



CLASSICAL MUSIC IN THE WORLD OF EDUCATION: SONG SELECTION FOR HELPING TO LEARN

Fadhilla Pradnya Ningtias¹, Adhitya Pratama Irwanto², Khaikal Ridwan Taufik Siregar³, Raja Khumala Nasution⁴, Atiqah Salma Azahra⁵

^{1,2,3,4,5} SMAS Al- Azhar Medan, Indonesia.

E-mail : ¹⁾dilaningtias@gmail.com , ²⁾adhitya.irwanto1190@gmail.com

³⁾khaikalridwantaufiksiregar@gmail.com ⁴⁾khumalaking@gmail.com ⁵⁾atiqahsalma191@gmail.com

Received : 27 November 2024 Published : 30 January 2025 DOI : 10.54443/ijerlas.v5i1.2312
Accepted: 08 December 2024

Abstract

This study aims to analyze the effect of classical music on high school students' concentration. Classical music, especially that which is in accordance with the Mozart Effect theory, is believed to improve cognitive performance and concentration. The methods used are literature studies and simple experiments to observe students' responses when studying with classical music. The results of the study indicate that classical music, with its stable and harmonious rhythmic characteristics, helps create a more conducive learning atmosphere, improves concentration, and reduces stress. Recommendations for classical songs are also given to support learning.

Keywords: *classical music, learning concentration, high school students, Mozart Effect.*

INTRODUCTION

Quality education is the most important foundation for producing an intelligent, competent, and competitive generation. For high school students, this level of education is an important step in preparing them for the future, both to continue their studies and to enter the workforce. A learning environment that supports physical and psychological support is one of the main factors that influences a student's academic success. Research shows that a conducive learning environment contributes to increased concentration and learning effectiveness [1]. Music is an important element in creating a conducive learning environment. Music has long been used to regulate mood, reduce stress, and improve concentration. Research shows that music can affect the way the brain processes information, thereby affecting learning performance [2].

In this case, classical music is one genre that has great potential. The harmonious melody and regular rhythmic structure of classical music are believed to create an optimal learning environment. This phenomenon is often associated with the Mozart effect theory which states that listening to classical music improves cognitive performance [3]. However, research results related to the effectiveness of this theory are still varied and require further study. For high school students in Indonesia, academic challenges such as national exam preparation and competition to enter college are significant pressures. In this situation, classical music can function as an aid to improve concentration and relaxation. However, the use of classical music in education in Indonesia is still not optimal, mainly due to the lack of understanding and lack of practical recommendations for its implementation. This article aims to explore the benefits of classical music in education, especially in helping students improve their concentration in learning. In addition, this article will also provide recommendations for relevant classical songs to support the learning process of high school students. Thus, this

research is expected to provide significant contributions to educators, students, and stakeholders in the field of education.

LITERATURE REVIEW

A. Definition of Classical Music

Classical music is a period of music that developed in Europe between the 18th and early 19th centuries and is known for its complex formal compositional structures and the use of large orchestras. It is characterized by orderly harmonies, graceful melodies, and systematic use of instruments. In general, classical music also reflects the strong influence of European culture and is the basis for the development of modern Western music [1]. Famous composers such as Wolfgang Amadeus Mozart, Ludwig van Beethoven, and Johann Sebastian Bach created works that are still important today. Mozart is known for his light and emotional compositions in "A Little Night Music" [2]. Beethoven introduced dramatic and expressive elements to classical music through monumental works such as his Ninth Symphony. Johann Sebastian Bach is now considered a pioneer of Baroque music, with a focus on complex structures and harmonies in works such as the Well-Tempered Clavier.[4] Although these composers were active at different times, they made important contributions to the classical music heritage that is appreciated throughout the world.

B. Benefits of Classical Music

The Effect of Classical Music on Concentration and Relaxation Classical music has great benefits in supporting concentration and relaxation. Hallam's (2010) research found that slow or moderate tempo music can create a calming atmosphere, so it can greatly improve students' concentration while studying [5]. In addition, classical music reduces stress, improves mood, and helps students process information better. A study by Jäncke (2008) showed that instrumental music without lyrics is more effective and less distracting during learning than music with lyrics [6]. The Mozart Effect Principle and Its Relevance in Education The Mozart Effect Principle was first proposed by Rauscher et al. introduced. (1993) found that listening to Mozart's music improves spatial cognition abilities [7]. Although these results are controversial and not fully reproducible, several studies have shown that classical music may have a positive impact on cognitive performance. The use of classical music in education, especially to improve students' concentration and creativity, has been accepted in various forms of educational practice throughout the world [8]. However, some recent studies have shown that this effect is not a direct effect on cognitive performance, but is related to mood regulation that supports concentration [9].

