

General Linear Model

[DataSet1] D:\Adiss\24Column.sav

Within-Subjects Factors

Measure: keystrokes

system	Dependent Variable
1	VAR00004
2	VAR00005
3	VAR00006

Descriptive Statistics

	Mean	Std. Deviation	N
Chibipoint (crosshairs ONLY)	4.67	.492	12
Chibipoint (crosshairs AND flyouts)	2.25	.452	12
Tabbing	4.33	1.155	12

Multivariate Tests^a

Effect		Value	F	Hypothesis df	Error df	Sig.
system	Pillai's Trace	.910	50.736 ^b	2.000	10.000	.000
	Wilks' Lambda	.090	50.736 ^b	2.000	10.000	.000
	Hotelling's Trace	10.147	50.736 ^b	2.000	10.000	.000
	Roy's Largest Root	10.147	50.736 ^b	2.000	10.000	.000

Multivariate Tests^a

Effect		Partial Eta Squared
system	Pillai's Trace	.910
	Wilks' Lambda	.910
	Hotelling's Trace	.910
	Roy's Largest Root	.910

a. Design: Intercept
Within Subjects Design: system

b. Exact statistic

Mauchly's Test of Sphericity^a

Measure: keystrokes

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Epsilon ^b
					Greenhouse-Geisser
system	.729	3.159	2	.206	.787

Mauchly's Test of Sphericity^a

Measure: keystrokes

Within Subjects Effect	Epsilon ^b	
	Huynh-Feldt	Lower-bound
system	.896	.500

Tests the null hypothesis that the error covariance matrix of the orthonormalized transformed dependent variables is proportional to an identity matrix.

a. Design: Intercept

Within Subjects Design: system

b. May be used to adjust the degrees of freedom for the averaged tests of significance. Corrected tests are displayed in the Tests of Within-Subjects Effects table.

Tests of Within-Subjects Effects

Measure: keystrokes

Source		Type III Sum of Squares	df	Mean Square	F
system	Sphericity Assumed	41.167	2	20.583	33.543
	Greenhouse-Geisser	41.167	1.574	26.158	33.543
	Huynh-Feldt	41.167	1.791	22.982	33.543
	Lower-bound	41.167	1.000	41.167	33.543
Error(system)	Sphericity Assumed	13.500	22	.614	
	Greenhouse-Geisser	13.500	17.311	.780	
	Huynh-Feldt	13.500	19.704	.685	
	Lower-bound	13.500	11.000	1.227	

Tests of Within-Subjects Effects

Measure: keystrokes

Source		Sig.	Partial Eta Squared
system	Sphericity Assumed	.000	.753
	Greenhouse-Geisser	.000	.753
	Huynh-Feldt	.000	.753
	Lower-bound	.000	.753
Error(system)	Sphericity Assumed		
	Greenhouse-Geisser		
	Huynh-Feldt		
	Lower-bound		

Tests of Within-Subjects Contrasts

Measure: keystrokes

Source	system	Type III Sum of Squares	df	Mean Square	F	Sig.
system	Linear	.667	1	.667	1.000	.339
	Quadratic	40.500	1	40.500	72.243	.000
Error(system)	Linear	7.333	11	.667		
	Quadratic	6.167	11	.561		

Tests of Within-Subjects Contrasts

Measure: keystrokes

Source	system	Partial Eta Squared
system	Linear	.083
	Quadratic	.868
Error(system)	Linear	
	Quadratic	

Tests of Between-Subjects Effects

Measure: keystrokes

Transformed Variable: Average

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Intercept	506.250	1	506.250	915.411	.000	.988
Error	6.083	11	.553			

Estimated Marginal Means

system

Estimates

Measure: keystrokes

system	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
1	4.667	.142	4.354	4.980
2	2.250	.131	1.963	2.537
3	4.333	.333	3.600	5.067

Pairwise Comparisons

Measure: keystrokes

(I) system	(J) system	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b	
					Lower Bound	Upper Bound
1	2	2.417 [*]	.229	.000	1.771	3.062
	3	.333	.333	1.000	-.607	1.273
2	1	-2.417 [*]	.229	.000	-3.062	-1.771
	3	-2.083 [*]	.379	.001	-3.151	-1.016
3	1	-.333	.333	1.000	-1.273	.607
	2	2.083 [*]	.379	.001	1.016	3.151

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Bonferroni.

Multivariate Tests

	Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Pillai's trace	.910	50.736 ^a	2.000	10.000	.000	.910
Wilks' lambda	.090	50.736 ^a	2.000	10.000	.000	.910
Hotelling's trace	10.147	50.736 ^a	2.000	10.000	.000	.910
Roy's largest root	10.147	50.736 ^a	2.000	10.000	.000	.910

Each F tests the multivariate effect of system. These tests are based on the linearly independent pairwise comparisons among the estimated marginal means.

a. Exact statistic