**Proofreading by students: implication of executive and non-executive components of working memory in revising a text containing typographical, lexical or grammatical errors**

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Supplementary Material 1

**Text used for the detection of typographic errors**

*(errors are in bold only for the article, but not for participants)*

Le bureau de mon père se trouvait **toujousr** dans un entrepôt de Newark. Bien des années plus tôt, on fabriquait des sous-vêtements ici. Cette époque était révolue. Maintenant on recevait des produits finis en **proveanance** d'Indonésie, de Malaisie ou d'un autre de ces coins du monde où l'on fait travailler les enfants. Tout le **mnde** sait que des abus sont commis et tout le monde continue à en **proftier**. Les clients continuent à acheter ces **prduits** parce qu'ils sont moins chers, et pour être juste, toute cette affaire est moralement fumeuse. C'est facile d'être contre le **travial** des gamins, facile d'être contre le fait de payer un gosse de douze ans dix centimes de l'heure. Facile de **condanmer** les parents et de dénoncer une telle exploitation. C'est un peu plus **diffciile** quand le choix, c'est dix centimes ou crever de faim, l'**exploitatoin** ou la mort.

Et c'est encore plus facile de ne pas trop y penser.

Trente ans auparavant, quand on fabriquait des sous-vêtements à Newark, mon père avait des tas de **travailleusr** noirs qui bossaient pour lui. Il pensait être bon **avc** eux. Il pensait qu'ils le considéraient comme un patron **bienviellant**. Mais, quand les émeutes avaient éclaté en 1968, ces mêmes travailleurs avaient brûlé quatre des cinq **bâtimnets** de son usine. Après cela, il ne les avait plus **jamias** regardés de la même manière.

Eloïse Williams était avec mon père bien **avnat** les émeutes. « Tant qu'il me restera un souffle, disait-il **souvnt**, Eloïse aura un travail. » Elle était comme une seconde épouse pour lui. Ils se **dispsutaient**, s'engueulaient, se faisaient la tête. Leur **afflection** mutuelle était sincère. Ma mère le savait bien sûr. « Dieu merci, Eloïse est plus **laidre** qu'une vache née à Tchernobyl, aimait-elle dire. Sinon je me poserais des **quetsions** ».

Extrait de *Temps mort.* Harlan Coben

Supplementary Material 2

**Text used for the detection of lexical errors**

*(errors are in bold only for the article, but not for participants)*

Le bus de campagne d'Arthur Bradford arborait **évidamment** des rayures rouges et bleues et de grosses étoiles blanches. BRADFORD GOUVERNEUR était inscrit sur les **flants** en caractères 3-D obliques. Stylisés. Les vitres étaient **tintées** de façon à ce que le grand dirigeant ne soit pas offert au regard du **vulguère**. Chacun a le droit de se sentir chez soi.

Arthur Bradford se tenait près de la porte du car, micro en main. Frère Chance était juste derrière lui, **montran** sa dentition au cas où la caméra s'**atarderait** sur lui. C'était le sourire regardez-comme-notre-candidat-est-génial de celui qui a **voccation** à servir d'ombre à son suzerain. A sa droite, se trouvait Terence Edwards, le cousin de Brenda. Egalement affublé d'un sourire aussi naturel qu'une pub pour **dantifrice** blancheur. Tous deux arboraient des **chapaux** cotillons que les politiciens en campagne distribuent au bon peuple.

La foule clairsemée était **essentiellemment** composée de vieux. De très vieux. Ils semblaient distraits comme si on les avait attirés ici avec la promesse d'un **buffé** gratuit. D'autres passants **ralantissaient** pour voir ce qui se passait, un peu comme ces gens qui se coagulent autour d'un accident en espérant voir un peu de sang. Les sbires de Bradford se **mélaient** au public, distribuant **pencartes**, pin's et même quelques-uns de ces couvre-chefs grotesques, arborant tous le slogan BRADFORD GOUVERNEUR en lettrage **conpliqué**. De temps à autre, ils **intérompaient** leur distribution pour se mettre à **aplaudir** et le reste de la foule les imitait sans conviction. Quelques médias locaux avaient envoyés des équipes, des **corespondants** visiblement peinés par ce qu'ils étaient en train de faire, se demandant ce qui était le pire : rendre compte d'un énième **discour** en conserve ou bien se faire démembrer par une **tronçoneuse**. A en juger par leurs expressions, ils étaient prêts à jouer à pile ou face.

