

# Designing a study to examine the effects of listening to music while studying on ...

[Sociology](#), [Community](#)



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Many college students listen to music while studying for a test. Some studies have found music to impede studying such that students did poorly on tests and other studies showed just the opposite. Another factor that has been examined in relation to learning is state dependency. For example when you study and are in one mood you do best on the test when you are in the same mood. This study was designed to determine whether listening to music while studying affected test scores and whether state dependency i. e. taking the test while listening to the same music that was playing during studying, affected test scores.

- Hypotheses

Listening to classical music while studying will result in greater improvements in test scores compared to rock music. Listening to any type of music will result in greater improvements in test scores than studying without listening to music. When music/silence states are consistent for studying and testing, scores will be higher.

- Operational Definitions

Operationalizing variable is the process of quantifying variable so they can

be measured and analyzed. Both the studying portions and testing portions for this experiment will be carried out in a building on campus. Each subject will be given a small study room in the library where they will have complete privacy. A computerized system will be used to generate music for each room to ensure that those in the same condition will be exposed to the same music at the same volume for the same amount of time. Those in the control condition will not be able to hear music in their room.

For the purpose of this study, loud, discordant music was defined as heavy metal music. For this study, loud, discordant music used was the album '1000hp' by Godsmack.

Soft, harmonious music was defined as classical, instrumental music. A selection of songs performed by the Windham Hill musicians was used.

The study period will be defined as a 60 minute period of studying a variety of facts about numerous disciplines that had a comprehension level of 9th grade. This ensure that comprehension of these college freshman should not have been a problem. The study period was 60 minutes.

The testing period will be defined as a series of free recall, cued recall, serial recall and forced choice items. Subjects will have 30 minutes to complete the test.

- Control/Experimental Groups

There will be 5 groups included in this experiment. The experimental groups will consist of those who study while listening to either the heavy metal album or the instrumental album.

### **There will be four experimental groups:**

Group 1 - Loud background music during studying silence during testing

Group 2 - Loud background music during both studying and testing

Group 3 - Soft background music during studying, silence during testing

Group 4: - Soft background music during both studying and testing

There will be two control group:

Group 5: Silence during both the studying and testing conditions

Group 6: Silence during studying, music during testing

- Dependant/Independent Variables

### **The independent variables will be:**

- Type of music played

- When music is played

### **The dependent variable will be scores on the test.**

- Random Assignment

The sample will be drawn from those required to take part in the research pool that semester. When subjects sign up for the experiment, a random numbers generator will be used to ensure participants are assigned to one of the six conditions randomly.

### **References**

Dolegui, A. S. (2013). The Impact of Listening to Music on Cognitive Performance. Student Pulse. 5(9), 1-2