

Table 1

Means and Standard Deviations on Control Measures and Equivalence Between Groups

	DYS	CA	SA
Age in years	9.09 (0.61) ^a	9.20 (0.58) ^a	7.65 (0.47) ^b
Non-verbal IQ standardised score	-0.42 (0.66)	-0.17 (0.85)	0.09 (0.74)
Vocabulary standardised score	0.50 (0.89)	0.92 (0.82)	0.93 (1.11)
Word reading			
Raw score	49.74 (13.71) ^a	70.83 (11.96) ^b	45.39 (10.80) ^a
Standardised score	-0.45 (0.77) ^a	0.79 (0.71) ^b	0.50 (0.64) ^b
Word spelling			
Raw score	15.19 (6.94) ^a	5.89 (2.05) ^b	14.61 (4.87) ^a
Standardised score	-3.03 (1.25) ^a	-0.16 (0.55) ^b	-0.26 (0.76) ^b
Handwriting quality			
Raw score	18.74 (6.81)	15.54 (5.31)	16.11 (4.87)
Standardised score	-1.51 (1.65) ^a	-0.81 (1.38) ^{ab}	-0.39 (0.83) ^b
Handwriting speed			
Raw score	187.09 (43.65) ^a	219.61 (49.21) ^b	130.48 (30.16) ^c
Standardised score	-0.13 (0.80) ^a	0.49 (0.92) ^b	0.28 (0.85) ^{ab}

Note. DYS = children with dyslexia; CA = chronological-age matched children; SA = spelling-age matched children. Pairs with different superscript letters a, b, and c differ significantly (Bonferroni contrasts all $ps < .05$).

Table 2

Means and Standard Deviations on Words' Characteristics per List and Equivalence Between Lists

Words characteristics	O-simple;G-simple		O-difficult;G-simple		O-simple;G-difficult		O-difficult;G-difficult	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Number of letters	5.24 ^a	0.91	5.38 ^{ab}	0.53	6.11 ^{ab}	0.85	6.27 ^b	0.67
Digram frequency	2.52	0.35	2.85	0.38	2.81	0.29	2.60	0.32
Success rate for G2 (EOLE)	90.90 ^a	8.14	12.33 ^b	6.16	85.84 ^a	7.91	12.91 ^b	10.08
Graphic complexity index	13.24 ^a	2.21	13.31 ^a	1.56	22.63 ^b	2.42	23.20 ^b	2.81
Example	papa <i>dad</i>		laitue <i>lettuce</i> (silent final letter)		sabre <i>saber</i> (modified link “br”)		brebis <i>ewe</i> (silent final letter; modified link “br”)	

Note. O-simple = orthographically simple words; O-difficult = orthographically difficult words; G-simple = graphically simple words; G-difficult = graphically difficult words; G2 = Grade 2; EOLE = Echelle d’acquisition en orthographe lexicale [lexical spelling acquisition scale]; Pothier & Pothier, 2003. Values with different superscript letters a and b differ significantly (Bonferroni contrasts all $ps < .001$).

Table 3

Descriptive Statistics of the Dependent Variables by Group and by Condition

Group	Condition	Handwriting Quality (2760 words)		Handwriting Speed (2748 words)		Spelling Accuracy (2760 words)	
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
DYS (N = 23)	O-simple;G-simple	1.44	1.15	0.56	0.33	0.93	0.26
	O-difficult;G-simple	1.19	0.96	0.42	0.37	0.06	0.23
	O-simple;G-difficult	1.82	1.31	0.39	0.31	0.69	0.46
	O-difficult;G-difficult	1.53	0.99	0.35	0.38	0.02	0.21
CA (N = 23)	O-simple;G-simple	1.19	0.92	0.55	0.66	0.96	0.18
	O-difficult;G-simple	1.11	0.87	0.45	0.41	0.23	0.45
	O-simple;G-difficult	1.46	1.08	0.43	0.36	0.89	0.31
	O-difficult;G-difficult	1.42	1.04	0.34	0.39	0.26	0.44
SA (N = 23)	O-simple;G-simple	1.43	0.84	0.21	0.37	0.89	0.26
	O-difficult;G-simple	1.31	0.83	0.19	0.46	0.07	0.25
	O-simple;G-difficult	1.83	0.97	0.25	0.38	0.65	0.48
	O-difficult;G-difficult	1.59	0.94	0.24	0.37	0.04	0.20

Note. DYS = children with dyslexia; CA = chronological-age matched children; SA = spelling-age matched children. O-simple = orthographically simple words, O-difficult = orthographically difficult words, G-simple = graphically simple words, G-difficult = graphically difficult words. All scores are average scores coming from the raw scores divided by the number of words written. For handwriting quality, high scores refer to poor performance.

Table 4

Correlations Between Measures

Measure	1	2	3	4	5	6	7	8
1. Receptive vocabulary (ELO)	-							
2. Non-verbal reasoning (WISC)	.28*	-						
3. Word-reading accuracy (LUM)	.10	-.07	-					
4. Handwriting quality (BHK)	-.03	.18	-.13	-				
5. Handwriting speed (BHK)	-.19	-.14	.56**	-.08	-			
6. Spelling accuracy (Chronosdictée) ^a	-.04	.07	-.68**	.23	-.58**	-		
7. Experimental task: spelling accuracy	.08	-.78	.79**	-.21	-.44**	-.71**	-	
8. Experimental task: handwriting quality ^a	.02	.03	-.03*	.46**	-.30*	.34**	-.22	-
9. Experimental task: handwriting speed	-.02	-.24	.01	.12	.15	-.11	-.01	-.09

Note. ^a For the interpretation of the correlations involving handwriting quality scores (BHK and experimental task) and spelling accuracy in Chronosdictées: a higher score refers to a higher number of graphical errors or spelling errors, and a lower score refers to better handwriting or spelling performance.

Table 5

Results from the GLMM Analyses Run on the Three Dependent Variables: Handwriting Quality, Handwriting Speed and Spelling Accuracy

Fixed effects	Handwriting quality					Handwriting speed					Spelling accuracy				
	<i>df1</i>	<i>df2</i>	<i>F</i>	<i>p</i>	ηp^2	<i>df1</i>	<i>df2</i>	<i>F</i>	<i>p</i>	ηp^2	<i>df1</i>	<i>df2</i>	<i>F</i>	<i>p</i>	ηp^2
Graphic complexity	1	1325	8.359	< .001	.39	1	2739	2.671	< .001	.22	1	2751	7.176	< .001	.52
Orthographic complexity	/	/	/	/	/	1	2739	3.244	< .001	.33	1	2751	87.419	< .001	.96
Group	2	1325	1.05	.350	<i>ns</i>	2	2739	4.93	.007	.13	2	2751	2.281	< .001	.46
Group x Graphic complexity	2	1325	4.98	.007	.02	2	2739	1.908	< .001	.28	2	2751	1.009	< .001	.18
Group x Orthographic complexity	/	/	/	/	/	2	2739	497	.007	.13	2	2751	5.04	.007	.07

Note. For effect sizes, the partial eta squared ηp^2 were calculated within repeated measures ANOVAs.