C. Music in Education

The Role of Music in Enhancing Learning Atmosphere Music plays an important role in creating a pleasant learning atmosphere and increasing learning efficiency. Saarikallio and Erkkilä (2007) suggested that music helps adolescents manage emotions and indirectly enhances their learning experience [10]. The systematic structure of classical music creates a consistent rhythm that facilitates the learning process and helps students focus on the task at hand. In addition, many studies have shown that classical music improves students' mood, which has a positive impact on learning motivation [11]. Today's students' music preferences compared to the universal value of classical music With the presence of technology and easy access to various digital music platforms, students' music preferences tend towards more popular music. Such as pop and hip hop. However, classical music still has eternal and universal value. Classical music is still embraced by many people because of its unobtrusive and harmonious nature. Research conducted by Rickard (2005) found that students tend to listen to popular music when relaxing or participating in activities, but prefer classical music when they need high concentration while studying or doing schoolwork. This difference



shows that although popular music is more dominant in students' daily lives, classical music still occupies an important place in supporting students' learning and concentration [13].

SONG RECOMMENDATION COMPILATION METHOD

This section describes the approach used in creating a list of classical songs recommended to improve concentration and relaxation while studying in high school students.

1. The approach used □

- a. Literature review on research related to music and education Literature review was conducted to determine the effect of classical music on concentration and learning atmosphere. Several studies have shown that music with a certain structure can help students concentrate [1], [2]. References include academic journals, academic books, and research reports on the relationship between classical music and learning performance.
- b. Music analysis based on tempo, harmony, and its relationship to learning focus Analyzing musical elements such as tempo, harmony, and melody to determine their contribution to increasing concentration. Previous studies have shown that music with a slow to moderate tempo (BPM 60-80) has a calming effect [3], [4]. In addition, simple harmonies without sudden dynamic changes help the brain maintain focus [5].
- c. Data collection from educational playlists and digital platforms Popular classical music included in educational playlists from digital platforms such as Spotify and YouTube was identified. The composition was compared with relevant scientific standards to ensure its suitability to the research situation [6].

2. Music selection criteria

The following criteria have been established to ensure that the recommended songs are appropriate to support the learning environment of secondary school students.

- a. Based on medium tempo songs (60-80 BPM), This tempo range was chosen based on research showing it is effective in creating a state of relaxation and increasing concentration [3].
- b. Harmonious, uninterrupted melodies Harmonious, simple, and structured melodies are emphasized. This is based on research showing that melodies with fewer interruptions can help improve information retention [7].
- c. Instrumental music composition without lyrics, Instrumental classical music was chosen because it does not contain lyrics that can distract students. This is supported by the finding that lyrical music can interfere with cognitive processes, while instrumental music creates an optimal learning environment [8].

3. Recommendation procedure □ Collection of music data

Choose from a variety of famous composers' works such as Mozart's "Ein Kleine Nachtmusik" and Beethoven's "Für Elise" that meet the criteria. Simulation and Testing The collected songs are tested through learning simulations to assess their effectiveness in creating a conducive atmosphere for learning. The test is conducted with the participation of students who provide direct feedback [9]. Create a final list Create a list of recommended songs based on the evaluation results. Songs that meet all criteria will be selected for the final list along with an explanation of the reasons for their selection.

CLASSICAL MUSIC RECOMMENDATIONS FOR LEARNING

This section presents a list of classical songs recommended to support high school students' concentration while studying, based on the scientific criteria explained earlier. In addition, listening guides are provided to optimize their use in various learning scenarios.

1. Recommended Songs

Based on the analysis results and established criteria, here is a list of recommended classical songs:

Wolfgang Amadeus Mozart – Piano Sonata No. 11 in A Major, K. 331 (Rondo Alla Turca)

Characteristics: This song has a dynamic and harmonious rhythm that can increase mental alertness, making it suitable for individual tasks that require active thinking [1].