Extrait de *Temps mort*. Harlan Coben

Supplementary Material 3

**Text used for the detection of grammatical errors**

*(errors are in bold only for the article, but not for participants)*

La Ford Taurus passa lentement devant le vieux terrain de jeux. Des visages **noir** se tournèrent vers lui. Un cinq contre cinq avait lieu avec des tas de gosses autour du terrain qui **attendait** de prendre les vainqueurs. Les baskets de supermarché de l'époque de Myron **avait** disparu, remplacées par des pompes à plus de cent **dollar** que ces gamins pouvaient difficilement s'offrir. Myron grimaça. Il aurait aimé adopter une attitude noble sur le sujet – la corruption des **valeur**, le matérialisme et tout le reste –, cependant, en tant qu'agent sportif qui régulièrement **faisaient** son beurre grâce à des contrats avec des **grande** marques, de telles notions posaient un léger problème de conscience. Cela ne lui plaisait pas forcément, mais il n'allait pas non plus être **hypocrites**.

Plus **personnes** ne jouait en short. Tous les mômes étaient en jeans *larges* noirs ou parfois **bleu**, autrement dit des sacs à deux jambes, le genre de fringues qu'un clown aurait **portée** pour faire rire. La taille sous les fesses, histoire de montrer la **marques** très classe des slips ou des caleçons. Myron n'était pas du genre à radoter sur la mode des jeunes, toutefois, en comparaison, les pattes d'éph et les semelles **compensés** paraissaient vraiment très **pratique**. Comment faire du basket si tu dois sans cesse t'arrêter pour remonter ton pantalon ?

Mais le plus grand changement, c'étaient les **regard**. Quand il s'était pointé sur ce terrain pour la première fois, **âgée** de quinze ans, il était mort de trouille. Pourtant il savait que, s'il voulait améliorer son jeu, il devait coûte que coûte **affronté** les meilleurs. Et donc venir jouer ici. Au début, il n'avait pas été le **bienvenus**. Loin de là. Mais l'animosité curieuse dont il avait été l'objet à l'époque **n'avaient** rien de commun avec les regards **glacées** de ces gosses.

Extrait de *Temps mort*. Harlan Coben

Supplementary Material 4

**Text used for the error correction task**

Le bureau de mon père se trouvait toujousr dans un entrepôt de Newark. Bien des années plus tôt, on fabriquait des sous-vêtements ici. Cette époque était révolue. Maintenant on recevait des produits finis en proveanance d'Indonésie, de Malaisie ou d'un autre de ces coins du monde où l'on fait travailler les enfants. Tout le mnde sait que des abus sont commis et tout le monde continue à en proftier. Les clients continuent à acheter ces prduits parce qu'ils sont moins chers, et pour être juste, toute cette affaire est moralement fumeuse. C'est facile d'être contre le travial des gamins, facile d'être contre le fait de payer un gosse de douze ans dix centimes de l'heure. Facile de condanmer les parents et de dénoncer une telle exploitation. C'est un peu plus diffciile quand le choix, c'est dix centimes ou crever de faim, l'exploitatoin ou la mort.

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Eloïse Williams était avec mon père bien avnat les émeutes. « Tant qu'il me restera un souffle, disait-il souvnt, Eloïse aura un travail. » Elle était comme une seconde épouse pour lui. Ils se dispsutaient, s'engueulaient, se faisaient la tête. Leur afflection mutuelle était sincère. Ma mère le savait bien sûr. « Dieu merci, Eloïse est plus laidre qu'une vache née à Tchernobyl, aimait-elle dire. Sinon je me poserais des quetsions ».

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Supplementary Material 5

**Text used for the comprehension task**

Pour rester dans la métaphore cinématographique, façon *Autant en emporte le vent*, un Noir déguisé en majordome avec queue-de-pie et chevelure grise assortie, répondit à la porte. Après s'être incliné, il les pria de le suivre. Deux gorilles habillés comme des types des services secrets étaient postés dans le vestibule. Myron regarda Win. Celui-ci hocha la tête. C'étaient bien des gorilles. Pas des types des services secrets. Le plus costaud des deux leur sourit comme s'ils étaient des saucisses de cocktail qu'on ramenait en cuisine. L'autre, nettement plus âgé, faisait presque chétif. Myron repensa à la description que Mabel Edwards avait donnée de ses agresseurs. Difficile d'en être certain tant qu'il ne pourrait pas vérifier la présence du tatouage, mais l'hypothèse n'était pas à écarter.

