APPENDIX IV

t – TEST ANALYSIS

$$t = \frac{\overline{x}_{mt} - \overline{x}_{me}}{\sqrt{\frac{S^2_{mt}}{n_{mt}} + \frac{S^2_{me}}{n_{me}}}}$$

Where $\overline{x}_{mt}$ = mean for music teachers and where

$\overline{x}_{me}$ = mean for music educators.

Null hypothesis I

Availability of teaching Materials for Early Childhood Music Education in Nigeria.

Variation	n	$\overline{x}$	SD
1. Music Teachers	300	2.44	1.49
2. Music Educators	13	2.60	1.5

Calculations:

$$\sqrt{\frac{1.49^2}{300} + \frac{1.58^2}{13}} = \frac{2.44 - 2.60}{\sqrt{\frac{2.2201}{300} + \frac{2.4964}{13}}}$$

$$= \frac{-0.16}{\sqrt{0.07400 + 0.19203}} = \frac{-0.16}{\sqrt{0.26603}}$$

$$= \frac{-0.16}{0.51578} = -0.310209$$

Approx. = - 0.310

Ca.t = - 0.310

df = nmt + nme - 2 = 300 + 13 – 2

= 313 - 2 = 311

Crit. t 0.05 of 311 df = 1.960 (see Critical values of t :A - 48)

t - 0.310 < 1.960

Decision: At 0.05 level of significance and 311 df, the calculated t -0.310 is less than critical t 1.960. Therefore, we do not reject the null hypothesis. Thus, there is no significant difference between the perceptions of the music teachers and music educators on the availability of teaching materials for early childhood music education in Nigeria.

Null hypothesis II

Teaching methods employed by the music teachers and music educators.

Variation	n	$\bar{x}$	SD
1. Music Teachers	300	2.75	1.82
2. Music Educators	13	2.82	1.67

Calculations:

$$\frac{2.75 - 2.82}{\sqrt{\frac{1.82^2}{300} + \frac{1.67^2}{13}}} = \frac{-0.07}{\sqrt{\frac{3.3124}{300} + \frac{2.7889}{13}}}$$

$$= \frac{-0.07}{\sqrt{0.01104 + 0.21453}} = \frac{-0.07}{\sqrt{0.22557}}$$

$$= \frac{-0.07}{0.22557} = -0.310324$$

Approx. = - 0.310

Ca.t = - 0.310

df = nmt + nme - 2 = 300 + 13 - 2

= 313 - 2 = 311

Crit. t 0.05 of 311 df = 1.960 (see Critical values of t :A - 48)
t - 0.310 < 1.960

Decision : At 0.05 level of significance and 311 df, the calculated t -0.310 is less than critical t 1.960. Therefore, we do not reject the null hypothesis. Thus, there is no significant difference between music teachers and music educators on the teaching methods for music lessons.

Null hypothesis III

Methodology that can best be utilized to ensure fruitful and effective impact of musical knowledge in the pupils.

Variation	n	$\bar{x}$	SD
1. Music Teachers	300	2.94	1.70
2. Music Educators	13	2.96	1.71

Calculations:

$$\sqrt{\frac{2.94 - 2.96}{\frac{1.70}{300} + \frac{1.71}{13}}} = \sqrt{\frac{- 0.02}{\frac{2.89}{300} + \frac{2.9241}{13}}}$$

$$= \sqrt{\frac{-0.02}{0.0096 + 0.2249}} = \sqrt{\frac{- 0.02}{0.2345}}$$

$$= \frac{-0.02}{0.484252} = - 0.04130081$$

Approx. = - 0.041

Cal. t = - 0.041

Crit. t 0.05 of 311 df = 1.960 (see Critical values of t :A -48)

t -0.041 < 1.960

Decision: H_{O3} is accepted because at five percent significant level and 311df, the calculated t -0.041 is less than the critical t 1.960. Therefore, there is no significant difference between the perceptions of the music teachers and music educators in thee methodology that can best be utilized to ensure fruitful and effective impact of musical knowledge in the pupils.

Null hypothesis IV

Adequacy of staffing of music education and other situations in Primary Schools in Nigeria.

Variation	n	$\bar{x}$	SD
1. Music Teachers	300	2.57	1.58
2. Music Educators	13	2.68	1.62

Calculations:

$$\sqrt{\frac{2.57 - 2.68}{\frac{1.58^2}{300} + \frac{1.62^2}{13}}} = \sqrt{\frac{- 0.11}{\frac{2.4964}{300} + \frac{2.6244}{13}}}$$

$$= \sqrt{\frac{- 0.11}{0.00832 + 0.20188}} = \sqrt{\frac{- 0.11}{0.2102}}$$

$$= \frac{- 0.11}{0.45848} = 0.2399$$

Approx. = -0.240

Cal. t = -0.240

Crit. t 0.05 of 311 df = 1.960 (see Critical values of t :A - 48)

t - 0.240 < 1.960

Decision: Ho_4 is accepted because at five percent significant level and 311df, the calculated t -0.240 is less than the critical t 1.960. Therefore, there is no significant difference between the perceptions of the music teachers and music educators on the adequacy of staffing of music education and other situations in primary schools in Nigeria.

Null hypothesis V

Problems militating against music teaching and learning in Primary Schools in Nigeria.

Variation	n	$\bar{x}$	SD
1. Music Teachers	300	2.88	1.67
2. Music Educators	13	2.80	1.65

Calculations:

$$\sqrt{\frac{2.88 - 2.80}{\frac{1.67^2}{300} + \frac{1.65^2}{13}}} = \sqrt{\frac{0.08}{\frac{2.7889}{300} + \frac{2.7225}{13}}}$$

$$= \sqrt{\frac{0.08}{0.009296 + 0.209423}} = \sqrt{\frac{0.08}{0.218719}}$$

$$= \frac{0.08}{0.467674} = 0.171059$$

Approx. = 0.171

Cal. t = 0.171

Crit. t 0.05 of 311 df = 1.960 (see Critical values of t :A -48)

t 0.171 < 1.960

Decision: At 0.05 level of significance and 311df, the calculated t 0.171 is less than 1.960. Therefore, we do not reject the null hypothesis. Thus, there is no significant difference

between the perceptions of the music teachers and music educators on the problems militating against music teaching and learning in primary schools in Nigeria.

CRITICAL VALUES OF t

For any given df, the table shows the values of *t*. corresponding to various levels of probability. Obtained ***t*** is significant at a given level if it is **equal to** or **greater than** the value (Nworgu 1991:154) shown in the table:

df	Level of significance for one-tailed test					
	.10	.05	.025	.01	.005	.0005
	Level of significance for two-tailed test					
	.20	.10	**.05**	.02	.01	.001
1	3.078	6.314	12.706	31.821	63.657	636.619
2	1.886	2.920	4.303	6.965	9.925	31.598
3	1.638	2.353	3.182	4.541	5.841	12.941
4	1.5333	2.132	2.776	3.747	4.604	8.610
5	1.476	2.015	2.571	3.365	4.032	6.859
10	1.372	1.812	2.228	2.764	3.169	4.587
16	1.337	1.746	2.120	2.583	2.921	4.015
26	1.315	1.706	2.056	2.479	2.779	3.707
40	1.303	1.684	2.021	2.423	2.704	3.551
∞	1.282	1.645	**1.960**	2.326	2.576	3.291