear mixed model fit by REML ['lmerMod']  
## Formula: z_reltime ~ logits * z_wler * z_joy * z_meta + logits * z_escs +  
##           logits * gender + (1 | user) + (1 | task) + (1 | schoolID)  
## Data: totdata  
##  
## REML criterion at convergence: 42850.2  
##  
## Scaled residuals:  
##     Min      1Q  Median      3Q     Max  
## -8.2512 -0.4472  0.0700  0.5652  5.4975  
##  
## Random effects:  
##   Groups    Name        Variance Std.Dev.  
##   user      (Intercept) 0.07773  0.2788  
##   schoolID (Intercept) 0.05143  0.2268  
##   task      (Intercept) 0.51322  0.7164  
##   Residual          0.33571  0.5794  
## Number of obs: 23011, groups: user, 1204; schoolID, 220; task, 29  
##  
## Fixed effects:  
##                               Estimate Std. Error t value  
## (Intercept)                3.090e-02 1.347e-01  0.229  
## logits                     1.391e-01 1.275e-01  1.091  
## z_wler                      9.885e-02 1.242e-02  7.960  
## z_joy                       3.245e-02 1.169e-02  2.776  
## z_meta                      3.564e-02 1.175e-02  3.032  
## z_escs                     -1.872e-02 1.087e-02 -1.722  
## gender                      -3.833e-02 1.999e-02 -1.917  
## logits:z_wler                7.995e-02 4.650e-03 17.193  
## logits:z_joy                 2.192e-02 4.413e-03  4.968  
## z_wler:z_joy                -3.774e-02 1.127e-02 -3.350  
## logits:z_meta                1.618e-02 4.430e-03  3.652  
## z_wler:z_meta                -5.108e-03 1.084e-02 -0.471  
## z_joy:z_meta                 -4.278e-03 1.135e-02 -0.377  
## logits:z_escs                9.214e-03 4.054e-03  2.273  
## logits:gender                -5.774e-03 7.928e-03 -0.728  
## logits:z_wler:z_joy            -3.644e-03 4.314e-03 -0.845  
## logits:z_wler:z_meta           9.036e-03 4.169e-03  2.167  
## logits:z_joy:z_meta            2.714e-03 4.348e-03  0.624  
## z_wler:z_joy:z_meta            7.707e-05 9.860e-03  0.008  
## logits:z_wler:z_joy:z_meta    -7.081e-03 3.768e-03 -1.879  
##  
## Correlation matrix not shown by default, as p = 20 > 12.  
## Use print(x, correlation=TRUE) or  
## vcov(x) if you need it
```

## SPAIN

```
summary(reltime.dep.r[[7]])  
  
## Linear mixed model fit by REML ['lmerMod']  
## Formula: z_relttime ~ logits * z_wler * z_joy * z_meta + logits * z_escs +  
##           logits * gender + (1 | user) + (1 | task) + (1 | schoolID)  
## Data: totdata  
##  
## REML criterion at convergence: 57787.7  
##  
## Scaled residuals:  
##     Min      1Q  Median      3Q     Max  
## -7.5613 -0.4536  0.0706  0.5652  4.7857  
##  
## Random effects:  
##   Groups    Name        Variance Std.Dev.  
##   user      (Intercept) 0.06522  0.2554  
##   schoolID (Intercept) 0.05148  0.2269  
##   task      (Intercept) 0.52489  0.7245  
##   Residual          0.33485  0.5787  
## Number of obs: 31294, groups: user, 1649; schoolID, 164; task, 29  
##  
## Fixed effects:  
##                                         Estimate Std. Error t value  
## (Intercept)                         1.677e-02 1.362e-01  0.123  
## logits                                1.389e-01 1.289e-01  1.078  
## z_wler                                 8.633e-02 9.515e-03  9.073  
## z_joy                                  1.564e-02 9.025e-03  1.733  
## z_meta                                 4.803e-02 9.138e-03  5.256  
## z_escs                                 1.204e-02 8.891e-03  1.355  
## gender                                -1.346e-02 1.577e-02 -0.854  
## logits:z_wler                          7.356e-02 3.933e-03 18.705  
## logits:z_joy                           1.492e-02 3.804e-03  3.923  
## z_wler:z_joy                          -2.158e-02 8.659e-03 -2.493  
## logits:z_meta                          1.205e-02 3.809e-03  3.165  
## z_wler:z_meta                          -2.404e-02 8.335e-03 -2.884  
## z_joy:z_meta                           4.287e-03 8.464e-03  0.506  
## logits:z_escs                          1.246e-02 3.392e-03  3.672  
## logits:gender                          -1.251e-02 6.697e-03 -1.867  
## logits:z_wler:z_joy                   -6.941e-03 3.655e-03 -1.899  
## logits:z_wler:z_meta                  -3.521e-04 3.551e-03 -0.099  
## logits:z_joy:z_meta                   7.703e-05 3.556e-03  0.022  
## z_wler:z_joy:z_meta                  -1.343e-02 8.481e-03 -1.584  
## logits:z_wler:z_joy:z_meta            2.773e-03 3.568e-03  0.777  
##  
## Correlation matrix not shown by default, as p = 20 > 12.  
## Use print(x, correlation=TRUE)  or  
## vcov(x)      if you need it
```

## FRANCE

