General Linear Model

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

Within-Subjects Factors

Measure: keystrokes

system	Dependent Variable
1	VAR00019
2	VAR00020
3	VAR00021

Descriptive Statistics

	Mean	Std. Deviation	N
Chibipoint (crosshairs ONLY)	5.83	1.115	12
Chibipoint (crosshairs AND flyouts)	3.50	1.087	12
Tabbing	23.33	1.155	12

Multivariate Tests[a]

Effect		Value	F	Hypothesis df	Error df	Sig.
system	Pillai's Trace	.998	3079.255[b]	2.000	10.000	.000
	Wilks' Lambda	.002	3079.255[b]	2.000	10.000	.000
	Hotelling's Trace	615.851	3079.255[b]	2.000	10.000	.000
	Roy's Largest Root	615.851	3079.255[b]	2.000	10.000	.000

Multivariate Tests[a]

Effect		Partial Eta Squared
system	Pillai's Trace	.998
	Wilks' Lambda	.998
	Hotelling's Trace	.998
	Roy's Largest Root	.998

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	.517	6.592	2	.037	.674

Mauchly's Test of Sphericity[a]

Measure: keystrokes

Within Subjects Effect	Epsilon[b] Huynh-Feldt	Lower-bound
system	.735	.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	2820.222	2	1410.111	1304.682
	Greenhouse-Geisser	2820.222	1.349	2090.842	1304.682
	Huynh-Feldt	2820.222	1.470	1918.661	1304.682
	Lower-bound	2820.222	1.000	2820.222	1304.682
Error(system)	Sphericity Assumed	23.778	22	1.081	
	Greenhouse-Geisser	23.778	14.837	1.603	
	Huynh-Feldt	23.778	16.169	1.471	
	Lower-bound	23.778	11.000	2.162	

Tests of Within-Subjects Effects

Measure: keystrokes

Source		Sig.	Partial Eta Squared
system	Sphericity Assumed	.000	.992
	Greenhouse-Geisser	.000	.992
	Huynh-Feldt	.000	.992
	Lower-bound	.000	.992
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	1837.500	1	1837.500	1155.000	.000
	Quadratic	982.722	1	982.722	1721.938	.000
Error(system)	Linear	17.500	11	1.591		
	Quadratic	6.278	11	.571		

Tests of Within-Subjects Contrasts

Measure: keystrokes

Source	system	Partial Eta Squared
system	Linear	.991
	Quadratic	.994
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	4268.444	1	4268.444	2674.532	.000	.996
Error	17.556	11	1.596			

Estimated Marginal Means

system

Estimates

Measure: keystrokes

system	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
1	5.833	.322	5.125	6.542
2	3.500	.314	2.809	4.191
3	23.333	.333	22.600	24.067

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	2.333*	.466	.001	1.019	3.648
	3	-17.500*	.515	.000	-18.952	-16.048
2	1	-2.333*	.466	.001	-3.648	-1.019
	3	-19.833*	.241	.000	-20.513	-19.154
3	1	17.500*	.515	.000	16.048	18.952
	2	19.833*	.241	.000	19.154	20.513

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	.998	3079.255[a]	2.000	10.000	.000	.998
Wilks' lambda	.002	3079.255[a]	2.000	10.000	.000	.998
Hotelling's trace	615.851	3079.255[a]	2.000	10.000	.000	.998
Roy's largest root	615.851	3079.255[a]	2.000	10.000	.000	.998

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