

Team Number: YWIC-3
School Name: YWIC
Area of Science: Behavioral and Social Science
Project Title: Musically Inclined

PROBLEM DEFINITION

When students ask to listen to music while studying, the teacher usually objects to the idea and either plays classical/instrumental or none at all. Our question is, 'Does music affect task performance while studying?' This question is based on real life experiences that our team has had in previous situations. We strive to find the truth behind this question based off of our piqued curiosity for an solution .

PROBLEM SOLUTION

We plan on investigating this problem by choosing three groups of students who will take a high interest critical thinking test while listening to three types of sound; classical/instrumental, music of choice, and silence. We will be conducting this test on our peers (grades 6-9) because we want to know how this affects students our age level. To make this as realistic as possible to what a teacher might assign, we will have the test be on Vlad the Impaler, the man behind the fictional character of Dracula. This decision was made because of the following reasons 1) high interest rate which our peers are more likely to pay attention 2)many people don't know a lot about him 3) because of two everyone has the base knowledge that he was Dracula. Our group also plans to make this more of something that is widespread and can be applicable for many different subjects by making them use some of their critical thinking and doing comparing and contrasting Vlad and Dracula. Compare and contrast is considered apart of critical thinking in the glossary of the Critical Thinking Community website.

Our group will process this data (once received) and display it through graphs, charts, models and more based on the volunteers age, performance outcome, background knowledge, gender ratio, and the types of music they listen to (this group of people will be able to pick from a selection of genres that we will have)To try to exclude any bias opinions, ideas, or emotions we will be giving them a short questionnaire before the test begins to look back upon if needed. This will include how their day was, if there is any important events that have happened/soon to happen, if they are in good health and so on.

PROGRESS MADE

Our original plan was very unclear and unorganised, we decided to stray from that and came up with this plan instead. We haven't gotten too far yet, but since this knew project idea has been sent in motion, we have been working noticeably harder and getting things done sooner. Currently, we are using our existing research, adding to it and creating the test. We plan to contact specialists in the music therapy and music neuroscience to talk about our project.

EXPECTED RESULTS

Based on the links bellow we have decided that either the classical/instrumental music or silence will be statistically significant. We believe this to be true because according to a study done my MIT (written by Anne Trafton on December 16, 2015) our auditory cortex has six components, two of which are for speech sounds and music. Another reason that exemplifies our expectations is a study done by Jessica Grahn that shows that our motor areas respond naturally to any type of rhythm. Even if the volunteers didn't move, their motor areas still flared. These two things will cause distraction and multitasking (which according to a link below 95% of students cannot do successfully) in our product. We think that silence and classical/instrumental will have less of these effects on studying students and they will therefore have a better overall product (test scores) rather than listening to their own music will.

Team members: Hailey Himelright, Verity Summers, Luis Pate

Sponsoring teacher: Patty Meyer

REFERENCES

<https://www.youtube.com/watch?v=J1WxMyEmUv4>

<https://www.youtube.com/watch?v=fDfVsFxJXms>

<http://www.jessicagrahn.com/research.html>

<http://www.uwo.ca/bmi/research/featured/grahn.html>

<http://news.mit.edu/2015/neural-population-music-brain-1216>

<http://www.inquiriesjournal.com/articles/762/the-impact-of-listening-to-music-on-cognitive-performance>

<http://old.biz.colostate.edu/mti/tips/pages/Students-Think-They-Can-Multitask---Here's-Proof-They-Can't.aspx>

<http://www.criticalthinking.org/pages/glossary-of-critical-thinking-terms/496#glossary-c>