```
summary(reltime.dep.r[[8]])  
  
## Linear mixed model fit by REML ['lmerMod']  
## Formula: z_relttime ~ logits * z_wler * z_joy * z_meta + logits * z_escs +  
##           logits * gender + (1 | user) + (1 | task) + (1 | schoolID)  
## Data: totdata  
##  
## REML criterion at convergence: 40994.5  
##  
## Scaled residuals:  
##     Min      1Q  Median      3Q     Max  
## -7.7260 -0.4332  0.0672  0.5676  5.0408  
##  
## Random effects:  
##   Groups    Name        Variance Std.Dev.  
##   user      (Intercept) 0.04733  0.2176  
##   schoolID (Intercept) 0.03783  0.1945  
##   task      (Intercept) 0.54947  0.7413  
##   Residual          0.31186  0.5584  
## Number of obs: 23164, groups: user, 1229; schoolID, 139; task, 29  
##  
## Fixed effects:  
##                               Estimate Std. Error t value  
## (Intercept)                2.838e-02 1.391e-01  0.204  
## logits                   1.940e-01 1.319e-01  1.471  
## z_wler                    5.735e-02 1.098e-02  5.226  
## z_joy                     1.402e-02 9.145e-03  1.533  
## z_meta                    1.711e-02 9.259e-03  1.848  
## z_escs                   -6.990e-04 8.924e-03 -0.078  
## gender                    -2.818e-02 1.581e-02 -1.783  
## logits:z_wler              7.992e-02 4.622e-03 17.293  
## logits:z_joy               9.656e-03 4.220e-03  2.288  
## z_wler:z_joy              -4.196e-02 9.106e-03 -4.609  
## logits:z_meta              2.528e-02 4.263e-03  5.930  
## z_wler:z_meta              -2.409e-02 8.863e-03 -2.718  
## z_joy:z_meta               3.255e-03 9.360e-03  0.348  
## logits:z_escs              1.471e-02 3.881e-03  3.791  
## logits:gender              -1.498e-02 7.411e-03 -2.021  
## logits:z_wler:z_joy         -5.926e-05 4.158e-03 -0.014  
## logits:z_wler:z_meta       -1.377e-02 4.099e-03 -3.359  
## logits:z_joy:z_meta        8.493e-03 4.347e-03  1.954  
## z_wler:z_joy:z_meta       -8.931e-03 7.956e-03 -1.123  
## logits:z_wler:z_joy:z_meta -7.259e-03 3.755e-03 -1.933  
##  
## Correlation matrix not shown by default, as p = 20 > 12.  
## Use print(x, correlation=TRUE) or  
## vcov(x)      if you need it
```

## HONG KONG-CHINA

```
summary(reltime.dep.r[[9]])  
  
