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MUSIC AND STUDYING: DO THEY GO TOGETHER?

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Abstract:You have likely heard before that music helps you study. But, do you know why parents and professors alike are urging you to tune to iTunes? Studies have shown that music produces several positive effects on a human's body and brain. Music activates both the left and right brain at the same time, and the activation of both hemispheres can maximize learning and improve memory. This article studies music's effect on our body and brain, and how to enhance studying with songs!

Key words: Mozart's effect, memory, concentration, emotion

Introduction

In the modern era of technology, many students listen to music while studying. This trend raises a question on how music effects one's concentration and performance during the study. There is a popular term coined "The Mozart effect"which shows that listening to classical music such as Mozart help increase intellectual quotient (IQ) in spatial reasoning. Rauscher et al., in 1993 hypothesized that neurons in brain fire at a sequence that can be stimulated by specific frequencies such as Mozart music. A research study done by University of Windsor, Canada to confirm the effect of listening to music reported its positive effect on work performance. This research was done on 56 software developers from various software companies in Canada, and its result from the narrative responses revealed the value of music listening for positive mood change and enhanced perception on design while working. The authors also concluded that 'the positive affect and quality-of-work were lowest with no music, while time-on-task was longest when music was removed.' This positive correlation between music on IQ and work performance have invoked our curiosity whether listening to music while studying is beneficial or not. This is because the 'Mozart effect' only shows a positive impact when a person listens to music before undergoing a test, and not listening to it while doing a test. Conversely, Smith and Morris, deny students best performances while listening to their preferred music. They have done this study focusing the effects of sedative and stimulative music on performance, anxiety, and concentration.

The potential of music

"Music activates both the left and right brain at the same time, and the activation of both hemispheres can maximize learning and improve memory," says Dr. Masha Godkin, a professor in the Department of Marriage and Family Sciences at National University. Music has a profound effect on our mood, blood pressure, and heart rate. "Music has the potential to take a person from the Beta brainwave state to deeper Alpha, and then Theta brainwave states, depending on the

music," she says. For the best music to focus and study, choose tunes that keep you awake but won't cause you to start shimmying and tapping to the beat. Instead of relying on the radio or a random mix on Pandora or Spotify, it can help to create a playlist of the best study music for concentration. You can plan a set amount of uninterrupted music, which serves as a built-in timer for studying. When the music is up, you've earned a break.

Benefits of Listening to Music When Studying

The benefits of music have been recognized for centuries, with cultures around the world using the beat of drums or vocals to aid in relaxation or meditation. Music-based activities in early childhood education have proven to support self-regulation, cognitive and intellectual development, literacy, and language. No matter their age, students can continue to benefit from music to help their academic performance. Every student is different in how they learn and study, so their music preferences can also vary. "Folks respond to music differently," says Phyllis Medina, PhD, program director of psychology at University of Maryland Global Campus. "One needs to think about what music they enjoy. For example, traditional classical is not for everyone, but soundtracks from Destiny or Skyrim might do the trick." Medina says finding the right soundtrack and music genres can help students in their academic journeys. "Studying can be stressful, and excessive anxiety can hinder learning and memory consolidation," says Medina. "The right choice of music, such as instrumental or ambient music, can help block out distractions, improve concentration, and maintain attention during study sessions."

Studying to Instrumental and Ambient Music

Instrumental music strips the vocals from a piece, leaving only the sound from the instruments. Any song can become instrumental, so students have a never-ending list of songs they can listen to during their study sessions. Classical music, such as by Mozart, is also completely instrumental and a great choice to listen to when studying.

"Instrumental or familiar music can be beneficial because it reduces the likelihood of getting caught up in lyrics or unfamiliar rhythms," says Medina. "It does not require switching attention from the song to the words one is processing while reading or attempting to write."

Ambient music is a form of instrumental that accentuates textures, mood, background noise, and atmosphere of a given place. For example, you may find a playlist called "Coffee Shop Ambiance," which not only has music you would expect to hear in a coffee shop such as acoustics, but also the sounds of an espresso machine, cups clattering or even a low tone of other people who would be sitting in the coffee shop with you. These sounds are muted so that they become part of a background, and it can create a calming effect for many people.

Ambient music may be perfect for students who prefer a mix of both music and white noise sounds. Many people have found it to be the perfect medium between listening and not listening to music. Some ambient backgrounds you can search for on music streaming sites such as YouTube include "Cozy Reading Nook by the Fireplace," "Library Sounds," or "Rainy Jazz Café." If you're a lover of fantasy books and movies, you can even find ambient music such as "Gryffindor Common Room," "The Shire in Winter," or "Hogwarts at Midnight."