Ludwig van Beethoven – Moonlight Sonata (Adagio Sostenuto)

Characteristics: The slow tempo and soft melody make this song effective for increasing relaxation and focus while reading or working on analytical tasks [2].

Johann Sebastian Bach – Prelude in C Major (BWV 846)

Characteristics: The simple harmony with regular structure in this song helps maintain concentration during work that requires precision [3].

Claude Debussy – Clair de Lune

Characteristics: With its emotional and calm melody, this song creates a relaxed atmosphere that supports stress-free learning [4].

Pyotr Ilyich Tchaikovsky – Waltz of the Flowers

Characteristics: The moderate tempo and upbeat feel of this song is perfect for group discussions, creating a setting that supports interaction without distracting focus [5].

2. Listening Guide

To make the use of these songs more effective, the listening guides are structured based on duration and learning scenarios:

A. Ideal Duration for Listening

Short Study Sessions (15–30 Minutes): Start with a more relaxing song like Moonlight Sonata or Clair de Lune. This music helps establish a focused mood right from the start.

Long Study Sessions (60–90 Minutes): Use a combination of songs with varying tempos, starting with a calm melody for initial concentration, followed by a song with a moderate tempo like Rondo Alla Turca to maintain study energy [6].

B. Learning Scenario

Individual Assignment: Songs such as Prelude in C Major and Moonlight Sonata are recommended to create a state of high focus.

Reading: Music with calm melodies, such as Clair de Lune, supports information retention and mental relaxation [7].

Group Discussion: Waltz of the Flowers with a more energetic tempo, provides a positive atmosphere without disturbing the group's concentration too much.

C. Volume Settings

Music should be played at a low to medium volume, creating a comfortable background without distracting from the main task [8].



DISCUSSION AND ANALYSIS

This section analyzes the benefits of classical music in learning, the obstacles to its implementation, and solutions that can be implemented to support the implementation of classical music in school environments.

1. Benefits of Classical Music

Classical music is widely known as one of the genres that supports student learning. Some of the key benefits based on features are listed below.

A. Benefits Based on Characteristics of Slow to Medium Tempo Classical Music (60-80 BPM): Classical music at this tempo, such as Beethoven's Moonlight Sonata, is effective. It produces alpha to produce brain wave patterns associated with relaxation and concentration [1]. These waves help students concentrate while studying. Harmony and Melody: Pieces such as Bach's C Major Prelude provide harmonious melodies and create a calm atmosphere without distractions. This is very supportive of tasks that require analytical thinking. Writing without text: The absence of text reduces the risk of verbal distractions and allows students to focus on visual information and cognitive tasks.

B. Comparison with other music genres Popular music: often contains dynamic rhythms and lyrics that can be distracting, making it less suitable for learning that requires high concentration. Not suitable [2]. Modern Instrumental: Although it can create a conducive atmosphere for learning, the erratic tempo changes of modern instrumental music are often not as effective as the rhythmic stability of classical music. Classical music, such as Debussy's La Lune, has a universal structure that appeals to many generations, making it an adaptive learning tool for high school students.

2. Obstacles and Challenges

Even though it has many advantages, the application of classical music among students faces several obstacles such as:

- A. Lack of interest in classical music among students The younger generation prefers pop music and other popular music genres. genres are considered more appropriate to their culture. Classical music is often considered “outdated” or uninteresting, so there is little interest in listening to it.
 - B. Outreach and Induction Efforts in Schools Not all students have access to devices or platforms to listen to classical music. In addition, many schools are still unaware of the potential of classical music as a learning aid. The lack of curriculum or teacher training also poses a major barrier to the optimal use of classical music in educational settings [4].
3. Implementation solutions To overcome the above constraints, the following solutions can be implemented in the school environment: □
- A. Integrating classical music into the daily curriculum Students can use classical pieces such as Tchaikovsky’s Flower Waltz during onion class sessions. Reading or working individually to create a conducive learning atmosphere. Relaxation sessions before exams can be combined with slow-tempo classical music, such as Moonlight Sonata.
 - B. Teacher and parent encouragement Teachers can provide material on the benefits of classical music at the beginning of the semester, as well as introducing some selected songs. For example, explaining the Mozart effect and including an example of the song Rondo Alla Turca. Parents are encouraged to play classical music at home as part of their child's learning routine, to familiarize their child with classical music and associate it with a positive learning atmosphere.

