

# NNS Evaluation

In this exercise, we examined an essay written in Japanese by a non-native speaker of Japanese. The essay was evaluated for three categories - Content, Organization, and Grammar - by 14 native and 14 non-native speakers of Japanese. Scores were given on a scale of 0-10. The purpose of this exercise was to determine whether there was a difference in the average evaluation score between the two groups.

We found that NNS had a higher standard deviation (SD = 2.31) on the total score allotted. Native speakers were much more consistent with their interpretation of the essay (SD = 1.7).

```
DESCRIPTIVES VARIABLES=VAR00003 VAR00004 VAR00005 VAR00006
/STATISTICS=MEAN STDDEV MIN MAX.
```

## Descriptives

### Notes

Output Created		29-APR-2016 11:24:18
Comments		
Input	Active Dataset	0
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	28
Missing Value Handling	Definition of Missing	User defined missing values are treated as missing.
	Cases Used	All non-missing data are used.
Syntax		DESCRIPTIVES VARIABLES=VAR00003 VAR00004 VAR00005 VAR00006 /STATISTICS=MEAN STDDEV MIN MAX.
Resources	Processor Time	00:00:00.02
	Elapsed Time	00:00:00.02

### Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Content	28	6.00	10.00	8.3571	1.12922
Organization	28	5.00	10.00	7.3214	1.09048
Grammar	28	4.00	8.00	6.2143	1.03126
Total	28	17.00	27.00	21.8929	2.13158
Valid N (listwise)	28				

```
T-TEST GROUPS=VAR00001(1 2)
/MISSING=ANALYSIS
/VARIABLES=VAR00003 VAR00004 VAR00005 VAR00006
/CRITERIA=CI(.95).
```

### T-Test

#### Notes

Output Created	29-APR-2016 11:25:33	
Comments		
Input	Active Dataset	0
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	N of Rows in Working Data File	28
Missing Value Handling	Definition of Missing	User defined missing values are treated as missing.
	Cases Used	Statistics for each analysis are based on the cases with no missing or out-of-range data for any variable in the analysis.
Syntax	T-TEST GROUPS=VAR00001(1 2) /MISSING=ANALYSIS /VARIABLES=VAR00003 VAR00004 VAR00005 VAR00006 /CRITERIA=CI(.95).	
Resources	Processor Time	00:00:00.00
	Elapsed Time	00:00:00.00

**Group Statistics**

	Group	N	Mean	Std. Deviation	Std. Error Mean
Content	1.00	14	8.5000	1.22474	.32733
	2.00	14	8.2143	1.05090	.28087
Organization	1.00	14	7.9286	.82874	.22149
	2.00	14	6.7143	.99449	.26579
Grammar	1.00	14	6.2143	1.05090	.28087
	2.00	14	6.2143	1.05090	.28087
Total	1.00	14	22.6429	2.30742	.61668
	2.00	14	21.1429	1.70326	.45522

**Independent Samples Test**

		Levene's Test for Equality of Variances		t-test for Equality of Means			
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference
Content	Equal variances assumed	.434	.516	.662	26	.514	.28571
	Equal variances not assumed			.662	25.414	.514	.28571
Organization	Equal variances assumed	1.427	.243	3.510	26	.002	1.21429
	Equal variances not assumed			3.510	25.181	.002	1.21429
Grammar	Equal variances assumed	.018	.894	.000	26	1.000	.00000
	Equal variances not assumed			.000	26.000	1.000	.00000
Total	Equal variances assumed	.881	.357	1.957	26	.061	1.50000
	Equal variances not assumed			1.957	23.924	.062	1.50000

### Independent Samples Test

		t-test for Equality of Means		
		Std. Error Difference	95% Confidence Interval of the Difference	
			Lower	Upper
Content	Equal variances assumed	.43131	-.60086	1.17228
	Equal variances not assumed	.43131	-.60185	1.17328
Organization	Equal variances assumed	.34598	.50311	1.92546
	Equal variances not assumed	.34598	.50199	1.92658
Grammar	Equal variances assumed	.39720	-.81646	.81646
	Equal variances not assumed	.39720	-.81646	.81646
Total	Equal variances assumed	.76650	-.07556	3.07556
	Equal variances not assumed	.76650	-.08224	3.08224

\*Nonparametric Tests: Independent Samples.

NPTESTS

/INDEPENDENT TEST (Content Organization Grammar Total) GROUP (Group)

/MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE

/CRITERIA ALPHA=0.05 CILEVEL=95.

### Nonparametric Tests

**Notes**

Output Created		29-APR-2016 12:07:34
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	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	28
Syntax		NPTESTS /INDEPENDENT TEST (Content Organization Grammar Total) GROUP (Group) /MISSING SCOPE=ANALYSIS USERMISSING=EXCLUD E /CRITERIA ALPHA=0.05 CILEVEL=95.
Resources	Processor Time	00:00:00.16
	Elapsed Time	00:00:00.09

### Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of Content is the same across categories of Group.	Independent-Samples Mann-Whitney U Test	.454 <sup>1</sup>	Retain the null hypothesis.
2	The distribution of Organization is the same across categories of Group.	Independent-Samples Mann-Whitney U Test	.004 <sup>1</sup>	Reject the null hypothesis.
3	The distribution of Grammar is the same across categories of Group.	Independent-Samples Mann-Whitney U Test	.874 <sup>1</sup>	Retain the null hypothesis.
4	The distribution of Total is the same across categories of Group.	Independent-Samples Mann-Whitney U Test	.150 <sup>1</sup>	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

<sup>1</sup> Exact significance is displayed for this test.