Extrait de *Temps mort.* Harlan Coben

**Questions:**

- Quelles sont les caractéristiques présentées par la personne qui ouvre la porte au début du passage ?
- Quel indice permettrait de savoir que les « gorilles » sont les agresseurs de Mabel Edwards ?

Supplementary Material 6

## Short-term and working memory tasks

### Non-executive working memory tasks (short term storage)

***Forward verbal storage task*** *(digit span test, adapted from Fournier-Vicente et al., 2008)*. The participants were presented orally in an audio headset with series of digits at a rate of one digit per second, and were asked to recall them in the same order to their presentation. The test consisted of 22 series, three for each set size from two (i.e. series 3, 6) to seven digits (i.e. series 4, 1, 9, 6, 3, 2, 7) and two series for each set size from eight to nine digits, presented in ascending order. There was no time limit for recall: in every trial, a click on the button « I finished » on the computer screen allowed to pass on trial following. Two series of two and three digits served as practice trials. The dependent measure was the number of correctly recalled series. A series of digits was considered as correctly recalled when every digit of the series was recalled according to the instruction (here in the same order to their presentation).

***Forward location storage task*** *(location span test, adapted from Fournier-Vicente et al., 2008)*. The participants were presented with a 5 x 5 matrix on the computer screen in which increasingly long series of locations were sequentially presented (one cell at a time turned black for 1500 milliseconds). Immediately after each sequence presentation, the participants had to reproduce the sequence of locations in the same order to their presentation, by clicking with the mouse on the corresponding cells in the now empty matrix. There was no time limit for recall, and the participant could correct its answer before validating it. In every trial, a click on the button « I finished » on the computer screen allowed to pass on trial following. The test consisted of 22 series, three for each set size from two to seven locations, and two series for each set size from eight to nine locations, presented in ascending order. Two series of two and three locations each served as practice trials. The dependent measure was the number of correctly recalled sequences. A series of locations was considered as correctly recalled when every cells of the series was recalled according to the instruction (here in the same order to their presentation).

### Executive working memory tasks (executive functions)

***Backward digit span task*** *(adapted from Fournier-Vicente et al., 2008)***.** The method, the type of material and the dependent measure used for this task are the same that for the forward verbal storage task (see before) with one exception: participants had to recall the series of digits in the opposite order to their presentation. The test consisted of 18 series, three for each set size from two to seven digits, presented in ascending order.

***Verbal transposed span task*** *(adapted from Fournier-Vicente et al., 2008)*. The method, the type of material and the dependent measure used for this task are the same that for the forward verbal storage task (see before) with one exception: after each list presentation, a cue (either ‘‘+1” or ‘‘-1”) appeared on the computer screen indicating that the participant had to mentally add/subtract the numeral 1 to/from each of the list’s digits, before recalling the resulting series in correct serial order an indication. For example, a three-digit series was orally presented (3, 9, 6), immediately followed by the cue presentation on the computer screen (-1), thus indicating that the participant had to mentally subtract 1 from each digit before recalling the resulting list in the correct serial order (2, 8, 5). The participants were informed that result calculations could be negative and would be between 0 and 10. The cues ‘‘+1” and ‘‘-1” occurred equally frequently throughout the whole task so that the

participants could not anticipate the next cue to appear. The test consisted of 18 series, three for each set size from two to seven digits, presented in ascending order.

***Backward location span task*** *(adapted from Fournier-Vicente et al., 2008).* The method, the type of material and the dependent measure used for this task are the same that for the forward location task (see before) with one exception: the participants had to reproduce the sequence of locations in the opposite order to their presentation.

The test consisted of 18 series, three for each set size from two to seven digits, presented in ascending order.

