```
 GET
  FILE='\\Client\H$\Choral+Music+Performance+Assessment+Evaluation_11.22.19
.sav'.
DATASET NAME DataSet1 WINDOW=FRONT.
UNIANOVA S1Q5 BY Agegroup YearsTeachinggroupRacegroup
  /METHOD=SSTYPE(3)
  /INTERCEPT=INCLUDE
  /EMMEANS=TABLES(Agegroup) COMPARE ADJ(BONFERRONI)
  /EMMEANS=TABLES(YearsTeachinggroup) COMPARE ADJ(BONFERRONI)
  /EMMEANS=TABLES(Racegroup) COMPARE ADJ(BONFERRONI)
  /EMMEANS=TABLES(Agegroup*YearsTeachinggroup)
  /EMMEANS=TABLES(Agegroup*Racegroup)
  /EMMEANS=TABLES(YearsTeachinggroup*Racegroup)
  /EMMEANS=TABLES(Agegroup*YearsTeachinggroup*Racegroup)
  /PRINT ETASQ DESCRIPTIVE HOMOGENEITY OPOWER
  /CRITERIA=ALPHA(.05)
  /DESIGN=Agegroup YearsTeachinggroupRacegroup Agegroup*YearsTeachinggroup
 Agegroup*Racegroup
    YearsTeachinggroup*Racegroup Agegroup*YearsTeachinggroup*Racegroup.
```

Univariate Analysis of Variance

Notes

Output Created		22-NOV-2019 14:54:58
Comments		
Input	Data	\\Client\H$\Choral+Music+Performance+Assessment+Evaluation_11.22.19.sav
	Active Dataset	DataSet1
	Filter	<none>
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	N of Rows in Working Data File	125
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data for all variables in the model.

Notes

Syntax		UNIANOVA S1Q5 BY Agegroup YearsTeachinggroup Racegroup /METHOD=SSTYPE(3) /INTERCEPT=INCLUDE /EMMEANS=TABLES (Agegroup) COMPARE ADJ(BONFERRONI) /EMMEANS=TABLES (YearsTeachinggroup) COMPARE ADJ (BONFERRONI) /EMMEANS=TABLES (Racegroup) COMPARE ADJ(BONFERRONI) /EMMEANS=TABLES (Agegroup*YearsTeaching group) /EMMEANS=TABLES (Agegroup*Racegroup) /EMMEANS=TABLES (YearsTeachinggroup*Rac egroup) /EMMEANS=TABLES (Agegroup*YearsTeaching group*Racegroup) /PRINT ETASQ DESCRIPTIVE HOMOGENEITY OPOWER /CRITERIA=ALPHA(.05) /DESIGN=Agegroup YearsTeachinggroup Racegroup Agegroup*YearsTeaching group Agegroup*Racegroup YearsTeachinggroup*Rac egroup Agegroup*YearsTeaching group*Racegroup.
Resources	Processor Time	00:00:00.03
	Elapsed Time	00:00:01.22

[DataSet1] \\Client\H$\Choral+Music+Performance+Assessment+Evaluation_11.22.19.sav

Between-Subjects Factors

		Value Label	N
Agegroup	1.00	18-30	39
	2.00	31-48	48
	3.00	50-73	32
YearsTeachinggroup	1.00	preservice	13
	2.00	novice (1-6 years)	37
	3.00	intermediate (7-17 years)	39
	4.00	experienced (18+ years)	30
Racegroup	1.00	white	98
	2.00	nonwhite	21

Descriptive Statistics

Dependent Variable: This is an appropriate choral tone for this style of music.

