DISCUSSION

By eyeballing the raw data in Table 5.1, we can observe that most of the students in the ‘Music and Concentration Group’ obtained higher scores compared to students in the other 3 groups, followed by the students in the ‘Music Group’, then the students in the ‘Concentration Techniques Group’ and finally those in the ‘Control Group’.

In the ‘Music and Concentration Group’, out of a total score of ‘15’ on the learning task, the highest score obtained was ‘15’, which was obtained by 14 participants. Many others scored between ‘11 to 14’ points. A lowest score of ‘5’ was obtained by only 1 participant in this group. This indicates that the tanpura music and the concentration techniques when used together have a profound influence on the performance of the students on a learning task.

In the ‘Music Group’, a highest score of ‘15’ was obtained by 11 students and quite a number of students scored between ‘12 to 14’ points. The lowest score of ‘2’ was obtained only by 1 student. This indicated that studying with tanpura music being played in the background does help to enhance performance.

In the ‘Concentration Techniques Group’, 9 participants obtained a score of ‘15’. Majority of them scored between ‘8 to 14’ points. The lowest score in this group was ‘5’, which was obtained by 3 students. This indicates that studying with the help of concentration techniques also does help to improve our performance on a learning task.

In the ‘Control Group’, in which neither music nor concentration techniques was administered, a highest score of ‘15’ was obtained by 9 participants. Majority of them scored between ‘1-9’ points. Only one student obtained ‘0’ points on the learning task.
In this study we hypothesize that “Music and concentration together enhance the academic performance of students.”

A glance at Table 5.2 and Figure 5.1, tells us about the average scores obtained by the 4 groups ie: the ‘Music and Concentration Group’, ‘Music Group’, ‘Concentration Techniques Group’ and the ‘Control Group’, on the learning task.

The ‘Music and Concentration Group’ obtains the highest average score of ’24.099, followed by the ‘Music Group’ with an average score of ’23.168’, followed by the ‘Concentration Techniques Group’ with an average score of ’21.207’ and finally the ‘Control Group’ obtaining an average score of ’18.356’.

This shows that music and concentration techniques when used together can actually help to enhance the academic performance of the students.

Table 5.5: The One-Way ANOVA is conducted to find out the significance levels. The F value is 14.561 and its significance level is 0.000. Since the significance level lies between 0.05 to 1.00, the results are significant.

In order to find out if there was a significant difference between the 4 groups the Post Hoc Tests are conducted.

At first we compare the ‘Concentration Group’ with the other 3 groups:-

1) When the ‘Concentration Group’ is compared with the ‘Music Group’ the significance level is 0.22. This shows that there isn’t a significant difference between these 2 groups. Although the mean value for the ‘Concentration Group’ is 10.71 and the ‘Music Group’ is 11.70, indicating a difference in the performance levels of both the groups, yet there is no significant difference between both the groups.

2) When the ‘Concentration Group’ is compared to the ‘Music and Concentration Group’ the significance level is 0.01. This shows that there is a significant
difference between these 2 groups. The mean value of the ‘Concentration Group’ is 10.71 and the ‘Music and Concentration Group’ is 12.17, indicating a significant difference between the performance levels of both the groups. This shows that the ‘Music and Concentration Group’ performed better on the learning task as compared to the ‘Concentration Group’.

3) When the ‘Concentration Group’ is compared to the ‘Control Group’ the significance level is 0.16, indicating that there isn’t a significant difference between these 2 groups. Although the mean value for the ‘Concentration Group’ is 10.71 and the ‘Control Group’ is 9.27, replicating a difference in the performance levels of both the groups, yet there isn’t a significant difference between both the groups.

Next, we compare the ‘Music Group’ with the other 3 groups:-

1) When the ‘Music Group’ is compared with the ‘Concentration Group’ the significance level is 0.22. This shows that there isn’t a significant difference between these 2 groups, although there is a difference in the mean values as discussed above.

2) When the ‘Music Group’ is compared with the ‘Music and Concentration Group’ the significance level is 1.00. This shows that there isn’t a significant difference between these 2 groups. Although the mean value for the ‘Music Group’ is 11.70 and that of the ‘Music and Concentration Group’ is 12.17, indicating a difference in the performance levels of both the groups on the learning task, yet there isn’t a significant difference between both the groups.