***Visuospatial transposed span task*** *(adapted from Fournier-Vicente et al., 2008).* The method, the type of material and the dependent measure used for this task are the same that for the forward location task (see before) with one exception: Immediately after each sequence presentation, either a left-pointing or a right-pointing arrow appeared at the bottom of the now empty matrix to indicate whether the participant had to move the whole sequence of locations one row to the left or right, while keeping them in the initial order of presentation, by clicking on the corresponding locations with the mouse. The participants were informed that any cell located at the edge of the grid and therefore had to be moved ‘‘out” of the grid had to be omitted from the response. Right- and left-pointing arrows occurred equally frequently throughout the whole task. The test consisted of 18 series, three for each set size from two to seven digits, presented in ascending order.

***Semantic verbal fluency task*** *(adapted from Fournier-Vicente et al., 2008)***.** This task is thought to call upon the general capability to strategically search and retrieve a certain type of information from long-term memory. The participants were given one minute to generate aloud as many words as possible belonging to the animal category. The dependent measure was the number of produced animal names minus the number of repetitions and ‘intruders’ (produced words not belonging to the target category).

***Random letter generation task*** *(adapted from Baddeley, 1966; Fournier-Vicente et al., 2008).* The participants had to produce a sequence of letters as randomly as possible, at a pace set by a timer (60 beeps emitted per minute = one letter per second for 1 min and 40 s, i.e. a total of 100 letters had to be produced). Standard random-generation instructions were given. These also emphasized the importance of maintaining the rhythm. The participants completed a brief practice session consisting of 10 beeps. The random sequences produced were analyzed using Towse and Neil’s (1998) RgCalc program, which computes various ‘‘randomness” indices. A set of commonly used indices was initially derived and we used a PCA to reduce the data. The obtained four-factor solution globally replicated Towse and Neil’s results and indicated that indices sensitive to the tendency to produce stereotyped responses, thus reflecting the ability to monitor retrieval strategies and to shift between them when appropriate, loaded on Factor 1 (Turning Point Index, Runs, Total Adjacency, RNG score, NSQ score, loadings > .70 except RNG score (=.54)). Consequently, the factor scores for Factor 1 were used as the dependent variable for asses the skill to produce a good random sequence in the random letter generation task.

***Trail Making test*** *(adapted from Reitan & Wolfson, 1985).* We used a paper-and-pencil version of the task, compound of two parts, A and B. The task for the participant is to draw lines as quickly as possible to connect the elements in sequence, without errors and without raising the pencil. In part A, the participant was to draw lines to connect 25 circled numbers in a numerical sequence (i.e., 1-2-3, etc.) and in part B, the participant was to draw lines to connect circled numbers (1 to 12) and letters (A to L) in an alternating numeric and alphabetic sequence (i.e., 1-A-2-B, etc.). If the participant made an error, he had to cure as quickly as possible as soon as the experimenter indicates him the error. Before each part, the participants completed a short practice trial consisting of 8 stimuli each. Reaction times (in seconds) were recorded for each part. Indicators used classically to assess the shift-cost in part

B (flexibility coast) are the simple reaction time difference (*B–A*) and the reaction time ratio (*B*/*A*) indices. According to Salthouse (2011), the simple difference (B–A) primarily reflects speed, and the ratio measure does not completely eliminate the influence of speed, but it does so to a much greater extent than the simple difference. Thus, we chose to use B/A ratio to compute the shift cost.

***Plus-minus task*** *(adapted from Spector & Biederman, 1976; Miyake et al., 2000; Fournier-Vicente et al., 2008)*. In this task, the participants were presented with a sheet of A4 paper containing three lists of 15 two-digit numbers (numbers from 10 to 99 randomly assigned to one of the three lists). They were instructed to add 3 to each number on the first list and to subtract 3 from each number on the second list, each time writing down their answers. Finally, on the third list, the participants had to alternate between adding 3 to and subtracting 3 from the numbers (starting by adding 3 to the first number). After a practice session consisting of three short lists of four numbers each, the participants were instructed to complete each list as quickly and accurately as possible and the total time to complete each list was recorded (reaction time, in seconds). The dependent measure was the shift cost calculated as a reaction time ratio between the time to complete the alternating list and the average of the times to complete the first two lists in which no shift (reaction time list 3/(( reaction time list 1+ reaction time list 2)/2).

