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The Effect of Accompaniment Music on the Concentration and Learning Outcomes of Grade VIII Students in Alpha Omega Education Tutoring Center

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Abstract

Feeling fed up and bored in learning mathematics occurs because of the imbalance between the right brain and the left brain, by forcing the brain to work very hard, can cause fatigue in the brain which results in a decrease in the concentration of students, especially mathematics. One method that can be used to increase concentration that can make the brain can relax in learning mathematics is to listen to classical music. The results of this study showed that there was a difference in the average grade of experimental classes that used accompaniment music while learning and control classes with learning without accompaniment music, obtained the average score of the experimental class posttest was 88.00 while the control class was 76.00 and the test calculation of the difference in the average score of the experimental class posttest and control classes was obtained tcount = 2.74 < ttable = 2.05, Which means that music affects concentration and improvementof student learning outcomes.

Keywords: Music, Concentration, Learning Outcome

INTRODUCTION

Mathematics is one of the learning points taught formally in school, students are required to learn mathematics which is considered as a basic education, because mathematical calculation skills are very important in every life. Through learning mathematics is expected to develop the ability to think critically, systematically, logically, and creatively. In learning mathematics required the ability of students in solving problems in mathematics. But in reality many students do not like mathematics, and consider mathematics one of the scary subjects.

From the results of researchers' interviews with several students who were following tutoring at alpha Omega said that mathematics is one of the most difficult

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lessons and less preferred by students. The difficulty of learning mathematics is due to the teaching and learning process that does not support the understanding of learners, resulting in students not understanding the concept of learning, considering math learning is a boring learning, and students feel fed up when learning mathematics which results in low learning outcomes.

Saturation and boredom in learning mathematics occurs due to the imbalance of the use of the right brain and left brain, where the left brain is busy with formulas and memorization while the right brain does not have a job. According to (Apriyani, Y., Parjo, 2015) says that: By forcing the left brain to work very hard, it can cause fatigue in the brain which results in a decrease in the concentration of students, especially mathematics. And to avoid an imbalance between the right brain and the left brain, music is needed to provide activity in the right brain. With the installation of music in the study room can create a fun and relaxed learning atmosphere and can improve the concentration of students' learning.

Concentration is the ability to focus on a problem that students encounter. By concentrating students avoid distracting thoughts when solving problems. But in reality, many students are unable to concentrate when facing a problem, resulting in their attention and focus being split. As revealed by (Astuti, D., Susilo, G. & Sari, 2018) Concentration of learning is needed by students in learning activities, because all knowledge information both oral and written will be able to be accepted and understood by students well if students are able to concentrate. The same thing is also revealed by (Andita, C., 2019) That Concentration can be interpreted as an attempt to focus attention on an object so that it can understand and understand the object being noticed. The learning process requires concentration therefore every child in following learning in school is expected to concentrate well. The child's ability to concentrate will affect the speed in capturing the material provided by the teacher in the learning process.

From some of the above statements it can be concluded that learning concentration can be obtained if students focus on learning. Therefore, the student's mathematical learning results will be better if the learning is done with adequate concentration. And concentration in learning is a very important thing that can affect the learning outcomes of the students in Mathematics.

One method that can be used to increase concentration that can make learners can relax in learning mathematics is to listen to classical music. The music is used to calm and energize the body or mind. According to (Zamil, 2016) said that music can significantly change a situation and can simultaneously help the development of cognitive capacity of children. And also according to (Hallam, 2010) said that Music also seems to improve spatial reasoning, one aspect of general intelligence which is related to some of the skills required in mathematics. While general attainment is clearly affected by literacy and numeracy skills, motivation which depends on self-esteem, self- efficacy and aspirations is also important in the amount of effort given to studying. Engagement with music can enhance self-perceptions but only if it provides positive learning experiences which are rewarding, Music can also improve spatial and reasoning, which is one aspect of general intelligence in the skills required in mathematics. While general achievement is clearly influenced by reading and numeracy skills, motivation that relies

on self-esteem, confidence and aspiration is also important in learning. Musical involvement in learning can improve self-perception and provide a positive and rewarding learning experience.

In 1993 three American neurobiologists conducted research into Mozart's music and its effects on intelligence. The study proved that the IQ of a group of college students increased by 8 to 9 levels in spatial ability after hearing Mozart's music for 15 minutes. In the world of education, music is one way to stimulate the mind so that students can better receive learning materials. Music is able to balance between the right brain and the left brain, this means balancing the intellectual aspect with the emotional aspect. Inlearning for the learning process to run well, there must be a balance between theright brain and the left brain, especially for materials that require high concentration.

Based on the description above researchers are interested in conducting research on the influence of music on the concentration and learning outcomes of mathematics students in keleas VIII in Alpha Omega Education Center Tutoring. The goal of the study was to see if there was any influence of music on students' concentration and learning outcomes.