Agegroup	YearsTeachinggroup	Racegroup	Mean	Std. Deviation	N
18-30	preservice	white	4.86	.378	7
		nonwhite	5.00	.000	4
		Total	4.91	.302	11
	novice (1-6 years)	white	4.71	.772	17
		nonwhite	5.00	.000	6
		Total	4.78	.671	23
	intermediate (7-17 years)	white	4.80	.447	5
		Total	4.80	.447	5
	Total	white	4.76	.636	29
		nonwhite	5.00	.000	10
		Total	4.82	.556	39
31-48	preservice	white	5.00	.	1
		Total	5.00	.	1
	novice (1-6 years)	white	4.70	.483	10
		nonwhite	5.00	.000	2
		Total	4.75	.452	12
	intermediate (7-17 years)	white	4.73	.456	22
		nonwhite	4.83	.408	6
		Total	4.75	.441	28
	experienced (18+ years)	white	4.67	.516	6
		nonwhite	5.00	.	1
		Total	4.71	.488	7

Descriptive Statistics

Dependent Variable: This is an appropriate choral tone for this style of music.

Agegroup	YearsTeachinggroup	Racegroup	Mean	Std. Deviation	N
	Total	white	4.72	.456	39
		nonwhite	4.89	.333	9
		Total	4.75	.438	48
50-73	preservice	white	4.00	.	1
		Total	4.00	.	1
	novice (1-6 years)	white	5.00	.000	2
		Total	5.00	.000	2
	intermediate (7-17 years)	white	5.00	.000	6
		Total	5.00	.000	6
	experienced (18+ years)	white	4.57	1.076	21
		nonwhite	3.50	2.121	2
		Total	4.48	1.163	23
	Total	white	4.67	.922	30
		nonwhite	3.50	2.121	2
		Total	4.59	1.012	32
Total	preservice	white	4.78	.441	9
		nonwhite	5.00	.000	4
		Total	4.85	.376	13
	novice (1-6 years)	white	4.72	.649	29
		nonwhite	5.00	.000	8
		Total	4.78	.584	37
	intermediate (7-17 years)	white	4.79	.415	33
		nonwhite	4.83	.408	6
		Total	4.79	.409	39
	experienced (18+ years)	white	4.59	.971	27
		nonwhite	4.00	1.732	3
		Total	4.53	1.042	30
	Total	white	4.71	.674	98
		nonwhite	4.81	.680	21
		Total	4.73	.673	119

Levene's Test of Equality of Error Variances[a,b]

		Levene Statistic	df1	df2
This is an appropriate choral tone for this style of music.	Based on Mean	2.930	13	102
	Based on Median	.960	13	102
	Based on Median and with adjusted df	.960	13	53.295
	Based on trimmed mean	1.940	13	102

Levene's Test of Equality of Error Variances[a,b]

		Sig.
This is an appropriate choral tone for this style of music.	Based on Mean	.001
	Based on Median	.496
	Based on Median and with adjusted df	.501
	Based on trimmed mean	.034

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

a. Dependent variable: This is an appropriate choral tone for this style of music.

b. Design: Intercept + Agegroup + YearsTeachinggroup + Racegroup + Agegroup * YearsTeachinggroup + Agegroup * Racegroup + YearsTeachinggroup * Racegroup + Agegroup * YearsTeachinggroup * Racegroup

Tests of Between-Subjects Effects

Dependent Variable: This is an appropriate choral tone for this style of music.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	5.935[a]	16	.371	.797	.686
Intercept	843.796	1	843.796	1813.479	.000
Agegroup	1.223	2	.611	1.314	.273
YearsTeachinggroup	.170	3	.057	.122	.947
Racegroup	.118	1	.118	.253	.616
Agegroup * YearsTeachinggroup	1.210	5	.242	.520	.760
Agegroup * Racegroup	1.151	2	.576	1.237	.295
YearsTeachinggroup * Racegroup	.107	3	.036	.077	.973
Agegroup * YearsTeachinggroup * Racegroup	.000	0	.	.	.
Error	47.460	102	.465		
Total	2717.000	119			
Corrected Total	53.395	118			

Tests of Between-Subjects Effects

Dependent Variable: This is an appropriate choral tone for this style of music.

