

General Linear Model

[DataSet1] D:\Acads\mtp\Data_Analysis\Results\data.sav

Warnings

Post hoc tests are not performed for Task because there are fewer than three groups.

Post hoc tests are not performed for Information because there are fewer than three groups.

Within-Subjects Factors

Measure: MEASURE_1

Time	Dependent Variable
1	ItemsPickedBeforeEarthquake
2	ItemsPickedDuringEarthquake
3	ItemsPickedAfterEarthquake

Between-Subjects Factors

N		
Task	Book Task	40
	No Task	40
Information	Given	40
	Not Given	40

Descriptive Statistics

	Task	Information	Mean	Std. Deviation	N
ItemsPickedBeforeEarthquake	Book Task	Given	4.50	2.090	20
		Not Given	4.80	2.191	20
		Total	4.65	2.119	40
	No Task	Given	4.05	3.170	20
		Not Given	4.40	2.998	20
		Total	4.22	3.051	40
	Total	Given	4.28	2.660	40
		Not Given	4.60	2.600	40
		Total	4.44	2.619	80
ItemsPickedDuringEarthquake	Book Task	Given	2.55	3.236	20
		Not Given	4.10	2.713	20
		Total	3.33	3.050	40
	No Task	Given	1.40	2.037	20
		Not Given	2.35	2.560	20
		Total	1.87	2.334	40
	Total	Given	1.98	2.731	40
		Not Given	3.22	2.750	40
		Total	2.60	2.795	80
ItemsPickedAfterEarthquake	Book Task	Given	6.65	2.601	20
		Not Given	6.20	4.697	20
		Total	6.43	3.755	40
	No Task	Given	7.10	6.181	20
		Not Given	8.25	7.799	20
		Total	7.67	6.970	40
	Total	Given	6.88	4.686	40
		Not Given	7.23	6.439	40
		Total	7.05	5.598	80

**Box's Test of
Equality of
Covariance
Matrices^a**

Box's M	51.611
F	2.660
df1	18
df2	20410.896
Sig.	.000

Tests the null hypothesis that the observed covariance matrices of the dependent variables are equal across groups.

- a. Design: Intercept + Task + Information + Task * Information
Within Subjects Design: Time

Multivariate Tests^a

Effect		Value	F	Hypothesis df	Error df
Time	Pillai's Trace	.397	24.654 ^b	2.000	75.000
	Wilks' Lambda	.603	24.654 ^b	2.000	75.000
	Hotelling's Trace	.657	24.654 ^b	2.000	75.000
	Roy's Largest Root	.657	24.654 ^b	2.000	75.000
Time * Task	Pillai's Trace	.056	2.208 ^b	2.000	75.000
	Wilks' Lambda	.944	2.208 ^b	2.000	75.000
	Hotelling's Trace	.059	2.208 ^b	2.000	75.000
	Roy's Largest Root	.059	2.208 ^b	2.000	75.000
Time * Information	Pillai's Trace	.022	.824 ^b	2.000	75.000
	Wilks' Lambda	.978	.824 ^b	2.000	75.000
	Hotelling's Trace	.022	.824 ^b	2.000	75.000
	Roy's Largest Root	.022	.824 ^b	2.000	75.000
Time * Task * Information	Pillai's Trace	.009	.357 ^b	2.000	75.000
	Wilks' Lambda	.991	.357 ^b	2.000	75.000
	Hotelling's Trace	.010	.357 ^b	2.000	75.000
	Roy's Largest Root	.010	.357 ^b	2.000	75.000

