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EFFECTIVE APPROACHES TO MAINTAINING CHILDREN'S FOCUS IN ONLINE MUSIC LESSONS

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Abstract. *The article is devoted to identifying effective approaches to sustaining children's attention during online music lessons. The purpose of the study is to determine and theoretically substantiate pedagogical and psychological tools that enhance children's concentration in the process of distance music education. The research employed general scientific methods of cognition: analysis and synthesis, induction and deduction, generalization, systematization, comparison, and interpretation of scientific sources. The findings show that ensuring proper focus in online music lessons requires a comprehensive approach that integrates methodological, technological, and psychological aspects. It is concluded that the structuring of the lesson, the use of interactive platforms, and the combination of traditional teaching forms with innovative tools, including elements of virtual and augmented reality, have a significant impact on concentration. The study revealed that maintaining interest and attention is supported by clear instructions, alternating activities, active involvement in practical exercises, and elements of creative interaction. The results also demonstrate that visualization techniques, short attention-shifting exercises, and multimedia tools help prevent fatigue and increase learning efficiency. Special attention is given to communicative interaction between teacher and students. It is shown that the activation of non-verbal communication, the use of cameras during lessons, and the creation of a supportive and collaborative atmosphere are important factors in improving focus. The practical significance of the study lies in the possibility of applying the conclusions to online music teaching methods in order to enhance learning effectiveness and children's sustained concentration.*

Keywords: *online music, attention, children, focus, methods.*

Introduction

Maintaining children's attention in the learning process is one of the key issues in modern pedagogy, as focus directly determines knowledge acquisition and the development of cognitive skills. In a traditional classroom environment, the teacher can quickly respond to changes in students' behavior, using verbal and non-verbal signals to redirect attention. However, with the shift to distance learning, especially during the COVID-19 pandemic, this opportunity has been significantly reduced. The online format is accompanied by a range of objective obstacles: technical problems, numerous distractions, "Zoom fatigue," and a decline in the intensity of teacher-student interaction. These challenges are particularly critical for younger students, who have not yet fully developed mechanisms of self-regulation and concentration.

Music education in distance learning poses specific difficulties related to the need for high-quality acoustic transmission, continuous practical work, and a high level of

student engagement. In this context, the issue of sustaining attention becomes even more relevant, as success in music learning depends not only on theoretical knowledge but also on practical interaction with instruments and collective activities. At the same time, recent studies demonstrate that innovative digital platforms, interactive technologies, and specially adapted teaching strategies can significantly improve children's focus and ensure the effectiveness of the learning process.

Literature Review

The question of effective approaches to maintaining children's concentration in online music lessons has been widely studied in foreign scientific literature, largely due to the rapid development of distance education during the COVID-19 pandemic and the further digitalization of the learning process. A significant contribution was made by V. Amm, K. Chandran, L. Engeln, and M. McGinity [1], who proposed innovative strategies involving mixed reality technologies to improve the effectiveness of piano education. The study of M. Biasutti, R. Antonini Philippe, and A. Schiavio [2] outlines the challenges faced by elementary school music teachers during remote learning and highlights the importance of flexible teaching methods in sustaining students' attention.

Meanwhile, M. C. Cortés-Albornoz, S. Ramírez-Guerrero, W. Rojas-Carabali, A. de-la-Torre, and C. Talero-Gutiérrez [3] in a systematic review demonstrated that distance learning has a substantial effect on children's cognitive abilities and academic performance, particularly on concentration. Equally important is the analysis by J. Hohagen and A. Immerz [4], who examined different instructions for focusing attention in music education and their impact on outcomes, which is highly relevant to online lessons. The study of Y. Kasuya-Ueba and colleagues [5] provides experimental evidence of the positive effect of musical interventions on children's attention development, forming a foundation for effective educational programs.