METHOD

The method used in this study is quasi-experimental research with the design pretest-posttest control group design. The sample in this study was as many as 2 groups of students consistingof 15 people each. One group as an experimental class and was treated with learning using accompaniment music and the other group as a control class taught with conventional learning. The determination of samples is done by saturated sampling technique which is a sampling technique that all populations use as samples because the population is less than 30 people. The instruments used as data gathering tools in this study are tests, and questionnaires. Tests areperformed before and after treatment. Thetest used is to deal with a system of two variable linear equations in the form of multiple choices of 25 problems. While the questionnaire in the form of question items given to each student to measure the concentration of students with the number of questions in the questionnaire 15 points.

FINDINGS AND DISCUSSIONS

1. Concentration

Students' learning concentration is influenced by each student's brain ability to focus on what is being learned. The concentration of attention to increase the possibility of students being able toabsorb and understand the information obtained. Based on the results of questionnaires from students and researchers' observations during the study conducted that 53.3% of students concentrated high, 33.33% of students concentrated moderately, and 13.33% of students did not concentrate when learning began and accompanied classical music. It can be concluded that overall classical music affects the concentration of students.

2. Pre-Test Score Data

From the results of pretests in the experimental class obtained a class average of 33,667 from a value of 100, with a low of 10 and a top score of 75. And from the results of pretests in the control class obtained an average value of 31.00 from the value of 100, with thelowest value of 5 and the highest value of 75. Based on tests conducted on both classes as many as 20% of students from each class have the completion of learning on the subject matter of a two- variable linear equation system with a minimum completion criteria of >75.

3. Post Test Score Data

From the results of the study aftertreatment in the experimental class obtained the lowest score of 65, and the highest score of 95, with a class average of 88.00. With the percentage of students who have completed learning 86%. And the results of giving posttest in the control class obtained the lowest value of 45 and the highest score of 90, with an average score of 76.00. With the percentage of students who have the completion of learning by 73.3% Based on the description above, then the percentage of students who have the completion of learning When compared between experimental classes with accompaniment music and control classes with conventional learning methods, it can be concluded that there is an increase in the percentage of students who have the completion of learning outcomes by 12.7%.

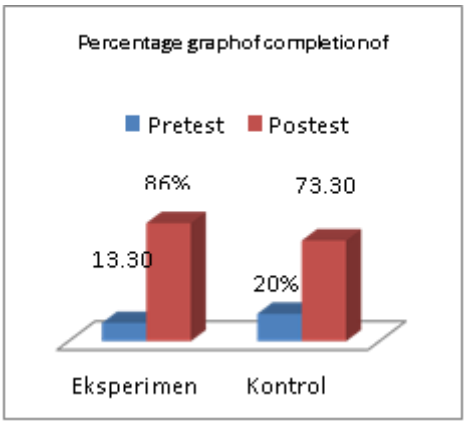

Figure 1. Percentage Graph of completion of student learning outcomes

4. Data Analysis

With the pretest we can find out the initial ability of students. In the experimental class that will be applied through Learning with music accompaniment learning the price of Lcount = 0.186 and α = 0.05 and N = 15 obtained from the list of critical values for Liliefors the value of Ltable = 0.220 turned out to be Lcount < Ltable (0.186<0.2200). This means that the data coming from samples are normally distributed while for control classes that have not been applied learning with conventional approaches obtained the value of Lcount = 0.128 with α = 0.05 andN = 15 obtained a critical list for LilieforsLtable = 0.220 turned out to be Lcount < Ltable (0.128<0.2200). This means that the data comes from a normal distributed sample. Because the second sample of the class spreads normally then onerequirement to perform the t test can be met. After being given different treatment in the class, postes were held to see if the following conditions were normality

testing there was an increase in the results obtained by both classes. In the experimental class obtained the price of posttest with Lcount = 0.092 with α = 0.05 and N = 15 obtained from the list of critical values for Liliefors value of Ltable = it turns out Lcount < Ltable (0.092<0.2200). This means that the data comes from a normal distributed sample. In the control class obtained the posttest price with Lcount = 0.123 with α = 0.05 and N = 15 obtained a list of critical values for Liliefors Ltabel value = 0.220, it turns out Lcount < Ltable (0.123 < 0.2200). This is based on data comingfrom a normal distributed sample.

The variance homogeneity test is used to find out whether the variance obtained is homogeneous or not. Based on the calculation of the variance homogeneity test on the pretest can be obtained the price of F count = 1.32 and Ftable = 2.48 with α = 0.05. This finding shows that F count < Ftable is 1.32 < 2.48 or in other words the sample of both groups comes from a homogeneous group. The calculation of the variance homogeneity test in posttest can be obtained the price of F count = 1.34 and Ftable = 2.48 with α = 0.05. The findings showed that F count < Ftable was 1.34 < 2.48, in other words sample of both groups came from a homogeneous group.