Multivariate Tests^a

Effect		Sig.	Partial Eta Squared	Noncent. Parameter
Time	Pillai's Trace	.000	.397	49.308
	Wilks' Lambda	.000	.397	49.308
	Hotelling's Trace	.000	.397	49.308
	Roy's Largest Root	.000	.397	49.308
Time * Task	Pillai's Trace	.117	.056	4.415
	Wilks' Lambda	.117	.056	4.415
	Hotelling's Trace	.117	.056	4.415
	Roy's Largest Root	.117	.056	4.415
Time * Information	Pillai's Trace	.442	.022	1.649
	Wilks' Lambda	.442	.022	1.649
	Hotelling's Trace	.442	.022	1.649
	Roy's Largest Root	.442	.022	1.649
Time * Task * Information	Pillai's Trace	.701	.009	.714
	Wilks' Lambda	.701	.009	.714
	Hotelling's Trace	.701	.009	.714
	Roy's Largest Root	.701	.009	.714

Multivariate Tests^a

Effect		Observed Power ^c
Time	Pillai's Trace	1.000
	Wilks' Lambda	1.000
	Hotelling's Trace	1.000
	Roy's Largest Root	1.000
Time * Task	Pillai's Trace	.437
	Wilks' Lambda	.437
	Hotelling's Trace	.437
	Roy's Largest Root	.437
Time * Information	Pillai's Trace	.186
	Wilks' Lambda	.186
	Hotelling's Trace	.186
	Roy's Largest Root	.186
Time * Task * Information	Pillai's Trace	.105
	Wilks' Lambda	.105
	Hotelling's Trace	.105
	Roy's Largest Root	.105

a. Design: Intercept + Task + Information + Task * Information
Within Subjects Design: Time

b. Exact statistic

c. Computed using alpha = .05

Mauchly's Test of Sphericity^a

Measure: MEASURE_1

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Epsilon ^b Greenhouse-Geisser
Time	.638	33.662	2	.000	.734

Mauchly's Test of Sphericity^a

Measure: MEASURE_1

Within Subjects Effect	Epsilon ^b	
	Huynh-Feldt	Lower-bound
Time	.775	.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 + Task + Information + Task * Information
Within Subjects Design: Time

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: MEASURE_1

Source		Type III Sum of Squares	df	Mean Square	F
Time	Sphericity Assumed	800.108	2	400.054	35.832
	Greenhouse-Geisser	800.108	1.469	544.723	35.832
	Huynh-Feldt	800.108	1.550	516.273	35.832
	Lower-bound	800.108	1.000	800.108	35.832
Time * Task	Sphericity Assumed	74.308	2	37.154	3.328
	Greenhouse-Geisser	74.308	1.469	50.590	3.328
	Huynh-Feldt	74.308	1.550	47.948	3.328
	Lower-bound	74.308	1.000	74.308	3.328
Time * Information	Sphericity Assumed	11.108	2	5.554	.497
	Greenhouse-Geisser	11.108	1.469	7.563	.497
	Huynh-Feldt	11.108	1.550	7.168	.497
	Lower-bound	11.108	1.000	11.108	.497
Time * Task * Information	Sphericity Assumed	12.775	2	6.388	.572
	Greenhouse-Geisser	12.775	1.469	8.697	.572
	Huynh-Feldt	12.775	1.550	8.243	.572
	Lower-bound	12.775	1.000	12.775	.572
Error(Time)	Sphericity Assumed	1697.033	152	11.165	
	Greenhouse-Geisser	1697.033	111.631	15.202	
	Huynh-Feldt	1697.033	117.783	14.408	
	Lower-bound	1697.033	76.000	22.329	

Tests of Within-Subjects Effects

Measure: MEASURE_1

Source		Sig.	Partial Eta Squared	Noncent. Parameter
Time	Sphericity Assumed	.000	.320	71.664
	Greenhouse-Geisser	.000	.320	52.631
	Huynh-Feldt	.000	.320	55.532
	Lower-bound	.000	.320	35.832
Time * Task	Sphericity Assumed	.039	.042	6.656
	Greenhouse-Geisser	.054	.042	4.888
	Huynh-Feldt	.051	.042	5.157
	Lower-bound	.072	.042	3.328
Time * Information	Sphericity Assumed	.609	.007	.995
	Greenhouse-Geisser	.552	.007	.731
	Huynh-Feldt	.562	.007	.771
	Lower-bound	.483	.007	.497
Time * Task * Information	Sphericity Assumed	.566	.007	1.144
	Greenhouse-Geisser	.514	.007	.840
	Huynh-Feldt	.523	.007	.887
	Lower-bound	.452	.007	.572
Error(Time)	Sphericity Assumed			
	Greenhouse-Geisser			
	Huynh-Feldt			
	Lower-bound			

