

Effects of music on studying



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Concentration Necessary for Studying Nana Y. Jukwakyi Agovi Cardinal

Stritch University Music Enhances Concentration Necessary for Studying

Music is known to be food to the soul. Many studies have investigated the effects of music on attention needed for studying. A great deal of studies conducted was to investigate the effects of music, most specifically the Mozart Piece, on the enhancement of intelligence. Music produce soothing effects on the mind, it increases focus when studying or produces a great deal of concentration required for a task.

Music is utilized to block out external noise and create a background noise beneficial for the task. Negative effects of music are it could be distracting when studying and the words in music piece interfere with concentration: this is known as the dichotomous effect. Jones et al (2006) run a study that investigated the Mozart Effect in terms of Arousal, Preference, and Spatial Performance. They found out their results indicated a positive effect of listening to Mozart.

C? rnc? c et al (2006) proposes that though background classroom music cannot be reliably shown to enhance children's cognitive and academic performance, it nonetheless appears to be effective in focusing children and reducing arousal in special education settings. The hypothesis was that there would be an increased observable positive effect of music on studying. The rationale for this hypothesis is that some students prefer music to study whilst others do not. Research shows the Mozart effect to increase spatial ability hence does music enhance or deter with the attention needed for studying? Method Participants Participants comprised of eight people, which

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was one male and seven females. Participants' ages ranged from 19 to 24 years and were Cardinal Stritch University students.

Participants were treated in accordance with the ethical guidelines published by the American Psychological Association (2002). Materials and apparatus
Materials used in this study included two boom boxes, two pieces of music, a stop clock, measuring tape and materials used to test for attention:

crossword puzzles from the Blue Ribbon Word-Finds. The music used was the Mozart piece and a Bob Dylan song. The Mozart piece was Allegro con spirito from the Sonata for Two Pianos, K. 448 and the Dylan piece was Desolation Row from No Direction Home. The boom boxes aka cd players were not of the same kind.

The boom box playing Mozart was Sony CDF-FS47 and the other playing the Dylan piece was Califone Model FG 00037. Word games such as crossword puzzles were used as a possible test for attention. Two crossword puzzles were handed out for each condition. Crosswords were obtained from the Blue Ribbon Word-Finds.

Word puzzles were published in Tobias, A. (Ed.) (Dec. , 2005). Blue Ribbon Word-Finds (pgs 42, 46, 84). Procedure Three conditions were set up in three different rooms.

The first condition was the Mozart piece, the second condition the Dylan piece and the third was no music. The boom boxes were placed in front of the room such that distance of each boom box from the center-most participant was 5 m. three groups of three participants were randomly selected. Each group had 2 min listening to music before the trial began.

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Each trial (when puzzles were done) was 5 min. A counter balance effect was created in order to reduce any anomalies from extraneous variables and eradicate any errors such as the ceiling or floor effects in the study.

The study was run such that each group heard music in a different order. The order was as follows: Trial 1 Trial 2 Trial 3 ? Group A (n = 3): Mozart Dylan no music ? Group B (n = 3): Dylan no music Mozart ? Group C (n = 3): no music Mozart Dylan Within the group, each person worked on a different puzzle while listening to the same music. This was to ensure that all variables in the study were the same for the participants. The independent variable was the type of music listened to or conditions, the dependent variable was the level of attention displayed by each participant. The control variable was that all participants were from Stritch and there was no subject variable.

Results Three effects were recorded from this study: the effect of music on concentration, the effect of puzzle difficulty, and a practice or boredom effect. The effect of the conditions revealed that for condition 1 (Mozart), the participants had a mean score of 11.6 words, the second condition (Dylan) a mean score of 11.5 words and the third condition (quiet) a mean score of 11.7 words.

(Table 1) Insert table 1 here. The effect of puzzle difficulty proved the mean for “ Dining Out” for all nine participants were 10.7 words found, the mean for “ The Heat is On” for all nine participants were 12.4 words found and the mean for “ Animated Animals” for all nine participants were 11.

9 words found. For the effect of order (practice or boredom effect), the Mean for Trial 1 for all nine participants was 12. 2 words found. The Mean for Trial 2 for all nine participants was 11.

0 words found and the Mean for Trial 3 for all nine participants was 11. 8 words found. A comparison of the effect of conditions was done statistically by graphing the SEM scores from each condition. This showed a difference in attention per each condition: participants recorded high scores in the Dylan condition, good scores for the Mozart condition and the least high scores were recorded for the third condition. Figure 1 Insert figure 1 here.

Discussion One can interpret that music increases attention necessary for studying. Results further affirm previous studies conducted to show the Mozart effect that music stimulates neurological pathways in the brain that enhances spatial and cognitive learning. This is demonstrable in the graph of the SEM of each condition. Condition 1 (Mozart) shows an increased word score compared to condition 3 (quiet). Condition 2 (Dylan) indicates an overall better word score compared to the other two conditions. This finding disproves the theory or belief that music with words interferes or aids in distracting an individual as opposed to music with no words.

This finding disproves the dichotomous effect that one expects. The finding also leans weight to C? rnc? ec et al (2006) study that found out that there is no demonstrable effect of the Mozart piece on children's spatial and cognitive learning. The students listening to Mozart did not have significantly higher arousal levels than those exposed to silence. This conflicts with other findings that claimed Mozart heightened participants' arousal (Jones et al

2006). The rationale behind the hypothesis initially assumes that a single musical piece will generate the same or similar arousal reactions in the participants or opposite control conditions will bring forth similar effects on participants.

As shown with the results that seem not to be the case; silence or music seemed to heighten arousal for some as opposed to others. References C? rnc? ec, R. , Wilson , S. J. , and Prior, M. (2006).

The Cognitive and Academic Benefits of Music to Children: Facts and fiction. Educational Psychology. Retrieved October 4, 2008 from PsycARTICLES. Jones, M.

H. , West, S. D. , and Estell D. B. (2006).

The Mozart Effect: Arousal, Preference, and Spatial Performance. American Psychological Association. Retrieved October 04, 2008 from Academic Search Elite. Figure 1. Level of attention (# of words recalled) is a function of the type of music listened to.

Table 1. Displays amount of words obtained on attention test and average.

Figure 1. Table 1. MozartDylanQuiet 141616 978 536 11814 131911 141213 141412 9811 161715 Mean: 11.

6666711. 5555611. 77778