Source	Partial Eta Squared	Noncent. Parameter	Observed Power[b]
Corrected Model	.111	12.756	.506
Intercept	.947	1813.479	1.000
Agegroup	.025	2.628	.278
YearsTeachinggroup	.004	.366	.072
Racegroup	.002	.253	.079
Agegroup * YearsTeachinggroup	.025	2.601	.187
Agegroup * Racegroup	.024	2.474	.264
YearsTeachinggroup * Racegroup	.002	.230	.063
Agegroup * YearsTeachinggroup * Racegroup	.000	.000	.
Error			
Total			
Corrected Total			

a. R Squared = .111 (Adjusted R Squared = -.028)

b. Computed using alpha = .05

Estimated Marginal Means

1. Agegroup

Estimates

Dependent Variable: This is an appropriate choral tone for this style of music.

Agegroup	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
18-30	4.873[a]	.123	4.628	5.117
31-48	4.847[a]	.168	4.513	5.180
50-73	4.414[a]	.203	4.012	4.817

a. Based on modified population marginal mean.

Pairwise Comparisons

Dependent Variable: This is an appropriate choral tone for this style of music.

(I) Agegroup	(J) Agegroup	Mean Difference (I-J)	Std. Error	Sig.[c]	95% Confidence [c]...
					Lower Bound
18-30	31-48	.026[a,b]	.209	1.000	-.482
	50-73	.458[a,b]	.238	.169	-.120
31-48	18-30	-.026[a,b]	.209	1.000	-.534
	50-73	.432[a,b]	.264	.312	-.209
50-73	18-30	-.458[a,b]	.238	.169	-1.037
	31-48	-.432[a,b]	.264	.312	-1.074

Pairwise Comparisons

Dependent Variable: This is an appropriate choral tone for this style of music.

(I) Agegroup	(J) Agegroup	95% Confidence Interval for [c]...
		Upper Bound
18-30	31-48	.534
	50-73	1.037
31-48	18-30	.482
	50-73	1.074
50-73	18-30	.120
	31-48	.209

Based on estimated marginal means

a. An estimate of the modified population marginal mean (I).

b. An estimate of the modified population marginal mean (J).

c. Adjustment for multiple comparisons: Bonferroni.

Univariate Tests

Dependent Variable: This is an appropriate choral tone for this style of music.

	Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Contrast	1.845	2	.922	1.982	.143	.037
Error	47.460	102	.465			

Univariate Tests

Dependent Variable: This is an appropriate choral tone for this style of music.

	Noncent. Parameter	Observed Power[a]
Contrast	3.964	.402
Error		

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

a. Computed using alpha = .05

2. YearsTeachinggroup

Estimates

Dependent Variable: This is an appropriate choral tone for this style of music.

			95% Confidence Interval	
YearsTeachinggroup	Mean	Std. Error	Lower Bound	Upper Bound
preservice	4.714[a]	.264	4.191	5.238
novice (1-6 years)	4.881[a]	.157	4.570	5.193
intermediate (7-17 years)	4.840[a]	.130	4.583	5.097
experienced (18+ years)	4.435[a]	.223	3.992	4.877

a. Based on modified population marginal mean.

Pairwise Comparisons

Dependent Variable: This is an appropriate choral tone for this style of music.

(I) YearsTeachinggroup	(J) YearsTeachinggroup	Mean Difference (I-J)	Std. Error	Sig.[c]
preservice	novice (1-6 years)	-.167[a,b]	.307	1.000
	intermediate (7-17 years)	-.126[a,b]	.294	1.000
	experienced (18+ years)	.280[a,b]	.346	1.000
novice (1-6 years)	preservice	.167[a,b]	.307	1.000
	intermediate (7-17 years)	.041[a,b]	.204	1.000
	experienced (18+ years)	.447[a,b]	.273	.629
intermediate (7-17 years)	preservice	.126[a,b]	.294	1.000
	novice (1-6 years)	-.041[a,b]	.204	1.000
	experienced (18+ years)	.406[a,b]	.258	.716
experienced (18+ years)	preservice	-.280[a,b]	.346	1.000
	novice (1-6 years)	-.447[a,b]	.273	.629
	intermediate (7-17 years)	-.406[a,b]	.258	.716

Pairwise Comparisons

Dependent Variable: This is an appropriate choral tone for this style of music.