Tests of Within-Subjects Effects

Measure: MEASURE_1

Source		Observed Power ^a
Time	Sphericity Assumed	1.000
	Greenhouse-Geisser	1.000
	Huynh-Feldt	1.000
	Lower-bound	1.000
Time * Task	Sphericity Assumed	.623
	Greenhouse-Geisser	.532
	Huynh-Feldt	.547
	Lower-bound	.437
Time * Information	Sphericity Assumed	.131
	Greenhouse-Geisser	.119
	Huynh-Feldt	.121
	Lower-bound	.107
Time * Task * Information	Sphericity Assumed	.144
	Greenhouse-Geisser	.130
	Huynh-Feldt	.132
	Lower-bound	.116
Error(Time)	Sphericity Assumed	
	Greenhouse-Geisser	
	Huynh-Feldt	
	Lower-bound	

a. Computed using alpha = .05

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Time	Type III Sum of Squares	df	Mean Square	F
Time	Linear	273.006	1	273.006	23.433
	Quadratic	527.102	1	527.102	49.358
Time * Task	Linear	28.056	1	28.056	2.408
	Quadratic	46.252	1	46.252	4.331
Time * Information	Linear	.006	1	.006	.001
	Quadratic	11.102	1	11.102	1.040
Time * Task * Information	Linear	6.006	1	6.006	.516
	Quadratic	6.769	1	6.769	.634
Error(Time)	Linear	885.425	76	11.650	
	Quadratic	811.608	76	10.679	

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Time	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power ^a
Time	Linear	.000	.236	23.433	.998
	Quadratic	.000	.394	49.358	1.000
Time * Task	Linear	.125	.031	2.408	.335
	Quadratic	.041	.054	4.331	.538
Time * Information	Linear	.982	.000	.001	.050
	Quadratic	.311	.013	1.040	.172
Time * Task * Information	Linear	.475	.007	.516	.109
	Quadratic	.428	.008	.634	.123
Error(Time)	Linear				
	Quadratic				

a. Computed using alpha = .05

Levene's Test of Equality of Error Variances^a

		Levene Statistic	df1	df2	Sig.
ItemsPickedBeforeEarthquake	Based on Mean	1.593	3	76	.198
	Based on Median	1.279	3	76	.288
	Based on Median and with adjusted df	1.279	3	61.902	.290
	Based on trimmed mean	1.590	3	76	.199
ItemsPickedDuringEarthquake	Based on Mean	.913	3	76	.439
	Based on Median	.609	3	76	.611
	Based on Median and with adjusted df	.609	3	67.713	.611
	Based on trimmed mean	.808	3	76	.493
ItemsPickedAfterEarthquake	Based on Mean	2.755	3	76	.048
	Based on Median	2.182	3	76	.097
	Based on Median and with adjusted df	2.182	3	53.265	.101
	Based on trimmed mean	2.431	3	76	.072

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + Task + Information + Task * Information
Within Subjects Design: Time

Tests of Between-Subjects Effects

Measure: MEASURE_1

Transformed Variable: Average

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Intercept	5292.204	1	5292.204	222.175	.000	.745
Task	2.604	1	2.604	.109	.742	.001
Information	24.704	1	24.704	1.037	.312	.013
Task * Information	1.838	1	1.838	.077	.782	.001
Error	1810.317	76	23.820			