***The Stroop-numerical test*** *(adapted from Stroop, 1935; Fournier-Vicente et al., 2008)*. This test consisted of three parts, A, B and C, presented successively. In all cases, the stimulus cards contained 100 stimuli consisting of 10 lines of 10 stimuli each. In part A, the participants were presented with blocks of two, three, four or five arrows each (e.g., ↑↑↑↑) and were instructed to say aloud the number of arrows in each block. In part B, they were presented with rows of digits whose value varied from 2 to 5 and were instructed to read aloud the digits. Finally, in part C, the stimuli consisted of digits presented in blocks of two, three, four or five digits each with all digits in a block possessing the same value (e.g., 2222) but with no correspondence between the number of digits in a block and the value of the contained digit. The participants were instructed to say aloud the number of digits in each block, irrespective of the value of the digits. In every part, the participants were instructed to perform as quickly as possible and without error. Before each part, the participants received a short practice trial consisting of 10 stimuli each. Reaction times (in seconds) were recorded for each part, and the dependent measure was the reaction time ratio between part C in which the number of digits and the digit value in each block were incongruent and part A consisted of blocks of arrows (reaction time C/ reaction time A).

***The d2 target detection task*** *(Brickenkamp, 1998)***.** This test is originally known as a concentration test, and is considered as a measure of selective attention (Brickenkamp & Karl, 1986, quoted from the French manual of the d2 task, ECPA, 1998). It is classically used in clinical neuropsychology to assess selective attention ability (Leclercq & Zimmermann, 2000). In this paper-and-pencil task, the participants were asked to cross out as fast and accurately as possible the target signs (the letter ‘‘d” with a double apostrophe placed either above or below the letter) randomly distributed among distractors (the letter “d” associated with one, three or four apostrophes and the letter “p” associated with one, two, three, or four apostrophes) on a sheet of A4 paper. Fourteen lines of 47 signs each were presented on the sheet. The participants were given 20 s per line to cross out as many target signs as possible. They received a short practice trial consisting of a 22-stimulus line. The dependent measure was the total number of signs examined minus the total number of errors and omissions.

Supplementary Material 7

Table A

*Pearson correlation coefficients between executives measures (N = 80)*

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|
| 1. Fluency | | | | | | | | | |
| 2. RG | .41** | | | | | | | | |
| 3. V-Bspan | .15 | .11 | | | | | | | |
| 4. V-Tspan | .17 | .10 | .61** | | | | | | |
| 5. VSP-Bspan | .11 | -.01 | .24* | .28* | | | | | |
| 6. VSP-Tspan | .05 | .00 | .20 | .33** | .59** | | | | |
| 7. PM | -.14 | -.10 | .04 | -.02 | -.02 | .05 | | | |
| 8. TMT | .17 | .12 | -.22 | -.07 | -.24* | -.31** | -.02 | | |
| 9. Stroop-N | -.04 | -.16 | .05 | -.07 | .02 | .01 | .14 | -.02 | |
| 10. D2 | .08 | -.01 | .18 | .27* | .14 | .32** | .17 | -.12 | .10 |

*Notes.* *$p < .05$; **$p < .01$. Fluency: Semantic verbal fluency (Number of correct items); RG: Random letter generation (factor score); V-Bspan: Backward digit span (number of recalled series); V-Tspan: Verbal transposed span task (number of recalled series); VSP-Bspan: Backward location span task (number of recalled series); VSP-Tspan: Visuospatial transposed span task (number of recalled series); PM: Plus-minus (ratio score); TMT: Trail Making Test (ratio score); Stroop-N: Stroop numerical test (ratio score); D2: d2 target detection task (number of signs correctly processed).

Table B

*Executives measures. adequacy of the different factor solutions (one-, two-, three-, and four-factor solution) to the data: residual analyses and percentage of explained variance*

| | One-Factor | Two-Factor | Three-Factor | Four-Factor |
|---|---|---|---|---|
| *Proportion of correlations uncorrectly reproduced:* % residuals >\| .10\| | 34.00 | 40.75 | 38.00 | 28.00 |
| *Accuracy of reproduction of the correlation coefficients (off-diagonal elements): M*ean (standard deviation) of the absolute values of the residuals | .099 (.088) | .100 (.063) | .101 (.067) | .082 (.072) |
| *Accuracy of reproduction of the variables (diagonal elements):* Mean (standard deviation) of the absolute values of the residuals | .750 (.227) | .588 (.170) | .470 (.077) | .369 (.138) |
| *Explained variance* (%) | 24.61 | 41.15 | 52.97 | 63.11 |