3) When the ‘Music Group’ is compared with the ‘Control Group’ the significance level is 0.00, replicating a significant difference between both the groups. The mean value of the ‘Music Group’ is 11.70 and the ‘Control Group’ is 9.27, indicating a significant difference between the performance levels of both the
groups. This shows that the ‘Music Group’ performed better on the learning task as compared to the ‘Control Group’.

Next, we compare the ‘Music and Concentration Group’ with the other 3 groups:-

1) When the ‘Music and Concentration Group’ is compared to the ‘Concentration Group’ the significance level is 0.01. This shows that there is a significant difference between these 2 groups, as discussed above.

2) When the ‘Music and Concentration Group’ is compared to the ‘Music Group’ the significance level is 1.00. This indicates that there isn’t a significant difference between these 2 groups, although there is a difference in the mean values as has been discussed above.

3) When the ‘Music and Concentration Group’ is compared to the ‘Control Group’ the significance level is 0.00, indicating a significant difference between both the groups. The mean value of the ‘Music and Concentration Group’ is 12.17 and that of the ‘Control Group’ is 9.27, replicating a significant difference between the performance levels of both the groups. This shows that the ‘Music and Concentration Group’ performed better on the learning task as compared to the ‘Control Group’.

Next, we compare the ‘Control Group’ with the other 3 groups:-

1) When the ‘Control Group’ is compared to the ‘Concentration Group’ the significance level is 0.16, indicating that there isn’t a significant difference between these 2 groups, although there is a difference between the mean values as discussed above.

2) When the ‘Control Group’ is compared to the ‘Music Group’ the significance level is 0.00, replicating a significant difference between both the groups as has been discussed above.
3) When the ‘Control Group’ is compared to the ‘Music and Concentration Group’ the significance level is 0.00, indicating a significant difference between both the groups as has been discussed above. 

Thus the first hypothesis of this study “Music and concentration together enhance the academic performance of students” is proved to be true.

We also hypothesize that “Music and concentration together create a difference in the learning abilities of the male and the female students.”

A glance at Table 5.3 and Figure 5.2 tells us about the raw scores obtained by male students on the 4 groups and the differences in their performance in these groups.

By eye-balling the raw scores of female students, in the 4 groups, in Table 5.4 and Figure 5.3 we are able to observe the differences in their performance in the groups.

On an average, a glance at the raw averages indicate that the female students scored higher as compared to the male students on the learning task.

Table 5.6: The t-tests are used as statistical tools to find out the significance levels between the males and females in the 4 groups.

1) While studying the performance of male and female students on the learning task, in the ‘Concentration Group’, the t-test value is -0.09. It’s significance value is 0.36, indicating that the results are not significant. Although the mean scores of males and females are 10.44 and 10.98 respectively, indicating a slightly better performance by female students in this group, yet there isn’t a significant difference in the performance of males and females in this group.

2) While judging the performance of male and female students in the ‘Music Group’, the t-value is -2.01. It’s significance level is 0.05. The mean values of the males and females are found to be 11.08 and 12.32 respectively, suggesting that there is a significant difference in the performance of male and
female students in this group, with the female students performing better on the learning task than the male students in this group.

3) While analyzing the performance of male and female students on the learning task, in the ‘Music and Concentration Group’, the t-value is -2.22 and its significance level is 0.03. The mean values of the males and females are found to be 11.66 and 12.68 respectively. This indicates that there is a significant difference in the performance of male and female students in this group. The female students performed better on the learning task in this group.

4) While studying the performance of male and female students on the learning task, in the ‘Control Group’, the t-value is -2.95. It’s significance level being 0.004. The mean values of the males and females are found to be 7.96 and 10.58 respectively. This implies that there is a significant difference in the performance of male and female students in this group. The female students performed better on the learning task than the male students in this group.

Although a significant difference was found between the scores of males and females in the ‘Music Group’, ‘Music and Concentration Group’ and ‘Control Group’ respectively, yet there wasn’t a significant difference in the scores of males and females in the ‘Concentration Group’.

However, when music and concentration are administered together, it does lead to a significant difference in the learning abilities of males and females, with the female students obtaining higher scores than the male students.

Thus the second hypothesis that “Music and concentration together create a difference in the learning abilities of the male and the female students” is accepted as true.