

How Different Genres of Music Affect Comprehension and Focus Levels.

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Abstract

Our research project revolved around the psychology behind music being able to improve your accuracy and focus while learning something new. Since we are students ourselves, this information would benefit us and others in school who want to improve their focus levels during studying and performances on assessments. To conduct this experiment, we separated 16 seventh graders into four groups: No music (control group), Pop, Jazz, and Rock, giving them each a 7th grade comprehension article on the Grand Canyon. After the subjects had thoroughly finished reading, the participants answered four questions to the best of their ability, their accuracy and level of detail determining how well they had comprehended the article. We had four different sessions, testing a new group (new music genre) each time. As a result, we found that Pop music had the same average in detail and accuracy as Jazz and Rock, but had the shortest average time out of the different genres, therefore, making Pop music the most effective.

Materials and Methods

For our 8th grade research project, we tested a total of 16 seventh graders on their reading comprehension while listening to different variations of music. We divided the seventh graders into small groups of 4, assigning each group a different music genre (pop, rock, jazz, none). Once each group had a basic understanding of the procedure, we gave them a pair of disposable earbuds which was used for the music playing on a low controlled volume. For the control group that listened to no music while reading, no earphones were given out. We then gave each test subject a simple, one page, standardized 7th grade reading comprehension article about the Grand Canyon from the website K12 Reader. Right when each test subject started to read the article, one of our group members would start the music (if needed) and began the timer. Once the subject felt like they had fully read and processed the article, they would notify us that they were finished and we would stop the timer and music. We then took away the reading comprehension article and gave the subject a sheet containing four self-made comprehension questions about the article to answer as well as they could. After they had completed the questions, we collected their papers, excused the subjects, and graded their responses, entering their data into a spreadsheet.

Results

To craft our data into results, we created graphs showing the average scores of the tests, and seconds taken to read the comprehension article. The results show that out of all the test groups, Pop had the shortest time average by 16 seconds to complete the article. With our Accuracy and Detail graph, the groups that listened to Pop, Jazz, and Rock had the same exact score. Even though the Jazz, Pop, and Rock groups all performed at the same caliber of detail, the Pop group was able to achieve the same results while taking less time. On the other hand, the group that didn't listen to any music had the worst level of accuracy and detail, additionally taking the longest average time to read the article which may be due to human error.

Discussion

Our original research question focused on what specific genres of music led to the highest levels of focus and accuracy during short amounts of time. In summary, our research concluded that Pop was the most beneficial genre of music having the same levels of accuracy and detail in responses as Jazz and Rock, but having the smallest time average by approximately 16 seconds to complete reading the article.

Since reading comprehension articles requires attention to detail we can infer that Pop music led to closer reading and higher levels of focus. This result may be due to the familiarity or liking our participants have towards the genre of Pop as it may be easier for a student to drone out lyrics to a song that they have heard many times before.

However, there were some inevitable setbacks regarding our human participants including different reading capabilities, energy levels, and distractions from potential background noise or their peers sitting nearby. Additionally, the amount of people we tested for each group was particularly small, as we only tested 4 at a time. If we were able to increase the amount of participants, our data would likely be more accurate and diminish possible outliers.

As a potential follow up experiment, we could test whether listening to Pop music while taking a reading comprehension evaluation would be more effective eating a certain amount of a type of food before the test, affecting levels of energy. This would help us zone in on whether Pop music itself is truly effective, without making an assumption based off other comparisons. The independent variable would be the kind of food given to each test subject, and the dependent variable would be the test results. Another potential follow up experiment could be based off on increased volume levels, which would help test whether the genre of Pop is effective, without test subjects being able to easily ignore the lyrics and music itself.

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