Tests of Between-Subjects Effects

Measure: MEASURE_1

Transformed Variable: Average

Source	Noncent. Parameter	Observed Power ^a
Intercept	222.175	1.000
Task	.109	.062
Information	1.037	.171
Task * Information	.077	.059
Error		

a. Computed using alpha = .05

Estimated Marginal Means

1. Grand Mean

Measure: MEASURE_1

Mean	Std. Error	95% Confidence Interval	
		Lower Bound	Upper Bound
4.696	.315	4.068	5.323

2. Task

Estimates

Measure: MEASURE_1

Task	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Book Task	4.800	.446	3.913	5.687
No Task	4.592	.446	3.704	5.479

Pairwise Comparisons

Measure: MEASURE_1

(I) Task	(J) Task	Mean Difference (I-J)	Std. Error	Sig. ^a	95% Confidence Interval for Difference ^a	
					Lower Bound	Upper Bound
Book Task	No Task	.208	.630	.742	-1.047	1.463
No Task	Book Task	-.208	.630	.742	-1.463	1.047

Based on estimated marginal means

a. Adjustment for multiple comparisons: Bonferroni.

Univariate Tests

Measure: MEASURE_1

	Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Contrast	.868	1	.868	.109	.742	.001
Error	603.439	76	7.940			

Univariate Tests

Measure: MEASURE_1

	Noncent. Parameter	Observed Power ^a
Contrast	.109	.062
Error		

The F tests the effect of Task. This test is based on the linearly independent pairwise comparisons among the estimated marginal means.

a. Computed using alpha = .05

3. Information

Estimates

Measure: MEASURE_1

Information	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Given	4.375	.446	3.488	5.262
Not Given	5.017	.446	4.129	5.904

Pairwise Comparisons

Measure: MEASURE_1

(I) Information	(J) Information	Mean Difference (I-J)	Std. Error	Sig. ^a	95% Confidence Interval for Difference ^a	
					Lower Bound	Upper Bound
Given	Not Given	-.642	.630	.312	-1.897	.613
Not Given	Given	.642	.630	.312	-.613	1.897

Based on estimated marginal means

a. Adjustment for multiple comparisons: Bonferroni.

Univariate Tests

Measure: MEASURE_1

	Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Contrast	8.235	1	8.235	1.037	.312	.013
Error	603.439	76	7.940			

Univariate Tests

Measure: MEASURE_1

	Noncent. Parameter	Observed Power ^a
Contrast	1.037	.171
Error		

The F tests the effect of Information. This test is based on the linearly independent pairwise comparisons among the estimated marginal means.

a. Computed using alpha = .05

4. Time

Estimates

Measure: MEASURE_1

Time	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
1	4.437	.297	3.846	5.029
2	2.600	.299	2.005	3.195
3	7.050	.632	5.791	8.309

Pairwise Comparisons

Measure: MEASURE_1

(I) Time	(J) Time	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b	
					Lower Bound	Upper Bound
1	2	1.837 [*]	.358	.000	.961	2.714
	3	-2.613 [*]	.540	.000	-3.934	-1.291
2	1	-1.837 [*]	.358	.000	-2.714	-.961
	3	-4.450 [*]	.647	.000	-6.033	-2.867
3	1	2.613 [*]	.540	.000	1.291	3.934
	2	4.450 [*]	.647	.000	2.867	6.033

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	.397	24.654 ^a	2.000	75.000	.000	.397
Wilks' lambda	.603	24.654 ^a	2.000	75.000	.000	.397
Hotelling's trace	.657	24.654 ^a	2.000	75.000	.000	.397
Roy's largest root	.657	24.654 ^a	2.000	75.000	.000	.397

Multivariate Tests

	Noncent. Parameter	Observed Power ^b
Pillai's trace	49.308	1.000
Wilks' lambda	49.308	1.000
Hotelling's trace	49.308	1.000
Roy's largest root	49.308	1.000