## Linear mixed model fit by REML ['lmerMod']  
## Formula: z_reltim ~ logits * z_wler * z_joy * z_meta + logits * z_escs +  
##           logits * gender + (1 | user) + (1 | task) + (1 | schoolID)  
## Data: totdata  
##  
## REML criterion at convergence: 47423.2  
##  
## Scaled residuals:  
##     Min      1Q  Median      3Q     Max  
## -8.6530 -0.4576  0.0749  0.5751  5.0880  
##  
## Random effects:  
##   Groups    Name        Variance Std.Dev.  
##   user      (Intercept) 0.07526  0.2743  
##   schoolID (Intercept) 0.01934  0.1391  
##   task      (Intercept) 0.48773  0.6984  
##   Residual          0.31707  0.5631  
## Number of obs: 26363, groups: user, 1414; schoolID, 149; task, 29  
##  
## Fixed effects:  
##                               Estimate Std. Error t value  
## (Intercept)                0.0257292  0.1308639  0.197  
## logits                     0.2733781  0.1242599  2.200  
## z_wler                      0.1128891  0.0106540 10.596  
## z_joy                        0.0075330  0.0098541  0.764  
## z_meta                      0.0118104  0.0095845  1.232  
## z_escs                     -0.0148641  0.0096490 -1.540  
## gender                      -0.0077939  0.0182167 -0.428  
## logits:z_wler                 0.0851231  0.0039376 21.618  
## logits:z_joy                  -0.0001528  0.0039679 -0.039  
## z_wler:z_joy                 -0.0307202  0.0092519 -3.320  
## logits:z_meta                  0.0203596  0.0037803  5.386  
## z_wler:z_meta                 -0.0204662  0.0097769 -2.093  
## z_joy:z_meta                   0.0039935  0.0092640  0.431  
## logits:z_escs                 -0.0008435  0.0035220 -0.240  
## logits:gender                  -0.0095701  0.0071014 -1.348  
## logits:z_wler:z_joy              -0.0054448  0.0037262 -1.461  
## logits:z_wler:z_meta              -0.0092447  0.0039022 -2.369  
## logits:z_joy:z_meta               0.0097015  0.0037197  2.608  
## z_wler:z_joy:z_meta              -0.0013527  0.0082742 -0.163  
## logits:z_wler:z_joy:z_meta       -0.0051889  0.0032907 -1.577  
##  
## Correlation matrix not shown by default, as p = 20 > 12.  
## Use print(x, correlation=TRUE) or  
## vcov(x) if you need it
```

## HUNGARY

```
summary(reltime.dep.r[[10]])  
  
## Linear mixed model fit by REML ['lmerMod']  
## Formula: z_relttime ~ logits * z_wler * z_joy * z_meta + logits * z_escs +  
##           logits * gender + (1 | user) + (1 | task) + (1 | schoolID)  
## Data: totdata  
##  
## REML criterion at convergence: 58978.6  
##  
## Scaled residuals:  
##     Min      1Q  Median      3Q     Max  
## -7.8815 -0.4635  0.0739  0.5790  5.1363  
##  
## Random effects:  
##   Groups    Name        Variance Std.Dev.  
##   user      (Intercept) 0.07283  0.2699  
##   schoolID (Intercept) 0.06950  0.2636  
##   task      (Intercept) 0.52179  0.7223  
##   Residual          0.32599  0.5710  
## Number of obs: 32296, groups: user, 1697; schoolID, 183; task, 29  
##  
## Fixed effects:  
##                               Estimate Std. Error t value  
## (Intercept)                0.0279211  0.1362062  0.205  
## logits                     0.0852025  0.1284990  0.663  
## z_wler                     0.1103056  0.0117395  9.396  
## z_joy                      0.0245857  0.0097652  2.518  
## z_meta                     0.0236275  0.0095750  2.468  
## z_escs                    -0.0055431  0.0099282 -0.558  
## gender                     -0.0417261  0.0174533 -2.391  
## logits:z_wler               0.0844795  0.0041926 20.149  
## logits:z_joy                 0.0165859  0.0038672  4.289  
## z_wler:z_joy                -0.0277722  0.0093990 -2.955  
## logits:z_meta                0.0124419  0.0037750  3.296  
## z_wler:z_meta                -0.0352753  0.0090655 -3.891  
## z_joy:z_meta                  0.0002081  0.0090962  0.023  
## logits:z_escs                 0.0116916  0.0035576  3.286  
## logits:gender                  0.0152210  0.0067017  2.271  
## logits:z_wler:z_joy            -0.0058423  0.0036807 -1.587  
## logits:z_wler:z_meta            0.0054401  0.0035248  1.543  
## logits:z_joy:z_meta             -0.0021435  0.0036474 -0.588  
## z_wler:z_joy:z_meta              -0.0069749  0.0083151 -0.839  
## logits:z_wler:z_joy:z_meta       0.0013905  0.0032918  0.422  
##  
## Correlation matrix not shown by default, as p = 20 > 12.  
## Use print(x, correlation=TRUE)  or  
##   vcov(x)      if you need it
```

## IRELAND

```
summary(reltime.dep.r[[11]])  
  
