EDUMASPUL
JURNAL PENDIDIKAN
Vol. 8 – No. 1, year (2024), page 1689-1692
| ISSN 2548-8201 (Print) | 2580-0469) (Online) |

The Influence of Alpha Waves in Cultural Arts (Music) Learning at Secondary School

Danny Rozano[1], Sukanta[2]
[1,2] *Pendidikan Seni, Sekolah Pascasarjana, Universitas Pendidikan Indonesia*
* Corresponding Author. E-mail: [1]danny@upi.edu

Receive: 11/01/2024	***Accepted: 17/02/2024***	***Published: 01/03/2024***

Abstrak

Music education, as perceived by students, mainly revolves around practical aspects, often neglecting the cognitive, affective and psychomotor dimensions inherent in education. As a result, the cognitive aspects of music education tend to be less appealing to students. In response, various attempts have been made to stimulate students' cognitive concentration during the theory aspect of music education by utilizing alpha waves. These alpha waves are integrated during music theory lessons and presented in the form of videos uploaded to YouTube for access anytime and anywhere. This article aims to investigate the impact of using YouTube as a medium, combined with background music containing alpha wave frequencies, on the theoretical aspects of Cultural Arts (music) education. This study used quantitative methods to correlate performance between the control group (not exposed to alpha waves) and the experimental group (subjected to alpha wave stimulation). Data was collected through assessments conducted by Cultural Arts teachers and then analyzed using Pearson correlation technique as a form of data analysis. After reviewing the results from the first sample (experimental group) and the second sample (control group), it is clear that the final hypothesis (the result) does not match the initial hypothesis (H0 > Ha).

Keywords: *Music Education, Cognitive Stimulation, Alpha Waves, YouTube, Arts and Culture (Music) Learning.*

Instroduction

Learning is the main task of students as students in school. It has become a sequence of students to know what is not known, understand what is not understood, and do what has not been done in the context of education as part of the learning process [1]. Of course, maximizing the learning process will lead students to maximum learning outcomes later. Learning success is not only determined by learning outcomes, but also includes various aspects of the learning process in the classroom. This is influenced by several factors, one of which is concentration [2]. Concentration creates a deep understanding and increases attention to the teacher in teaching and learning activities [3].

Concentration is referred to as reflex attention where the soul's awareness is deliberately focused on an object that is built by the student himself [4], [5]. Not all things are noticed by students, in addition to being the concentration of all activities, attention is also a filter for various things that students receive [6]. So the objects that are most likely to be noticed by students are objects that look attractive or sound loud, one of which is music.

The importance of music in its role in children's lives starts from a young age [7]. Music has an influence on improving academic abilities and this has long been believed because music provides a stimulus to the quality of children's lives and this is due to the rhythm in music that makes students easier to remember [8]. Previous research by Hasshumaker showed that music has the ability to be a facilitator for children in acquiring language, reading readiness, and general intelligence development [9]. In addition, music is also able to influence physiology and help the development of personal abilities [10].

Learning concentration influenced by music has been done a lot, but there are still minimal researchers who use alpha waves with a certain frequency. This is what interests researchers to test, conduct an experimental action to find out the extent to which alpha waves from music affect students' concentration and learning power in learning cultural arts (music) at school.

Method

Experimentation was the method in this study with post-test only control design. This design was applied to two groups, each of which was randomly selected (R). The first group was given treatment (X) and the second group was not. The effect of treatment is (O2:O4) If there is a significant difference between the experimental group and the control group, then the treatment given has a significant effect [11]. The research design is as follows:

R	X	O_2
R		O_4

Figure 1. Desain Method

This research was conducted at a junior high school with the subject of grade 8 students in the 2022/2023 school year where two classes were sampled. One class was used as an experimental group and the other class was used as a control class. Meanwhile, the data were obtained from the students' post-test results after being given the treatment.

Result and Discussion

Alpha waves are the object used in this study with a frequency of 8-12 Hz. The waves became the background sound in a music learning video with style and folk song singing material for grade 8 Junior High School.

Gambar 2. Alpha Wave Background Soundless Learning Video

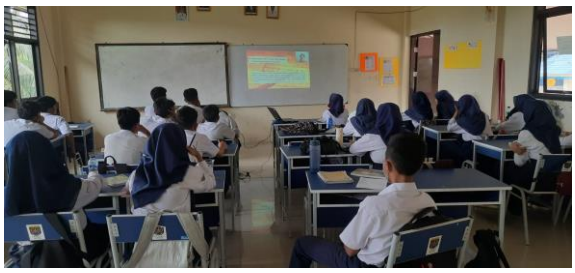
Gambar 3. Learning Video with Alpha Wave Background Sound

The barcode attached two learning videos that could be accessed through the researcher's personal YouTube channel. There were two classes that were used as subjects in this study, namely one class that used learning videos without alpha wave background sound with a total of 26 students and another class that used learning videos with alpha wave background sound with a total of 28 students. Descriptively, this research data can be seen in Table 1.

Tabel 1. Statistics Analysis

Statistics	Control Class Post-test	Experiment Class Post-test
Maximum	100	100
Minimum	50	50
Average	83	74
Median	90	70
Mode	90	70
Standard Deviation	15	18

Based on the data above, it can be analyzed that the music learning outcomes are classified as good for the control class (average 83) and the experimental class (average 74). This condition shows that students have a good ability to solve the questions given. However, the difference in treatment has a less favorable effect when viewed from the average. In other words, the control class, i.e. students who were not given alpha waves in the music learning video, got a higher average score than students given alpha waves in the music learning video with a difference of 9 points.