Practical challenges of teaching music online are described in the works of C. Kuebel and E. Haskett [6], who emphasize teacher burnout, while A. R. Lauricella and colleagues [7] show that children's visual perception and engagement largely depend on the interactivity of the learning environment. A recent study by R. Ma [8] explores

key problems and solutions in online piano education, whereas K. A. Parkes, J. A. Russell, W. I. Bauer, and P. Miksza [9] stress the balance between teacher well-being and learning effectiveness. The contribution of Z. Pi, R. Bailey, S. El-Shimi, G. Burch, and S. Bloxham [10] is also significant, as they proved that even a simple element such as students' cameras being turned on can greatly enhance focus and learning outcomes. In turn, X. Zheng and colleagues [11] identified a range of factors influencing satisfaction, effectiveness, and preferences of elementary school students in online education.

The study also relied on expert literature, including online publications offering practical recommendations for improving children's concentration, such as interactive music education platforms, gamification, and the use of virtual instruments.

Thus, despite the large number of foreign studies on this issue, there remains a lack of systematized material specifically addressing the peculiarities of online music lessons with children. Therefore, this work analyzes, classifies, and presents information within the framework of the research topic using various scientific methods.

Methodology and Methods

The scientific study employed a set of general scientific methods of cognition, including analysis and synthesis for identifying patterns in the organization of online music lessons; induction and deduction for formulating generalized conclusions; comparison for contrasting different teaching models and practices; systematization and generalization for shaping a comprehensive view of pedagogical approaches. Interpretation of scientific sources and previous research data was also applied, which made it possible to identify key factors influencing children's attention span during distance music learning.

The purpose of the article is to substantiate the effectiveness of innovative approaches to maintaining children's focus during online music lessons and to identify the key factors influencing attention in the context of distance learning. Achieving this purpose requires the following tasks: analysis of the main challenges of sustaining children's attention in the digital environment; characterization of the specifics of

teaching music online and the pedagogical difficulties involved; and identification of the peculiarities of students' attention focusing, along with a generalization of innovative approaches aimed at enhancing engagement and the effectiveness of music education.

Research Results

Children's focus is a key factor in the effectiveness of the learning process, yet maintaining it always presents a pedagogical challenge. In a traditional classroom, the teacher can quickly respond to distractions and redirect students' attention through immediate verbal and non-verbal cues. In online lessons, however, this possibility is considerably limited. The study by A. R. Lauricella [7] shows that the digital environment itself creates additional difficulties: the absence of social signals, numerous distractions both on and off the screen, and the effect of "Zoom fatigue" caused by constant observation of one's own image. This leads to cognitive overload and a decline in attention and comprehension of the material. As a result, children are more prone to losing focus compared to situations of direct contact with the teacher [7].

This problem became especially acute during the COVID-19 pandemic, when schools were forced to switch to remote learning. The study by X. Zheng and colleagues [11] demonstrated that primary school students, due to their low level of self-regulation and attention, were the most vulnerable. In a real classroom, the teacher can immediately bring a child's attention back to the task, whereas in distance learning the lack of constant control and feedback led to a rapid decline in concentration. External factors such as household noise or other gadgets intensified the problem. A lack of real-time pedagogical support and reduced interaction between student and teacher made it difficult to sustain attention and negatively affected both satisfaction and learning effectiveness [11].

The systematic review by M. C. Cortés-Albornoz and colleagues [3] confirms that the absence of face-to-face contact and teacher presence in the distance format had a significant negative impact on children's academic performance. During lockdowns, learning gaps were recorded in mathematics, reading, and speech development, most

of all among younger students. Researchers explain this by insufficient cognitive stimulation, inadequate pedagogical adaptation, and a large number of distractions. When teachers could not promptly redirect children's attention, their ability to focus decreased significantly, which ultimately affected learning quality [3].