## Linear mixed model fit by REML ['lmerMod']  
## Formula: z_relttime ~ logits * z_wler * z_joy * z_meta + logits * z_escs +  
##           logits * gender + (1 | user) + (1 | task) + (1 | schoolID)  
## Data: totdata  
##  
## REML criterion at convergence: 47101.4  
##  
## Scaled residuals:  
##     Min      1Q  Median      3Q     Max  
## -7.2241 -0.4542  0.0623  0.5679  6.7081  
##  
## Random effects:  
##   Groups    Name        Variance Std.Dev.  
##   user      (Intercept) 0.06698  0.2588  
##   schoolID (Intercept) 0.01533  0.1238  
##   task      (Intercept) 0.53232  0.7296  
##   Residual          0.33854  0.5818  
## Number of obs: 25383, groups: user, 1336; schoolID, 138; task, 29  
##  
## Fixed effects:  
##                               Estimate Std. Error t value  
## (Intercept)                0.058497  0.136562  0.428  
## logits                     0.223507  0.129808  1.722  
## z_wler                      0.106858  0.010748  9.942  
## z_joy                      -0.013426  0.010027 -1.339  
## z_meta                      0.012107  0.009935  1.219  
## z_escs                     -0.007404  0.009200 -0.805  
## gender                      -0.073981  0.019784 -3.739  
## logits:z_wler               0.085295  0.004503 18.941  
## logits:z_joy                 0.017716  0.004241  4.177  
## z_wler:z_joy                -0.037002  0.009687 -3.820  
## logits:z_meta                0.020451  0.004241  4.823  
## z_wler:z_meta               -0.044622  0.009262 -4.818  
## z_joy:z_meta                 0.020508  0.009626  2.130  
## logits:z_escs                0.012129  0.003796  3.195  
## logits:gender                -0.051209  0.007358 -6.960  
## logits:z_wler:z_joy          -0.015207  0.004115 -3.695  
## logits:z_wler:z_meta         -0.001348  0.003909 -0.345  
## logits:z_joy:z_meta          0.011709  0.004122  2.840  
## z_wler:z_joy:z_meta          -0.001710  0.008802 -0.194  
## logits:z_wler:z_joy:z_meta   -0.011188  0.003766 -2.971  
##  
## Correlation matrix not shown by default, as p = 20 > 12.  
## Use print(x, correlation=TRUE) or  
## vcov(x) if you need it
```

## ICELAND

```
summary(reltime.dep.r[[12]])  
  
## Linear mixed model fit by REML ['lmerMod']  
## Formula: z_relttime ~ logits * z_wler * z_joy * z_meta + logits * z_escs +  
##           logits * gender + (1 | user) + (1 | task) + (1 | schoolID)  
## Data: totdata  
##  
## REML criterion at convergence: 31391.8  
##  
## Scaled residuals:  
##     Min      1Q  Median      3Q     Max  
## -6.5155 -0.4716  0.0636  0.5727  5.3201  
##  
## Random effects:  
##   Groups    Name        Variance Std.Dev.  
##   user      (Intercept) 0.08177  0.2860  
##   schoolID (Intercept) 0.03651  0.1911  
##   task      (Intercept) 0.50926  0.7136  
##   Residual          0.30517  0.5524  
## Number of obs: 17706, groups: user, 930; schoolID, 118; task, 29  
##  
## Fixed effects:  
##                               Estimate Std. Error t value  
## (Intercept)                0.0727291  0.1346775  0.540  
## logits                     0.1784689  0.1269983  1.405  
## z_wler                     0.0938934  0.0139102  6.750  
## z_joy                      0.0187610  0.0134241  1.398  
## z_meta                     0.0685132  0.0126794  5.404  
## z_escs                     0.0035419  0.0122506  0.289  
## gender                     -0.0800009  0.0237055 -3.375  
## logits:z_wler               0.0884024  0.0050754 17.418  
## logits:z_joy                 0.0278401  0.0050364  5.528  
## z_wler:z_joy                -0.0147675  0.0126909 -1.164  
## logits:z_meta                0.0243258  0.0046860  5.191  
## z_wler:z_meta                -0.0415023  0.0132873 -3.123  
## z_joy:z_meta                 0.0051857  0.0128922  0.402  
## logits:z_escs                0.0093826  0.0042026  2.233  
## logits:gender                -0.0300063  0.0088396 -3.395  
## logits:z_wler:z_joy            -0.0060642  0.0047456 -1.278  
## logits:z_wler:z_meta            0.0002083  0.0050166  0.042  
## logits:z_joy:z_meta             -0.0135004  0.0048541 -2.781  
## z_wler:z_joy:z_meta             -0.0177122  0.0117512 -1.507  
## logits:z_wler:z_joy:z_meta      -0.0178667  0.0044126 -4.049  
##  
## Correlation matrix not shown by default, as p = 20 > 12.  
## Use print(x, correlation=TRUE)  or  
##   vcov(x)      if you need it
```

## JAPAN