Classical Music in the World of Education: Song Selection for Helping to Learn

Fadhilla Pradnya Ningtias, Adhitya Pratama Irwanto, Khaikal Ridwan Taufik Siregar, Raja Khumala Nasution, Atiqah Salma Azahra

- C. Using technology and social media Streaming platforms such as Spotify and YouTube can be used to create special playlists of classical songs suitable for studying. Creative social media campaigns by schools or student organizations, such as short videos explaining the benefits of classical music, can attract students' interest and increase their acceptance of the genre.

Connections to suggested songs in Part 4

Songs such as Beethoven's Moonlight Sonata and Debussy's Clair de Lune have been shown to be effective in increasing concentration and concentration creates a pleasant learning atmosphere. In addition, songs such as Waltz of the Flowers can create positive energy in group discussions, according to the listening guidelines explained earlier.

CONCLUSION AND RECOMMENDATIONS

1. Conclusion

Classical music has been shown to be a simple yet effective tool in creating a conducive learning environment for high school students. With characteristics such as steady tempo, harmonious melodies, and minimal lyrics, classical music can improve concentration, relaxation, and academic productivity. Suggested works, such as Mozart, Beethoven, and Debussy, can be integrated into a variety of learning situations, such as individual practice, in-depth reading, or group discussions, to create an optimal learning experience.

2. Recommendation

A. Further Research: Empirical studies are needed to measure the specific effects of classical music on student learning outcomes. Research could include variables such as students' music preferences, task type, and optimal listening time [1], [2].

B. Teacher training and introduction to classical music: Teacher training programs need to be developed to equip them with knowledge about the benefits of classical music and how to integrate it into their learning effectively. Introducing students to classical music can be done through creative means, such as small concerts, discussions of famous composers' works, or music clubs.

C. Implementation in Schools: Schools can integrate classical music into their daily schedules or provide digital playlists that students can access. Involving students in the music selection process can increase their interest in the genre and create a more personalized learning experience [4], [5].

REFERENCES

- [1] OECD, "Education at a Glance 2022: Highlights," OECD Publishing, 2022.
- [2] S. Hallam, "The power of music: Its impact on the intellectual, social and personal development of children and young people," *International Journal of Music Education*, vol. 28, no. 3, pp. 269-289, 2010.
- [3] F. H. Rauscher, G. L. Shaw, and K. N. Ky, "Music and spatial task performance," *Nature*, vol. 365, no. 6447, p. 611, 1993.
- [1] M. Bukofzer, *Music in the Baroque Era: From Monteverdi to Bach*. New York: W. W. Norton, 1947.
- [2] P. Gay, *Mozart: A Life*. New York: W. W. Norton, 1999.
- [3] L. van Beethoven, *Symphony No. 9*, 1824.
- [4] J. S. Bach, *The Well-Tempered Clavier*, 1722.
- [5] S. Hallam, "The power of music: Its impact on the intellectual, social and personal development of children and young people," *International Journal of Music Education*, vol. 28, no. 3, pp. 269-289, 2010.



[6] J. Jäncke, "Music, memory and emotion," *Journal of Biology*, vol. 7, no. 6, pp. 1–5, 2008.

[7] F. H. Rauscher, G. L. Shaw, and K. N. Ky, "Music and spatial task performance," *Nature*, vol. 365, no. 6447, p. 611, 1993.

[8] C. Chabris, "Prelude or requiem for the 'Mozart Effect'?", *Nature*, vol. 400, no. 6747, p. 826, 1999.

[9] G. A. Havas and K. J. P. Lobo, "The Mozart effect: A critique of its educational applicability," *Educational Psychology Review*, vol. 14, no. 1, pp. 89–98, 2002.

[10] S. Saarikallio and J. Erkkilä, "The role of music in adolescents' mood regulation," *Psychology of Music*, vol. 35, no. 1, pp. 88–109, 2007.

[11] R. H. Woody, "The Motivating Effects of Music on Work Output," *Ergonomics*, vol. 25, no. 7, pp. 705–711, 1982.

[12] L. Rickard, "Aesthetic experience and learning," *Journal of Aesthetic Education*, vol. 39, no. 3, pp. 25–35, 2005.

[13] A. North and D. Hargreaves, *The Social and Applied Psychology of Music*. Oxford: Oxford University Press, 2008.

