

MUSIC AID: THE EFFECT OF FILIPINO MUSIC ON THE ACADEMIC PERFORMANCE OF STUDENTS IN PROBABILITY AND STATISTICS

Xamuel L. Fajardo

*Valenzuela National High School
xamuel.fajardo@gmail.com*

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ABSTRACT

This paper studied the effects of Filipino hard and soft music towards the academic performance of Grade 12 STEM students in relation to Probability and Statistics. The study explored if there is a significant difference between the academic performance of students who learned alongside music and those who did not. A randomized controlled trial was conducted among 3 STEM sections, comprising 99 Grade 12 STEM students of Valenzuela National High School over a course of 4 days. The experimental groups engaged in Probability and Statistics discussions alongside their assigned music played in the room at 65 dB, while the controlled groups maintained their regular routines without music. The experiment was conducted over the course of 4 days, covered 2 Probability and Statistics lessons. The academic performance was measured through scores from a validated 20 item standardized test administered before and after the experiment. The F-statistic of 7.17 significantly exceeds the critical value of 3.09, and with a P-value of 0.00, which is below the significance level of 0.05, the null hypothesis is rejected. This confirms statistically significant differences in average performance among the groups studied. It is found that students who learned with music, particularly soft music, achieved higher scores than those taught conventionally and those exposed to heavy music. However, a much broader study should be performed as such other variables like preferences, generalizability, and time and duration of music exposure were not considered in the present study.

Keywords: *Academic Performance, Filipino Music, Heavy Music, Probability and Statistics, Soft Music*