Supplementary Material 8

Table A
*Principal Components analysis of executive measures. Eigenvalue and percentage of explained variance for the four-factor solution before orthogonal rotation*

| | Eigenvalue | % Explained Variance | Cumulative Eigenvalue | Cumulative % of Explained Variance |
|---|---|---|---|---|
| Factor 1 | 2.46 | 24.61 | 2.46 | 24.60 |
| Factor 2 | 1.65 | 16.55 | 4.11 | 41.15 |
| Factor 3 | 1.18 | 11.82 | 5.30 | 52.97 |
| Factor 4 | 1.01 | 10.14 | 6.31 | 63.11 |

Table B
*Principal Components analysis of executive measures. Results of the principal components analysis with varimax rotation*

| Variables | Factor 1 | Factor 2 | Factor 3 | Factor 4 |
|---|---|---|---|---|
| Fluency | 0.10 | **0.83**** | -0.02 | 0.09 |
| RG | -0.03 | **0.73**** | -0.17 | 0.11 |
| V-Bspan | 0.10 | 0.02 | 0.04 | **0.90**** |
| V-Tspan | 0.21 | 0.13 | 0.01 | **0.84**** |
| VSP-Bspan | **0.83**** | 0.05 | -0.02 | 0.11 |
| VSP Tspan | **0.86**** | 0.02 | 0.11 | 0.13 |
| PM | -0.08 | -0.15 | **0.70**** | 0.04 |
| TMT | **-0.49*** | **0.46*** | 0.09 | -0.20 |
| Stroop-N | -0,01 | -0,07 | **0.65**** | -0;09 |
| D2 | 0.32 | .14 | **0.56*** | 0.24 |
| Eigenvalue | 1.84 | 1.50 | 1.29 | 1.67 |
| Explained Variance (%) | 18.48 | 15.05 | 12.87 | 16.70 |

*Notes.* *$p < .05$; **$p < .01$ (A factor loading threshold of 0.439 was used to consider a loading as significant at $p < .05$ and a factor loading threshold of .572 at $p < .01$, which corresponds to the double of a correlation coefficient for a given level of significance, according to Gorsuch's method, 1983). Fluency: Semantic verbal fluency (number of correct items); RG: Random letter generation (factor score); V-Bspan: Backward digit span (number of recalled series); V-Tspan: Verbal transposed span task (number of recalled series); VSP-Bspan: Backward location span task (number of recalled series); VSP-Tspan: Visuospatial transposed span task (number of recalled series); PM: Plus-Minus (ratio score); TMT: Trail Making Test (ratio score); Stroop-N = Stroop numerical test (ratio score); D2: d2 target detection task (number of signs correctly processed).

Supplementary Material 9

Table A
*Pearson correlation coefficients between measures of working memory (N = 80).*

| | | 1. | 2. | 3. | 4. | 5. |
|---|---|---|---|---|---|---|
| 1. | V-S | | | | | |
| 2. | VSP-S | .09 | | | | |
| 3. | VSP-Coord | .10 | **.67**** | | | |
| 4. | SR-LTM | .15 | .04 | .00 | | |
| 5. | SHIFT-E | .02 | -.04 | -.00 | .00 | |
| 6. | V-Coord | **.67**** | .00 | -.00 | -.00 | .00 |

*Notes.* ** $p < .01$. V-S: Verbal Storage, number of recalled series at the backward digit span task; VSP-S: Visuospatial storage, number of recalled series at the location storage task; VSP-Coord: Coordination of visuospatial storage and processing, factorial scores on Factor 1 PCA ; SR-LTM: Strategic retrieval in long-term memory, factorial scores on factor 2 PCA; SHIFT-F: Effortful Shifting, factorial scores on Factor 3 PCA; V-Coord: coordination of verbal storage and processing, factorial scores on Factor 4 PCA.