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

a. Exact statistic

b. Computed using alpha = .05

5. Task * Information

Measure: MEASURE_1

Task	Information	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
Book Task	Given	4.567	.630	3.312	5.822
	Not Given	5.033	.630	3.778	6.288
No Task	Given	4.183	.630	2.928	5.438
	Not Given	5.000	.630	3.745	6.255

6. Task * Time

Measure: MEASURE_1

Task	Time	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
Book Task	1	4.650	.420	3.814	5.486
	2	3.325	.422	2.484	4.166
	3	6.425	.894	4.645	8.205
No Task	1	4.225	.420	3.389	5.061
	2	1.875	.422	1.034	2.716
	3	7.675	.894	5.895	9.455

7. Information * Time

Measure: MEASURE_1

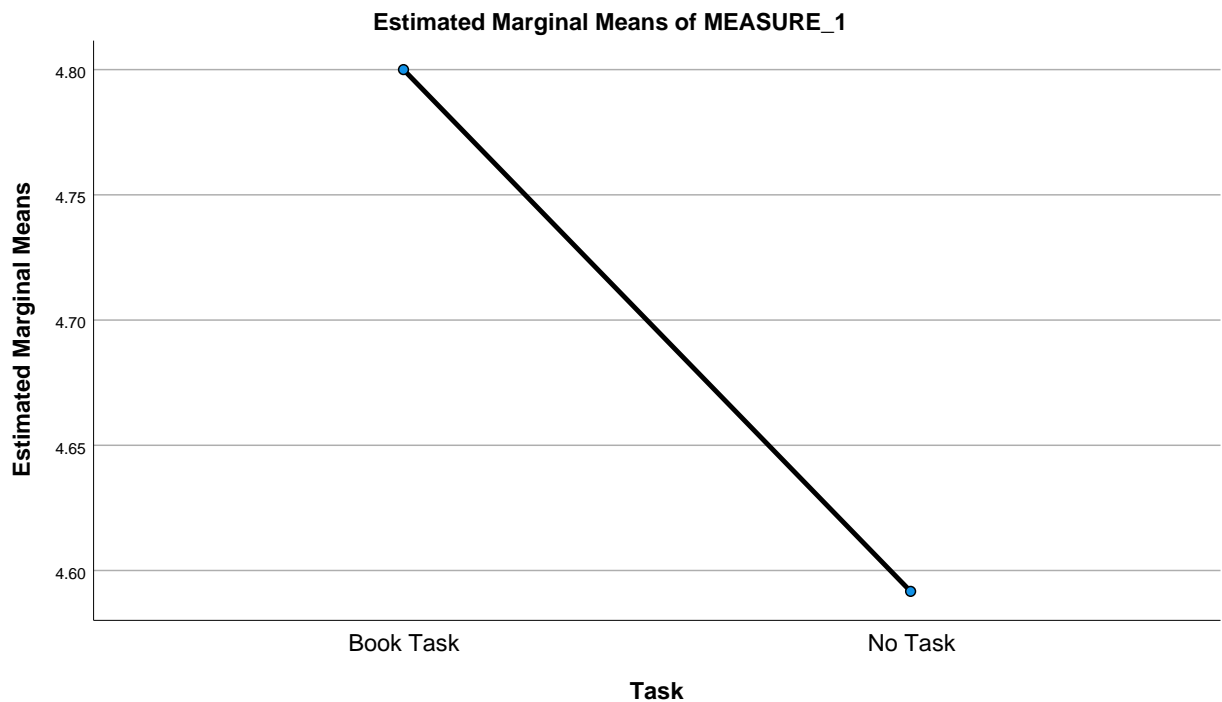
Information	Time	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
Given	1	4.275	.420	3.439	5.111
	2	1.975	.422	1.134	2.816
	3	6.875	.894	5.095	8.655
Not Given	1	4.600	.420	3.764	5.436
	2	3.225	.422	2.384	4.066
	3	7.225	.894	5.445	9.005