		95% Confidence Interval for Difference[c]	
(I) YearsTeachinggroup	(J) YearsTeachinggroup	Lower Bound	Upper Bound
preservice	novice (1-6 years)	-.993	.659
	intermediate (7-17 years)	-.917	.665
	experienced (18+ years)	-.650	1.210
novice (1-6 years)	preservice	-.659	.993
	intermediate (7-17 years)	-.507	.589
	experienced (18+ years)	-.288	1.181
intermediate (7-17 years)	preservice	-.665	.917
	novice (1-6 years)	-.589	.507
	experienced (18+ years)	-.289	1.100
experienced (18+ years)	preservice	-1.210	.650
	novice (1-6 years)	-1.181	.288
	intermediate (7-17 years)	-1.100	.289

Based on estimated marginal means

a. An estimate of the modified population marginal mean (I).

b. An estimate of the modified population marginal mean (J).

c. Adjustment for multiple comparisons: Bonferroni.

Univariate Tests

Dependent Variable: This is an appropriate choral tone for this style of music.

	Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Contrast	1.436	3	.479	1.029	.383	.029
Error	47.460	102	.465			

Univariate Tests

Dependent Variable: This is an appropriate choral tone for this style of music.

	Noncent. Parameter	Observed Power[a]
Contrast	3.086	.272
Error		

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

a. Computed using alpha = .05

3. Racegroup

Estimates

Dependent Variable: This is an appropriate choral tone for this style of music.

			95% Confidence Interval	
Racegroup	Mean	Std. Error	Lower Bound	Upper Bound
white	4.730[a]	.115	4.502	4.958
nonwhite	4.722[a]	.183	4.360	5.085

a. Based on modified population marginal mean.

Pairwise Comparisons

Dependent Variable: This is an appropriate choral tone for this style of music.

					95% Confidence [c]...
(I) Racegroup	(J) Racegroup	Mean Difference (I-J)	Std. Error	Sig.[c]	Lower Bound
white	nonwhite	.008[a,b]	.216	.972	-.420
nonwhite	white	-.008[a,b]	.216	.972	-.436

Pairwise Comparisons

Dependent Variable: This is an appropriate choral tone for this style of music.

(I) Racegroup	(J) Racegroup	95% Confidence Interval for [c]... Upper Bound
white	nonwhite	.436
nonwhite	white	.420

Based on estimated marginal means

a. An estimate of the modified population marginal mean (I).

b. An estimate of the modified population marginal mean (J).

c. Adjustment for multiple comparisons: Bonferroni.

Univariate Tests

Dependent Variable: This is an appropriate choral tone for this style of music.

	Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Contrast	.001	1	.001	.001	.972	.000
Error	47.460	102	.465			

Univariate Tests

Dependent Variable: This is an appropriate choral tone for this style of music.

	Noncent. Parameter	Observed Power[a]
Contrast	.001	.050
Error		

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

a. Computed using alpha = .05

4. Agegroup * YearsTeachinggroup

Dependent Variable: This is an appropriate choral tone for this style of music.

Agegroup	YearsTeachinggroup	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
18-30	preservice	4.929	.214	4.505	5.353
	novice (1-6 years)	4.853	.162	4.532	5.174
	intermediate (7-17 years)	4.800[a]	.305	4.195	5.405
	experienced (18+ years)	.[b]	.	.	.
31-48	preservice	5.000[a]	.682	3.647	6.353
	novice (1-6 years)	4.850	.264	4.326	5.374
	intermediate (7-17 years)	4.780	.157	4.469	5.092
	experienced (18+ years)	4.833	.368	4.103	5.564
50-73	preservice	4.000[a]	.682	2.647	5.353
	novice (1-6 years)	5.000[a]	.482	4.043	5.957
	intermediate (7-17 years)	5.000[a]	.278	4.448	5.552
	experienced (18+ years)	4.036	.252	3.535	4.536

a. Based on modified population marginal mean.

b. This level combination of factors is not observed, thus the corresponding population marginal mean is not estimable.

5. Agegroup * Racegroup

Dependent Variable: This is an appropriate choral tone for this style of music.