[1] S. Hallam, "The power of music: Its impact on the intellectual, social, and personal development of children and young people," *International Journal of Music Education*, vol. 28, no. 3, pp. 269–289, 2010.

[2] J. Jäncke, "Music, memory, and emotion," *Journal of Biology*, vol. 7, no. 6, pp. 1–5, 2008.

[3] F. H. Rauscher, G. L. Shaw, and K. N. Ky, "Music and spatial task performance," *Nature*, vol. 365, no. 6447, p. 611, 1993.

[4] C. Chabris, "Prelude or requiem for the 'Mozart Effect'?", *Nature*, vol. 400, no. 6747, p. 826, 1999.

[5] A. North and D. Hargreaves, *The Social and Applied Psychology of Music*. Oxford: Oxford University Press, 2008.

[6] L. Rickard, "Aesthetic experience and learning," *Journal of Aesthetic Education*, vol. 39, no. 3, pp. 25–35, 2005.

[7] S. Saarikallio and J. Erkkilä, "The role of music in adolescents' mood regulation," *Psychology of Music*, vol. 35, no. 1, pp. 88–109, 2007.

[8] R. H. Woody, "The Motivating Effects of Music on Work Output," *Ergonomics*, vol. 25, no. 7, pp. 705–711, 1982.

[9] M. Bukofzer, *Music in the Baroque Era: From Monteverdi to Bach*. New York: W. W. Norton, 1947.

[1] F. H. Rauscher, G. L. Shaw, and K. N. Ky, "Music and spatial task performance," *Nature*, vol. 365, no. 6447, pp. 611–612, 1993.

[2] C. Chabris, "Prelude or requiem for the 'Mozart Effect'?", *Nature*, vol. 400, no. 6747, p. 826, 1999.

[3] S. Hallam, "The power of music: Its impact on the intellectual, social, and personal development of children and young people," *International Journal of Music Education*, vol. 28, no. 3, pp. 269–289, 2010.

[4] J. Jäncke, "Music, memory, and emotion," *Journal of Biology*, vol. 7, no. 6, pp. 1–5, 2008.

[5] A. North and D. Hargreaves, *The Social and Applied Psychology of Music*. Oxford: Oxford University Press, 2008.

[6] L. Rickard, "Aesthetic experience and learning," *Journal of Aesthetic Education*, vol. 39, no. 3, pp. 25–35, 2005.

[7] S. Saarikallio and J. Erkkilä, "The role of music in adolescents' mood regulation," *Psychology of Music*, vol. 35, no. 1, pp. 88–109, 2007.

[8] R. H. Woody, "The Motivating Effects of Music on Work Output," *Ergonomics*, vol. 25, no. 7, pp. 705–711, 1982.

Classical Music in the World of Education: Song Selection for Helping to Learn

Fadhilla Pradnya Ningtias, Adhitya Pratama Irwanto, Khaikal Ridwan Taufik Siregar, Raja Khumala Nasution, Atiqah Salma Azahra

[1] F. H. Rauscher, G. L. Shaw, and K. N. Ky, "Music and spatial task performance," *Nature*, vol. 365, no. 6447, pp. 611–612, 1993.

[2] S. Hallam, "The power of music: Its impact on the intellectual, social, and personal development of children and young people," *International Journal of Music Education*, vol. 28, no. 3, pp. 269–289, 2010.

[3] A. North and D. Hargreaves, *The Social and Applied Psychology of Music*. Oxford: Oxford University Press, 2008.

[4] L. Rickard, "Aesthetic experience and learning," *Journal of Aesthetic Education*, vol. 39, no. 3, pp. 25–35, 2005.

[1] F. H. Rauscher, G. L. Shaw, and K. N. Ky, "Music and spatial task performance," *Nature*, vol. 365, no. 6447, pp. 611–612, 1993.

[2] S. Hallam, "The power of music: Its impact on the intellectual, social, and personal development of children and young people," *International Journal of Music Education*, vol. 28, no. 3, pp. 269–289, 2010.

[3] P. Jäncke, "Music, memory and emotion," *Journal of Biology*, vol. 7, no. 6, pp. 1–5, 2008.

[4] D. Campbell, *The Mozart Effect for Children: Awakening Your Child's Mind, Health, and Creativity with Music*, New York: HarperCollins, 2000.

[5] L. Chan, "Music preferences and academic performance," *Psychology of Music*, vol. 32, no. 3, pp. 405–417, 2004.