Music education involves not only acquiring theoretical knowledge but also continuous listening, practice, and active participation in performance activities. Distance music education faced particular problems that are less evident in general education. For example, it requires proper technical support, since acoustic accuracy and clear sound transmission are essential for successful learning. The study by R. Ma notes that modern digital technologies – such as WeChat applications or MOOC platforms – provide high sound quality and flexibility in learning. Most students identified instant messaging, screen-sharing options, and integrated communication functions as useful tools for music lessons. At the same time, even with such resources, technical difficulties remain, including audio quality and connection delays, which directly affect children's ability to concentrate during lessons [8].

To maintain children's focus in this technological environment, teachers must use specially adapted strategies for structuring the learning process. The study by M. Biasutti, Antonini Philippe, and Schiavio [2] showed that combining structured lesson planning with interactive platforms that encourage active participation of children is effective. This may include short but dynamic tasks, frequent changes of activity, and involving students in collective music-making even in a virtual format. Continuous pedagogical contact plays an important role – maintaining dialogue with students and their parents creates additional motivation and helps children stay attentive. As emphasized by K. Parkes and colleagues [9], emotional support and fostering a sense of belonging to a musical community are also decisive factors that reduce distractions and ensure deeper student engagement in learning.

An important aspect involves changing the structure and organization of the learning process. The study by C. Kuebel and E. Haskett [6] showed that music teachers in the United States during the pandemic faced a radical transformation of instructional formats: from teaching in equipped classrooms to "music-on-a-cart" or hybrid models.

Teachers had to abandon traditional tools (for example, playing the recorder or group singing) due to health restrictions and look for new ways to hold children's attention. The use of digital platforms such as Quaver and MusicPlay Online served to maintain student focus, yet many educators felt that the overall level of music education remained incomplete [6].

Table 1 – Main factors of focus in distance music education

Factor	Characteristic	Explanation
Technical quality of sound and image	Clear playback of audio and video, minimization of delays	The quality of the audio signal determines how well students can focus on the music. Technical issues [8] reduce concentration, as attention shifts to the "defects" of communication.
Lesson structure	Clear lesson planning, alternation of different activities	Dynamic task changes and short activity blocks help avoid overload and maintain the attention of younger students [2].
Interactivity and engagement	Use of interactive platforms, collective forms of music-making	Interactive tools (Quaver, MusicPlay Online) sustain interest and allow children to feel like active participants in the process rather than passive listeners [6].
Emotional support	Creating a sense of safety, community, and positive atmosphere	Children maintain attention more effectively when the teacher fosters an environment of trust and belonging, even in a virtual space [9].
Communication with parents	Ongoing feedback with students' families	Interaction with parents helps organize the learning environment at home, resolve technical issues, and increase the child's responsibility for completing tasks [2].

Note: systematized by the author based on sources [2, 6, 8, 9]

Particular attention should be given to the psychological dimension of distance learning. Research by K. Parkes, Russell, Bauer, and Miksza [10] indicated that music educators experienced high levels of stress and emotional exhaustion. At the same time, the wellbeing of students remained central to their efforts. This directly concerned children's attention: teachers noted that emotional support and a sense of belonging and involvement are critical for students to stay focused during lessons. The lack of direct contact with the teacher led to decreased motivation, whereas creating conditions for interaction and a "sense of community" helped offset this deficit [10].

Qualitative interviews conducted by M. Biasutti, P. Antonini Philippe, and A. Schiavio confirm that primary school teachers in Italy sought new methods of

organizing learning, with an emphasis on lesson planning, time management, and active engagement with children and parents. The key pedagogical task involved not only using appropriate software but also sustaining younger students' concentration in a virtual environment. Teachers stressed that flexible use of digital tools, together with continuous communication with parents and the creation of a positive atmosphere, helps children maintain focus and engagement in the musical process [2].