Table B
*Pearson correlation coefficients between measures of errors detection (N = 80).*

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Detection time TYP (sec.) | | | | | | | | | | | | | | |
| 2. Detection time LEX (sec.) | **.78**** | | | | | | | | | | | | | |
| 3. Detection time GRAM (sec.) | **.81**** | **.81**** | | | | | | | | | | | | |
| 4. Detection rate of corrected errors TYP | .14 | .19 | .08 | | | | | | | | | | | |
| 5. Detection rate of corrected errors LEX | **-.36**** | **-.27*** | **-.29**** | .09 | | | | | | | | | | |
| 6. detection rate of corrected errors GRAM | .07 | .04 | .07 | .11 | **.47**** | | | | | | | | | |
| 7. False detection TYP | -.06 | -.07 | .03 | .06 | -.01 | -.01 | | | | | | | | |
| 8. False detection LEX | .08 | .18 | .16 | .15 | -.22 | -.06 | -.02 | | | | | | | |
| 9. False detection GRAM | .14 | .17 | .20 | .02 | -.13 | -.06 | -.09 | **.37**** | | | | | | |
| 10. Efficiency TYP | **--.79**** | **-.57**** | **-.59**** | **.34**** | **.39**** | -.02 | .06 | -.07 | -.14 | | | | | |
| 11. Efficiency LEX | **-.62**** | **-.68**** | **-.60**** | -.02 | **.78**** | **.32**** | .04. | **-.23*** | -.17 | **.61**** | | | | |
| 12. Efficiency GRAM | **-.46**** | **-.50**** | **-.59**** | .09 | **.55**** | **.70**** | -.01 | -.14 | -.16 | **.47**** | **.72**** | | | |
| 13. Detection cost TYP | **.73**** | **.46**** | **.50**** | **.37**** | -.10 | .20 | .04 | .15 | .16 | **-.46**** | **-.23*** | -.11 | | |
| 14. Detection cost LEX | **.53**** | **.71**** | **.54**** | **.44**** | -.01 | .18 | .03 | **.30**** | .20 | **-.24*** | **-.32**** | -.17 | **.76**** | |
| 15. Detection GRAM | **.56**** | **.54**** | **.75**** | **.31**** | -.04 | .19 | .13 | **.23*** | **.23*** | **-.28**** | **-.25*** | **-.30**** | **.76**** | **.81**** |

*Notes.* *$p < .05$; ** $p < .01$. TYP: Typographical errors; LEX: Lexical errors; GRAM: Grammatical errors.

Table C
*Pearson correlation coefficients between measures of working memory and of errors detection (N = 80).*

| | Verbal storage | Visuospatial storage | V-Coord | VSP-Coord | SR-LTM | SHIFT-E |
|---|---|---|---|---|---|---|
| 1. Detection time TYP (sec.) | -14 | .35** | -.20 | .14 | -.06 | -.14 |
| 2. Detection time LEX (sec.) | -.21 | .21 | **-.24*** | .00 | -.07 | -.20 |
| 3. Detection time GRAM (sec.) | **-.30**** | .21 | **-.27*** | .05 | -.18 | -.10 |
| 4. Detection rate of corrected errors TYP | .06 | **.23*** | .20 | .22 | **.22*** | -.12 |
| 5. Detection rate of corrected errors LEX | .06 | -.21 | .17 | -.07 | .09 | **.23*** |
| 6. Detection rate of corrected errors GRAM | .18 | .04 | .12 | -.01 | .20 | .06 |
| 7. False detection TYP | .04 | -.05 | .12 | -.00 | .01 | .02 |
| 8. False detection LEX | -.09 | -.19 | -.09 | -.11 | .03 | -.04 |
| 9. False detection GRAM | .01 | -.20 | .02 | -.20 | -.04 | -.15 |
| 10. Efficiency TYP | .13 | **-.25*** | **.28*** | -.04 | .10 | .11 |
| 11. Efficiency LEX | .16 | **-.29**** | **.29**** | -.16 | .12 | **.31**** |
| 12. Efficiency GRAM | **.29**** | -.11 | **.30**** | -.09 | **.32**** | .17 |
| 13. Detection cost TYP | .11 | .15 | .05 | **.23*** | .12 | .02 |
| 14 Detection cost LEX | .08 | .07 | .02 | .11 | .11 | -.05 |
| 15 Detection cost GRAM | .04 | .01 | -.03 | .14 | -.04 | .05 |

*Notes.* *$p < .05$; ** $p < .01$. V-Coord: Coordination of verbal storage and processing; VSP-Coord: Coordination of visuospatial storage and processing; SR-LTM: Strategic Retrieval in long-term memory; SHIFT-E: Effortful Shifting; TYP: Typographical errors; LEX: Lexical errors; GRAM: Grammatical errors.