What Is the Best Auditory Atmosphere for Taking a Math Test?

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"Multi-tasking ruins productivity, causes mistakes, and impedes creative thought," says Earl Miller, neuroscientist at MIT. Auditory distractions are one form of multi-tasking that may hinder students' performance on academic work. Does the auditory atmosphere of a classroom affect students' performance on a five-minute written math test? This project examines the performance of 42 male and female students, ranging in ages from 12-18 on 3 five-minute basic arithmetic tests. Each test was conducted with different levels of auditory distraction. The first test was administered with no background noise. The second test was administered with classical music playing at 82 dB on a Bose speaker. The third test was administered with lyrical music playing at 82 dB on a Bose speaker. My hypothesis was that students' performance would be worst with lyrical music playing, better with classical music playing, and best in silence. The experimental results did not support my hypothesis. My conclusion is further supported by the results when I compared different ages and genders. Overall results on which I base my conclusion are as follows: 1. The average exam score for tests taken in quiet was 65.7%. 2. The average exam score for tests taken with lyrical music was 68.6%. 3. The average exam score for tests taken with classical music was 69.8%. Although there were not enough subjects to confirm or deny the optimal auditory atmosphere for test-taking, the results are substantial enough to draw the general conclusion that students perform best with classical music playing.

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