5. Hypothesis Test

After being given treatment in the experimental class and control class obtained the average score of the experimental class posttest was 88.00 while the control class was 76.00 and the test calculation of the difference in the average score of the experimental class posttest and control classes obtained tcount = 2.74 < ttable = 2.05, so H0 was rejected and Ha was accepted. This means that there is an influence of learning music on concentration and improvement of learning outcomes of grade VII students guided by alpha omega education center.

To support these findings, several previous researchers have conducted their research, such as (Raharja, 2011) said that the treatment of listening to music while doing tasks has a positive and negative influence on the academic achievement of kindergarten students in Sinduadi region, Melati sub district. Positive effects occur in the treatment of listening to music that is familiar with the child, while music is not familiar can interfere with the child's concentration in completing the task. In line with research conducted by (Kumar, N, 2016) said that the positive finding as obtained from the study is relevant to justify the current trend of listening to music while studying as it may not pose any adverse effects on the concentration of student. In fact, it might also improve the performance of the student in their academic perspectives, which means positive findings obtained from research that are current trends listening to music while learning do not cause adverse effects on student concentration. But in reality it can improve students' learning outcomes academically.

The same thing is also said (Roffiq, A., Qarim, I., & Rubiono, 2017) The learning atmosphere in a classroom is very influential on the results of the learning process carried out. The results of the study stated that some types of music affect the learning atmosphere of students in the classroom. Classical music is a type of music that is widely researched. Music is witnessed as a background to the learning atmosphere in the classroom. In his research (Andita, C., 2019) also said that learning while listening to favorite music can improve a student's learning concentration. Music that can provide

calm and peace is music with a slower tempo. Music with a slow tempo can be found in all genres, one of which is instrument music. The types of music that can affect the concentration of learning in the learning process include popular music (e.g. Baroque String Conceert) is very effective for reading and concentration, while Classical and Baroque music, if specifically designed can increase concentration and desire to learn. This can give an idea of the relationship between music and a person's response that is actually not far from the emotional relationship between musicand listeners.

CONCLUSION

Based on the description above can be drawn conclusions about 85% of students from the sample number said that learning with accompaniment music can increase student concentration in the learning process. And judging from the learning results of experimental classroom students using accompaniment music has a higher grade point average than the class without accompaniment music. In other words, music affects the concentration and learning outcomes of the students.

And based on the results of the study and the conclusions that have been explained earlier, researchers provide some suggestions, including the following:

1. For other researchers who want to dosimilar research, to pay attention to the type of music that is suitable for use as accompaniment music while studying.
2. The use of accompaniment music can make students concentrate more in learning it's good for teachers in school to use accompaniment music in learning for certain subjects.

REFERENCES

Andita, C., & D. (2019). Pengaruh Penggunaan Musik Terhadap Konsentrasi Belajar Anak Sekolah Dasar. *Jurnal Ilmu Pendidikan*, *1*(3), 205–206.

Apriyani, Y., Parjo, & R. (2015). *Pengaruh Terapi Murottal Terhadap Konsentrasi Belajar Siswa Kelas V SD Muhammadiyah Pontianak*. Naskah Publikasi.

Astuti, D., Susilo, G. & Sari, T. (2018). Pengaruh Konsentrasi Belajar Dan Kemandirian Belajar Terhadap Hasil Belajar Matematika Siswa Kelas Xi SMA Negeri 2 Balikpapan Tahun Ajaran 2017/2018. *Jurnal Pendidikan Matematika*, *1*(2).

Hallam, S. (2010). The power of music: Its impact on the intellectual, social and personal development of children and young people. *International Journal of Music Education*.

Kumar, N, . Dkk. (2016). The Effect of Listening to Music On Concentration and Academic Performance of the Student: Cross- Sectional Study On Medical Undergraduate Students. *RJPBCS*, *7*(6).

Raharja, B. (2011). Efek Musik terhadap Prestasi Anak Usia Prasekolah: Studi Komparasi Efek Lagu Anak, Dolanan Jawa, dan Musik Klasik. *Artikel*.

Roffiq, A., Qarim, I., & Rubiono, G. (2017). Media Musik dan Lagu Pada Proses

Pembelajaran. Jurnal Pendidikan Dasar Indonesia. *Jurnal Pendidikan Dasar Indonesia*, *2*(2), 35–40.

Zamil, I. (2016). Pengaruh Musik dan Lingkungan Belajar Terhadap Siswa. *Jurnal PPKn & Hukum*, *11*(2), 149–156.