R code used for ciritcal data analysis. All analyses were conducted using R version 3.4.1 (R Core Development Team, 2016).

#Data frame preparation

data<-read.csv(“filepath.csv”)

data$SCHOOL<-as.factor(data$SCHOOL)

data$GROUP<-as.factor(data$GROUP)

data$DAY<-as.factor(data$DAY)

library("lme4")

library("lmerTest")

library("lmtest")

#fitting models with PM as outcome

model1<-lmer(PM~GROUP\*DAY+(1|subject)+(1|SCHOOL), data=data, REML=FALSE)

model2<-lmer(PM~GROUP+DAY+(1|subject)+(1|SCHOOL), data=data, REML=FALSE)

model3<-lmer(PM~ DAY+(1|subject)+(1|SCHOOL), data=data, REML=FALSE)

model4<-lmer(PM~ GROUP+(1|subject)+(1|SCHOOL), data=data, REML=FALSE)

lrtest(model1,model2)

#not significant, accept model 2

lrtest(model2,model3)

#significant, accept model 2

lrtest(model2,model4)

#significant, accept model 2

library(“MuMin”)

library(“r2glmm”)

#estimate effect sizes for the accepted model

r.squaredGLMM(model2)

#estimates partial effect sizes for the model predictors

r2beta(model2, partial=TRUE, method='kr')

#fitting models with DM as outcome

model1<-lmer(DM~GROUP\*DAY+(1|subject)+(1|SCHOOL), data=data, REML=FALSE)

model2<-lmer(DM~GROUP+DAY+(1|subject)+(1|SCHOOL), data=data, REML=FALSE)

lrtest(model1,model2)

#significant, accept model 1

#estimate effect sizes for the accepted model

r.squaredGLMM(model2)

#estimates partial effect sizes for the model predictors

r2beta(model1, partial=TRUE, method='kr')

#follow-up t-tests

DLD1<-data[data$GROUP=="1" & data$DAY=="0", c("DM")]

DLD2<-data[data$GROUP=="1" & data$DAY=="1", c("DM")]

t.test(DLD1, DLD2, paired = TRUE, alternative = "two.sided")

TD1<-data[data$GROUP=="0" & data$DAY=="0", c("DM")]

TD2<-data[data$GROUP=="0" & data$DAY=="1", c("DM")]

t.test(TD1, TD2, paired = TRUE, alternative = "two.sided")

#Supplementary analyses:

Day1<-data[data$DAY==”0”, c(“PM”, “DM”, “Spelling”, “token\_test”)]

model<-lm(Spelling~DM+PM, data=Day1)

summary(model)

r2beta(model, partial=TRUE, method='kr')

Day2<-data[data$DAY==”1”, c(“PM”, “DM”, “Spelling”, “token\_test”)]

model<-lm(Spelling~DM+PM, data=Day2)

summary(model)

Day1<-data[data$DAY==”0”, c(“PM”, “DM”, “Spelling”, “token\_test”)]

model<-lm(token\_test ~DM+PM, data=Day1)

summary(model)

r2beta(model, partial=TRUE, method='kr')

Day2<-data[data$DAY==”1”, c(“PM”, “DM”, “Spelling”, “token\_test”)]

model<-lm(token\_test ~DM+PM, data=Day2)

summary(model)