Gambar 4. Implementation Process of Music Learning Video with Alpha Wave Background Sound in Grade 8

Media is one component of communication as a messenger from the communicator to the communicant [12]. Therefore, teachers must have sufficient knowledge and understanding of learning media. Alpha waves as a learning media here should be able to increase student concentration and learning outcomes. Because in a state of entering alpha waves will make a person's brain experience relaxation [13], [14].

In this case, there is a mismatch of expectations to be able to increase student concentration in order to achieve better learning outcomes. This of course can be influenced by other factors. The concept conveyed through this media is also influenced by the existence of several components contained in the media such as the availability of text, images, audio, video, and animation [15]. This research has implications for further research to better prepare alpha wave media in any scientific field if it is to be applied later. This research is limited to trials and experiments without implementation cycles.

Conclusion

Based on testing and experiments in the application of alpha waves as a music learning media in schools, there is a decrease in grades in experimental classes that use music learning videos with alpha wave background sound from control classes that use music learning videos without alpha wave background sound. This is proven through statistical calculations where the experimental class gets an average score of 74 and the control class gets an average score of 83 with a difference of 9 points. The utilization of alpha wave media can be followed well but does not get maximum results. Recommendations for researchers in related fields to conduct more mature experimental packaging in order to work on improving student learning outcomes.

References

[1] N. Nirfayanti and N. Nurbaeti, "Pengaruh Media Pembelajaran Google Classroom Dalam Pembelajaran Analisis Real Terhadap Motivasi Belajar Mahasiswa | Proximal: Jurnal Penelitian Matematika dan Pendidikan Matematika," *PROXIMAL: Jurnal Penelitian Matematika dan Pendidikan Matematika*, vol. 2, no. 1, pp. 50–59, Feb. 2019, Accessed: Sep. 13, 2023. [Online]. Available: https://e-journal.my.id/proximal/article/view/211

[2] C. D. Andita and D. Desyandri, "Pengaruh Penggunaan Musik Terhadap Konsentrasi Belajar Anak Sekolah Dasar," *EDUKATIF : JURNAL ILMU PENDIDIKAN*, vol. 1, no. 3, pp. 205–209, Dec. 2019, doi: 10.31004/EDUKATIF.V1I3.50.

[3] F. Handayani, D. Desyandri, and F. Mayar, "Implementasi Seni Musik terhadap Konsentrasi Belajar Siswa dan Pembentukan Karakter di Kelas IV Sekolah Dasar," *Jurnal Pendidikan Tambusai*, vol. 6, no. 2, pp. 11370–11378, Jun. 2022, Accessed: Sep. 13, 2023. [Online]. Available: https://www.jptam.org

[4] J. Linschoten, *Pengantar Ilmu Jiwa: Fenomenologi*, 2nd ed. Bandung: Jemmars, 1983.

[5] S. Hidayat, "Pengaruh Musik Klasik Terhadap Daya Tahan Konsentrasi dalam Belajar," Universitas Islam Negeri Sultan Syarif Kasim, Pekanbaru, 2011. Accessed: Sep. 16, 2023. [Online]. Available: https://repository.uin-suska.ac.id/1185/

[6] M. B. Walgito, "Pendidikan Luar Sekolah Menyambut Masyarakat Belajar," *Analisis CSIS*, vol. 5, pp. 424–432, 1985, Accessed: Sep. 16, 2023. [Online]. Available: journals.csis.or.id

[7] L. Riyadi and Y. Sukmayadi, "Pengaruh Musik sebagai Media Intervensi Terhadap Kemampuan Anak Berbahasa," *Musikolastika: Jurnal Pertunjukan dan Pendidikan Musik*, vol. 5, no. 2, pp. 127–138, Dec. 2023, doi: 10.24036/musikolastika.v5i2.132.

[8] B. DePorter, M. Reardon, and S. Singer-Nourie, *Quantum Teaching: Orchestrating Student Success*. Boston: Allyn and Bacon, 1999.

[9] Y. Rachmawati and R. M. Agushardiana, *Musik Sebagai Pembentuk Budi Pekerti*, 1st ed. Yogyakarta: Jalasutra, 2005.

[10] D. Djohan, *Psikologi Musik*, 3rd ed. Yogyakarta: Penerbit Best Publisher, 2009.

[11] Sugiyono, *Metode Penelitian: Kualitatif, Kuantitatif, dan R&D*, 2nd ed. Bandung: Alfabeta, 2022.

[12] D. Dasmo, A. P. Lestari, and M. Alamsyah, "Peningkatan Hasil Belajar Fisika Melalui Penerapan Media

Pembelajaran Interaktif Berbasis Ispring Suite 9," *SINASIS (Seminar Nasional Sains)*, vol. 1, no. 1, pp. 99–102, Jul. 2020, Accessed: Sep. 16, 2023. [Online]. Available: https://www.proceeding.unindra.ac.id/index.php/sinasis/article/view/3979

[13] T. Pasiak, *Brain Management for Self Improvement*, 1st ed. Bandung: Penerbit Mizan, 2007.

[14] A. Mustajib, *Rahasia Dahsyat Terapi Otak*, 1st ed. Jakarta: Wahyu Media, 2010.

[15] F. Himmah, "Pengembangan Multimedia Interaktif Menggunakan iSpring Suite 8 Pada Sub Materi Zat Aditif untuk Meningkatkan Hasil Belajar Siswa SMP Kelas VIII," *PENSA: E-JURNAL PENDIDIKAN SAINS*, vol. 5, no. 02, Apr. 2017, Accessed: Sep. 16, 2023. [Online]. Available: https://ejournal.unesa.ac.id/index.php/pensa/article/view/18834

Curriculum Vitae

Danny Rozano. Student of Master of Arts Education Program, Graduate School, Universitas Pendidikan Indonesia.