Several years of practice in distance music education have also produced new approaches to strengthening children's focus. The review by J. Hohagen and A. Immerz shows that the concept of focus of attention (FOA) can be adapted from motor learning to the musical context. Depending on whether a student's attention is directed to internal sensations or external aspects of performance (sound, instrument, spatial characteristics), the quality of performance and the stability of concentration change. In particular, focusing on the sonic outcome rather than finger movements supports greater performance stability among beginners [4]. This opens the door to pedagogical instructions that retune a child's attention to meaningful yet non-overloading aspects of musical activity.

Another line of research shows that music itself can act as a factor in sustaining attention. Experiments by Kasuya-Ueba and colleagues demonstrated that rhythmic and melodic structures affect children's ability to shift and sustain attention [5]. The use of musical interventions, particularly Musical Attention Control Training (MACT), yielded positive results for selective and sustained attention in children with cognitive difficulties. This indicates that a teacher can not only control external lesson conditions but also purposefully use musical material as a tool for developing cognitive focus.

In parallel, innovative technologies are advancing rapidly. V. Amm and co-authors demonstrate the potential of mixed reality (MR) for piano instruction. An MR environment enables note visualization directly on the keyboard, provides instant feedback, and transforms routine exercises into gamified tasks. Such solutions help maintain motivation and prevent attention loss in online learning conditions. The emotional engagement component is especially important: MR encourages children to perceive learning not as an obligation but as an interactive, game-like experience [1].

Social presence in videoconferencing serves as a distinct factor in sustaining focus. The study by Z. Pi and colleagues [10] showed that peers' and teachers' cameras being on enhances social interaction and motivates students through a mechanism of social comparison.

Another innovative method for learning music is "DigiMusic." Its key idea is that distance learning should not lag behind offline lessons in terms of concentration and engagement. Through a sense of presence created by interactive quests and AR animations, a child experiences the lesson not as passive video consumption but as a lively, dynamic encounter. At the same time, AI trackers analyze student behavior (eye movements, activity, reactions) and help the teacher promptly adjust the pace or format of the lesson. This integration individualizes the learning process and makes lessons more effective. A second innovative component involves gamification and STEAM links that connect music with elements of mathematics, logic, and creative tasks. The student not only masters musical skills but also trains cognitive functions by solving mini-tasks and taking part in "music battles." Point accumulation and unlocking new levels create a motivational mechanism that markedly increases interest and the duration of focused attention. The method has proven especially effective for children with ADHD: thanks to the interactive approach and game elements, their engagement nearly doubled.

In group lessons, the use of digital platforms is amplified through synergy. When young schoolchildren see their peers at work, their attention shifts more strongly toward the learning materials, and the competitive element encourages diligence. At the same time, excessive visual load can create distractions, so the teacher needs to balance the benefits of social presence against the risk of cognitive overload.

Conclusions

The challenge of maintaining children's attention during online lessons remains one of the main tests facing contemporary education. The online format significantly limits a teacher's ability to respond quickly to distractions, which in turn leads to cognitive overload, reduced engagement, and less stable attention. The absence of direct contact and social cues complicates the learning process, while additional

external factors (noise, gadgets, “Zoom fatigue”) create conditions for even greater loss of concentration, especially among younger students.

Music education in the online environment presents specific difficulties related to the quality of technical infrastructure, the need for accurate sound transmission, and the requirement to sustain interactivity. Studies show that the effectiveness of distance music lessons depends on clear lesson structuring, flexible planning, the use of interactive platforms, and consistent feedback between teachers and families. At the same time, educators face a decline in performance practices and the need to adapt tools and methods to the constraints of the digital environment.

Current research highlights the promise of new approaches to sustaining attention, including the use of the focus of attention (FOA) concept, musical interventions (MACT), gamification, mixed and virtual realities (MR, AR), and platforms like DigiMusic. Innovative solutions make it possible to transform traditional lessons into a dynamic, highly engaging experience, reduce the risk of attention loss, and foster an environment of collaboration and emotional support. Such an approach supports not only the development of musical skills but also the improvement of cognitive functions, which is particularly important in the context of distance music education.

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