```
summary(reltime.dep.r[[13]])  
  
## Linear mixed model fit by REML ['lmerMod']  
## Formula: z_relttime ~ logits * z_wler * z_joy * z_meta + logits * z_escs +  
##           logits * gender + (1 | user) + (1 | task) + (1 | schoolID)  
## Data: totdata  
##  
## REML criterion at convergence: 36805.9  
##  
## Scaled residuals:  
##     Min      1Q  Median      3Q     Max  
## -7.4050 -0.4401  0.0728  0.5702  6.0162  
##  
## Random effects:  
##   Groups    Name        Variance Std.Dev.  
##   user      (Intercept) 0.050038 0.2237  
##   schoolID (Intercept) 0.005084 0.0713  
##   task      (Intercept) 0.538224 0.7336  
##   Residual             0.292944 0.5412  
## Number of obs: 21591, groups: user, 1155; schoolID, 41; task, 29  
##  
## Fixed effects:  
##                               Estimate Std. Error t value  
## (Intercept)                3.755e-02 1.372e-01  0.274  
## logits                   3.066e-01 1.305e-01  2.349  
## z_wler                    6.208e-02 9.900e-03  6.271  
## z_joy                     -3.323e-03 8.839e-03 -0.376  
## z_meta                    2.596e-02 9.156e-03  2.835  
## z_escs                    -7.010e-03 8.307e-03 -0.844  
## gender                    -2.952e-02 1.646e-02 -1.793  
## logits:z_wler              5.694e-02 4.404e-03 12.929  
## logits:z_joy               1.138e-02 4.113e-03  2.768  
## z_wler:z_joy               -3.004e-02 9.268e-03 -3.241  
## logits:z_meta              1.631e-02 4.249e-03  3.837  
## z_wler:z_meta              -3.475e-02 7.838e-03 -4.433  
## z_joy:z_meta               -9.924e-05 9.167e-03 -0.011  
## logits:z_escs              5.402e-04 3.727e-03  0.145  
## logits:gender              -3.331e-03 7.328e-03 -0.455  
## logits:z_wler:z_joy         -1.151e-02 4.337e-03 -2.654  
## logits:z_wler:z_meta       2.403e-03 3.537e-03  0.679  
## logits:z_joy:z_meta        -9.094e-03 4.287e-03 -2.121  
## z_wler:z_joy:z_meta        1.663e-02 7.508e-03  2.215  
## logits:z_wler:z_joy:z_meta 9.616e-03 3.580e-03  2.686  
##  
## Correlation matrix not shown by default, as p = 20 > 12.  
## Use print(x, correlation=TRUE) or  
## vcov(x) if you need it
```

## KOREA

```
summary(reltime.dep.r[[14]])  
  
## Linear mixed model fit by REML ['lmerMod']  
## Formula: z_relttime ~ logits * z_wler * z_joy * z_meta + logits * z_escs +  
##           logits * gender + (1 | user) + (1 | task) + (1 | schoolID)  
## Data: totdata  
##  
## REML criterion at convergence: 44291.9  
##  
## Scaled residuals:  
##     Min      1Q  Median      3Q     Max  
## -8.5776 -0.5049  0.0356  0.5843  5.0573  
##  
## Random effects:  
##   Groups    Name        Variance Std.Dev.  
##   user      (Intercept) 0.048342 0.21987  
##   schoolID (Intercept) 0.009676 0.09837  
##   task      (Intercept) 0.605911 0.77840  
##   Residual          0.262225 0.51208  
## Number of obs: 27747, groups: user, 1452; schoolID, 156; task, 29  
##  
## Fixed effects:  
##                               Estimate Std. Error t value  
## (Intercept)                0.0075137  0.1451831  0.052  
## logits                     0.3184548  0.1384461  2.300  
## z_wler                      0.0702556  0.0086875  8.087  
## z_joy                      -0.0136792  0.0079172 -1.728  
## z_meta                     -0.0008088  0.0081448 -0.099  
## z_escs                     -0.0059644  0.0075862 -0.786  
## gender                      0.0207125  0.0160945  1.287  
## logits:z_wler                 0.0525028  0.0037021 14.182  
## logits:z_joy                  0.0102025  0.0034752  2.936  
## z_wler:z_joy                 -0.0257047  0.0080068 -3.210  
## logits:z_meta                 0.0144125  0.0035535  4.056  
## z_wler:z_meta                 -0.0269155  0.0074082 -3.633  
## z_joy:z_meta                  0.0099389  0.0085101  1.168  
## logits:z_escs                  0.0060148  0.0031621  1.902  
## logits:gender                  -0.0232316  0.0061515 -3.777  
## logits:z_wler:z_joy              -0.0091503  0.0035384 -2.586  
## logits:z_wler:z_meta              -0.0080725  0.0032493 -2.484  
## logits:z_joy:z_meta              -0.0017260  0.0037257 -0.463  
## z_wler:z_joy:z_meta               0.0097852  0.0066612  1.469  
## logits:z_wler:z_joy:z_meta       -0.0007676  0.0029303 -0.262  
##  
## Correlation matrix not shown by default, as p = 20 > 12.  
## Use print(x, correlation=TRUE)  or  
##   vcov(x)      if you need it
```

## MACAO-CHINA