Proven to Ease Student Stress

In the middle of a busy semester, students' stress runs high. This is the perfect reason to study your class notes with music playing, — it is proven to help reduce stress! Music is a way to

process emotions and strengthen their resolve while being overwhelmed. People often turn to the music they can relate to as it helps them deal with stress in this way. So, if university life has got you feeling a bit down, dazed or distracted then it might be a good idea to put some music on while you study. Not only will it help you concentrate on your studies, it will also help keep stress at bay and put you in the learning mood.

It will help you focus more

Rather than distracting college students, a Stanford study found that “music moves [the] brain to pay attention.” Researchers utilized musical compositions from the 1800s in their study and found that “music engages the areas of the brain involved with paying attention, making predictions and updating the event in memory” (Baker). They believe that music choice was influential in brain processing, revealing, “The goal of the study was to look at how the brain sorts out events, but the research also revealed that musical techniques used by composers 200 years ago help the brain organize incoming information” (Baker). Mozart, Bach, and Beethoven can help students categorize information, which is an influential asset to studying.

Proven to improve brain functions

Musical activity serves as a cognitive exercise for the brain which trains it for more challenges in the future. Therefore, people who have musical training early on, specifically before age seven, have healthier brains and are less likely to suffer from debilitating diseases like Alzheimer’s or Dementia. But you don’t have to wait for a certain age before benefitting from music. Regardless of whether you’re a freshman or senior, you can start exercising your brain now, simply by having your favorite device and earphones handy for any study session.

Music, Memory, Emotions

Several studies in recent years have linked music, memory, and emotion. To back this claim, Petr Janata has conducted two studies to prove that music, memory, and emotion are linked. His initial study found that “music serves as a potent trigger for retrieving memories.” During his second study, Janata took Functional magnetic resonance imaging (fMRI) of students’ brains as he played popular songs from their childhood and teenage years. “After each excerpt, the student responded to questions about the tune, including whether it was familiar or not, how enjoyable it was, and whether it was associated with any particular incident, episode or memory” (UC Davis). This study reveals that music, memory, and emotions and strongly linked. This evidence supports the theory that studying while listening to music is a very beneficial practice.

What kind of music works best?

Listening to music while you study or work doesn’t always make you less productive or efficient. If you prefer to study with music, there’s no need to give it up. Keeping these tips in mind can help you find the most helpful music for work and study:

Avoid music with lyrics. Any music that has lyrics in a language you understand will probably prove more distracting than helpful.

Choose slow, instrumental music. Existing research generally focuses on classical music, but if you don’t enjoy this genre, you could also consider soft electronic, space, or ambient — the kind you might hear at a spa or while getting a massage.

Avoid surprising or experimental music. Music that changes abruptly or lacks a fixed rhythm can leave you guessing about what to expect. This can distract your brain and keep you from focusing on your work.

Keep the volume low. Study music should stay at a background volume. If it's too loud, it could disrupt your thinking process.

Stick to songs you don't have strong feelings about. Listening to music you either love or hate can affect your ability to concentrate.

Mozart's effect

The original experiments on adults exposed to Mozart's music were of short duration only. In related experiments, long-term effects of music were studied in groups of pre-school children aged 3-4 years who were given keyboard music lessons for six months, during which time they studied pitch intervals, fingering techniques, sight reading, musical notation and playing from memory. At the end of training all the children were able to perform simple melodies by Beethoven and Mozart. When they did they were then subjected to spatial-temporal reasoning tests calibrated for age, and their performance was more than 30% better than that of children of similar age given either computer lessons for 6 months or no special training ($P < 0.001$). The improvement was limited to spatial-temporal reasoning; there was no effect on spatial recognition. The effect lasted unchanged for 24 hours after the end of the music lessons but the precise duration of the enhancement was not further explored. The longer duration of the effects than in previous reports was attributed to the length of exposure to music and the greater plasticity of the young brain. In further experiments of this kind it has been claimed that the enhancement of spatial-temporal reasoning in children after piano training has resulted in significantly greater scores in higher mathematics.

Conclusion

We now understand that music and memory are strongly linked in the brain, and that music can be beneficial to study. All that studying, however, has made you exhausted! You close the textbooks and lay beneath your blankets, but your mind is still buzzing from all of the information you've acquired. Can't sleep? Well, music can even help you close out the night after studying. "Listening to classical music has been shown to effectively treat insomnia in college students, making it a safe, cheap alternative to sleep-inducing meds" (Christ)

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