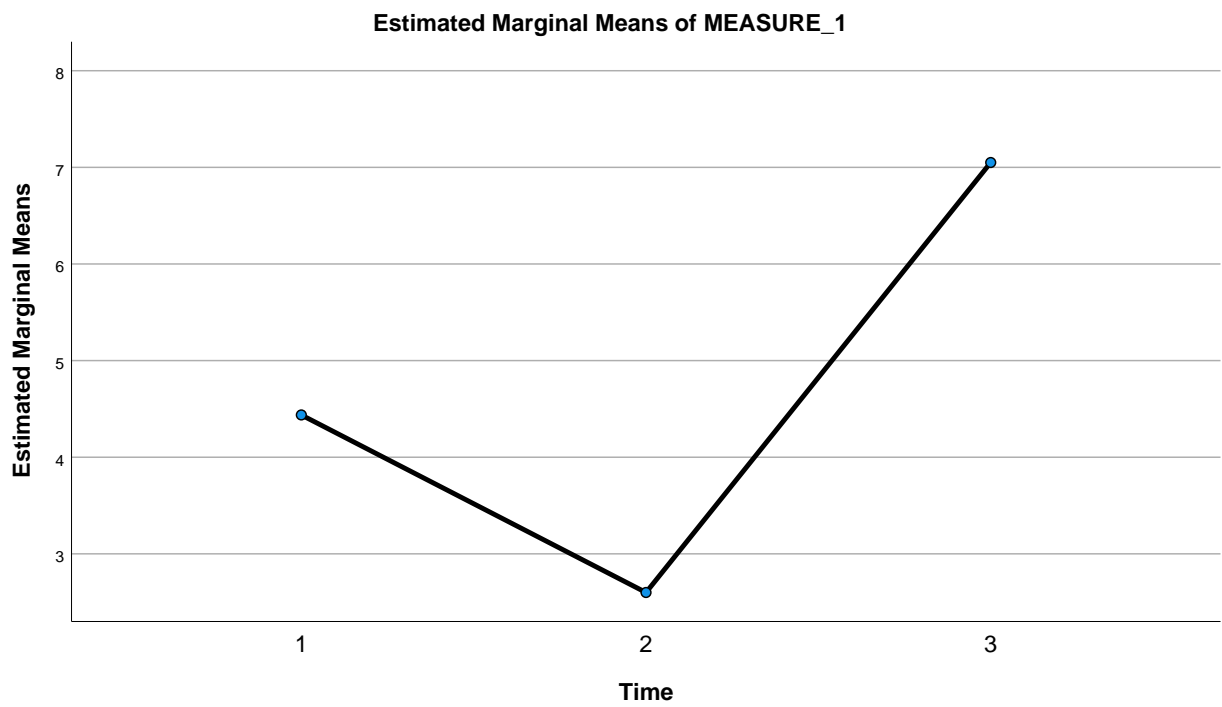
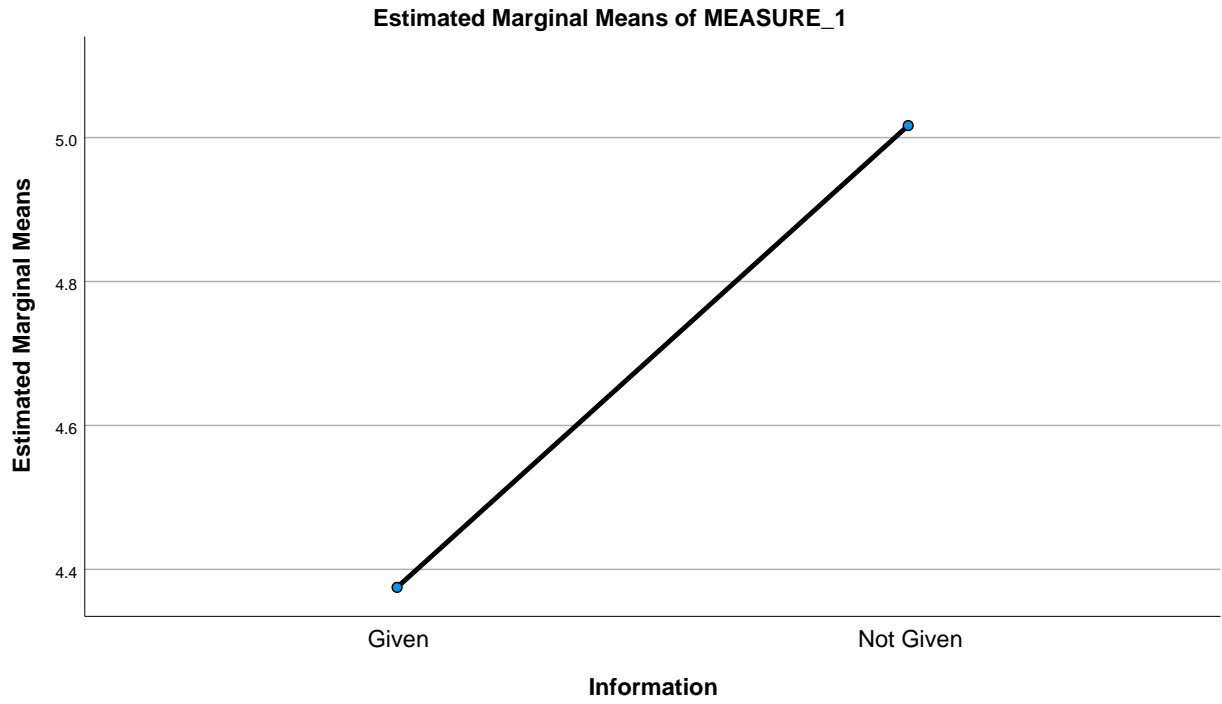
8. Task * Information * Time