```
summary(reltime.dep.r[[15]])  
  
## Linear mixed model fit by REML ['lmerMod']  
## Formula: z_reltim ~ logits * z_wler * z_joy * z_meta + logits * z_escs +  
##           logits * gender + (1 | user) + (1 | task) + (1 | schoolID)  
## Data: totdata  
##  
## REML criterion at convergence: 79837.5  
##  
## Scaled residuals:  
##     Min      1Q  Median      3Q     Max  
## -6.8419 -0.4657  0.0755  0.5971  4.8925  
##  
## Random effects:  
##   Groups    Name        Variance Std.Dev.  
##   user      (Intercept) 0.0590   0.2429  
##   schoolID (Intercept) 0.0101   0.1005  
##   task      (Intercept) 0.5437   0.7374  
##   Residual          0.3129   0.5594  
## Number of obs: 45159, groups: user, 2484; schoolID, 44; task, 29  
##  
## Fixed effects:  
##                               Estimate Std. Error t value  
## (Intercept)                0.023531  0.138116  0.170  
## logits                   0.282478  0.131133  2.154  
## z_wler                    0.064964  0.007027  9.244  
## z_joy                     0.004082  0.006505  0.628  
## z_meta                    0.020181  0.006319  3.194  
## z_escs                  -0.005521  0.006530 -0.845  
## gender                   -0.057001  0.013343 -4.272  
## logits:z_wler              0.082359  0.002924 28.169  
## logits:z_joy               0.010472  0.002959  3.540  
## z_wler:z_joy              -0.035497  0.005946 -5.970  
## logits:z_meta              0.008193  0.002827  2.899  
## z_wler:z_meta              -0.018532  0.005982 -3.098  
## z_joy:z_meta               0.010976  0.006033  1.819  
## logits:z_escs              -0.004210  0.002636 -1.597  
## logits:gender              -0.035217  0.005482 -6.424  
## logits:z_wler:z_joy         -0.005182  0.002696 -1.922  
## logits:z_wler:z_meta       -0.005293  0.002711 -1.953  
## logits:z_joy:z_meta        0.004680  0.002729  1.715  
## z_wler:z_joy:z_meta        -0.003488  0.004796 -0.727  
## logits:z_wler:z_joy:z_meta  0.000584  0.002158  0.271  
##  
## Correlation matrix not shown by default, as p = 20 > 12.  
## Use print(x, correlation=TRUE) or  
## vcov(x) if you need it
```

## NORWAY

```
summary(reltime.dep.r[[16]])  
  