Agegroup	Racegroup	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
18-30	white	4.788[a]	.144	4.502	5.074
	nonwhite	5.000[a]	.220	4.563	5.437
31-48	white	4.773	.195	4.386	5.161
	nonwhite	4.944[a]	.294	4.362	5.527
50-73	white	4.643	.223	4.200	5.086
	nonwhite	3.500[a]	.482	2.543	4.457

a. Based on modified population marginal mean.

6. YearsTeachinggroup * Racegroup

Dependent Variable: This is an appropriate choral tone for this style of music.

YearsTeachinggroup	Racegroup	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
preservice	white	4.619	.333	3.959	5.279
	nonwhite	5.000[a]	.341	4.324	5.676
novice (1-6 years)	white	4.802	.185	4.436	5.168
	nonwhite	5.000[a]	.278	4.448	5.552
intermediate (7-17 years)	white	4.842	.146	4.553	5.132
	nonwhite	4.833[a]	.278	4.281	5.386
experienced (18+ years)	white	4.619[a]	.158	4.306	4.932
	nonwhite	4.250[a]	.418	3.421	5.079

a. Based on modified population marginal mean.

7. Agegroup * YearsTeachinggroup * Racegroup

Dependent Variable: This is an appropriate choral tone for this style of music.

Agegroup	YearsTeachinggroup	Racegroup	Mean	Std. Error	95% ...
					Lower Bound
18-30	preservice	white	4.857	.258	4.346
		nonwhite	5.000	.341	4.324
	novice (1-6 years)	white	4.706	.165	4.378
		nonwhite	5.000	.278	4.448
	intermediate (7-17 years)	white	4.800	.305	4.195
		nonwhite	.[a]	.	.
	experienced (18+ years)	white	.[a]	.	.
		nonwhite	.[a]	.	.
31-48	preservice	white	5.000	.682	3.647
		nonwhite	.[a]	.	.
	novice (1-6 years)	white	4.700	.216	4.272
		nonwhite	5.000	.482	4.043
	intermediate (7-17 years)	white	4.727	.145	4.439
		nonwhite	4.833	.278	4.281
	experienced (18+ years)	white	4.667	.278	4.114
		nonwhite	5.000	.682	3.647
50-73	preservice	white	4.000	.682	2.647
		nonwhite	.[a]	.	.
	novice (1-6 years)	white	5.000	.482	4.043
		nonwhite	.[a]	.	.

7. Agegroup * YearsTeachinggroup * Racegroup

Dependent Variable: This is an appropriate choral tone for this style of music.

Agegroup	YearsTeachinggroup	Racegroup	95% Confidence . Upper Bound
18-30	preservice	white	5.369
		nonwhite	5.676
	novice (1-6 years)	white	5.034
		nonwhite	5.552
	intermediate (7-17 years)	white	5.405
		nonwhite	.
	experienced (18+ years)	white	.
		nonwhite	.
31-48	preservice	white	6.353
		nonwhite	.
	novice (1-6 years)	white	5.128
		nonwhite	5.957
	intermediate (7-17 years)	white	5.016
		nonwhite	5.386
	experienced (18+ years)	white	5.219
		nonwhite	6.353
50-73	preservice	white	5.353
		nonwhite	.
	novice (1-6 years)	white	5.957
		nonwhite	.

7. Agegroup * YearsTeachinggroup * Racegroup

Dependent Variable: This is an appropriate choral tone for this style of music.

Agegroup	YearsTeachinggroup	Racegroup	Mean	Std. Error	95% ... Lower Bound
	intermediate (7-17 years)	white	5.000	.278	4.448
		nonwhite	.[a]	.	.
	experienced (18+ years)	white	4.571	.149	4.276
		nonwhite	3.500	.482	2.543

7. Agegroup * YearsTeachinggroup * Racegroup

Dependent Variable: This is an appropriate choral tone for this style of music.

Agegroup	YearsTeachinggroup	Racegroup	95% Confidence . Upper Bound
	intermediate (7-17 years)	white	5.552
		nonwhite	.
	experienced (18+ years)	white	4.867
		nonwhite	4.457

a. This level combination of factors is not observed, thus the corresponding population marginal mean is not estimable.