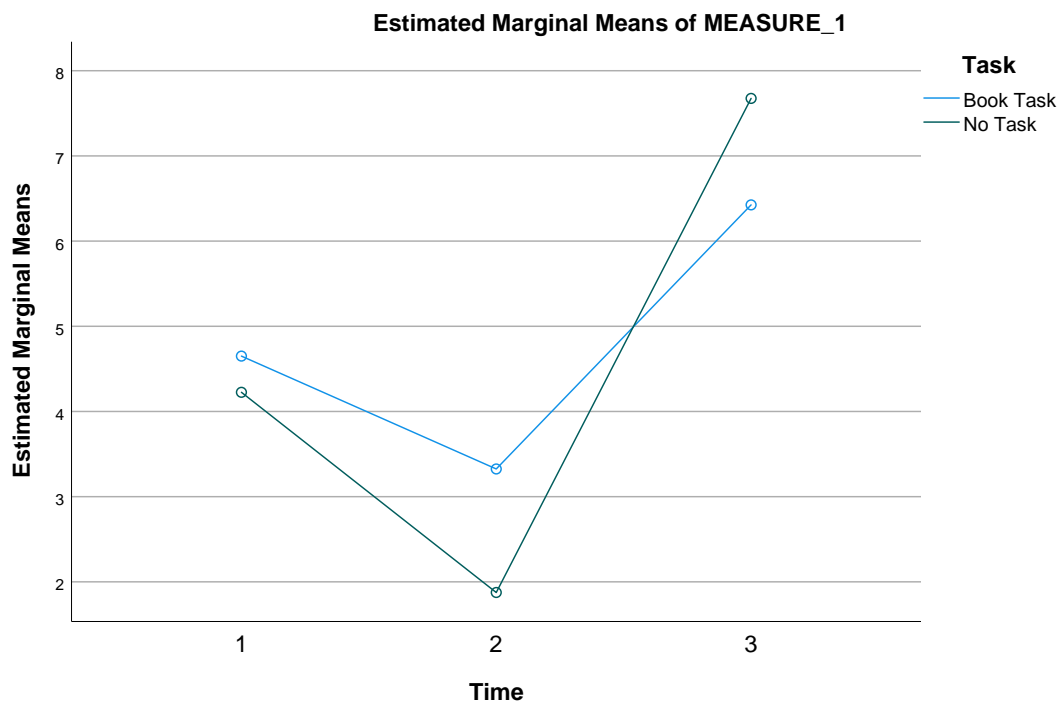
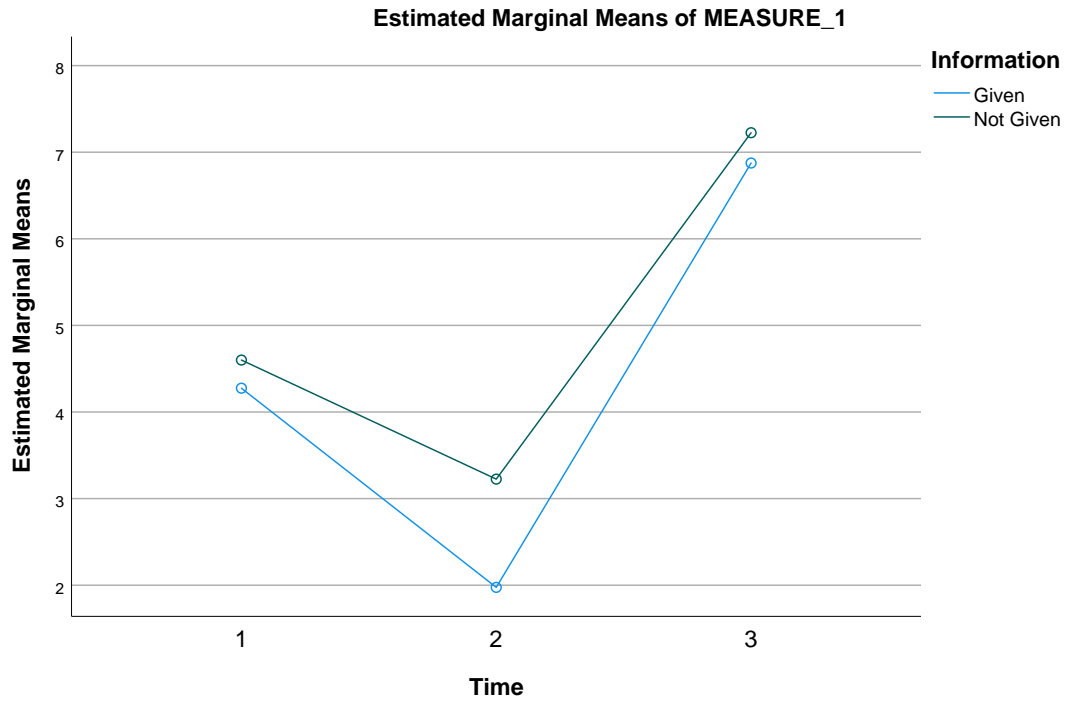
Measure: MEASURE_1

Task	Information	Time	Mean	Std. Error	95% Confidence Interval	
					Lower Bound	Upper Bound
Book Task	Given	1	4.500	.594	3.317	5.683
		2	2.550	.597	1.361	3.739
		3	6.650	1.264	4.132	9.168
	Not Given	1	4.800	.594	3.617	5.983
		2	4.100	.597	2.911	5.289
		3	6.200	1.264	3.682	8.718
No Task	Given	1	4.050	.594	2.867	5.233
		2	1.400	.597	.211	2.589
		3	7.100	1.264	4.582	9.618
	Not Given	1	4.400	.594	3.217	5.583
		2	2.350	.597	1.161	3.539
		3	8.250	1.264	5.732	10.768

Profile Plots







Time * Information * Task