## Linear mixed model fit by REML ['lmerMod']  
## Formula: z_relttime ~ logits * z_wler * z_joy * z_meta + logits * z_escs +  
##           logits * gender + (1 | user) + (1 | task) + (1 | schoolID)  
## Data: totdata  
##  
## REML criterion at convergence: 65906.6  
##  
## Scaled residuals:  
##     Min      1Q  Median      3Q     Max  
## -6.9347 -0.4695  0.0699  0.5882  5.4459  
##  
## Random effects:  
##   Groups    Name        Variance Std.Dev.  
##   user      (Intercept) 0.09095  0.3016  
##   schoolID (Intercept) 0.04201  0.2050  
##   task      (Intercept) 0.49699  0.7050  
##   Residual          0.32188  0.5673  
## Number of obs: 36225, groups: user, 1902; schoolID, 180; task, 29  
##  
## Fixed effects:  
##                               Estimate Std. Error t value  
## (Intercept)                0.057244  0.132362  0.432  
## logits                   0.155333  0.125401  1.239  
## z_wler                    0.124379  0.010045 12.382  
## z_joy                     0.027718  0.009575  2.895  
## z_meta                    0.018637  0.009529  1.956  
## z_escs                   -0.017145  0.008464 -2.026  
## gender                    -0.046346  0.016521 -2.805  
## logits:z_wler              0.088568  0.003661 24.192  
## logits:z_joy               0.020895  0.003484  5.997  
## z_wler:z_joy              -0.038098  0.009071 -4.200  
## logits:z_meta              0.013133  0.003485  3.769  
## z_wler:z_meta              -0.031871  0.008699 -3.664  
## z_joy:z_meta               0.005453  0.009119  0.598  
## logits:z_escs              0.008089  0.003011  2.687  
## logits:gender              -0.002817  0.006195 -0.455  
## logits:z_wler:z_joy         0.005351  0.003340  1.602  
## logits:z_wler:z_meta       -0.010576  0.003189 -3.316  
## logits:z_joy:z_meta        0.006972  0.003372  2.068  
## z_wler:z_joy:z_meta        0.010477  0.007235  1.448  
## logits:z_wler:z_joy:z_meta -0.006182  0.002646 -2.337  
##  
## Correlation matrix not shown by default, as p = 20 > 12.  
## Use print(x, correlation=TRUE) or  
## vcov(x) if you need it
```

## NEW ZEALAND

```
summary(reltime.dep.r[[17]])  
  
## Linear mixed model fit by REML ['lmerMod']  
## Formula: z_relttime ~ logits * z_wler * z_joy * z_meta + logits * z_escs +  
##           logits * gender + (1 | user) + (1 | task) + (1 | schoolID)  
## Data: totdata  
##  
## REML criterion at convergence: 57627.8  
##  
## Scaled residuals:  
##     Min      1Q  Median      3Q     Max  
## -8.6919 -0.4483  0.0559  0.5543  5.9463  
##  
## Random effects:  
##   Groups    Name        Variance Std.Dev.  
##   user      (Intercept) 0.07202  0.2684  
##   schoolID (Intercept) 0.01776  0.1333  
##   task      (Intercept) 0.51506  0.7177  
##   Residual          0.31920  0.5650  
## Number of obs: 32018, groups: user, 1687; schoolID, 145; task, 29  
##  
## Fixed effects:  
##                               Estimate Std. Error t value  
## (Intercept)                0.082621  0.134302  0.615  
## logits                     0.248355  0.127667  1.945  
## z_wler                     0.039673  0.010137  3.914  
## z_joy                      0.022617  0.009560  2.366  
## z_meta                     0.030140  0.009099  3.313  
## z_escs                     0.001423  0.008562  0.166  
## gender                     -0.084643  0.018097 -4.677  
## logits:z_wler               0.083812  0.004145 20.218  
## logits:z_joy                 0.019575  0.003916  4.999  
## z_wler:z_joy                -0.038587  0.008335 -4.629  
## logits:z_meta                0.026124  0.003693  7.074  
## z_wler:z_meta                -0.054956  0.008651 -6.352  
## z_joy:z_meta                 -0.007776  0.008692 -0.895  
## logits:z_escs                0.014060  0.003347  4.201  
## logits:gender                -0.024666  0.006580 -3.748  
## logits:z_wler:z_joy            -0.004029  0.003415 -1.180  
## logits:z_wler:z_meta            -0.009812  0.003521 -2.787  
## logits:z_joy:z_meta             -0.003769  0.003568 -1.056  
## z_wler:z_joy:z_meta              0.008354  0.007541  1.108  
## logits:z_wler:z_joy:z_meta       -0.008195  0.003093 -2.649  
##  
## Correlation matrix not shown by default, as p = 20 > 12.  
## Use print(x, correlation=TRUE)  or  
##   vcov(x)      if you need it
```

## SWEDEN

```
summary(reltime.dep.r[[18]])  
  
