APPENDIX IV

**t – TEST ANALYSIS**

\[
t = \frac{\bar{x}_{mt} - \bar{x}_{me}}{\sqrt{\frac{S^2_{mt}}{n_{mt}} + \frac{S^2_{me}}{n_{me}}}}
\]

Where \( \bar{x}_{mt} \) = mean for music teachers and where \( \bar{x}_{me} \) = mean for music educators.

**Null hypothesis I**

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

<table>
<thead>
<tr>
<th>Variation</th>
<th>n</th>
<th>( \bar{x} )</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Music Teachers</td>
<td>300</td>
<td>2.44</td>
<td>1.49</td>
</tr>
<tr>
<td>2. Music Educators</td>
<td>13</td>
<td>2.60</td>
<td>1.5</td>
</tr>
</tbody>
</table>

Calculations:

\[
\sqrt{\frac{2.44 - 2.60}{\frac{1.49^2}{300} + \frac{1.58^2}{13}}} = \sqrt{\frac{-0.16}{2.2201 + 2.4964}}
\]

\[
\frac{-0.16}{300} + \frac{0.19203}{13} = \frac{-0.26603}{0.51578} = -0.310209
\]

Approx. = -0.310

Ca.t = -0.310

\[\text{df} = \text{nmt} + \text{nme} - 2 = 300 + 13 - 2\]

\[= 313 - 2 = 311\]

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.

<table>
<thead>
<tr>
<th>Variation</th>
<th>n</th>
<th>( \bar{x} )</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Music Teachers</td>
<td>300</td>
<td>2.75</td>
<td>1.82</td>
</tr>
<tr>
<td>2. Music Educators</td>
<td>13</td>
<td>2.82</td>
<td>1.67</td>
</tr>
</tbody>
</table>

Calculations:

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

\[
-0.07 = \sqrt{0.01104 + 0.21453} = \sqrt{0.22557}
\]

Approx. = - 0.310

C.a.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.

<table>
<thead>
<tr>
<th>Variation</th>
<th>n</th>
<th>( \bar{x} )</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Music Teachers</td>
<td>300</td>
<td>2.94</td>
<td>1.70</td>
</tr>
<tr>
<td>2. Music Educators</td>
<td>13</td>
<td>2.96</td>
<td>1.71</td>
</tr>
</tbody>
</table>
Calculations:

\[
\sqrt{\frac{2.94 - 2.96}{\frac{1.7}{300} + \frac{1.71}{13}}} = \sqrt{\frac{-0.02}{\frac{2.89}{300} + \frac{2.9241}{13}}}
\]

\[
= \sqrt{0.0096 + 0.2249} = \sqrt{0.2345}
\]

\[
= \frac{-0.02}{0.484252} = -0.04130081
\]

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: Ho3 is accepted because at five percent significant level and 311 df, 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 the 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.

<table>
<thead>
<tr>
<th>Variation</th>
<th>n</th>
<th>( \bar{x} )</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Music Teachers</td>
<td>300</td>
<td>2.57</td>
<td>1.58</td>
</tr>
<tr>
<td>2. Music Educators</td>
<td>13</td>
<td>2.68</td>
<td>1.62</td>
</tr>
</tbody>
</table>

Calculations:

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

\[
= \sqrt{0.00832 + 0.20188} = \sqrt{0.2102}
\]

\[
= \frac{-0.11}{0.45848} = 0.2399
\]
Approx. = -0.240
Cal. t = -0.240
Crit. t 0.05 of 311 df = 1.960 (see Critical values of t : A - 48)

\[ t = -0.240 \leq 1.960 \]

Decision: Ho is accepted because at five percent significant level and 311 df, 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.

<table>
<thead>
<tr>
<th>Variation</th>
<th>n</th>
<th>( \bar{x} )</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Music Teachers</td>
<td>300</td>
<td>2.88</td>
<td>1.67</td>
</tr>
<tr>
<td>2. Music Educators</td>
<td>13</td>
<td>2.80</td>
<td>1.65</td>
</tr>
</tbody>
</table>

Calculations:

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

\[
= \frac{0.08}{\sqrt{0.009296 + 0.209423}} = \sqrt{0.018719}
\]

\[
= \frac{0.08}{0.467674} = 0.171059
\]

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 311 df, 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:

<table>
<thead>
<tr>
<th>df</th>
<th>Level of significance for one-tailed test</th>
<th>Level of significance for two-tailed test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>.10</td>
<td>.05</td>
</tr>
<tr>
<td>5</td>
<td>1.372</td>
<td>1.812</td>
</tr>
<tr>
<td>10</td>
<td>1.372</td>
<td>1.812</td>
</tr>
<tr>
<td>16</td>
<td>1.337</td>
<td>1.746</td>
</tr>
<tr>
<td>26</td>
<td>1.315</td>
<td>1.706</td>
</tr>
</tbody>
</table>