## Linear mixed model fit by REML ['lmerMod']  
## Formula: z_relttime ~ logits * z_wler * z_joy * z_meta + logits * z_escs +  
##           logits * gender + (1 | user) + (1 | task) + (1 | schoolID)  
## Data: totdata  
##  
## REML criterion at convergence: 60013.5  
##  
## Scaled residuals:  
##     Min      1Q  Median      3Q     Max  
## -7.5557 -0.4573  0.0601  0.5658  7.2498  
##  
## Random effects:  
##   Groups    Name        Variance Std.Dev.  
##   user      (Intercept) 0.09023  0.3004  
##   schoolID (Intercept) 0.01655  0.1286  
##   task      (Intercept) 0.51615  0.7184  
##   Residual          0.31514  0.5614  
## Number of obs: 33405, groups: user, 1760; schoolID, 179; task, 29  
##  
## Fixed effects:  
##                               Estimate Std. Error t value  
## (Intercept)                0.057478  0.134343  0.428  
## logits                     0.180142  0.127795  1.410  
## z_wler                     0.099934  0.010909  9.161  
## z_joy                      0.033944  0.009941  3.415  
## z_meta                     0.036033  0.009873  3.650  
## z_escs                     0.013914  0.008960  1.553  
## gender                     -0.046800  0.017448 -2.682  
## logits:z_wler               0.083891  0.003981 21.074  
## logits:z_joy                 0.016122  0.003656  4.410  
## z_wler:z_joy                -0.059004  0.009217 -6.402  
## logits:z_meta                0.024040  0.003554  6.765  
## z_wler:z_meta                -0.032187  0.009473 -3.398  
## z_joy:z_meta                  0.013395  0.009719  1.378  
## logits:z_escs                 0.014289  0.003251  4.395  
## logits:gender                 -0.009078  0.006511 -1.394  
## logits:z_wler:z_joy            -0.003371  0.003404 -0.990  
## logits:z_wler:z_meta            -0.007445  0.003479 -2.140  
## logits:z_joy:z_meta              0.006074  0.003582  1.696  
## z_wler:z_joy:z_meta             -0.001965  0.007550 -0.260  
## logits:z_wler:z_joy:z_meta       -0.008223  0.002824 -2.912  
##  
## Correlation matrix not shown by default, as p = 20 > 12.  
## Use print(x, correlation=TRUE)  or  
##   vcov(x)      if you need it
```

## POLAND

```
summary(reltime.dep.r[[19]])  
  
## Linear mixed model fit by REML ['lmerMod']  
## Formula: z_relttime ~ logits * z_wler * z_joy * z_meta + logits * z_escs +  
##           logits * gender + (1 | user) + (1 | task) + (1 | schoolID)  
## Data: totdata  
##  
## REML criterion at convergence: 64567.1  
##  
## Scaled residuals:  
##     Min      1Q  Median      3Q     Max  
## -7.4776 -0.4517  0.0846  0.5843  6.0711  
##  
## Random effects:  
##   Groups    Name        Variance Std.Dev.  
##   user      (Intercept) 0.07727  0.2780  
##   schoolID (Intercept) 0.03958  0.1990  
##   task      (Intercept) 0.51983  0.7210  
##   Residual          0.33562  0.5793  
## Number of obs: 34848, groups: user, 1823; schoolID, 179; task, 29  
##  
## Fixed effects:  
##                               Estimate Std. Error t value  
## (Intercept)                0.0345132  0.1352000  0.255  
## logits                     0.1280651  0.1282504  0.999  
## z_wler                     0.1186544  0.0097934 12.116  
## z_joy                      0.0303593  0.0093314  3.253  
## z_meta                     0.0219008  0.0086709  2.526  
## z_escs                    -0.0072311  0.0090855 -0.796  
## gender                     -0.0154860  0.0162692 -0.952  
## logits:z_wler               0.0722339  0.0038003 19.008  
## logits:z_joy                 0.0301760  0.0036981  8.160  
## z_wler:z_joy                -0.0440774  0.0089072 -4.949  
## logits:z_meta                0.0132562  0.0034573  3.834  
## z_wler:z_meta                -0.0353538  0.0086649 -4.080  
## z_joy:z_meta                  0.0073892  0.0088199  0.838  
## logits:z_escs                 0.0171354  0.0033031  5.188  
## logits:gender                 -0.0004848  0.0065622 -0.074  
## logits:z_wler:z_joy            -0.0167438  0.0035482 -4.719  
## logits:z_wler:z_meta            -0.0027351  0.0034280 -0.798  
## logits:z_joy:z_meta              0.0058511  0.0035184  1.663  
## z_wler:z_joy:z_meta              0.0048202  0.0078101  0.617  
## logits:z_wler:z_joy:z_meta       0.0001627  0.0030763  0.053  
##  
## Correlation matrix not shown by default, as p = 20 > 12.  
## Use print(x, correlation=TRUE)  or  
##   vcov(x)      if you need it
```